Hamilton City Council
Te kaunihera o Kirikiriroa

Notice is hereby given that an ordinary Meeting of the Council will be held on:

Date:	**Tuesday 28 March 2017**
Time:	**9.30am**
Meeting Room:	**Council Chamber**
Venue:	**Municipal Building, Garden Place, Hamilton**

Council

OPEN ATTACHMENTS

ATTACHMENTS UNDER SEPARATE COVER

Item 5

Attachment 6

Peacocke

Indicative Business Case

Housing Infrastructure Fund

March 2017

hamilton.govt.nz

Authors: Hamilton City Council

Executive Summary

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

Population projections indicate that Hamilton is well on the way to being a city of 200,000 residents. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing.

Strategic Case

Hamilton City Council, through strategic planning processes, has defined four investment objectives. These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

To meet the demand for dwellings caused by projected population growth, and the new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC), Hamilton City Council will need to bring forward planned greenfield areas such as Peacocke.

Peacocke is within the Hamilton City Council boundary and covers an area of approximately 747 hectares. This area of land was brought into the City from Waipa District in 1989 for the express purpose of providing for the City's future urban growth. This area, along with Rototuna and Rotokauri, was incorporated into Hamilton City to provide for long-term development and growth.

For many years the area was identified as 'future urban' zoning. In 1999, the area was changed from 'rural' zoning to 'future urban' and Stages 1 and 2 of the Peacocke Structure Plan was finalised through Variation 14 to the District Plan between 2009 and 2012.

Peacocke comprises two stages. Stage 1 has an initial capacity of 850 dwellings (Stage 1a 500 lots, Stage 1b 350 lots) before significant infrastructure improvements are required. Investments to upgrade and/or build further three waters infrastructure are scheduled in the Hamilton City Council 10-Year Plan 2015-2025 for the Stage 1 area.

An upgrade to the SH3 and Dixon Road intersection has also been scheduled in the current 10-Year Plan; this is a precondition to release the entire Stage 1 area. With these investments, and subject to development timing the remainder of Stage 1 will have the necessary infrastructure in place by 2025.

Stage 2 has an expected capacity for 7,500 dwellings. The development timing of Stage 2 would be brought forward if the necessary strategic infrastructure and transport networks are constructed in advance of the timeframes identified by the Hamilton City Council.

Peacocke is within five kilometres of the Hamilton CBD. The provision of appropriate transport networks will therefore encourage residents to use active modes when moving between home, work and leisure activities, which will lead to associated health benefits. These outcomes will therefore be beneficial to the economy of the City and the well-being of current and future Hamiltonians.

This indicative business case relates to a preferred way forward that accelerates the following new strategic infrastructure and future planned land use:

- Wairere Drive/Cobham overbridge – additional to current funding and advance fund agreement
- Wairere Drive extension and bridge over the Waikato River to Peacocke north-south arterial
- Peacocke Road urban upgrade
- SH3/Dixon Road intersection and Peacocke east-west arterial to Peacocke Road
- North-south arterial land
- The Peacocke transfer wastewater pump station and rising main.

Hamilton City Council has a positive and collaborative relationship with NZTA, and as a consequence the Council and NZTA have jointly approached city land use planning as it relates to transport activities. This integrative approach is heavily reflected in the Peacocke Structure Plan and resulting networks.

Attached to this indicative business case is an NZTA Point of Entry letter that relates to the funding of strategic infrastructure that supports the preferred way forward.

Economic Case

The Housing Infrastructure Fund provides Hamilton City Council with the opportunity to finance the strategic infrastructure services needed to unlock all of the planned residential developments in Peacocke and bring these developments forward. This is the preferred option identified in this indicative business case.

The Southern Growth Corridor is one of four growth corridors recognised in the Future Proof Growth Strategy. The Southern Growth Corridor comprises six distinct areas of differing land uses and infrastructure needs, including Peacocke, the Hamilton Airport and adjacent lands, Tamahere, other rural residential areas, Rukuhia, and the rural environment. These areas are connected by State Highways 3 and 21.

The infrastructure funded by the Housing Infrastructure Fund is an integrated programme of works that includes a Waikato River crossing and strategic arterial roads that form part of Southern Links and the strategic Peacocke transfer wastewater pump station and rising main.

Southern Links is a joint NZTA and Hamilton City Council initiative. It involves the construction of 21 kilometres of state highway, three new bridges and 11 kilometres of urban arterial roads within the Peacocke growth area. Southern Links is considered by NZTA and Hamilton City Council as the optimum long-term solution to accommodate growth and manage existing traffic issues in the southern network corridor of Hamilton. The Southern Link project allows for a future connection to, but it is not part of, the Waikato Expressway project.

In March 2017, a feasibility and concept design study was completed by OPUS for Hamilton City Council. This study looked at the construction and operation of a strategic transfer wastewater pump station and rising main to enable growth in the Peacocke stage 2 area.

The Peacocke area has been divided by Hamilton City Council into 17 'neighbourhoods' each with a different residential density profile. Wastewater 'subcatchments' and the associated pump stations have been identified based on neighbourhood size and the projected staging of the development. In addition, as the residential area is being developed in stages the number of people that will

potentially be living in the area has been calculated and with that their requirements for wastewater at a subcatchment level.

Together, this programme of works will accelerate growth in the development of Peacocke, which will yield 3,153 dwellings within 10 years and 8,103 dwellings within 30 years. The 3,153 dwellings built in Peacocke within 10 years will meet 26% of the projected future demand for housing in Hamilton City in 2025. In addition, the average infrastructure spend per dwelling built is expected to be $59,100 within 10 years, dropping to $23,000 within 30 years.

Benefit-cost analysis indicates that this programme of works has an overall benefit-cost ratio of 18.80. This includes transport benefits, dwelling value appreciation, and three kinds of economic contribution. Each of these options alone provides a favourable benefit-cost outcome.

Commercial Case

Hamilton City Council has a positive and collaborative working relationship with key landowners and developers in the Rotokauri area. In Rotokauri, Hamilton City Council has been working with RDL limited (a joint venture partnership including Tainui Group Holdings).

Letters of intent outlining a further commitment to housing delivery through the signing of detailed private developer agreements have been included as an attachment to our indicative business case.

Financial Case

The financial case includes charts that show the impact on the Council's debt to revenue ratio of accelerating the Peacocke growth cell by using HIF loans and other loans (to complete infrastructure not included in the HIF application).

The financial case illustrates the impact on the Council is very challenging as there is currently much uncertainty on debt treatment; the level of new revenue associated with HIF; the level of developer contributions and costs met direct by developers; and other inputs to the 2018 Long-Term Plan. These are all largely unknown at this time.

This means the long-term financial predictions challenge the existing financial strategy of Hamilton City Council and the Council needs more time and opportunity to work through the financial scenarios with MBIE and other key stakeholders.

Management Case

On execution of the funding agreement, Hamilton City Council will establish a project to deliver the strategic infrastructure and manage the programme of works in collaboration with NZTA and MBIE. This would use Hamilton City Council's existing governance and large project management systems.

The Council operates three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience
- Level 2: Project/programme governance
- Level 3: Independent and objective assurance.

The project management and governance structure will follow Hamilton City Council's standard practice for large infrastructure projects.

Preferred Way Forward

On the basis of the above initial assessment, $182.3 million in Housing Infrastructure Funding is being sought by Hamilton City Council for the development of the Peacocke greenfield residential area. The potential contribution for the Waikato River crossing and arterial Peacocke roads that support the Southern Links from NZTA for transport work is $89.5 million.

The $182.3 million in Housing Infrastructure Funding will accelerate development timing and bring projects that were part of the Hamilton Plan and Long-Term Infrastructure Strategy 2015-2045 forward.

- In total, 8,103 dwellings will be developed in the Peacocke area between 2017/18 and 2038/39
- Within the 10 years of the Housing Infrastructure Funding, the accelerated development of 3,153 dwellings will occur in the Peacocke area.

The developments within Peacocke will continue to be undertaken in stages. This means that the $182.3 million in Housing Infrastructure Funding will allow:

- Stage 1 of Peacocke to be realised within seven years, resulting in the development of 627 dwellings
- Stage 2A of Peacocke to be realised within 11 years, resulting in the development of 1,751 dwellings
- Stages 2B and 2C of Peacocke to be realised within 15 years, resulting in the development of 5,725 dwellings. Stage 2B will be completed within the period 2019/20 to 2032/33, while Stage 2C will be undertaken as the final stage in the development between 2024/25 and 2038/39.

Hamilton City Council also acknowledges that the Housing Infrastructure Funding indicated in this business case, at the indicative business case stage, is non-binding. The information provided in this indicative business case may therefore change should the Council proceed through to the detailed business case stage.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the tender documentation, the final proposal is submitted to the Ministry of Business, Innovation and Employment (MBIE) on the following basis:

It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.

Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets
- Contributions are known

- Caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances
- Letters of Intent to be provided by development partners
- Final bid acceptance is based on receiving confirmation that DC's can be legally collected under the HIF structure
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General
- Project costs to be reviewed every three years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

Alternative financing models

Hamilton City Council also requests that MBIE consider other alternative funding proposals to reduce the financial impacts on Council's financial strategy, including, but not limited to the following:

- The creation of a Crown-owned Special Purpose Vehicle (SPV). A SPV would result in new infrastructure constructed and managed by a crown entity with Council effectively buying shares in the entity, and thus, the infrastructure, as development rolled out in each of growth cells over time. Hamilton City Council see merit in the SPV proposal and it is a viable financial delivery alternative that the Council would like to will continue to explore with MBIE.
- The Crown debt funding a CCO of Council on a non-recourse basis to Council, and the CCO owning the infrastructure assets that enable the HIF goals to be achieved (other than roads that would ordinarily vest in the Crown). The debt would be repaid with development contributions, payments from developers and rates, but the Crown would take the risk that timing of those payments was not sufficient to repay the debt at the end of the 10 year period. The debt and assets could be brought onto Council's balance sheet if financial ratios could be met on a pro forma basis. The debt of the CCO would need to be excluded from the LGFA financial covenants.
- A Crown equity funding a vehicle that is owned by either the Crown or Council and otherwise on the same terms as above. The repayment mechanism would be akin to the government's Crown Fibre Holdings model, which would mean that government would take the risk that housing sales did not meet expectations and therefore funding was not available to purchase all of the government's shares.
- A combination of the two options above, that permits private funding and allows charges for use of the relevant assets (e.g. toll roads/bridges or charges for availability).
- All parties satisfying themselves that the FAR funding and offset is not accounted for as debt to Council. In addition, FAR eligible works (transport operating and maintenance, renewals, capital projects) for which the offset applies could occur as early as year 2 of the 10 year payback period. Council would debt fund these projects, undoing much of the benefit of the FAR funding from the perspective of Council's financial position and so some consideration of delaying these offsets until or beyond the end of the 10 year period should be considered.
- Extended payment periods and cash flows tied to related cash flows being received by Council (e.g. developer contributions for sections sold in the growth cells being used to repay the government).
- The creation of a suspensory loan whereby the Government loans Council the necessary funds and waives loan conditions if development expectations are realised.

Peacocke Residential Growth: Business Case Overview

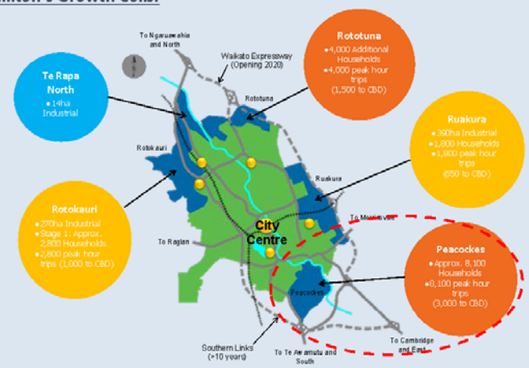
Housing Infrastructure Fund (HIF) Proposal -Peacocke

Problem: **We need space and homes for a growing population.**

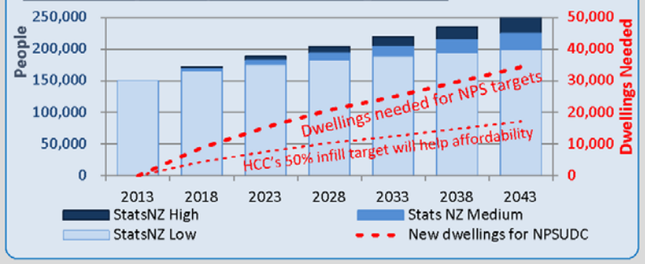
We are heading to 250,000 people by 2045. Our community will need 12,296 more homes by 2025 and 33,188 homes by 2045. Even with 50% infill we'll need access to greenfield development for more than 16,000 dwellings.

Peacocke will accommodate 8,103 dwellings but needs access for transport and utilities. The strategic infrastructure needed to open up growth cells comes with large upfront costs. That puts significant financial pressures on Council and developers and constrains development.

Hamilton's Growth Cells:



Hamilton's Projected Population and Dwellings Needed:



Objectives: **Room to grow, more dwellings and better choices.**

Hamilton's objectives for investment in Peacocke enabled by the HIF are to:

Increase the amount of developer ready land:	– that supports Hamilton to be NZ's third city economy by 2025.
	– to support 11,638 dwellings by 2025.
	– to support the balance of the NPS-UDC dwelling requirements by 2045.
Support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase.	

Alternatives and Options:

Council considered strategic responses including doing nothing, delivery over 30 years in accordance with current plans and acceleration options in Peacocke and elsewhere.

Preferred Option:

Hamilton will work with NZ Government and NZ Transport Agency to invest $271.8M over 6 years on gateway transport, water and wastewater systems to facilitate access to around 415 hectares of developable land and around 8,103 new dwellings in the Peacocke growth cell. The proposed transport system gives effect to parts of Southern Links and connects to the ring road.

Outcomes and Benefits:

The Proposal will contribute to the business case objectives for early access for residential development and deliver over $3B of additional economic growth benefits over 30 years. The road network brings forward sections of the Hamilton Southern Links local arterial and regional state highway network, bringing benefits forward. 100% of the wastewater system and 50% of the transport links is brought forward by over 10 years, delivering over 70,000 extra house years.

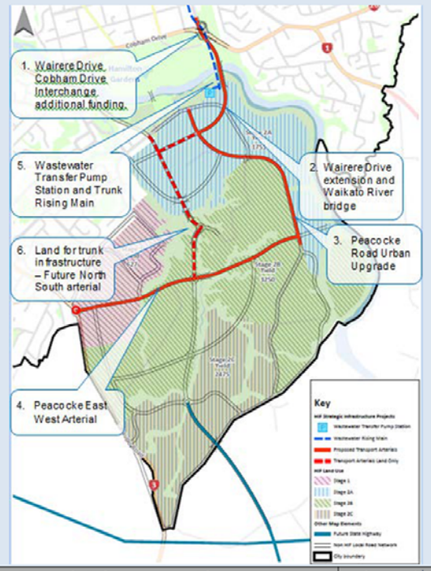
Year	Developable Land Area	Dwelling Yield	Affordable Housing
2025	Approx. 160 hectares	Approx. 3,150 dwellings	Existing areas released
2045	Approx. 415 hectares	8,103 dwellings	Existing areas released

The proposal has a HIGH Strategic Fit, HIGH Effectiveness and HIGH Efficiency, with a BCR >5.

Next Steps:

Funding agreement and detailed business case to optimise implementation.

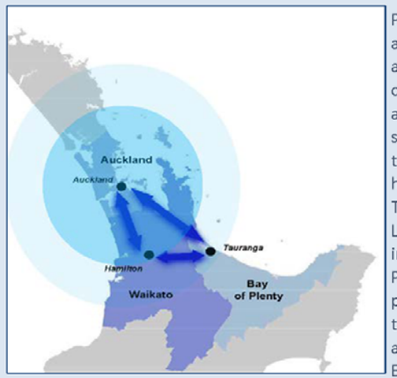
Proposal: **Gateway Infrastructure for 8,103 dwellings.**



Strategic Infrastructure Element	Estimate ($M,2017)
Wairere Drive/Cobham Drive overbridge	$20.8M
Wairere Drive extension and Waikato River bridge	$113.0M
Peacocke Road urban upgrade	$9.7M
SH3 intersection and east-west arterial	$35.5M
Wastewater strategic storage and pressure main	$43.3M
North-south arterial land	$26.7M
Internal strategic wastewater network	$17.6M
Internal strategic water distribution main	$5.2M
Peacocke Project Total	**$271.8M**
2015 10 Year Plan $0M	*NZTA FAR $89.5M* *HIF $182.3M*

Strategic Context: **Hamilton and Peacocke: The right locations.**

Hamilton is a young, strong and diverse economic node, part of the "Golden Triangle" of Auckland, Tauranga and Hamilton. Investment in Hamilton can leverage the HIF investment in conjunction with recent investment in the Waikato Expressway, Southern Links, Ruakura inland port and Innovation Park.

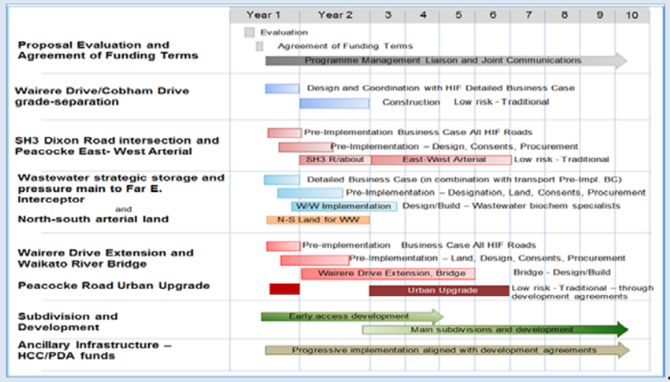


Peacocke is a key growth area zoned residential only around 5km south of the city centre. Land is available but costly strategic connections for transport and wastewater have deterred developers. The Hamilton Southern Links is designated and integrated with the Peacocke structure plan to provide efficient access to the airport, regional links and the Waikato Expressway.

Implementation: **Careful procurement, collaborative delivery.**

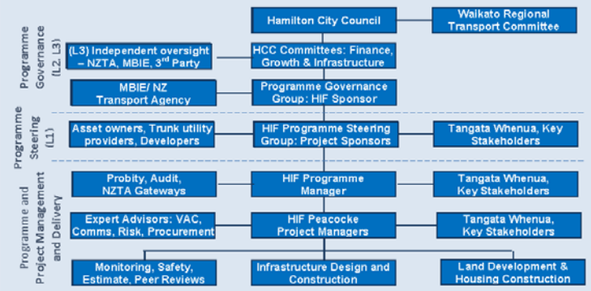
Both the road and wastewater proposals are at pre-implementation stage, with road designations, key consents, and some land secured. Preliminary designs are ready or under way.

We propose a combination of traditional staged delivery for routine infrastructure and design and construct models for the bridge and wastewater system where construction techniques and specialist skills can add value and reduce cost and risks with innovative and optimum designs.



Governance and Management: **Risks, opportunities and results.**

We will collaborate with NZTA and NZ Government to minimise project risks, overcome barriers and ensure successful delivery. We have demonstrated our ability to deliver in the forward-funded Hamilton Ring Road and the W2 Hamilton Wastewater Treatment Plant upgrade projects.



We have effective relationships with NZTA and developers. We will build on these relationships though comprehensive developer agreements to share risk and funding requirements. Working together with clear messages and direction we can assure the HIF benefits.

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1. Strategic Case

Peacocke is a greenfield area that is zoned and planned as a growth cell in the Southern Growth Corridor of Hamilton City. This area of land was brought into the City from Waipa District in 1989. In 1999, the area was changed from 'rural' zoning to 'future urban' and Stages 1 and 2 of the Peacocke Structure Plan was finalised through Variation 14 to the District Plan between 2009-2012.

Peacocke has been prioritised for future development by Hamilton City Council due to the unique strengths this area has, and the particular outcomes it will achieve. The HIF provides Hamilton City Council with the opportunity to finance the strategic infrastructure needed to unlock planned residential developments in Peacocke, and bring these developments forward.

The infrastructure funded by the HIF is an integrated programme of works that includes the strategic Peacocke transfer wastewater pump station and rising main; and a Waikato River crossing and strategic arterial roads that form part of Southern Links. Together, this programme of works will accelerate growth in the development of Peacocke, which will yield 3,153 dwellings within 10 years and 8,103 dwellings within 30 years.

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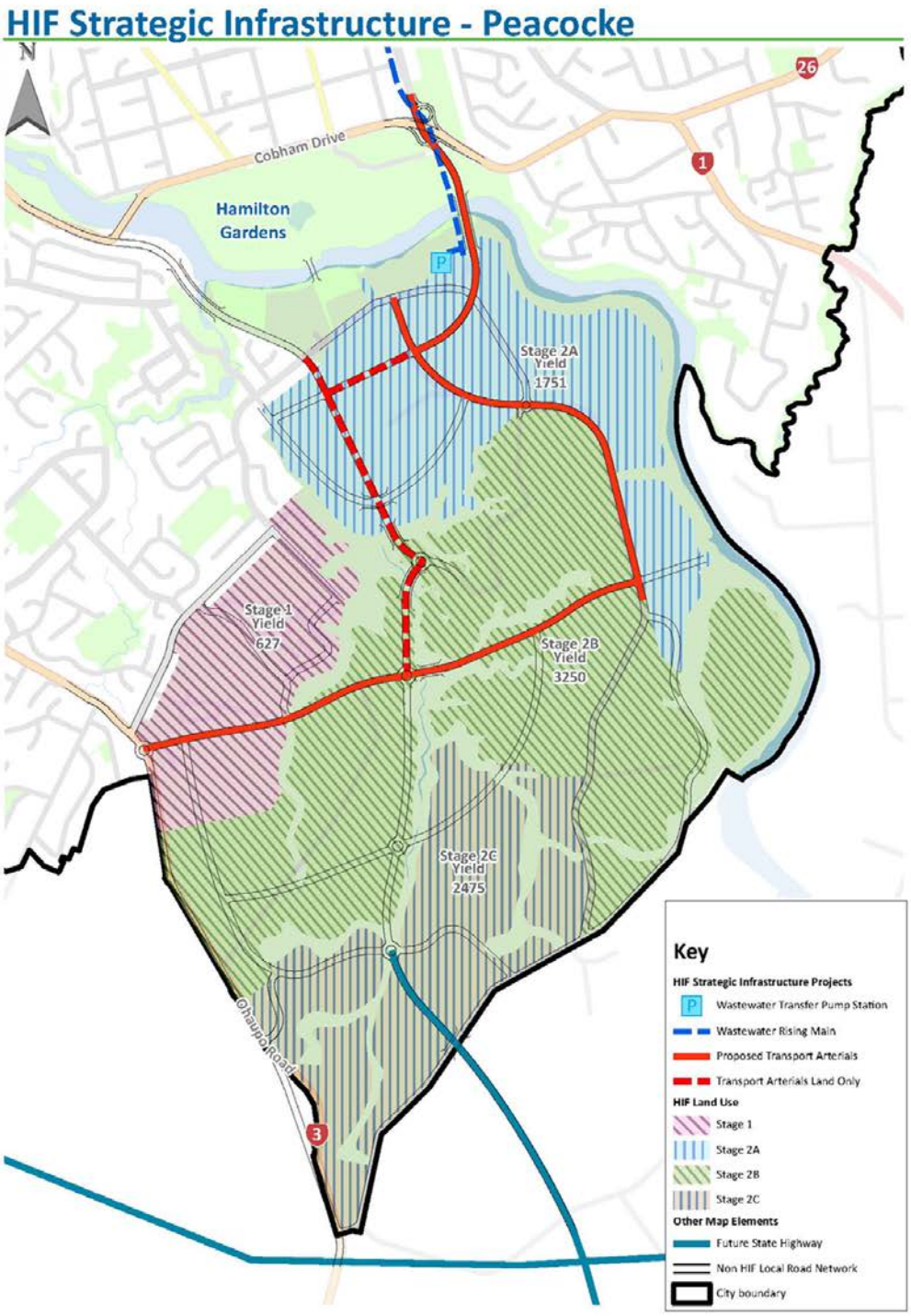

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Strategic Context

Transport systems – The Southern Growth Corridor

The Southern Growth Corridor is one of four growth corridors recognised in the Future Proof Growth Strategy. The growth corridors have been identified to assist with infrastructure and land use integration. The other corridors include the Northern, Eastern and Central Growth Corridor.

The Southern Growth Corridor comprises six distinct areas of differing land uses and infrastructure needs, including Peacocke, the Hamilton Airport and adjacent lands, Tamahere, other rural residential areas, Rukuhia and the rural environment. These areas are connected by State Highways 3 and 21.

The corridors form part of wider sub-regional settlement patterns. These settlement patterns assist in the integration of land use information and infrastructure, particularly transport.

Hamilton City Council and NZTA are working in collaboration as joint clients in the Southern Growth Corridor to better understand and manage land use and strategic infrastructure. This collaboration has resulted in a Strategic Land Use and Infrastructure Plan and a Memorandum of Understanding that outlines agreed outcomes and actions.

In developing the Strategic Land Use and Infrastructure Plan, key land use and infrastructure challenges were identified for each area within the Southern Growth Corridor. Key findings in the form of options, approaches and solutions were also identified. The challenges and findings were identified through a series of workshops with the parties, subsequent feedback and supporting documents.

The Strategic Land Use and Infrastructure Plan found a key challenge of the Waikato transport network is increasing traffic volumes on State Highway 3 (SH 3) and State Highway 21 (SH21). The proposed solution was to regularly monitor land use uptake rates, rural-residential and rural development, and traffic growth and safety performance within the Southern Growth Corridor ahead of delivery of the full Southern Links Network.

In regards to Peacocke the key challenge identified was infrastructure affordability, staging and timing. In the Strategic Land Use and Infrastructure Plan, infrastructure means roads and other transport, water, wastewater, and stormwater collection and management networks.

In regards to meeting this challenge it was argued that Peacocke should continue to be developed and Stage 1 and Stage 2 of the development should be funded through the Hamilton City Council 10-Year Plan. The alternative is for Council to allow development in advance of the timeframes identified, if developers in the area provided the necessary strategic infrastructure. However, the development community is simply not able to fund the $271.8 million and, this is strategic infrastructure that Council would normally provide.

Southern Links

SH3 is a regional road and SH21 is an arterial road in the Waikato Regional Land Transport Plan 2015-2025. SH3 runs from Hamilton City connecting the Waikato with the Taranaki region. SH21 provides a key link between SH1 and SH3 and access to Hamilton Airport.

Journey time and reliability, and safety are priorities for both SH3 and SH21. Both highways are identified by KiwiRAP (the New Zealand Road Assessment Programme) as having medium to high collective risk which may be exacerbated as a result of growth in the area.

High population growth in Hamilton City is accelerating problems on the transport network. These problems can be seen in:

- Congestion, safety and conflict on SH1 between Hillcrest and Kahikatea Drive
- Congestion affecting freight to Hamilton's Western Corridor to and from the South, and the increasing use of urban state highways by freight traffic
- Capacity and safety alignment on SH3 and SH21
- Access for growth in the Hamilton Airport business park areas

The majority of traffic approaching Hamilton from the south travel along SH1 and SH3, and have a destination within Hamilton City. During peak periods, there are congestion issues when entering Hamilton City along these highways.

The Hamilton Section of the Waikato Expressway will also impact on SH21. Vehicle numbers on SH21 are expected to increase, and traffic flows will change, post the completion of this section of the Expressway.

Southern Links is therefore considered by NZTA and Hamilton City Council as the optimum long-term solution to accommodate growth and manage existing traffic issues in the corridor.

Southern Links is a joint NZTA and Hamilton City Council initiative. It involves the construction of 21 kilometres of state highway, three new bridges and 11 kilometres of urban arterial roads within the Peacocke growth area.

The Southern Link project allows for a future connection to, but it is not part of the Waikato Expressway project. The Waikato Expressway is a four-lane highway from the Bombay Hills to south of Cambridge. The Expressway project aims to improve safety and reliability, and reduce travel times and congestion on SH1.

When constructed Southern Links will reduce congestion within the greater Southern Hamilton area, improve safety on SH1 and SH3 in the Hillcrest and Melville suburbs of Hamilton, improve freight flows and be a key part of Hamilton City's urban arterial network. It will also complement the Waikato Expressway by providing the main southern access linking Hamilton. The project has been developed with the projected growth in the Peacocke, Ruakura, Tamahere and Hamilton Airport areas in mind.

Hamilton City Council and NZTA have collaborated in investigations leading to designations for the Southern Links project. The investigation of arterial roads includes preliminary design for permanent level plans. The remaining decisions relate to staged implementation, including extents, interim connectivity and 2/4 lane options. The proposed Waikato River crossing that is part of the Housing Infrastructure Fund is part of these preliminary designs for permanent level plans. The planned roads in the bottom of the Peacocke residential area will open up the area, as a result of the ripple effect of the larger strategic transport investment.

Wastewater

In March 2017, a feasibility and concept design study was completed by OPUS for Hamilton City Council. This study looked at the construction and operation of a strategic transfer wastewater pump station and rising main to enable growth in the Peacocke Stage 2 area.

The Peacocke area has been divided by Hamilton City Council into 17 'neighbourhoods' each with a different residential density profile. The densities differ depending on the underlying land-use zoning in the District Plan, topography and indicative educational and recreational facility locations. Wastewater 'subcatchments' and the associated pump stations have been identified based on neighbourhood size and the projected staging of the development.

In addition, as the residential area is being developed in stages the number of people that will potentially be living in the area has been calculated and with that their requirements for wastewater at a subcatchment level.

Alignment to existing strategies

Hamilton is growing, and is home to many young people and families. Population growth is an opportunity and a challenge for Hamilton City. The Council response is that growth needs to be managed in Hamilton City because of boundary considerations. Hamilton is the smallest metropolitan area by land area, and is one of the smallest local government areas by land size in New Zealand.

To meet the priority of being the third city economy in New Zealand by 2025, Hamilton City Council has adopted a strategic approach to the spatial development and growth of Hamilton City. This approach is documented in the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The Hamilton Urban Growth Strategy articulates areas suitable for accommodating future residential growth while ensuring that the social well-being of the community is enhanced and the local environment is protected. The Hamilton Urban Growth Strategy also identifies where to develop first, why and when; what other land uses are required for business or industrial purposes; and what city infrastructure is required to support this development.

There are two growth approaches from the Hamilton Urban Growth Strategy that are important:

- Growth Approach 1: Over the next 10-20 years, approximately 50% of Hamilton's new dwellings will be increasingly provided through regeneration of existing parts of the city. It is recognised that this will not be appropriate for all areas. Therefore this regeneration will focus in and around key nodes including the CityHeart, transport hubs, suburban centres, and areas of high public amenity such as parks and the Waikato River.

- Growth Approach 2: The commitments to developing the remainder of Rototuna and Stage 1 of both Peacocke and Rotokauri remain. The development of Rototuna and Stage 1 of both Peacocke and Rotokauri will include greater choice in living environments, for instance, more compact type developments in key areas such as town centres or around parks and open spaces.

Access Hamilton: the transport strategy for Hamilton, the Regional Policy Statement, the Waikato Regional Land Transport Plan 2015-2045, and the Future Proof Strategy all recognise the need to align land use and infrastructure planning.

Access Hamilton, the transport strategy for Hamilton, guides relevant land-use planning and the management, development and protection of the transport network necessary to support Hamilton's economic development, urban design and growth strategies. Access Hamilton is currently in the process of being reviewed. This indicative business case builds on the Network Action Plan contained within Access Hamilton and the outcomes that it is delivering for Hamilton City. For this reason, the purpose of the Network Action Plan is listed below:

- Evaluates desirable land use and structure planning principles that minimise the need to travel and support a multi-modal transport system
- Identifies the key nodes and connections and expected movements, including rail, passenger transport, and national and regional road links
- Establishes a road hierarchy that identifies the strategic network (state highways and city roads), major and minor arterials, collectors and local access roads, and defines the role and treatment of each component of the road network
- Assesses the transport consequences of growth in line with integrated sub-regional and local growth strategies and identifies areas of concern
- Identifies a hierarchy of land use and transport interventions, activities and infrastructure necessary to sustain a network that supports an affordable, integrated, safe, responsive and sustainable transport system
- Provides an implementation framework for the prioritisation, coordination and implementation of activities.

Land use and transport integration is heavily reflected in the Peacocke Structure Plan and resulting arterial networks. Access Hamilton identifies the Southern Links as a key transport project for Hamilton and the Waikato, and the Peacocke area as a key land use change.

The Regional Policy Statement (Section 6, Implementation Method 6.3.2) states that territorial authorities should, in association with Waikato Regional Council, the NZTA and other infrastructure providers, ensure infrastructure planning and land use planning initiatives are aligned, and should coordinate the provision of appropriate infrastructure and services for new development prior to development occurring.

The Waikato Regional Land Transport Plan 2015-2045 (Section 3, Policy 1) aims to ensure that the land transport system is developed and manged within the context of collaborative and integrated land use and transport planning at sub-regional, regional and wider spatial scales. Measure 2 in the Waikato Regional Land Transport Plan states that transport partners are to implement integrated land use and transport measures as directed by the Regional Policy Statement.

Also, integrating land use with infrastructure is a central tenant of the Future Proof Growth Strategy and Implementation Plan. It should be noted here that the Future Proof partners include Hamilton City, Waipa District, Waikato District, Ngā Karu Atua o te Waka and Tainui Waka Alliance.

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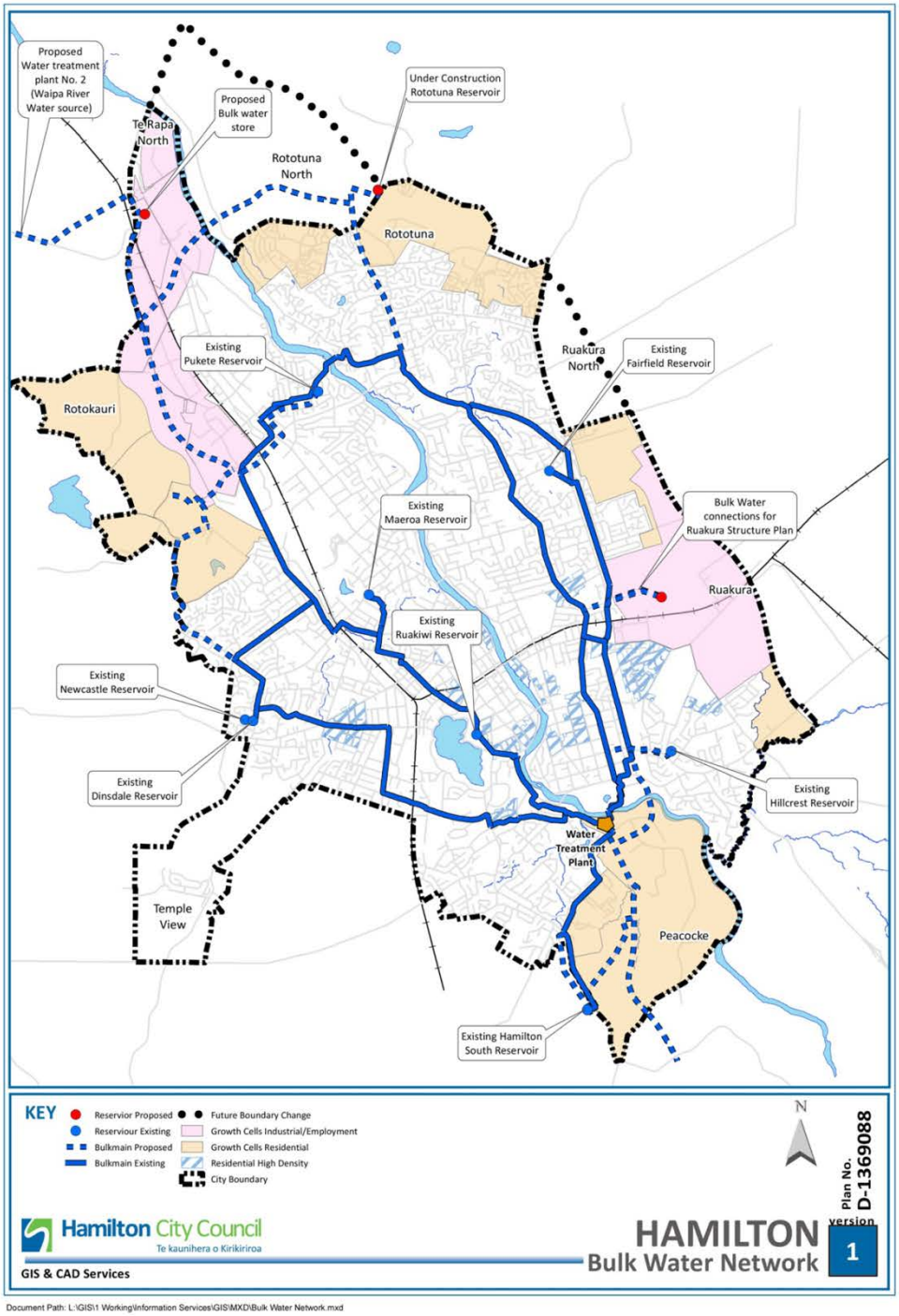

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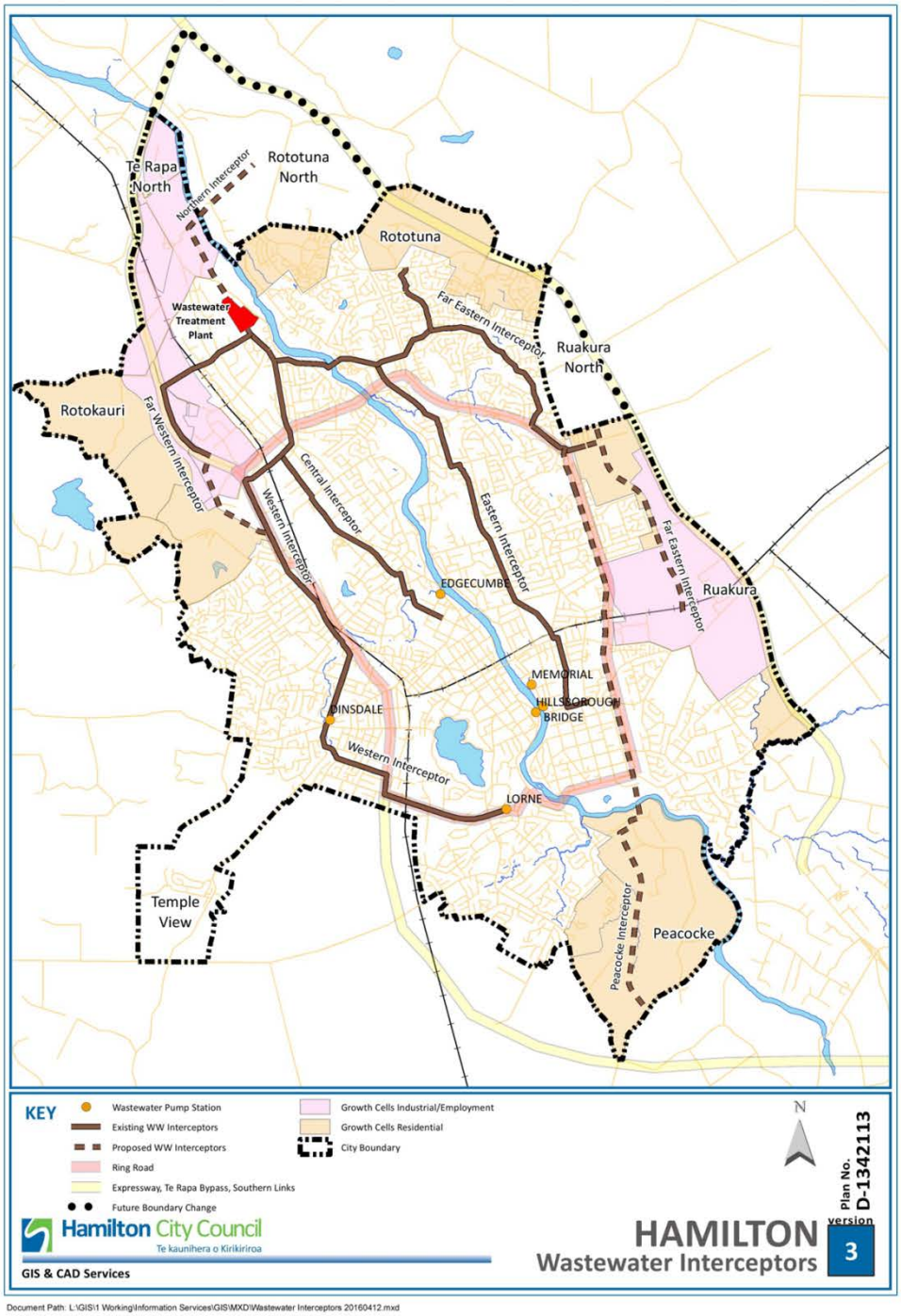
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Northern Interceptor
Wastewater Treatment Plant
Far Eastern Interceptor
Ruakura North
Rotokauri
Far Western Interceptor
Central Interceptor
Western Interceptor
Eastern Interceptor
EDGECUMBE
Ruakura
MEMORIAL
HILLSBOROUGH BRIDGE
DINSDALE
Western Interceptor
LORNE
Temple View
Peacocke Interceptor
Peacocke
KEY
Wastewater Pump Station
Existing WW Interceptors
Proposed WW Interceptors
Ring Road
Expressway, Te Rapa Bypass, Southern Links
Future Boundary Change
Growth Cells Industrial/Employment
Growth Cells Residential
City Boundary
N
Plan No. D-1342113 version 3
Hamilton City Council
Te kaunihera o Kirikiriroa
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HAMILTON
Wastewater Interceptors
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1.1 Investment objectives, existing arrangements and business needs

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

The Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Operative District Plan and the Hamilton 10-Year Plan 2015-25, along with the 30-Year Infrastructure Plan, the Regional Land Transport Plan and the Access Hamilton Strategy – Integrated Transport Plan are all aligned to grow Hamilton to be the third city economy in New Zealand by 2025.

The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The Hamilton City Growth model, along with household and population projections provided by the National Institute of Demographic and Economic Analysis (NIDEA) at the University of Waikato, indicates the projected demand for dwellings. This demand information is then matched with household supply data from each of the greenfield areas in Hamilton and the amount of infill available. The settlement pattern that Hamilton has in place to meet this supply and demand reflects the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The settlement pattern that Hamilton City Council currently has in place is insufficient over the long-term to meet new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC). Under this National Policy Statement, Hamilton has been identified as a high growth area. This means Hamilton is required to increase the amount of residential and business land that is zoned, serviced and commercially viable. In the short to medium-term (three to 10 years) this land capacity must be over and above 20% of the projected demand for residential and business land.

To meet the NPS-UDC targets, and the associated demand for dwellings caused by projected population growth, Hamilton City Council will need to bring forward planned greenfield areas such as Peacocke and Rotokauri.

Investment objectives and business needs

Hamilton City Council, through strategic planning processes, has defined four investment objectives.

These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

In a later chapter, these investment objectives are ranked against the business needs of Council and various critical success factors. This ranking allows the Council to determine what the best long and short-list options are going forward – and therefore what planned greenfield area best meets the needs of the Council - and what planned greenfield area should be put forward to receive Housing Infrastructure Funding.

Investment objective 1

Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.

Business need 1

The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.

Investment objective 2

Increase the amount of developer ready land to support 11,638 dwellings by 2025.

Business need 2

Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.

Investment objective 3

Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.

Business need 3

Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.

Investment objective 4

To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.

Business need 4

The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

Existing arrangements and business needs

Existing arrangements

Citywide water

Hamilton City Council has two treatment plants – water and wastewater. Each plant has long-term consents in place to 2044 that provide for city growth. These consents are based on the projected peak demand for water and wastewater. The Hamilton City Council projects this peak water demand out to 2060 and funds infrastructure upgrades based on these projections. This means that funded investment capacity and water allocation consents provide for growth and resilience.

The water treatment plant consent allows a stepped water take from the Waikato River to match projected growth in the population and economy of Hamilton to 2044. The wastewater plant has a discharge consent that also matches demand and allows for city growth to 2027.

Hamilton City Council has a just in time investment strategy to match growth needs. This means the Council has budgeted for the upgrade of these plants in response to actual demand. Currently $54 million has been allocated across the two plants – water and wastewater – for capacity upgrades.

For the wastewater plant the capacity upgrade is in the design phase, and procurement will start for the construction phase in the next four to eight weeks. The water treatment plant upgrade has also started and the first upgrade component is under construction. The upgrade will increase the capacity of the water treatment plant and a proportion of this upgrade is currently under construction.

At present, Hamilton City has 84.4 million litres of treated water storage capability. The Council is in the process of completing a new reservoir to meet recent and expected growth in the City. This new reservoir will be online and operational in October 2017, and will increase total treated water storage by 24 million litres. This represents a $21 million investment in potable water storage and network resilience.

There are also plans for a second additional reservoir. This is forecast to be constructed and completed by June 2020 and would add a further 12 million litres in potable water storage in the City.

All of this investment in potable water is focused on meeting the projected economic and resident population growth in Hamilton City. Further, the total increase in potable water storage enables residential growth in Peacocke.

Citywide transport networks

Hamilton City Council has a positive and collaborative relationship with the regional office of the New Zealand Transport Agency (NZTA). Together, Hamilton City Council and NZTA have jointly approached strategic network planning as it relates to transport activity and planned city land use changes.

NZTA in the Waikato Expressway Network Plan noted that the Te Rapa Bypass, Waikato Expressway and Southern Links would assist in determining the settlement pattern of western and southern Hamilton, enabling an integrated approach to development which should reduce the need for travel. This conclusion was subsequently supported by further modelling carried out in the development of the Hamilton Urban Growth Strategy.

Land use and transport integration is therefore heavily reflected in the Peacocke Structure Plan and resulting arterial networks.

Business needs – Investment objective 1

Investment objective 1 will contribute to delivering the following business needs identified by Hamilton City Council through various plans and strategies:

- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.

- The management of land use and strategic infrastructure including roads and other transport, water, wastewater, and stormwater collection and management networks. These needs are identified in the Waikato Regional Policy Statement, the Waikato Regional Land Transport Plan 2015-2045, Access Hamilton: the New Zealand Action Plan for Hamilton, and the Future Proof Growth Strategy and Implementation Plan.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

Long-term settlement pattern

Investment objective one will assist to deliver a settlement pattern that encourages families and young people to live and work in Hamilton. This meets a business need of council.

- Hamilton is home to many young people and families, and is one of only a few places in New Zealand that continues to experience growth in the youth population.
- Hamilton is a city for families, and liveability is important to encourage resident population growth.

Investing in residential areas such as Peacocke meets the long-term settlement pattern for Hamilton City, as noted in the Peacocke Structure Plan.

This development also supports the focus in the Hamilton Urban Growth Strategy on an active, strong commercial central city in Hamilton with distinctive suburban villages.

Investment objective one also contributes to and meets the business needs identified in Priority 2 and Priority 7 in the 10-Year Plan.

- Priority 2: Become the third city economy in New Zealand. Investing in community assets such as parks, playgrounds, gardens, arts and cultural and sporting facilities will support Hamilton to become the third city economy in New Zealand by 2025, as it continues to be a great place to live and work.
- Priority 7: Become an urban garden. Hamilton is green, with parks, trees, beautiful gardens and street plantings. This priority is supported by strategies that are focused on the parks, playgrounds, and river walkways in and around Hamilton, along with Hamilton Zoo and the Hamilton Gardens.

Strategic infrastructure

The business needs of Hamilton City Council to manage land use and strategic infrastructure is outlined in the 10-Year Plan and 30-Year Infrastructure Plan. Priority 3 in the 10-Year Hamilton Plan states:

- Provide outstanding infrastructure. This priority is focused on infrastructure development that prepares the City for a population of more than 200,000.

Hamilton City Council needs to manage land use and infrastructure to improve infrastructure efficiency and reduce costs. To meet business needs growth needs to occur in a manner that supports the efficient use of infrastructure (e.g. development should occur in areas that are already strategically serviced or where infrastructure is planned). Land use should also support the

significant funding investment in strategic infrastructure, and not undermine it through unplanned or ad-hoc development.

The ability to provide strategic infrastructure and services is fundamental to successful growth management and becoming the third city economy by 2025.

Infrastructure - Road Transport

The most significant business needs for transport in Hamilton are defined by the Hamilton Urban Growth Strategy, the Regional Policy Statement, and the Waikato Regional Land Transport Plan 2015-2045. Together, these strategies indicate the business needs of Hamilton City Council for road transport to enable sustainable development, and support passenger transport and active modes.

Over the next three years, connections to the Waikato Expressway will be a focus along with a continued partnership approach with developers in established growth areas over 10 years. Beyond the next 10 years, investment will be required to extend the transport network into new growth areas, including providing additional river crossings in the north and south of the city.

Business needs are also noted in the 10-Year Hamilton Plan. Hamilton City Council will provide and manage a safe and efficient transport network for Hamilton that integrates freight, private vehicles, buses, walking and cycling. This includes the operation and maintenance of existing networks, and planning for future development and growth.

There are also business needs to meet the Regional Land Transport objectives outlined in the Integrated Land Transport Plan over the next 30 years. These include the following:

- Facilitating economic development: An effective and efficient land transport system that enhances economic wellbeing, and supports growth and productivity within the Waikato region and upper North Island
- Affordability: An adaptable and flexible approach to managing and developing the land transport system that optimises funding options and provides innovative management approaches to best meet the needs of the region in an affordable way.
- Integration and forward planning: An integrated and aligned land use and transport system.

Capacity for population growth

An important business need identified by Hamilton City Council is to provide capacity within the City for population growth. Population growth will assist council to meet investment objective one and become the third city economy in New Zealand by 2025.

This resident population growth is guided by population projections. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The National Institute of Demographic and Economic Analysis (NIDEA), a University of Waikato institution, has prepared a low and medium series of household and population projections for Hamilton and other territorial authorities in the Waikato Region. These projections have been devised as part of the Future Proof project.

The Future Proof Chief Executives Advisory Group and Strategic Implementation Management Group approved the following recommendation in December 2016: *"Confirm the agreement reached*

on growth projections, which is to use a banded approach based on NIDEA low and medium projections for the Future Proof Strategy Update, and to use NIDEA low for the Waikato Regional Transport Model."

The NIDEA low series of household and population projections averages 1,250 households per annum. This projection series is the preferred projection going forward, and will be used in the Hamilton Growth model, the development of the Hamilton Long Term Plan and in future infrastructure planning and development.

Business needs – Investment objective 2

Investment objective 2 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 10 years, this requirement is to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings. This figure is over and above 20% of the projected demand for residential land.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The National Policy Statement on Urban Development Capacity (NPS-UDC) directs local authorities to provide sufficient development capacity in their resource management plans for housing and business growth to meet demand. Hamilton City Council is a local authority that is directly impacted by the NPS-UDC as Hamilton City is considered a high growth area. The NPS-UDC therefore has a substantial impact on the business needs of the Council.

Under the NPS-UDC, Councils are required to increase feasible development capacity. This means land that is zoned, serviced, and commercially viable. The NPS-UDC is focused on feasible development capacity for housing and business land to meet projected demand over the short, medium and long-term (three, 10 and 30 years).

The NPS-UDC has also set the requirements for the additional margin of feasible development capacity. For high growth areas such as Hamilton this is 20% over the projected demand for developer ready land in the short and medium-term, and 15% in the long-term. These demand projections regarding development capacity will have a substantial effect on Council's requirements for infrastructure and developable land.

The difference between the NIDEA household and population projections and the NPS-UDC requirements is important. In terms of residential growth, Hamilton needs to build new dwellings to house the additional residents projected in the NIDEA low projections, and it needs to provide the capacity for growth to be constructed along the NPS-UDC lines, but dwelling construction does not need to follow this line.

The additional capacity is there to address:

- Housing affordability through an increase in the supply of developable land
- Ensure housing supply for any unprojected population increase
- Factor in the proportion of feasible development capacity that may not be developed.

The NPS-UDC defines demand in the short, medium and long-term in relation to housing as including:

- The total number of dwellings required to meet projected household growth and projected visitor accommodation growth;
- The demand for different types of dwellings;
- The demand for different locations within the urban environment; and
- The demand for different price points.

This definition of demand is central to the NPS-UDC definition of development capacity, where development capacity refers to the amount of development allowed by zoning, and the regulations in plans that are supported by infrastructure. This development can be "outwards" on greenfield sites and/or "upwards" by intensifying the existing urban environment.

Business needs – Investment objective 3

Investment objective 3 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 30 years, this requirement is to provide developer-ready land that is zoned, serviced and commercially viable. This figure is over and above 15% of the projected demand for residential land.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

There is a business need for the Council to meet the business and residential land capacity requirements in 2045, as specified in the NPS-UDC. Such requirements are similar to those described for investment objective 2 above.

Investment objective 3 has a longer term focus and recognises that council can plan for future requirements through Annual Plan reviews and the coordinated management of strategic infrastructure. However, it also recognises that investment needs to occur to meet the long-term needs of the NPS-UDC, particularly in regards to developer ready residential land.

Business needs – Investment objective 4

Investment objective 4 will contribute to delivering the following business needs identified by Hamilton City Council:

- Priority 8 in the 10-Year Hamilton Plan: Provide access to affordable housing. The city will continue to provide a balanced supply of housing options to meet the city's growth.
- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.

- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The Hamilton Growth Model is used to determine future capacity requirements in Hamilton City. The dwelling demand projections from the model are based on the NIDEA low household and population projections and the NPS-UDC requirements.

This demand scenario assumes that the resident population of Hamilton City will be 198,000 by 2030, which is 4% higher or 7,000 more people than under the old Statistics New Zealand medium population growth scenario. This is because the NIDEA low projections are projecting 1,200-1,300 new dwellings per year for 10 years, which is a lot higher than the previous five year average of about 800 new dwellings per year.

Population growth is projected to be higher than it has been in recent years according to NIDEA and Statistics New Zealand. If this projection holds true and migration and household formation is at a higher rate than that forecast, than this will likely put pressure on land use and prices.

There is insufficient future affordable housing to provide a balanced supply of housing options given projected demographics and incomes.

- Over recent years, growth has predominantly occurred in the North of the city and continuing this trend may not provide for the future social or cultural needs of all residents
- Majority of greenfield section sizes are between 600 to 800 square metres, this is leading to urban sprawl and impacting on the price of land and the cost of travel.
- Other transport modes such as walking and cycling become less attractive if local activities are further away from people's homes. This issue is particularly important for local neighbourhood shopping nodes and schools.

Table 1 Summary of the existing arrangements and business needs

Investment Objective One	**Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025**
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.
Investment Objective Two	**Increase the amount of developer ready land to support 11,638 dwellings by 2025**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Three	**Increase the amount of developer ready land to support the balance of the NPS-UD dwelling requirements by 2045**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model; Hamilton Urban Growth Strategy; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Four	**To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase**
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045.
Business Needs	The capacity of Hamilton City to provide a balanced supply of housing options to meet resident population growth. A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.

1.2 Context for Peacocke investment option

Peacocke is within the Hamilton City Council boundary and covers an area of approximately 747 hectares. This area of land was brought into the City from Waipa District in 1989 for the express purpose of providing for the City's future urban growth.

For many years the area was identified as 'future urban' zoning. In 1999, the area was changed from 'rural' zoning to 'future urban' and Stages 1 and 2 of the Peacocke Structure Plan was finalised through Variation 14 to the District Plan between 2009-2012.

Peacocke comprises two stages. Stage 1 has an initial capacity of 850 dwellings (Stage 1a 500 lots, Stage 1b 350 lots) before significant infrastructure improvements are required. Investments to upgrade and/or build further three waters infrastructure are scheduled in the Hamilton City Council 10-Year Plan 2015-2025 for the Stage 1 area. An upgrade to the SH3 and Dixon Road intersection has also been scheduled in the current 10-Year Plan; this is a precondition to release the entire Stage 1 area. With these investments, and subject to development timing, the remainder of Stage 1 will have the necessary infrastructure in place by 2025.

Stage 2 is undeveloped and does not have an established infrastructure programme within the current 10-Year Plan. Stage 2 has an expected capacity for 7,500 dwellings. The development timing of Stage 2 could be brought forward if the necessary strategic infrastructure and transport networks are constructed in advance of the timeframes identified by the Hamilton City Council.

1.3 Potential business scope and key service requirements

The potential business scope and key service requirements were identified and assessed by Hamilton City Council. In doing this, Hamilton City Council identified specific strategic transport and water infrastructure projects that will enable land within the Peacocke area to be developer ready. These infrastructure projects will accelerate the building of new dwellings in this area.

In Peacocke, the projects that the $182.3 million in Housing Infrastructure Funding is being sought for include:

- Wairere Drive/Cobham overbridge - additional to current funding and advance funding agreement
- Wairere Drive extension and bridge over the Waikato River to Peacocke north- south arterial
- Peacocke Road urban upgrade
- SH3/Dixon Road intersection and Peacocke east-west arterial to Peacocke Road
- North-south arterial land
- The Peacocke transfer wastewater pump station and rising main.

These are all new infrastructure projects and include the construction of strategic transport and water and wastewater elements.

The potential contribution for the Waikato River crossing and arterial Peacocke roads that support the Southern Links from NZTA for transport work is $89.5 million.

The $182.3 million in Housing Infrastructure Funding will accelerate development timing and bring projects that were part of the Hamilton Plan and Long-Term Infrastructure Strategy 2015-2045 forward.

- In total, 8,103 dwellings will be developed in the Peacocke area between 2017/18 and 2038/39.
- Within the 10 years of the Housing Infrastructure Funding, the accelerated development of 3,153 dwellings in the Peacocke area.

The developments within Peacocke will continue to be undertaken in stages. This means the $182.3 million in Housing Infrastructure Funding will allow:

- Stage 1 of Peacocke to be realised within 7 years, resulting in the development of 627 dwellings
- Stage 2A of Peacocke to be realised within 11 years, resulting in the development of 1,751 dwellings
- Stages 2B and 2C of Peacocke to be realised within 15 years, resulting in the development of 5,725 dwellings. Stage 2B will be completed within the period 2019/20 to 2032/33, while Stage 2C will be undertaken as the final stage in the development between 2024/25 and 2038/39.

1.4 Main benefits

The quantifiable benefits are discussed in detail in the Economic Case. As a reference, these benefits include:

- Transport benefits to Hamilton City ratepayers (refer Annexes)
- Rates revenue to Hamilton City Council
- Wealth created for households due to appreciation in the capital value of the dwelling
- Economic contributions to Hamilton City arising from the economic activity associated with:
  a) Infrastructure construction
  b) Housing construction
  c) Household expenditure.

The non-quantifiable benefits include:

- The optimisation of strategic infrastructure networks, including the staging of transport networks and strategic infrastructure, and the earlier opening up of the wider growth cell in Peacocke.
- The earlier realisation of wider economic benefits that impact on the well-being of the community, including social infrastructure.
- Wider regional benefits, including the efficient operation of freight corridors and the adherence to coherent settlement patterns
- National benefits including the key role Hamilton plays in the Waikato and Upper North Island transport network

The optimisation of strategic infrastructure

The key economic benefit that the strategic infrastructure will enable is the bringing forward of a residential development in Peacocke. The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

Bringing forward urban development in Peacocke through the provision of a bridge across the Waikato River will enable synergies in the provision of network services. This is because the bridge can carry strategic three waters and other infrastructure services required for the residential development.

Other benefits associated with transport infrastructure being brought forward include: travel time savings including congestion relief values; vehicle operating costs savings; accident cost savings; vehicle emission reductions; trip reliability savings; and the associated wider economic benefits. It should be noted here these benefits have been identified but not quantified in the indicative business case.

As well as local access benefits, there are also expected to be transport network benefits to other industrial, commercial and residential markets in south west Hamilton, such as the Airport Business

Park, and access to additional affordable housing in the Waipa District towns of Ohaupo and Te Awamutu.

The additional Waikato River crossing is also expected to improve safety and amenity on existing corridors – SH1, SH3, SH21 - and local roads. The opening up of walking and cycle paths to and from Peacocke, and the provision of passenger transport, will also assist in managing travel demand across the Hamilton network.

Peacocke is within five kilometres of the Hamilton CBD. The provision of appropriate transport networks will therefore encourage residents to use active modes when moving between home, work and leisure activities, which will lead to associated health benefits. These outcomes will therefore be beneficial to the economy of the City and the well-being of current and future Hamiltonians.

Wider benefits that impact on the community

The bringing forward of residential development in Peacock will also have wider economic benefits on the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value.

The skills and other human capital in Hampton City will grow through projected population growth and the bringing forward of the residential development in Peacock. An increase in skills and other human capital also raises the capacity of a community to take-up new knowledge and technologies. This capacity is called the "absorptive capacity" for technology. Increasing absorptive capacity immediately makes a community ready to innovate, and to adopt and adapt new technologies. These activities increase the capacity of communities to participate in global value chains of supply. This is beneficial and vital for Hamilton City and for the wider rural community it services.

The earlier provision of infrastructure for social support and development will support the earlier development and deepening of social and cultural capital (e.g. safer communities). This also creates more resilient communities sooner. This social and cultural resilience has a value which, if realised earlier, provides a higher present value to communities.

Earlier realisation of development profits by developers will also release funds available for further development opportunities. Hence, the net present value of investment expenditure and thereby incomes for households and firms in Hamilton City will increase.

Regional benefits

The opportunity to leverage the Housing Infrastructure Fund in the south of the City in conjunction with key infrastructure and economic projects - Waikato Expressway including the extension to Pairere; Inland Port/logistics hubs; advancement of Southern Links; Pairere to Tauranga road upgrade; and the upgrade to the East Coast Main Trunk Line underscores the power of a coordinated Hamilton and Waikato region.

As discussed earlier, the Southern Growth Corridor is one of four growth corridors recognised in the Future Proof Growth Strategy. These growth corridors have been identified to assist with infrastructure and land use integration. The corridors form part of a wider sub-regional view of the Future Proof settlement pattern to assist in achieving integration between land use information and infrastructure, particularly transport.

The Southern Links network that is part of the Southern Growth Corridor is regionally significant, and the infrastructure that is required to open up the Peacocke residential area is a part of this. This includes the Waikato River crossing and minor arterial roads.

National benefits

The Ministry of Business, Innovation & Employment (MBIE) has identified housing affordability as a significant issue for many New Zealand families, the economy and government. As a result, MBIE is undertaking a comprehensive work programme that spans five areas: the supply of land, the role of regulation, the provision of infrastructure, the cost of building materials, and increasing the skills and level of innovation in the construction sector.

A well-functioning housing market is important for social and economic well-being. This includes the number of dwellings that are in the housing stock and the quality of that stock.

Table 2 Potential benefits that can be expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Description
Transport benefits	Hamilton City ratepayers	Direct	Time saving benefits
Rates revenue	Hamilton City Council	Direct	New rates paid by new ratepayers
Developer contributions	Hamilton City Council	Direct	Funding provided by developers to be applied to meet infrastructure costs
Wealth created from households	Hamilton City	Direct	Appreciation in real value of dwelling over time
Infrastructure construction	Hamilton City	Direct	Economic contribution to economy stimulated by infrastructure construction activity
Household construction	Hamilton City	Direct	Economic contribution to economy stimulated by housing construction activity
Household expenditure	Hamilton City	Direct	Economic contribution to economy stimulated by household consumption of goods and services

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Table 3 Potential benefits that cannot be reliably expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Quantitative or Qualitative?	Description and Possible Measures
Optimise strategic infrastructure	Hamilton City	Direct & Indirect	Qualitative	Enable coordination in the provision of network services.
Earlier establishment of social infrastructure including schools and community facilities	Hamilton City	Direct & Indirect	Qualitative	Resilient communities with high social and cultural capital.
Connection with Southern Links transport network	Residents of Waikato and Upper North Island. Industry road users	Direct & Indirect	Qualitative	Traffic flows, safety and reduce congestion, improve safety on SH1 & SH3, improve freight flows

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1.5 Main risks

Non-financial risks

Non-financial risks associated with the Housing Infrastructure Fund are identified in the table below with proposed bid mitigations. These mitigations have been included as HIF conditional acceptance conditions for Council.

Table 4 Initial non-financial risk analysis

Non-Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Securing developer commitment and resultant housing construction	H	M	Proposal submitted on the basis that final funding is subject to an agreed Private Developer Agreement (PDA) between Council addressing the following: Confirmation of clear housing construction targets; contributions are known; caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances.
Aligning HIF allocation with Local Government Act and Land Transport Management Act process	H	L	Final proposal submitted on the basis that it is subject to consultation with the community over the priority of advancing other capital projects in the Long-Term Plan, including any consequential impact on debt and rates.
Delivery risk	L	L	Creation of a new standalone HIF delivery team within Council and the formation of tailored industry best practice contractual delivery arrangements.
Information	H	M	Due to the compressed timeframe imposed by MBIE, some aspects of the analysis informing our understanding of costs, benefits, and impacts on the Council's finances arising from the final proposal are likely to alter through more detailed investigations in the next phase of the HIF process. This may be mitigated through the additional time and investigation phase of the next stage of the HIF process.

Financial risks

While there are financial benefits from receiving a Housing Infrastructure Fund allocation (primarily in terms of interest payments saved from the fact the Housing Infrastructure Fund would be interest free), there are potential issues with how any Housing Infrastructure Fund allocation may impact on the Council's current financial strategy.

The specific issue arising from receiving any Housing Infrastructure Fund allocation relates to how any Housing Infrastructure Fund debt will be treated both on the balance sheet and in terms of financial debt ratios, the repayment arrangements and future commitments (especially for transport projects), and how development contributions will be levied.

The table below includes the main financial risks and the proposed mitigation/bid acceptance conditions relating to them.

Table 5 Initial financial risk analysis

Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Contingency costing	H	M	Project costs to be reviewed every three years to update for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land values).
Lack of consequential and necessary infrastructure funding	H	M	The HIF proposal does not include any allowance for consequential upsize and operating expenditure, and no allowance for community infrastructure. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue as part of any future LTP considerations.
Financial reporting of HIF in Council accounts	H	H	Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Finance Authority, credit rating agencies, NZTA and the Office of the Auditor General.
Development Contribution funding uncertainty	H	M	Final bid acceptance based on receiving confirmation that DCs can be legally collected.
Impacts on financial strategy	H	H	HIF allocation would potentially result in a breach of the financial strategy with regard to debt to revenue ratios. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue.

A risk register has been developed and will be progressively updated as more detailed analysis is undertaken in the Detailed Business Case stage.

1.6 Key constraints and dependencies

The proposal is subject to the following constraints and dependencies. The first are used by Council to guide the appropriate use of funding. The second set of dependencies are specific to the HIF proposal.

The Hamilton City Council has determined the following basic principles to guide the appropriate use of funding sources and decision-making:

- Each generation of ratepayers should pay for the services they receive and borrowing can assist to achieve this outcome.
- Subsidies, grants and other income options are fully explored prior to rates being used.
- Capital costs to replace assets that reach the end of their projected economic life is firstly funded from rates.
- Capital costs to upgrade or build new assets is funded firstly from sources other than rates (e.g. subsidies, grants, fundraising, financial contributions) and then borrowing.
- Growth related capital costs are funded by development contributions.

If no other funding source can be used it is then appropriate to fund the remaining revenue requirement for operating expenditure from rates.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the MBIE tender documentation, this indicative business case is also submitted on the following basis:

- It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.
- Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is also subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets,
- contributions are known,
- caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances,
- Letters of Intent to be provided by development partners.
- Final bid acceptance based on receiving confirmation that DC's can be legally collected under the HIF structure.
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General.
- Project costs to be reviewed every 3 years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

1.7 Housing Infrastructure Fund Criteria – Strategic case

The following HIF criteria are critical for the strategic case for Peacocke and have been defined for the HIF assessment process.

Table 6 HIF Criteria Assessment Factors – Strategic Case

HIF Critical Assessment Factors	Description
Number of dwellings as a proportion of total projected demand	The number of dwellings expected to be built as a result of the proposed infrastructure as a proportion of the total projected demand for housing over the construction timeframe of the dwellings.
Expected timing of dwelling construction	The expected timing within which dwellings will be built in the area to be served by infrastructure built with HIF assistance.
Degree to which timing of infrastructure construction is brought forward	The timing of infrastructure construction if provided through HIF assistance, compared to timing if no HIF assistance was provided.
Co-benefits and economic growth	The degree to which the proposed infrastructure will support or complement other investments or economic growth.
Level of lower-cost housing	The number of lower-cost dwellings expected to be built as a result of the funded infrastructure.
Contribution to development capacity under the National Policy Statement	Degree proposed infrastructure assists a territorial authority to meet development capacity targets under the NPS-UDC.

Number of dwellings as a proportion of total demand

Table 8 shows that in the first five years, the number of dwellings that will be constructed in Peacocke will be approximately 581 dwellings. During this period, Peacocke will meet an estimated nine percent of the projected demand for housing in Hamilton City.

Table 7 Number of dwellings as a proportion of total project demand, Peacocke

	2016-2020 5 Years	2021-2025 10 Years	2026-2030 15 Years	2031-2045 30 Years
No. of dwellings to be constructed (within each period)	581	2,572	2,950	2,000
No. of lower cost dwellings to be constructed	58	257	295	200
Cumulative no. of dwellings to be constructed	581	3,153	6,103	8,103
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	9%	26%	34%	24%

Over the next five years, however, housing construction picks up. This means by Year-10 Peacocke is projected to meet 26 percent of the projected demand for residential dwellings in Hamilton City.

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This is based on the construction of an estimated 3,153 dwellings in Peacocke over the 10-year period, and a projected demand for approximately 12,296 dwellings across the City. This projected demand is based on data from the NIDEA population and housing projections, the Hamilton City growth model, and the Future Proof Growth Strategy.

By Year-15, an estimated 6,103 dwellings will be completed in Peacocke and the residential area will be meeting approximately 34% of the demand for housing across Hamilton City. Between Years-15 and 30, an additional 2,000 dwellings will be built, bringing the cumulative total to 8,103 dwellings.

Expected timing of dwelling construction

The expected timing of dwelling construction can be further assessed in two complementary ways:

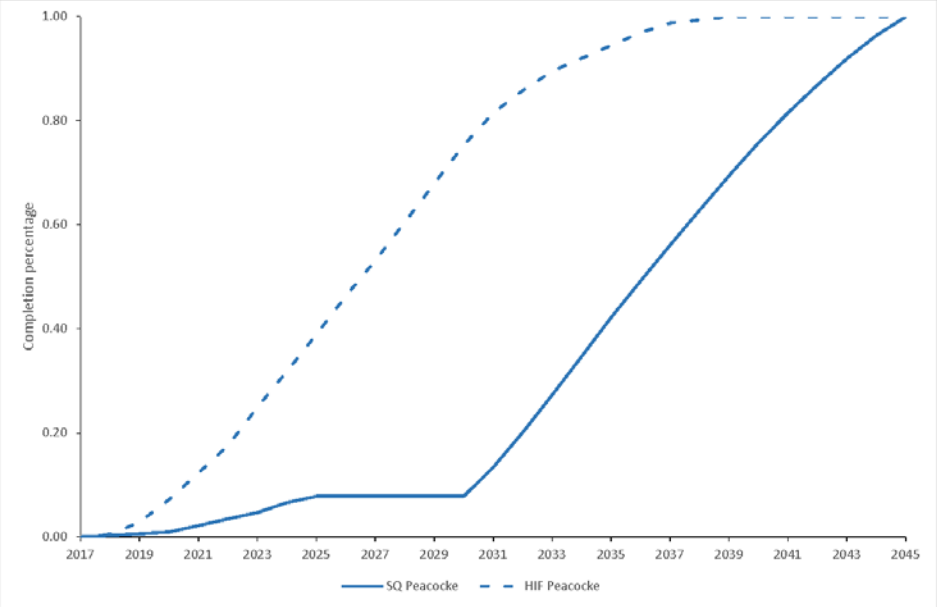
- The number of house years – this is the number of years for each house constructed times the number of years until 2045. In the case of HIF-assisted construction, dwellings are constructed earlier and have higher house years until 2045, from which time HIF and non-HIF assisted construction will accrue house years at the same rate.
- Completion dates for percentiles of construction completed – these are the years in which 25%, 50%, 75% and 100% of the number of houses are completed. In the case of HIF construction, more house are constructed sooner and the completion dates for non-HIF and HIF constructed houses show the reduction in time achieved due to the HIF assistance.

Table 9 below illustrates that with HIF funding of Peacocke achieves 5,700 more house years than under a status quo situation.

Table 8 Peacocke dwelling construction completion dates

	Peacocke	
Housing	SQ	HIF
House Years	70,030	144,034
Completion dates		
Start year	2018	2018
100 percent complete	2045	2039

Figure 1 Housing cumulative completion, percentage of dwellings, Peacocke SQ & HIF



Degree to which timing of infrastructure construction will be brought forward

Table 10 illustrates the difference in start dates for the key infrastructure projects that will occur in Rotokauri as a result of HIF funding. This infrastructure is an integrated programme of works that includes the Rotokauri Floodway and arterial roads.

Table 9 Peacocke infrastructure completion dates and change in timing completion

	Peacocke		
Completion dates	SQ	HIF	HIF (NZTA subsidy)
Transport			
Start year	2017	2017	2017
50 Percent complete	2038	2023	2027
100 percent complete	2045	2037	2037
Three waters			
Start year	2017	2016	2016
50 Percent complete	2032	2020	2020
100 percent complete	2045	2033	2033

	Peacocke		
Change in timing (years)	SQ	HIF	HIF (NZTA subsidy)
Transport			
Start year	0	0	0
50 Percent complete	0	15	11
100 percent complete	0	8	8
Three waters			
Start year	0	1	1
50 Percent complete	0	12	12
100 percent complete	0	12	12

The table splits the variables into SQ (Status Quo), or the timing of when the construction will occur without the HIF funding; HIF, or the timing of when the construction will occur with the HIF fund; HIF (NZTA subsidy) or the timing of when the construction will occur with the HIF funding and the impact of the HIF funding on the transport infrastructure projects.

Under a status quo situation, the investment in transport infrastructure associated with Peacocke will occur as part of the 30-Year Infrastructure Plan. This means 50% of the associated arterial roads will be completed by 2023 and 100% will be completed by 2037. The Peacocke transfer wastewater pump station and rising main is also part of this plan, with 50% of the wastewater pump station scheduled to be completed as part of the 10-Year Plan and 100% completed by 2033.

The HIF fund will accelerate investment in strategic infrastructure. For example, the investment in the Waikato river crossing into Peacocke is brought forward by eight years, while the investment in the transfer wastewater pump station and rising main is brought forward by 12 years.

Co-benefits and economic growth

The Economic Case presents the quantitative estimates of economic activity generated by infrastructure and housing developments. In addition, there are wider unquantified social, economic, environmental and cultural benefits. Some of these have been discussed in the previous sections, entitled *Main Benefits* and *Context for Peacocke Investment Options*. These benefits are focused on well-being and the associated social and cultural infrastructure that develops in the development of a new community.

The opportunity to leverage the Housing Infrastructure Fund in the south of the City in conjunction with key infrastructure and economic projects - Waikato Expressway including the extension to Pairere; Inland Port/logistics hubs; advancement of Southern Links; Pairere to Tauranga road upgrade; and the upgrade to the East Coast Main Trunk Line underscores the power of a coordinated Hamilton and Waikato region.

As discussed earlier, the Southern Growth Corridor is one of four growth corridors recognised in the Future Proof Growth Strategy. These growth corridors have been identified to assist with infrastructure and land use integration. The corridors form part of a wider sub-regional view of the Future Proof settlement pattern to assist in achieving integration between land use information and infrastructure, particularly transport.

As noted, and discussed in more detail in the Economic Case, the key economic benefit that HIF fund will enable is the bringing forward of strategic infrastructure that will enable residential development in Peacocke. The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

Level of lower cost housing

Council is working in collaboration with major landowners who are looking to undertake significant new residential development in the Peacocke area.

This development will provide for differing densities, with lots ranging from 250m² to 1,000m² in the site area. Approximately 40% of the anticipated dwellings are expected to have a gross floor area of between 250 and 450m². The majority of houses constructed and sold in Hamilton since 2005 range in gross floor area of between 150 and 300m²2.

Houses with a gross floor area below 200m² are typically more affordable in Hamilton, compared to larger dwellings. From the work done in collaboration with landowners to date, Hamilton City Council anticipate approximately 10% of all houses delivered in Rotokauri will be lower in cost when compared to the median 2017 Hamilton house price.

Contribution to development capacity under National Policy Statement

Hamilton City Council is well advanced in terms of undertaking the necessary work to fulfil its obligations for residential land capacity under the NPS-UDC.

As a starting point, Hamilton is satisfying its obligations in terms of having sufficient land supply up to a 10 year period when taking in to account both greenfield and brownfield development opportunities enabled under the existing planning and investment framework. Nevertheless an independent modeller has been appointed to determine all the of supply and demand requirements articulated under the NPS-UDC. The full results of these revised supply and demand assessments will not be available until June 2017.

Hamilton's population is expected to grow from approximately 160,000 in 2017 to 236,500 in 2046, an increase of 79,500 people (or by over 50%). On this basis, the demand for new residential dwellings in Hamilton until 2025 is 9,574 dwellings, or 1,064 per year. This demand will be spread across new greenfield sites and infill in the existing urban areas of Hamilton.

As noted earlier, the NPS-UDC indicates that high growth areas such as Hamilton City must provide for an additional 20% development capacity over the current demand estimates. Applying this demand contingency means the 1,064 new dwellings required in Hamilton City increases by another 229 dwellings to 1,293 new dwellings per year, or the provision of 11,638 new dwellings to 2025.

Between 2025 and 2045 the estimate for new dwellings is approximately 23,000. Consequently, over a 30-year period, the total number of dwellings needed to be constructed in Hamilton is approximately 34,000 dwellings.

2. Economic Case

The purpose of the Economic Case is to identify the investment option that optimises value for money. Having determined the strategic context for the investment proposal and established a robust case for change, this part of the business case:

- identifies critical success factors for the investment options to:
  - align with HCC's strategic direction and its operational capacity
  - be achieved in a timely way with available funding and with available public and private resources
- generates three long-list options
- assesses the long-list options in terms of:
  - fulfilling investment objectives (strategic case) targeted to business needs (strategic case)
  - meeting the critical success factors
- assesses a limited number of short-listed options, selected from the long-options assessment in terms of:
  - benefit cost assessment of the investment options compared with the status quo
  - presents the HIF criteria for the short-listed options
- identifies a preferred way forward based on the short-listed options.

Given the timeframe to prepare this indicative business case, Hamilton City Council employed Business and Economic Research Limited (BERL) to undertake the analysis in the Economic Case.

2.1 Outline of the Economic Case

Other developments and infrastructure projects considered

The Strategic Case above and the Management Case below contain a comprehensive account of the scale, scope, timing, location and strategic connections of the proposed investment options assessed in this Economic Case.

Rationale for the development and the proposed projects

The rationale for the proposed projects in this Economic Case are described detail in the proceeding Strategic Case. The main outcome sought is the acceleration of dwelling construction, including affordable dwellings. This is to be achieved by successfully meeting investment objectives. The recommended investment options assessed in this Economic Case are designed to deliver these investment objectives.

Cost contingencies

Cost estimates are the best available estimates that Hamilton City Council could produce at this time. Escalations for the infrastructure costs discussed in this Economic Case have been accounted for using SOLGM cost adjustors and are net of CPI inflation.

2.2 Critical success factors

The following critical success factors were identified by Hamilton City Council through its recent strategic planning processes.

Table 10 Critical Success Factors

Critical Success Factors	Broad Description
Strategic fit and business needs	Alignment with other key Council growth programmes and strategies over short, medium and long-term for transport and water.
Achievability	Overall programme and direct investment can be delivered in required timescales to required standard/quality and corresponding indirect investment and outcomes can be realised, including collaboration and partnering elements.
Timing and sequencing	Acceleration of core output (housing) is achieved and wider programmes are able to be delivered as forecast or sped up.
Financial viability	Fit with funding constraints, maximises/optimises financial return and capital recycling over short, medium and long-term.
Market impacts	Developers are incentivised to expedite housing development by accelerating developments, public sector funding matches pace with private sector development and collaboration is fostered.
Risk management	Appropriate controls/frameworks, management and governance including partnering, can be established and maintained.

2.3 Long list options and initial options assessment

Investment options were defined by Hamilton City Council through a facilitated options workshop held on Thursday 2 March 2017 and refined in subsequent management discussions.

Options identification

Subsequently, BERL advisors in consultation with Hamilton City Council systematically considered all the possible ways in which the investment proposal could be delivered under each of seven dimensions or categories of choice:

- *Scoping options* – What levels of road and water services are possible for each option?
- *Service solution options* – Are there policy options for road and water services?
- *Service delivery options* – Are there appropriate governance, project management and infrastructure entities in place?
- *Implementation options* - When Are services available to match the annual housing yield?
- *Prioritisation/Sequencing* – Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?
- *Consequential housing outputs* – What is the yield and timing of housing outputs?

- *Funding* – What is the likelihood of wider private investment or development?

This led to a selection of long list of in-scope options as follows:

Table 11 Possible long-list options classified by the seven dimensions of choice

Dimension	Description	Options within each Dimension
Scale, scope and location	What level of road and water services are possible for each option?	Status quo HIF-Peacocke HIF-Peacocke (with NZTA subsidy)
Service solution	Are there policy solutions for road and water services?	Status quo HIF-Peacocke HIF-Peacocke (with NZTA subsidy)
Service delivery	Are there appropriate governance, project management and infrastructure entities in place?	Status quo HIF-Peacocke HIF-Peacocke (with NZTA subsidy)
Implementation	Are services available to match the annual housing yield?	Status quo HIF-Peacocke HIF-Peacocke (with NZTA subsidy)
Prioritisation/ Sequencing	Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?	Status quo HI-Peacocke HIF-Peacocke (with NZTA subsidy)
Consequential housing outputs	Number/timescale?	Status quo HIF-Peacocke HIF-Peacocke (with NZTA subsidy)
Funding	Wider private investment/development?	Status quo HIF-Peacocke HIF-Peacocke (with NZTA subsidy)

The status quo and the investment options were assessed in terms of the investment objective and the critical success factors for each of the seven dimensions of choice, in terms of: *fully meeting, partially meeting, or not meeting each investment objective and critical success factor.*

The assessment methodology was informed by:

- Hamilton City Council strategic and operational plans
- An economic outlook for Hamilton City, including its capacity for major infrastructure development and residential housing construction.

The summary assessment of the long-list options is included below. A more detailed analysis is included in Annexes to this indicative business case.

The status quo option

A base case option is used as a baseline for comparing marginal costs and benefits of alternative investment options. It provides the benchmark for determining the relative marginal value for money added by the short-listed option under consideration.

The status quo option, in the present case is the non-HIF Peacocke option. This status-quo is currently described as part of the Council's 30 year Infrastructure Plan.

Description of the status quo option

Advantages

The main advantages are that:

(i) implementation:

a. it fulfils all investment objectives

b. it fulfils all critical success factors.

Disadvantages

The main disadvantages are that:

(i) scale, scope and location:

a. it does not fulfil objectives 2 and 3

b. it does not fulfil critical success factor market impacts.

(ii) service solution

a. it does not fulfil critical success factor of achievability.

(iii) prioritisation/sequencing

a. it does not fulfil critical success factors of strategic fit, timing and sequencing, and risk management.

(iv) consequential housing outputs

a. it does not fulfil any of the investment objectives.

Conclusion

The status quo option has a low level of alignment with Hamilton City Council's NPS-UDC investment objectives, and would not deliver council requirements for consequential housing outputs.

Long list option - HIF Peacocke (without and with NZTA subsidy)

Description of the Long List option – HIF Peacocke

Advantages

The main advantages are that:

(ii) scale, scope and location:

a. it fully meets all investment objectives
b. it fully meets all critical success factors

(iii) service solution:

a. it fully meets all investment objectives
b. it fully meets all critical success factors

(iv) service delivery:

a. it fully or partially meets all investment objectives
b. it fully meets all critical success factors except for market impacts with which it has partial fits

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(v) implementation:

a. it fully or partially meets all investment objectives
b. it fully meets all critical success factors

(vi) prioritisation/sequencing:

a. it fully meets all investment objectives
b. it fully meets all critical success factors

(vii) consequential housing outputs:

a. it fully meets all investment objectives
b. it fully meets all critical success factors except for financial viability with which it has a partial fit

Conclusion

These two options are viable short-list options since they partially or fully meet all investment objectives and critical success factors.

The short-listed options

This short-list assessment is made for the investment options compared with the status quo option.

The status quo option is the non-HIF Peacocke option. It is defined by the Hamilton City Council's Future Proof 30 year Infrastructure Plan.

On the basis of the long-list analysis, the recommended short-list for further assessment is as follows:

- Option 1: Status quo option (retained as a baseline comparator)
- Option 2: HIF Peacocke
- Option 3: HIF Peacocke (with NZTA subsidy)

2.4 Indicative costs and benefits

The indicative benefits and costs and the overall benefit-cost ratio of the short list options are presented in Table 13 below. The marginal benefit-cost ratios for the contributing benefits are presented in Table 14 below.

Table 12 Indicative costs and benefits and overall benefit-cost ratio, in present value $2017, by short-list options

BCR components ($000s)	SQ	Peacocke HIF	Peacocke HIF (NZTA subsidy)
Houses	**8,019**	**8,103**	**8,103**
Costs			
Infrastructure capital	140,592	377,912	304,106
Infrastructure maintenance	1,865	6,916	6,046
Total Cost	**142,457**	**384,827**	**310,153**
Benefits			
Transport benefits	0	378,231	378,231
Rates revenue	90,203	198,927	198,927
Developer contribution revenue	0	40,682	40,682
Improvements value appreciation	49,893	107,877	107,877
Infrastructure construction - economic impact	148,224	399,015	399,015
Housing construction - economic impact	917,374	1,535,858	1,535,858
Household expenditure - economic impact	1,300,837	3,171,215	3,171,215
Total Benefits	**2,506,529**	**5,831,804**	**5,831,804**
Benefit Cost Ratio	**17.60**	**15.15**	**18.80**

Table 13 Marginal benefit-cost ratios of contributing benefits

BCR components ($000s)	SQ	Peacocke HIF	Peacocke HIF (NZTA subsidy)
Costs	**142,457**	**384,827**	**310,153**
Transport benefits	0	378,231	378,231
Benefit Cost Ratio	0.00	0.98	1.22
Rates revenue	90,203	198,927	198,927
Benefit Cost Ratio	0.63	0.52	0.64
Developer contribution revenue	0	40,682	40,682
Benefit Cost Ratio	0.00	0.11	0.13
Improvements value appreciation	49,893	107,877	107,877
Benefit Cost Ratio	0.35	0.28	0.35
Infrastructure construction - economic impact	148,224	399,015	399,015
Benefit Cost Ratio	1.04	1.04	1.29
Housing construction - economic impact	917,374	1,535,858	1,535,858
Benefit Cost Ratio	6.44	3.99	4.95
Household expenditure - economic impact	1,300,837	3,171,215	3,171,215
Benefit Cost Ratio	9.13	8.24	10.22

The benefit-cost ratios are calculated in accordance with the following requirement set out on p18 of the "HIF Call for Final Proposals":

The benefit-cost ratio for HIF activities which provide access to housing development in high growth areas is to be calculated assuming that the level of housing development that cannot occur without the investment is advanced; the costs and benefits generated by the infrastructure work are brought forward in the benefit-cost ratio calculation.

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The main quantifiable costs for Hamilton City Council are infrastructure capital and maintenance costs.

The main quantifiable economic benefits provided are:

- transport benefits to Hamilton City ratepayers
- rates revenue to Hamilton City Council
- developer contributions to Hamilton City Council
- wealth created for households due to appreciation in the capital value of the dwelling
- economic contributions to Hamilton City arising from the economic activity associated with:
- infrastructure construction
- housing construction
- household expenditure (less rates payable whose economic benefit is already accounted for above).

The HIF-Peacocke and HIF-Peacocke (NZTA subsidy) options have overall benefit-cost ratios of 15.15 and 18.80 respectively.

Transport benefits, dwelling value appreciation and the three kinds of economic contribution all have marginal benefit-cost contributions equal or greater than one. Consequently, in general, each of these options alone provides a favourable benefit-cost outcome. This is important since the quantum of benefits outweighs the investment cost for mutually exclusive beneficiaries who are diverse across location, time, private sector, public sector and households.

Assumptions

The following are data sources and assumptions used by BERL in determining these estimates of costs and benefits.

Transport benefits

The net present value of the benefits (refer Annexes) accruing from the transport infrastructure in terms of time savings for road users. These benefits were provided by Gray Matter.

Rates and Developer contributions

Average annual rates and developer contributions per new dwelling were provided by Hamilton City Council. BERL have deflated both rates and developer contributions by the projected CPI rates to ensure they reflect real price change.

Improvement value appreciation to households

BERL have assumed that the initial capital value of a new home is the same as the average new build cost of $340,000.

BERL have assumed that each new house will appreciate in value by 3% per annum once the house has been built.

BERL has then applied an annual deflator to the annual appreciation to remove the inflation component of the price change in housing, and allowed the appreciation in capital value of housing to reflect the real growth in the value of the house.

The forecast CPI series to 2045 was developed by BERL combining current inflation growth and the long run target of 2% inflation per annum (the current RBNZ inflation target).

Infrastructure Costs

All infrastructure costs were provided by Hamilton City Council for transport infrastructure and three waters infrastructure.

To reflect real changes in infrastructure costs going forward, BERL have used a cost adjustor. For this project the cost adjustor was calculated by taking a projected capital expenditure annual cost adjustor and subtracting from it the projected annual change in inflation as represented by CPI.

Using this cost adjustor means that infrastructure costs in 2045 are 19.1 percent higher than in 2017 when expressed in $2017.

Housing Construction

Average costs per square meter were used for a house of between 100 and 250 square meters. This house would have a concrete floor slab, kitchen, bathroom, WC, ensuite. Colorsteel roof, and weatherboard cladding (Linea). Fittings in the house would be of a medium quality.

The average cost per square meter for a residential house in the Waikato comes from QV CostBuilder which replaced Rawlinsons New Zealand Construction Handbook. The range per square meter for a new build was $1,700 to $1,900 in this construction handbook. BERL has used $1,700 per square meter to reflect the better economies of scale that larger housing developers are able to achieve.

To determine the overall average size of a new house, BERL used data on the number of new residential consents in the 12 months to January 2017 and the floor area of these consents. This data showed that in the 12 months to January 2017, there were 2,933 new consents for residential houses and the total floor area was 608,200 square meters, or 207.4 square meters per house. BERL therefore used 200 square meters as an average to reflect a more conservative approach, and that the average will be influenced by a small number of much larger houses potentially being built.

Therefore, BERL has assumed an average new build cost of $340,000 for a 200 square meter house.

Household Expenditure

Average weekly household expenditure is from the Statistics New Zealand Household Expenditure Survey 2013. This is a survey of New Zealand residents who own their own dwelling.

The overall household expenditure data was adjusted by 88% to reflect the difference between the New Zealand average spend and the average spend in the Waikato / Rest of North Island region. BERL also removed property rates, savings, donations, fines and overseas expenditure from the household expenditure.

The average weekly spend was then adjusted to an annual spend. This resulted in an estimate of average household expenditure in the Waikato of $51,371.25 per year, which was rounded to $51,300 for BERL calculations.

The household expenditures output to GDP co-efficient was constructed by assigning household expenditure to 21 industries (including retail, education, recreation, food and beverages services, etc.) and using the spending weight the Gross Output to GDP co-efficient of each of the 21 industries to construct an overall co-efficient. This co-efficient is 0.6.

The total GDP multiplier for household expenditure was constructed using the same weights as the Gross Output to GDP co-efficient. This co-efficient is calculated to be 1.86.

Multipliers

For this analysis, BERL has used 2013 input-output multipliers tables for New Zealand. These are calculated from the 2013 New Zealand input-output tables produced by Statistics New Zealand in 2016.

- For Local Authority rates and developer contributions, BERL used the multiplier for Local Government.
- For infrastructure construction, BERL used the multiplier for Heavy and Civil Engineering Construction.
- For residential housing construction, BERL used the multiplier for Residential Building Construction.

For each of the Local Authority rates, developer contributions, infrastructure construction, residential building construction and household expenditure, BERL transformed the gross output to GDP and then multiplied the direct GDP for each category to determine the total annual GDP contribution to the New Zealand economy.

Net Present Value

BERL have used a discount rate of 6 percent in our Net Present Value calculations.

BERL have also expressed the Net Present Values in $2017.

The recommended preferred way forward

On the basis of the above initial assessment, both the HIF-Peacocke and HIF-Peacocke (NZTA subsidy) options are preferred over the status quo, with the NZTA subsidised option being the best.

2.5 Housing Infrastructure Fund Criteria – Economic Case

The HIF criteria relevant to the economic case for the investment options are defined as shown in Table 15 below.

Table 14 HIF Criteria Assessment Factors – Economic Case

HIF Critical Assessment Factors	Description
Infrastructure spend per dwelling	The average spend would be the total value of funding assistance applied for, divided by the number of dwellings expected to be built as a result of the infrastructure provided.
Co-benefits and economic growth (where quantifiable)	The degree to which the proposed infrastructure will support or complement other investments or economic growth (where quantifiable)

Infrastructure spend per dwelling

Table 16 below shows the infrastructure spend per dwelling in HIF-Peacocke over the next 30 years. It illustrates that in the first 10 years, the average cost per dwelling enabled by the HIF assistance sought is $59,100. This drops to an average cost per dwelling of $23,000 by 30 years.

Table 15 Infrastructure spend per dwelling, Rotokauri

	2016-2020 5 Years	2021-2025 10 Years	2026-2030 15 Years	2031-2045 30 Years
No. of dwellings to be constructed (within each period)	581	2,572	2,950	2,000
No. of lower cost dwellings to be constructed	58	257	295	200
Cumulative no. of dwellings to be constructed	581	3,153	6,103	8,103
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	9%	26%	34%	24%
HIF bid infrastructure cost per dwelling constructed	320,700	59,100	30,500	23,000

These figures are based on the gross funding of this HIF proposal for Peacocke of $271.8 million, which includes $89.5 million of NZTA subsidy. This calculation is in accordance with guidance provided by MBIE.

Co-benefits and economic growth (where quantifiable)

The Economic Case presents the quantitative estimates of economic activity generated by infrastructure and housing developments. In addition, there are wider unquantified social, economic, environmental and cultural benefits. Some of these have been discussed in the previous sections, entitled *Main Benefits* and *Context for Peacocke Investment Options*. These benefits are focused on well-being and the associated social and cultural infrastructure that develops in the development of a new community.

Some of the key co-benefits of Peacocke relate to high amenity values particularly the natural landscape, and their proximity to major transport infrastructure, primary, secondary and tertiary education facilities, and major employment areas in the central city.

As noted, and discussed in more detail in the Economic Case, the key economic benefit that HIF fund will enable is the bringing forward of strategic infrastructure that will enable residential development in Peacocke. The opening up of these greenfield areas will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

The bringing forward of residential development in Peacocke will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value. In addition, the skills and other human capital in Hamilton City will grow through projected population growth.

3. Commercial Case

The purpose of the Commercial Case is to identify how the preferred investment option that optimises value for money from a commercial perspective.

Having determined the strategic context for the investment proposal and established a robust case for change, this part of the business case examines how commercial viability can for the preferred option of funding Peacocke can be achieved through:

- developer commitment and general residential update, and
- Procurement processes
- Delivery processes

These commercial case elements are the best mechanisms to ensure the preferred option of funding Peacocke can come to fruition.

Commercial viability

The primary way to determine commercial viability at this stage of the indicative business case process is through developer commitment.

Hamilton City Council has a positive and collaborative working relationship with our key landowners and developers in the Peacocke area.

Within the Peacocke growth cell the Adare Development Group, owns 200 ha of land and in partnership with Todd Property Group Ltd. has identified a developer funded development stage capable of producing up to 350 homes over the next three years. Adare is working in partnership with HCC to initiate that development. However, development for Peacocke beyond this is constrained by current lack of HCC long term infrastructure funding and privately funded viability.

Letters of intent outlining a further commitment to housing delivery through the signing of detailed private developer agreements have been included in our proposal.

We have a long and proven track record of delivering excellent development outcomes in both growth cells by working in partnership with key landowners and developers.

Peacocke

Hamilton has minimal regulatory constraints to the proposal. The land identified is zoned and included within the October 2016 Partly Operative District Plan. For Peacocke, a land acquisition programme is underway and all designations are in place with regional consents secured for key transport related projects associated with the HIF project funding.

Procurement processes

HCC is committed to smart public procurement that delivers better public services and value for money through a strategic and structured approach to procurement.

HCC's procurement framework is based on policy, principles and rules as contained in the HCC Procurement Policy and Procedures Manual.

Collectively, these provide a broad framework that supports accountability for spending and delivering best value for money for ratepayers while ensuring the checks and balances expected of public sector procurement are in place.

HCC Procurement Policy and Procedures have been developed to comply with both the Ministry of Business and Innovation and Employments "Government Rules of Sourcing –third edition 2015" as well as the requirement of NZTA's procurement processes.

The HCC Procurement Policy is underpinned by a procedures manual that contains defined processes and templates covering end to end procurement procedures from planning and sourcing through to managing contracts. As part of the continuous improvement cycle these policies, processes and procedures are frequently reviewed to ensure compliance with best practice.

Delivery processes

All of the infrastructure proposals under the preferred option for the Peacocke funding package are at or beyond detailed business case stage, with some road designations, key consents, and land secured.

Preliminary designs are ready or under way. We propose a combination of traditional staged delivery for routine infrastructure and design and construct models for the bridge and wastewater system where construction techniques and specialist skills can add value and reduce cost and risks with innovative and optimum designs

We will collaborate with land owners, developers, key local stakeholders, Iwi, NZTA and the NZ Government to minimise project risks, overcome barriers and ensure successful delivery.

We have demonstrated our ability to deliver in the forward-funded Hamilton Ring Road and the W2 Hamilton Wastewater Treatment Plant upgrade projects.

We have effective relationships with NZTA and developers. We will build on these relationships though comprehensive developer agreements to share risk and funding requirements. Working together with clear messages and direction we can assure the HIF benefits.

4. Financial Case

4.1 Impact on the financial statements

The following table is stated in 2017 $millions, therefore no inflation has been applied.

Table 17 – Impact on financial statements 2017 to 2035

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital	0.00	33.00	70.00	37.00	23.00	10.00	7.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating	0.00	0.00	0.05	0.06	0.08	0.09	0.13	0.16	0.18	0.19	0.20	0.21	0.22	0.24	0.24	0.24	0.26	0.28	0.28
Total	**0.00**	**33.00**	**70.05**	**37.06**	**23.08**	**10.09**	**7.13**	**2.16**	**0.18**	**0.19**	**0.20**	**0.21**	**0.22**	**0.24**	**0.24**	**0.24**	**0.26**	**0.28**	**0.28**
Funded By:																			
Existing revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Existing capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Extra revenue - Rates	0.00	0.29	0.61	0.95	1.33	1.74	2.19	2.67	3.20	3.77	4.33	4.93	5.56	6.22	6.93	7.68	8.47	9.30	10.19
- DCs	0.00	1.00	2.00	2.00	3.00	4.00	3.50	3.00	3.00	2.50	3.00	3.50	4.00	4.50	4.00	4.50	4.00	2.50	2.50
Loan - HIF	0.00	31.71	67.39	34.05	18.67	4.26	1.31	-3.67	-6.20	-6.27	-7.33	-133.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Other	0.00	0.00	0.05	0.06	0.08	0.09	0.13	0.16	0.18	0.19	0.20	125.70	-9.34	-10.49	-10.69	-11.94	-12.20	-11.53	-12.41
Total	**0.00**	**33.00**	**70.05**	**37.06**	**23.08**	**10.09**	**7.13**	**2.16**	**0.18**	**0.19**	**0.20**	**0.21**	**0.22**	**0.24**	**0.24**	**0.24**	**0.26**	**0.28**	**0.28**
Net Cash Flow	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Within the above table, assumptions have been made to determine these initial estimates. The assumptions include:

- HIF loans are repaid from additional revenue received from growth in the rating base and development contributions. After 10 years it is assumed that the remaining HIF loan is repaid by refinancing from other sources (LGFA or the banks).
- Additional growth in the rating base attributed to Peacocke HIF investment is assumed to be 0.2% which is based on expected extra demand.
- Additional development contributions revenue is based on modelling and assumptions using growth data and capital costs of growth infrastructure proposed.

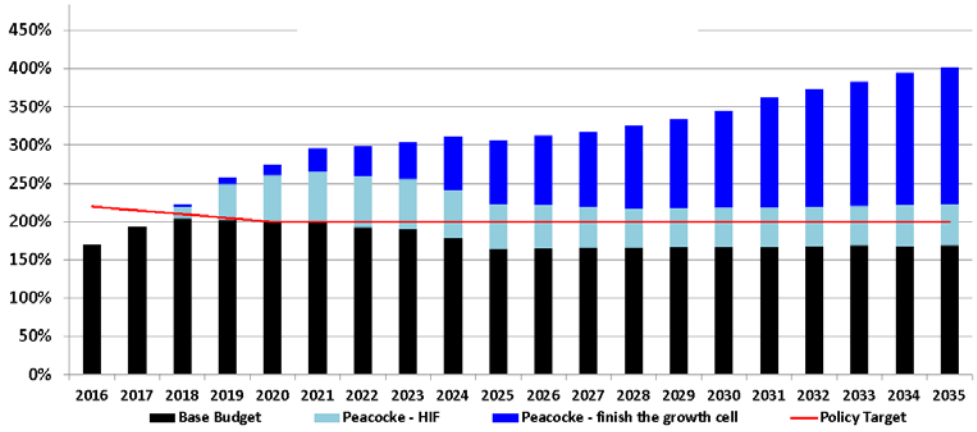
4.2 Overall affordability

The financial case includes charts that show the impact on the Council's debt to revenue ratio of accelerating the Peacocke growth cell by using HIF loans and other loans (to complete infrastructure not included in the HIF application).

The financial case illustrates the impact on the Council is very challenging as there is currently much uncertainty on debt treatment; the level of new revenue associated with HIF; the level of developer contributions and costs met direct by developers; and other inputs to the 2018 Long-Term Plan. These are all largely unknown at this time.

This means the long-term financial predictions challenge the existing financial strategy of Hamilton City Council and the Council needs more time and opportunity to work through the financial scenarios with MBIE and other key stakeholders.

Figure 2 – Debt to revenue ratio 2016 to 2035



The following assumptions and caveats have been taken into account when developing the above chart:

- The "Base Budget" is the 10-Year Plan plus decisions made since. It excludes the 2017/18 Annual Plan proposals and any potential future impacts on
- Budgets (e.g. a new Founders Theatre, a new rubbish collection contract).
- The "Base Budget" from the 2025/26 year and beyond is estimated based on a debt to revenue ratio that is constant at about 2024/25 levels.
- Inflation has been applied at the rates used in the 2015-25 10-Year Plan and from 2025/26 the average BERL rate is used per their 2016 report to local authorities.
- The Peacocke scenario includes the capital cost of the funding to be requested from the HIF and consequential operating costs and revenues associated with completing the infrastructure early.
- There is additional infrastructure required to complete the growth cell in addition to the works covered by the HIF. This additional capital and operating expenditure is included in the above chart.

- There will be considerable costs of community infrastructure required at the growth cell that is not included in this analysis.
- Additional revenues include increased Development Contributions for Peacocke and increased growth in the rating base of 0.2% per annum.
- All funds advanced either directly from the HIF or through NZTA on behalf of the HIF are assumed to be recognised as debt by the Council.
- The debt to revenue charts are calculated using the Council's calculation method. The LGFA use a different method that is more favourable.

4.3 Funding sources

The funding sources are discussed in the above sections.

5. Management Case

5.1 Executive Summary

On execution of the funding agreement, we will establish a project to deliver the HIF Peacocke infrastructure and manage it in collaboration with NZTA and MBIE using HCC's existing governance and large project management systems. We operate three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

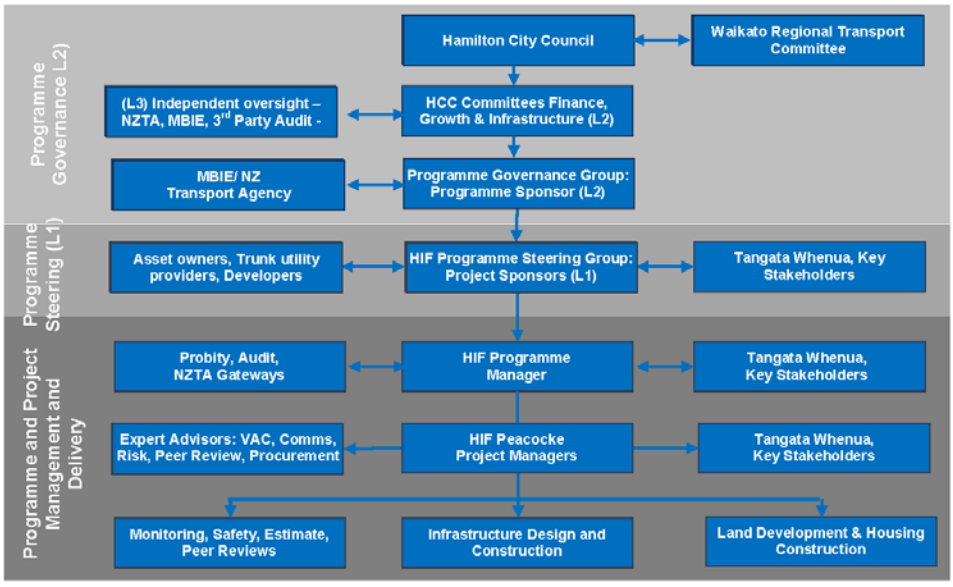
Level 1: Project management oversight, capability and experience (L1);

Level 2: Project/programme governance (L2); and,

Level 3: Independent and objective assurance (L3)

The project management and governance structure will follow HCC's standard practice for large infrastructure projects as shown below.

Figure 2: Peacocke Trunk Utility and Arterial Transport Network project organisation chart



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The Peacocke proposal comprises:

Strategic Infrastructure Element	Estimate ($M,2017)
Wairere Drive/Cobham Drive overbridge	$20.8M
Wairere Drive extension and Waikato River bridge	$113.0M
Peacocke Road urban upgrade	$9.7M
SH3 intersection and east-west arterial	$35.5M
Wastewater strategic storage and pressure main	$43.3M
North-south arterial land	$26.7M
Internal strategic wastewater network	$17.6M
Internal strategic water distribution main	$5.2M
HIF Proposal – Peacocke Project Total	**$271.8M**
2015 10 Year Plan $0M	***NZTA FAR $89.5M***	***HIF $182.3M***

Two major gateway projects form part of the Housing Infrastructure Fund business case for Hamilton's Peacocke growth area. These are the bridge over the Waikato River and associated new transport link and, the proposed wastewater transfer pump station and rising main. An east-west link and road upgrade support additional development and generate additional travel time savings through early construction of part of the Hamilton Southern Links transport network. Implementation will take around 6 years and commitment to construction of the gateway infrastructure will allow early development accepting a lower level of service and greater risk on the existing networks in the interim.

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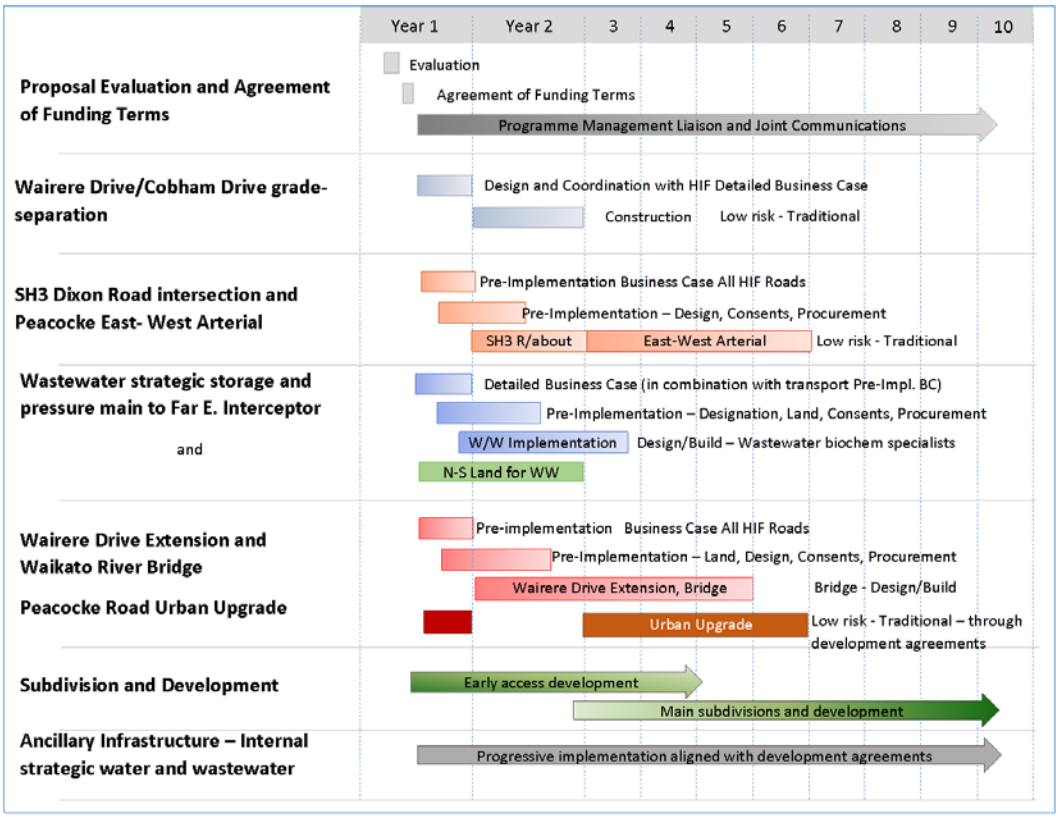
Figure 3: Peacocke Trunk Utility and Arterial Transport Network – Estimated Timeline



In addition, as a well-advanced project developed in collaboration with NZTA, the HIF transport infrastructure matches the proposed Hamilton Southern Links, which has a detailed risk management plan, with peer reviews of key outputs such as designs and estimates. There is also a comprehensive environmental management plan in development and a Public Engagement Plan which is already under way.

The strategy, framework and plan for dealing with change, contract management and risk will be founded on HCC's established quality, risk, contract and cost management policies and procedures. These are in accordance with NZTA's quality, risk and procurement requirements and the Government Rules of Sourcing. We have demonstrated our effectiveness working closely with NZTA and 100% forward funding on large projects by successfully delivering the $88M Wairere Drive Hamilton Ring Road. Our success with the $25M P2 Pukete Wastewater treatment plant upgrade demonstrates our ability to procure and deliver technically challenging wastewater solutions.

Right at the beginning we will sort out what we know, what we might not know, and make sure that we target risks appropriately to establish a foundation for project development through the detailed business case and implementation. We will also use independent challenge and peer review methods as triggers for value engineering to build our time and budget contingencies.

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Governance and reporting arrangements

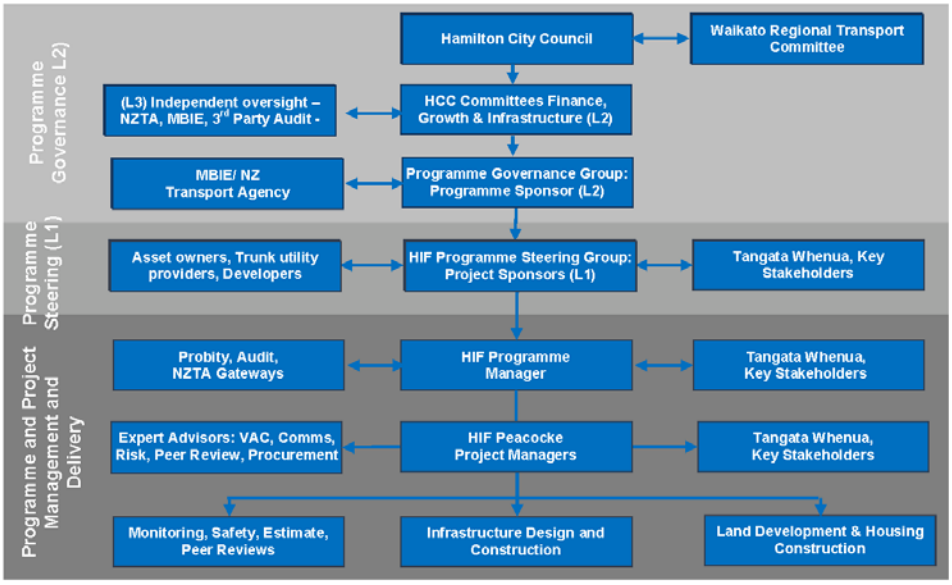
Governance will be in accordance with HCC's Governance Structure[1]. We will extend our highly successful Southern Links investigation collaboration with NZTA through implementation. We will update the multi-party funding agreement, which covers risk, funding, communications, governance, scope and project management and invite MBIE to join us in governance. The project management and governance will follow HCC's existing practice for large infrastructure projects as shown below. We operate three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

Level 1: Project management oversight, capability and experience –project steering and peer reviews (L1);

Level 2: Project/programme governance – generally Council Committees (L2); and,

Level 3: Independent and objective assurance (L3): E.g. third party oversight by NZTA, external and internal audit to check controls are working.

Figure 4: Peacocke Trunk Utility and Arterial Transport Network project organisation chart



[1] http://www.hamilton.govt.nz/our-council/councilcommittees/Documents/Governance%20Structure%20Terms%20of%20Reference%20and%20Delegations%202016-2019.pdf

Integration with other programmes

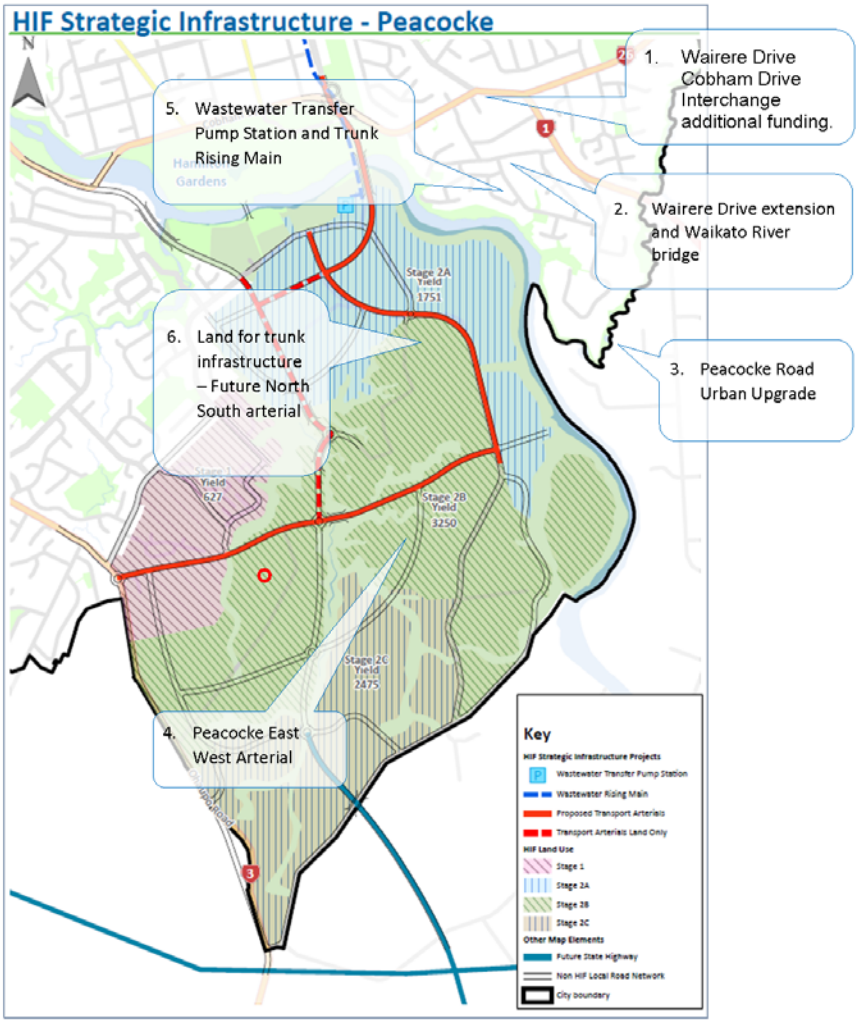
The HIF Programme of works will link with other infrastructure programmes. The Peacocke trunk utility and arterial transport network activities form part of the Southern Links project. This is an established project developed jointly by HCC and NZTA and an integral part of the draft Access Hamilton Programme. Access Hamilton comprises a portfolio of key projects for the delivery of improvements to Hamilton's transport over the next 10 years. The key projects are set out in the Access Hamilton Programme Business Case (currently draft – updating the Access Hamilton Strategy 2010 – 2040). The relevant programme management arrangements will remain are as follows:

- Activity development in accordance with NZTA's Business Case approach
- Optimisation and prioritisation as part of RLTP and Hamilton LTP processes.
- Procurement and implementation in accordance with HCC's procurement procedures (NZTA Approved)
- Monitoring in accordance with One Network Road Classification and Road Efficiency Group requirements
- Benefit monitoring and reporting in accordance with approved business case requirements.

Key activities and benefits management

The key activities comprising the HIF proposal are shown in Figure 4 below.

Figure 5: HIF Strategic Infrastructure - Peacocke Strategic Utility and Arterial Transport Network



Two major gateway projects form part of the business case infrastructure. These are the bridge over the Waikato River and associated new transport link, and the proposed wastewater transfer pump station and rising main.

In addition, an east-west arterial connection from State highway 3 Ohaupo Road and an urban upgrade to Peacocke Road to link to the bridge over the Waikato River can start early and facilitate early access to deliver housing benefits early and transport network benefits as soon as the bridge is connected.

Additional HIF funding will top up the committed funding for the Wairere Drive/Cobham Drive interchange to grade separate the link between the Hamilton ring road and the bridge over the Waikato River. NZTA Value Assurance Committee approved the interchange in March 2017 as part of our ring road project assurance procedures.

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5.2 Planning for successful delivery

Governance reporting and benefits realisation

The Programme Manager will produce monthly a combined programme report for the HIF Programme Governance Group that shows where all projects are at in terms of scope, time, cost and risk and whether there are any issues to deal with in order to help the projects to progress successfully. The status of the programme and each project is measured against the baselined project management plan and any changes to this will be reviewed and if appropriate approved through governance (Level 2-3 – e.g. Council Committees and NZTA VAC/NLTP Advisory Group).

Each major project will maintain a risk register, issues register, and change register, and update the project management plan following governance approval of any changes. We will complete a post-implementation review within 6 months of completion (Level 3 assurance).

We will prepare a Benefits Realisation Plan as part of the HIF detailed[2] business case. HCC's strategy for management and delivery of benefits is to establish clear measures and milestones for benefits and to test proposals and outcomes against these as the project develops and is refined and delivered. The key benefits are summarised below with likely measures.

Table 18 Benefits Management – measures and monitoring

Benefit	Measure	Monitoring/reporting	Status
Residential development	• Dwellings (No)	Building consents (applications, completions)	Existing
	• serviced land suitable for development (area, lots)	Subdivision consents	Existing
	• Trunk infrastructure capacity (households)	reserve capacity (Capacity – connections)	Existing (increase review frequency)
Transport – Travel time	• Travel time (duration)	BlipTrack bluetooth or TomTom data	Existing NZTA access
	• Trip reliability (variation)	BlipTrack bluetooth or TomTom data	Existing NZTA access
	• Delays	Traffic signal performance	Existing HCC SCATS system
		Surveys (before and after)	As required
Transport - Safety, amenity	• Inferred – external traffic	Surveys (before and after)	As required

Project management arrangements

General

We will establish a project to deliver the Peacocke trunk utility and arterial transport network activities (refer Figure 1 above for structure). We will use the PRINCE2 or PMI project management

[2] The Southern Links Transport components are at Pre-Implementation phase. Detailed Business Case is used to align terminology with the Request for Proposal and link with Wastewater infrastructure.

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methodology or equivalent. We will prepare a detailed project plan to set out the project roles and responsibilities for each major project.

We do not anticipate significant organisational changes as part of the project, other than managing the additional delivery commitment. We will deal with this by increasing internal or external resources for the project or existing commitments. We will use expert advisors to assist staged design and procurement planning and with project management if required. Suitably experienced physical works contractors will construct the works. For complex projects such as the river bridge and the wastewater works we would prefer design and build approaches to optimise value for money.

We have demonstrated our effectiveness working closely with NZTA and 100% forward funding on large projects by successfully delivering the $88M Wairere Drive Hamilton Ring Road. That has transformed Hamilton's transport system and successfully passed a Price Waterhouse Cooper independent audit.

Project timetable – key gateway infrastructure activities

The major projects will run over three stages (Pre-implementation, Early Access, and Full Access) and will take approximately six years to complete. A timeline summarising the key projects and activities in the Peacocke HIF programme is illustrated in Figure 5 below.

Figure 6: Peacocke Strategic Utility and Arterial Transport Network – Estimated Timeline

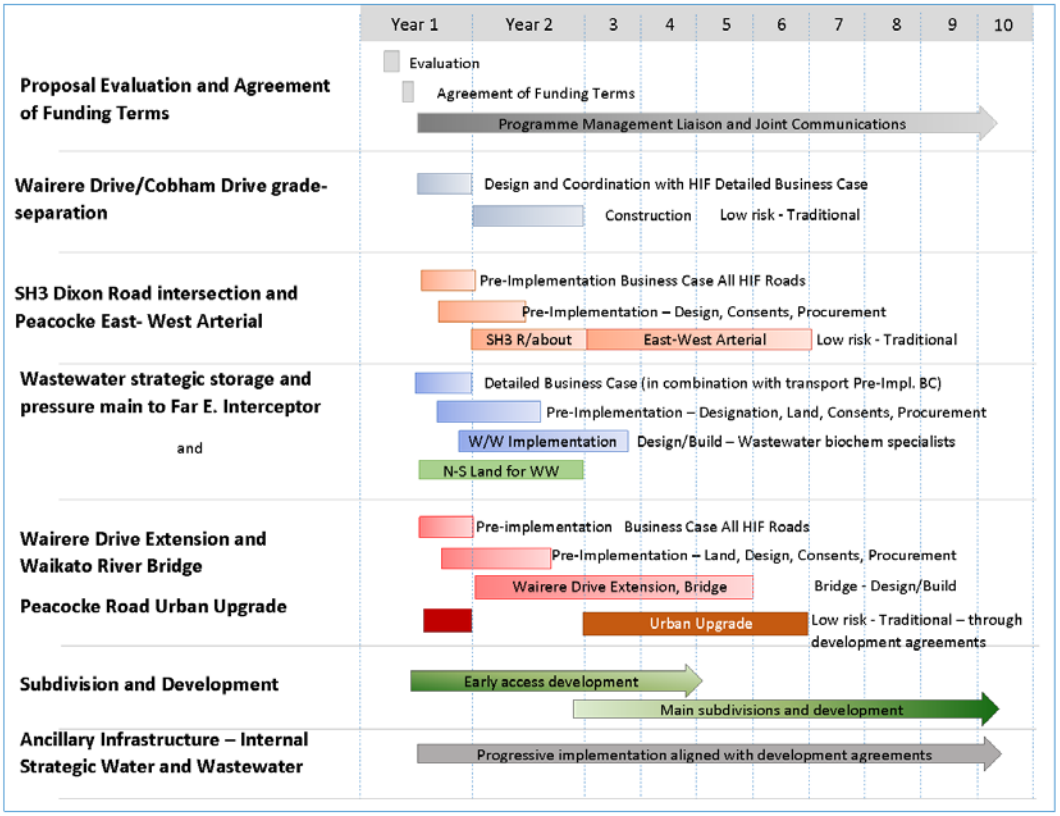

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Table 19 Project plan – Preliminary timetable – subject to land and NZTA approvals

Key Project Milestone	Completion Year	
HIF Proposal Funding Agreement – Negotiation and Executions	0	
DBC/Pre-implementation – Property, consents, design, procurement	1-2	
Wairere Drive/Cobham Drive Grade Separation – facilitate construction	2	
Early Access – Maximise use of existing assets		
Early access agreements between HCC, developers and NZTA	1	
Procurement	1	
Construction - East/West access to SH3	2	Roundabout
	6	East West Connection
Construction - Wastewater	3	
Full Access – Full servicing		
Procurement	1	
Ring Road Link and Gardens Bridge including final Wastewater connections	5	
Construction – Peacocke arterial roads	6	
Completion –subject to statutory limitations and engagement	**Year 6**	

Project cost control

The expected project estimates as listed below (no escalation).

Table20 Expected project cost estimates

Wairere Drive/Cobham overbridge - additional to current funding:	$20.8M
Wairere Drive extension and bridge over Waikato river to Peacocke north south arterial:	$113.0M
Peacocke Road urban upgrade	$10.1M
SH3/Dixon road intersection and Peacocke east west arterial to Peacocke Road	$35.5M
Wastewater strategic storage and pressure main back to the existing far eastern interceptor	$43.3M
North south arterial Land	$26.7M
Internal strategic wastewater network	$17.6M
Strategic water distribution main	$5.2M
Project Total (HIF Proposal)	**$272.1M**

The following key assumptions were applied when developing the cost estimates:

Transport Costs

- Costs are derived from HCC/NZTA estimates with verification from third party technical advisors

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- Transport costs have come from the Hamilton Southern Links project estimates (detailed business case status approved by HCC and NZTA and estimates peer reviewed 2017).
- Cost estimates have been assessed and reviewed following best practice methodology, but still involve a level of uncertainty and will be reviewed and finalised at the next stage of the business case process
- Costs are expected estimates (P50 confidence level) with contingency allowance typically around 20%, but with no allowance for inflation/escalation.

Water / Waste Water

- For the strategic wastewater transfer pump station and rising main, cost estimates have been assessed and developed via third party experts following best practice methodology. There is still a level of uncertainty and will be reviewed and finalised at the next stage of the business case process
- Costs for other water and wastewater projects are derived from HCC's Long Term Plan Standard Unit Rate estimates.
- They are based on concepts for the specific works and reflect anticipated outturns based on similar works
- Outturn costs could change subject to private developer agreement negotiations, efficiencies, innovations and the design approach of Developers.
- Costs are expected estimates (P50 confidence level) with a nominal 20% contingency allowance, but with no allowance for inflation/escalation.

Stormwater

- Costs are derived from HCC's Long Term Plan estimates (Equivalent to indicative business case) based on high level assumptions of works, related ground conditions, engineering judgement and amounts that would likely be incurred directly by Developers
- Costs are expected estimates (P50 confidence level) with reflective contingency allowance, but with no allowance for inflation/escalation.
- Outturn costs will only be confirmed at the time of full design and development or through negotiation of private developer agreements.

General Assumptions

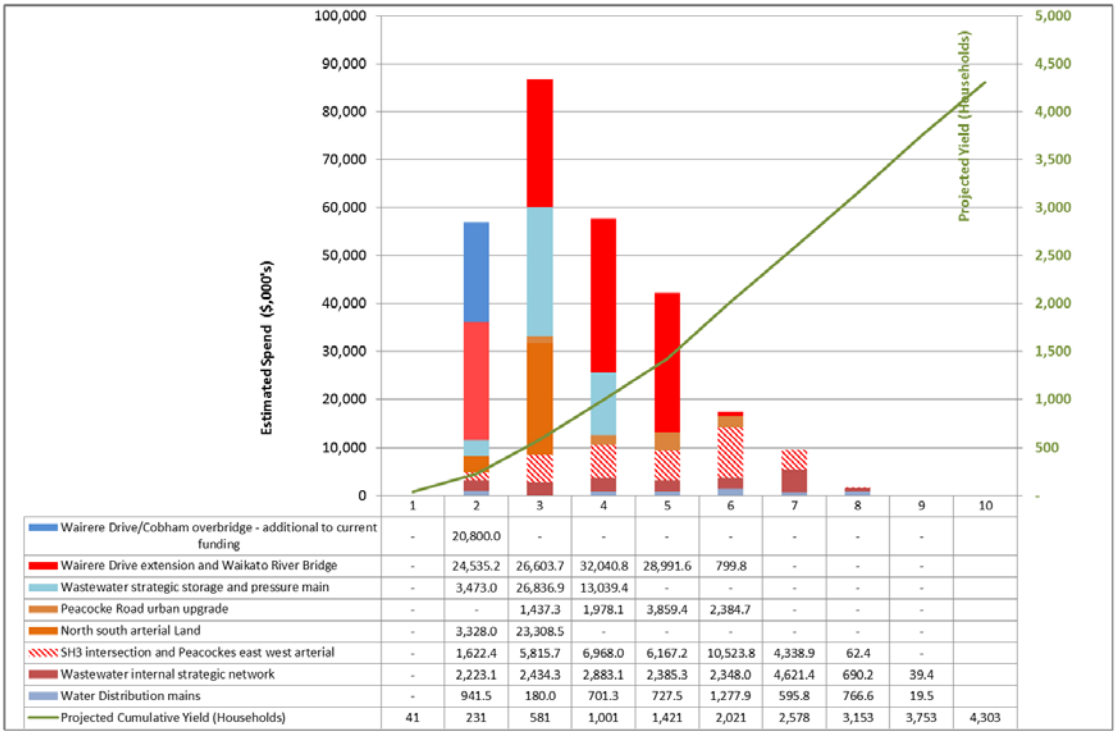
- Costs are in 2017 dollars with no allowance for inflation
- Where applicable, costs include elements for land acquisition (other than land that may be subject to Tainui rights of first refusal).
- All major and minor transport corridors assume an NZTA subsidy on investigation, design, land purchase and construction. All costs to date will be included in a retrospective funding application to NZTA.
- Costs for operating or ongoing maintenance costs related to the infrastructure are excluded and will be met by HCC
- Costs are assumed to be for strategic trunk infrastructure and therefore exclude any allowance for local infrastructure (e.g. roads within a development site) to connect to the trunk infrastructure.
- Local road and reticulation cost are typically the responsibility of individual developers with the specific requirements being determined via the resource consent process or private development agreements.

- Additional costs for upsizing and upgrading local development infrastructure where necessary to meet future demand from other areas are excluded at this stage and will only be confirmed at the time of full design and development or through private development agreements.

All costs will be reviewed in the post-business case stage and at three-yearly Long Term Plan resets.

The Peacocke spend profile for the project based on estimated costs and timing is illustrated in Figure 7 below:

Figure 7: Peacocke Strategic Utility and Arterial Transport Network – Spend Profile and Expected Yield



	1	2	3	4	5	6	7	8	9	10
Wairere Drive/Cobham overbridge - additional to current funding	-	20,800.0	-	-	-	-	-	-	-	
Wairere Drive extension and Waikato River Bridge	-	24,535.2	26,603.7	32,040.8	28,991.6	799.8	-	-	-	
Wastewater strategic storage and pressure main	-	3,473.0	26,836.9	13,039.4	-	-	-	-	-	
Peacocke Road urban upgrade	-	-	1,437.3	1,978.1	3,859.4	2,384.7	-	-	-	
North south arterial Land	-	3,328.0	23,308.5	-	-	-	-	-	-	
SH3 intersection and Peacockes east west arterial	-	1,622.4	5,815.7	6,968.0	6,167.2	10,523.8	4,338.9	62.4	-	
Wastewater internal strategic network	-	2,223.1	2,434.3	2,883.1	2,385.3	2,348.0	4,621.4	690.2	39.4	
Water Distribution mains	-	941.5	180.0	701.3	727.5	1,277.9	595.8	766.6	19.5	
Projected Cumulative Yield (Households)	41	231	581	1,001	1,421	2,021	2,578	3,153	3,753	4,303

Project assurance

HCC operates three levels of protection for project assurance. These are appropriate project management oversight by means of steering or project control groups, project/programme governance and independent reviews and audits, such as NZTA Value Assurance.

We will complete typical NZTA project assurance activities for the transport works during the pre-implementation and implementation stages. We will incorporate the key trunk water and wastewater works with these as relevant. The Southern Links macroscope and Wairere Drive/Cobham Drive Interchange has already been presented to VAC. Additional assurance will consider details such as managing interim effects and incorporating passenger transport and walking/cycling infrastructure which need to be coordinated with the Access Hamilton programme.

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Table 21 Project Assurance (NZTA focus since Southern Links is joint network project)

Item	Component	Description
Southern Links Peacocke Arterials	Optimise scope and extent for staged implementation -	Problem and benefit confirmation and review Confirmation of support and consistency with NZTA objectives for state highway. Staging/Macroscope confirmation
	3rd party funding commitments	Multi Party Funding Agreement
	Safety in design, Safety audit, estimate peer review, contract probity	Standard processes (subject to fast-tracking)

Risk Management

The strategy, framework and plan for dealing with the management of risk are in accordance with HCC's risk management policy[3], which outlines HCC's risk management philosophy, risk threshold and approach to managing risk. The risk register and preliminary management plan is attached. Example risks are highlighted in Table 4 below.

The fundamental HIF risk management response is to work with MBIE to achieve fair and appropriate allocation of risk to avoid unnecessary exposure for the parties involved.

[3] (http://www.hamilton.govt.nz/our-council/consultation-and-public-notices/haveyoursay/Documents/D-1629589%20%20Council%20Policy%20-%20Risk%20Management%20%20(Feb%202015).pdf).

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Table 22 Potential HIF risks and management responses for risks include:

Risk Category	Risk Types	Possible Risk Management Responses
Strategic	• LTP and 3Y Plan are not aligned to HIF project resulting in impacts or exposures not considered • Ability to repay loan on time	• Effective agreement with MBIE and NZTA • Clear understanding of loan and repayment terms.
Financial risks	• Improve estimate • cost certainty and confidence • Exceeding loan capacity	• confirmation of value for money and affordability at each business case stage • provision for 3 yearly updates/resets (also see economic risks) • Agreement with LG debt funders
Reputation	• Poor perceptions of local and central government's roles in facilitating development • Potential for conflict of interest in communications, and in selecting priorities for investment,	• Joint messaging NZ Government, NZTA, HCC • Conflict ID and management
Compliance & regulatory risks	• Statutory timeframes for consents, designations and special consultation delay starts	• Engagement with consent authorities, standardise engagement/ application/ approvals processes, discovery protocols, • Memoranda of understanding and early escalation of issues to avoid delays.
Political	• Potential for conflicts of interest of Council and Elected Members relating to construction, developments • HIF proposal or project initiation results in community not supporting Council	• Conflict management • Effective engagement • Whole of government commitment to collaborative working • Manage implementation programmes crossing election cycles appropriately.
People risks	• Health and safety • Continuity	• HCC management systems
Technology	• Delivery speed does not allow for technology to be incorporated	• Recognise future proofing in Detailed Business Case
Disaster recovery & business continuity	• Generally opportunity for resilience • Earthquake	• Recognise in Detailed Business Case • HCC disaster management protocols
Operational	• Development raises land values and developers land bank rather than build • Land ownership for infrastructure corridors delays start (e.g.) First rights	• MOU, PDA's, financial incentives • Government and NZTA assistance
Project	• Failure in due diligence in project management • Procurement speed of delivery from builders, developers and consultants, contractors varied impacting on delivery	• Independent audit and NZTA gateway protocols • NZTA and MBIE commitment to programmes

In addition to HCC's risk processes, the Southern Links risks management, previously in accordance with NZTA's risk management minimum standard Z/44 and the Agency's Risk Management Process Manual[4], will be incorporated in the HIF programme risk files.

[4] (https://www.nzta.govt.nz/resources/risk-management-process-manual/).

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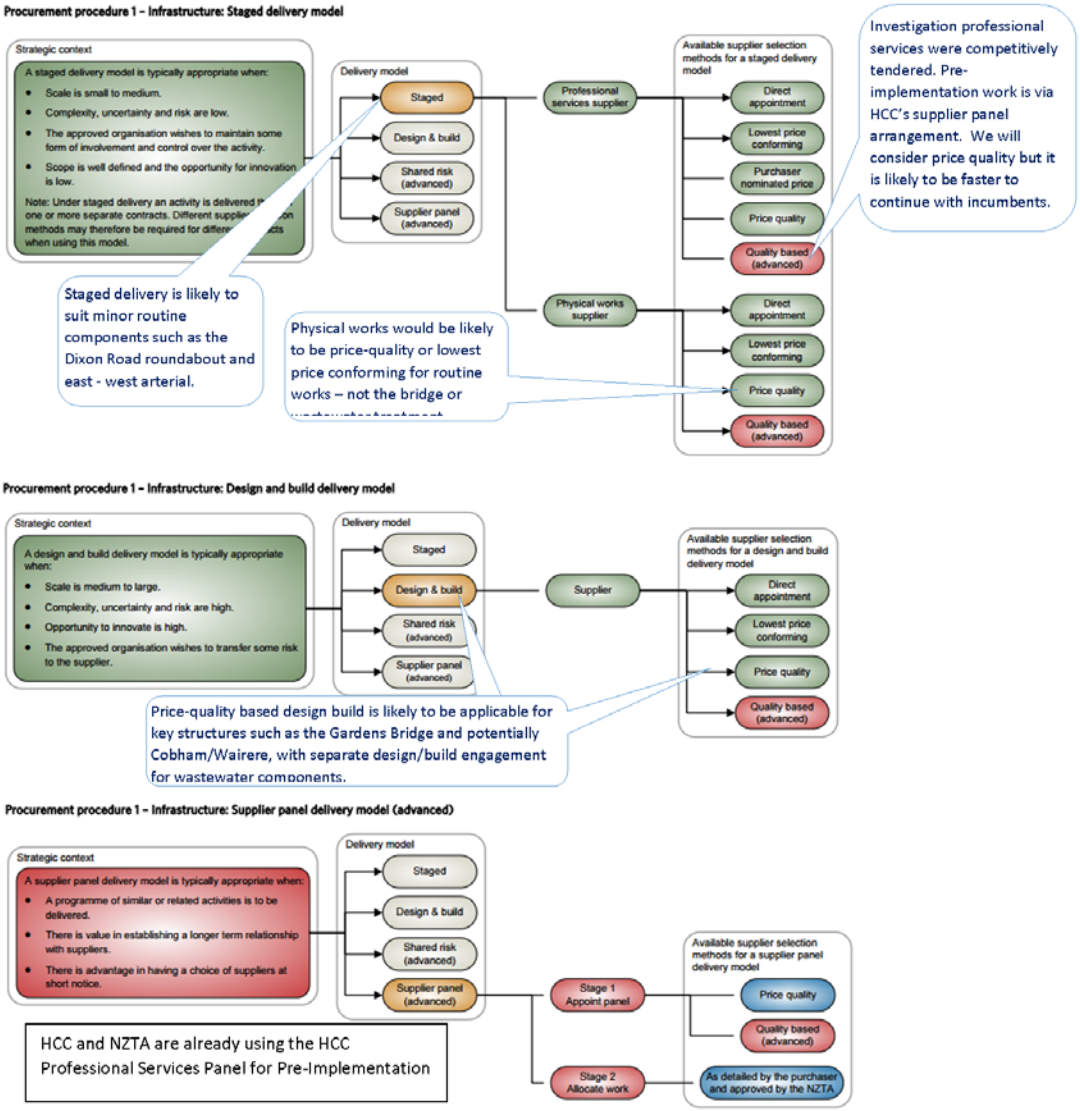
Procurement planning

HCC has successfully delivered the Hamilton Ring Road and similar large scale projects successfully using policies and procedures consistent with Government rules for sourcing and NZ Transport Agency requirements. HCC's procurement processes are NZTA-approved. NZTA's selection procedures will be used as a starting point for procurement decisions (Figure 8 below).

Implementation processes and procurement will depend on the extent and complexity of the stages to be completed. The shared risk model is unlikely to be necessary for the complexity and scale of the projects expected for transport or wastewater. The road links are routine and will be procured by traditional staged methods. The river bridge will suit design/build. The wastewater system will require chemical/biological/automation control system expertise and therefore specialist design/build expertise distinct from the bridge skillset. This allows us to split the delivery load, avoid market capacity issues and pursue value for money. We have demonstrated our effectiveness working closely with NZTA and 100% forward funding on large projects by successfully delivering the $88M Wairere Drive Hamilton Ring Road. Our success with the $25M P2 Pukete Wastewater treatment plant upgrade demonstrates our ability to procure and deliver technically challenging wastewater solutions.

Figure 8: Peacocke Strategic Utility and Arterial Transport Network – Procurement Planning



Public engagement

Council-managed HIF programme engagement rather than separate project arrangements would be desirable. We propose joint messaging and an integrated communications team.

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HCC is already collaborating on public engagement with NZ Transport Agency for Hamilton Southern Links as part of a comprehensive Pre-Construction Consultation and Engagement Plan[5] and Property Acquisition and Management Engagement Practice[6] required as part of Southern Links designation conditions.

We propose to extend our joint communications protocols to include NZ Government. Clear and consistent messaging will be desirable to manage the risk of adverse community reaction to development in one area being prioritised over another, and the potential for significant changes in Long Term funding priorities.

Consenting and designations

The Peacocke structure plan is operational and therefore most urbanisation effects are part of the expected environment and are low risk or land matters.

The designations for Southern Links are in place (2016). The consents for key river and gully crossings were obtained at the same time. Earthworks consents, outline plans etc. will be resolved as part of implementation. Designation conditions including those relating to archaeology, stakeholder engagement and ecology are currently being addressed through pre-implementation activities.

Land will be required for the wastewater pump station and strategic utility corridors (some future road land already designated for Southern Links).

[5] http://www.hamilton.govt.nz/our-city/regional-alliances/southernlinks/Documents/Management%20Plans/Southern%20Links%20-%20Pre-Construction%20Communication%20and%20Consultation%20Plan%20-%20FINAL%20Certified%2020160812.pdf
[6] http://www.hamilton.govt.nz/our-city/regional-alliances/southernlinks/Documents/Management%20Plans/Southern%20Links%20-%20Property%20Acquisition%20and%20Management%20Engagement%20Practice%20-%20FINAL%2020160812.pdf

6. Assessment Profile

The participation of Hamilton City Council in the HIF process is predicated on the HIF presenting an opportunity for Council to achieve accelerated achievement of investment objectives and business needs over a status quo approach.

Our investment objectives and business needs are outlined below:

Investment objective 1

Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.

Business need 1

The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.

Investment objective 2

Increase the amount of developer ready land to support 11,638 dwellings by 2025.

Business need 2

Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.

Investment objective 3

Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.

Business need 3

Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.

Investment objective 4

To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.

Business need 4

The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

The analysis undertaken as part of this business case indicates that all of these investment objectives and business needs can be achieved by through a Peacocke HIF allocation when compared to a status quo situation or indeed without a NZTA subsidy.

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Benefit cost ratio

The benefit cost ratio of funding HIF-Peacocke (NZTA subsidy) is 18.80. The BCR reveals that large, one-off capital investments represent the bulk of the costs. The benefits are largely derived from the economic activity generated by housing construction and subsequent household expenditure. There are also transport benefits network wide.

Despite the above, the benefits that would accrue to Council in terms of rates revenue and development contributions are less substantive.

Housing delivery results

Under the Peacocke proposal, approximately 3,153 dwellings will be built within 10 years which represent 26% of the projected demand for new housing. Within 30 years, approximately 8,103 dwellings will be built in Peacocke. In addition, the average infrastructure spend per dwelling built is expected to be $59,100 within 10 years and $23,000 within 30 years.

Conclusion

On the basis of the above initial assessment, the HIF-Peacocke (NZTA subsidy) option is preferred over the status quo.

7. Annex

Table 23 Long List options assessment

Description of options	Scale scope		Service solution		Service delivery		Implementation		Prioritisation		Consequential		Funding	
	SQ	HIF-P	SQ	HIF-P	SQ	HIF-P	SQ	HIF-P	SQ	HIF-P	SQ	HIF-P	SQ	HIF-P
Investment Objectives:														
Objective 1	P	F	F	F	F	F	F	F	F	F	N	F	P	P
Objective 2	N	F	F	F	P	P	F	P	F	F	N	F	P	P
Objective 3	N	F	F	F	P	P	F	F	F	F	N	F	P	P
Objective 4	P	F	F	F	P	P	F	F	F	F	N	F	P	P
Critical Success Factors:														
Strategic fit	F	F	F	F	F	F	F	F	N	F	F	F	P	F
Achievability	F	F	N	F	F	F	F	F	F	F	F	F	P	F
Timing and sequencing	F	F	P	F	P	F	F	F	N	F	F	F	P	F
Financial viability	F	F	F	F	F	F	F	F	F	F	F	P	F	P
Market impacts	N	F	F	F	P	P	F	F	P	F	P	F	F	F
Risk management	F	F	F	F	F	F	F	F	N	F	F	F	F	P
Summary of advantages and disadvantages:														
Overall assessment:														
Short-listed options:														
SQ *HIF-R* *HIF-P* *HIF-R&P*														

Table notes

SQ	Status Quo: Future Proof Rotokauri and Peacocke
HIF-R	HIF Rotokauri
HIF-P	HIF Peacocke
HIF-R&P	HIF Rotokauri and HIF Peacocke
Scale scope	Scale scope and location scores: What levels of road and water services are possible for each option?
Service solution	Service solution: Are there policy solutions for road and water services?
Service delivery	Service delivery: Are there appropriate governance, project management and infrastructure entities in place?
Implementation	Implementation: Are services available to match the annual housing yield?
Prioritisation	Prioritisation / Sequencing: Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?
Consequential	Consequential housing outputs: number / timescale
Funding	Funding: Wider private investment / development
Objective 1	Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025
Objective 2	Increase the amount of developer ready land to support 11,638 dwellings by 2025
Objective 3	Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045
Objective 4	To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase
Strategic fit	Alignment with other key council growth programmes and strategies over short, medium and long term for transport and water
Achievability	Overall programme and direct investment can be delivered in required timescales to required standard/quality and corresponding indirect investment and outcomes can be realised, including collaboration and partnering elements
Timing and sequencing	Acceleration of core output (housing) is achieved and wider programmes are able to be delivered as forecast or sped up
Financial viability	Fit with funding constraints, maximises/optimises financial return and capital recycling over short, medium and long term
Market impacts	Developers are incentivised to expedite housing development by accelerating developments, public sector funding matches pace with private sector development and collaboration is fostered
Risk management	Appropriate controls/frameworks, management and governance including partnering, can be established and maintained
F	Fully meets requirements
P	Partial meets requirements
N	Does not meet requirements

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Attachment 6

NZ TRANSPORT AGENCY
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13 March 2017

Andrew Parsons
City Development Manager
Hamilton City Council
Private Bag 3010
Hamilton

Dear Andrew

Transport Infrastructure – Southern Links. Confirmation of Status as Detailed Business Case

Thank you for the Point of Entry Assessment dated 14 February 2017 for the Southern Hamilton Area Transport Infrastructure and its supporting Business Case Status Summary.

I confirm that the investigations including the corridor designation work completed to date for both the NZ Transport Agency (Transport Agency) and Hamilton City council (HCC) components are equivalent to a Detailed Business Case, and that the appropriate point of entry for activities identified as part of the Southern Hamilton Area Transport Infrastructure are therefore determined to be at the Pre-Implementation stage.

I note that it is expected that NZTA and HCC will continue to collaborate during the Pre-Implementation phase activities under way in response to designation conditions and property acquisition. The investigation phase Multi-Party Funding Agreement (MPFA) is being extended to include the current activities.

As discussed, we will continue to work with you to scope these pre-implementation activities, which are likely to include:

- Optimising the network form and function including for walking, cycling and passenger transport infrastructure
- Confirming the mix of modes to progress towards the wider network outcomes agreed through Access Hamilton.
- Remaining consents and ongoing engagement;
- Optimising all project stages and phasing for implementation; and,
- Detailed scoping, design and procurement planning.

Also, as has been the approach with the Southern Links project to date, the Transport Agency expects to be party to an MPFA as part of each implementation phase for the Southern Links commences to ensure; value for money and that the network operates to suit NZTA's and HCC's objectives.

It is expected that prior to implementation there will be a project hold point to allow the Transport Agency to ensure that network form and function, phase scope and multi-party funding agreements are agreed.

We understand that detailed project management arrangements and procurement programmes will be in accordance with HCC's management systems and are sufficient to satisfy the Transport Agency delivery requirements.

We look forward to continuing our successful collaboration with Hamilton City Council and Future Proof transport partners in delivering an effective transport system for Hamilton and its surrounding area.

Yours sincerely

Dennis Crequer
Regional Manager – Planning and Investment
DDI: 07 958 7850
Email: Dennis.Crequer@nzta.govt.nz

cc. James Bevan Transport Planning Manager NZTA

Glossary

HIF	Housing Infrastructure Fund
HIF Scenario	Urban development scenario based on funding from HIF
HIF (NZTA Subsidy) Scenario	Urban development scenario based on funding from HIF and NZTA funding 50% of the transport infrastructure
SQ	Status Quo
Status Quo Scenario	Urban development scenario based on Hamilton City Council Long Term Plan
BCR	Benefit Cost Ratio
NPS-UDC	National Policy Statement on Urban Development Capacity
MBIE	Ministry of Business, Innovation & Employment
NZTA	New Zealand Transport Agency
NIDEA	National Institute of Demographic and Economic Analysis, this is a University of Waikato institution
HCC	Hamilton City Council
BERL	Business and Economic Research Limited
SOLGM	New Zealand Society of Local Government Managers
SOLGM Cost Adjustors	Forecast price level change adjustors for Local Authorities
CPI	Consumers Price Index produced by Statistics New Zealand
PRINCE2	Projects IN Controlled Environments is a structured project management method

Hamilton City Council
Te kaunihera o Kirikiriroa

Rotokauri

Indicative Business Case

Housing Infrastructure Fund

March 2017

hamilton.govt.nz

Hamilton City Council
Te kaunihera o Kirikiriroa

Item 5

Attachment 7

Authors: Hamilton City Council

Executive summary

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

Population projections indicate that Hamilton is well on the way to being a city of 200,000 residents. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing.

Strategic Case

Hamilton City Council, through strategic planning processes, has defined four investment objectives. These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

To meet the demand for dwellings caused by projected population growth, and the new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC), Hamilton City Council will need to bring forward planned greenfield areas such as Rotokauri.

Rotokauri is an area of approximately 955 hectares to the north-west of the Te Rapa area in Hamilton. It was brought into the City from the then Waikato County (now the Waikato District) as a consequence of the 1989 Local Government Reforms. This area, along with Rototuna and Peacocke, was incorporated into Hamilton City to provide for long-term development and growth.

Through the development of the Hamilton Urban Growth Strategy in 2008, Rotokauri was identified as one of the four greenfield growth cells in Hamilton City. It was also identified that Rotokauri would be developed in two stages. A Structure Plan has been developed for Rotokauri.

Rotokauri is considered a desirable urban development location and investment option as it is located within close proximity to the Base, major transport infrastructure, the WINTEC Rotokauri campus, Hamilton Zoo, and major employment areas located on the western side of the City. Rotokauri also has high levels of amenity due to its natural landscape.

Rotokauri is a viable development opportunity as it continues new urban development to the north of the established suburbs of Nawton and Dinsdale. It also leverages off the recent significant investments made by NZTA in the Te Rapa Bypass.

Rotokauri needs strategic bulk water and wastewater infrastructure to open up residential development in this area. It is proposed that a strategic bulk water connection will go from Pukete to Rotokauri. This will allow potable water from the Pukete Reservoir to be redirected to Rotokauri. This wastewater project will be funded by Council as part of the Long-Term Plan but is a key part of the overall programme of works in Rotokauri and the Housing Infrastructure Bid.

To date, the Council has completed a significant interceptor extension into Rotokauri to support zoned industrial land and economic development. A further extension of the far western interceptor will provide the strategic wastewater infrastructure for the residential Stage 1 area.

Stormwater is a key constraint to residential development in Rotokauri. Hamilton City Council is best placed to provide the Rotokauri floodway to deal with stormwater issues rather than an individual landowner or developer. This is because of the nature of stormwater, including the function of the floodway to deal with, this and related property ownership. However, stormwater and the construction of the Rotokauri floodway is a significant cost for Hamilton City to accommodate within its financial strategy, particularly if the Council is to deliver this as lead strategic infrastructure.

As such, only a proportion of the floodway cost are presently provided for in the later years of the Hamilton City Council 10-Year Plan. This is the reason why the floodway is part of the request for Housing Infrastructure Funding. Without the floodway it is very challenging, if not impossible, for developers to individually develop a stormwater solution.

This indicative business case relates to a preferred way forward that accelerates the arterial roads that support the Waikato Expressway and future planned land use. Hamilton City Council has a positive and collaborative relationship with NZTA, and as a consequence the Council and NZTA have jointly approached city land use planning as it relates to transport activities. This integrative approach is heavily reflected in the Rotokauri Structure Plan and resulting networks.

Attached to this indicative business case is an NZTA Point of Entry letter that relates to the funding of strategic infrastructure that supports the preferred way forward.

Economic Case

The Housing Infrastructure Fund provides Hamilton City Council with the opportunity to finance the remaining infrastructure services needed to unlock all of the planned residential developments in Stage 1 Rotokauri and bring these developments forward. This is the preferred option identified in this indicative business case.

The infrastructure is an integrated programmes of works that includes the Rotokauri floodway and arterial roads. The HIF will accelerate investment in arterial roads in Stage 1 of Rotokauri by more than 10 years, while the investment in Rotokauri floodway will be brought forward by six years. The construction of the strategic bulk water connection from Pukete to Rotokauri could occur within the next two years.

Together, this programme of works will accelerate growth in the development of Stage 1 of Rotokauri, which will yield 1,610 dwellings within 10 years and 2,787 dwellings within 30 years. The 1,610 dwellings built in Rotokauri within 10 years will meet 13% of the projected future demand for housing in Hamilton City in 2025. In addition, the average infrastructure spend per dwelling built is expected to be $57,300 within 10 years, dropping to $33,100 within 30 years.

Benefit-cost analysis indicates that this programme of works has an overall benefit-cost ratio of 18.91. This includes transport benefits, dwelling value appreciation, and three kinds of economic contribution. Each of these options alone provides a favourable benefit-cost outcome.

Commercial Case

Hamilton City Council has a positive and collaborative working relationship with key landowners and developers in the Rotokauri area. In Rotokauri, Hamilton City Council has been working with RDL limited (a joint venture partnership including Tainui Group Holdings).

Letters of intent outlining a further commitment to housing delivery through the signing of detailed private developer agreements have been included as an attachment to our indicative business case.

Financial Case

The financial case includes charts that show the impact on the Council's debt to revenue ratio of accelerating the Peacocke growth cell by using HIF loans and other loans (to complete infrastructure not included in the HIF application).

The financial case illustrates the impact on the Council is very challenging as there is currently much uncertainty on debt treatment; the level of new revenue associated with HIF; the level of developer contributions and costs met direct by developers; and other inputs to the 2018 Long-Term Plan. These are all largely unknown at this time.

This means the long-term financial predictions challenge the existing financial strategy of Hamilton City Council and the Council needs more time and opportunity to work through the financial scenarios with MBIE and other key stakeholders.

Management Case

On execution of the funding agreement, Hamilton City Council will establish a project to deliver the strategic infrastructure and manage the programme of works in collaboration with NZTA and MBIE. This would use Hamilton City Council's existing governance and large project management systems.

The Council operates three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience
- Level 2: Project/programme governance
- Level 3: Independent and objective assurance.

The project management and governance structure will follow Hamilton City Council's standard practice for large infrastructure projects.

Preferred Way Forward

On the basis of the above initial assessment, $91.2 million in Housing Infrastructure Funding is being sought by Hamilton City Council for the Stage 1 development of the Rotokauri greenfield residential area. The new strategic infrastructure that this funding is sought for includes:

- The floodway crossing multiple land holdings required to deal with the stormwater from Stage 1 of the growth cell including that from the sensitive Lake Rotokauri.
- The strategic bulk water connection from Pukete to Rotokauri, which allows potable water from the Pukete Reservoir to be redirected to Rotokauri.
- Road connection to Te Wetini Drive and Te Kowhai Road to extend the Hamilton arterial transport system.

Hamilton City Council also acknowledges that the Housing Infrastructure Funding indicated in this business case, at the indicative business case stage, is non-binding. The information provided in this indicative business case may therefore change should the Council proceed through to the detailed business case stage.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the tender documentation, the final proposal is submitted to the Ministry of Business, Innovation and Employment (MBIE) on the following basis:

It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.

Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets
- Contributions are known
- Caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances
- Letters of Intent to be provided by development partners
- Final bid acceptance is based on receiving confirmation that DC's can be legally collected under the HIF structure
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General
- Project costs to be reviewed every three years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

Alternative financing models

Hamilton City Council also requests that MBIE consider other alternative funding proposals to reduce the financial impacts on Council's financial strategy, including, but not limited to the following:

- The creation of a Crown-owned Special Purpose Vehicle (SPV). A SPV would result in new infrastructure constructed and managed by a crown entity with Council effectively buying shares in the entity, and thus, the infrastructure, as development rolled out in each of growth cells over time. Hamilton City Council see merit in the SPV proposal and it is a viable financial delivery alternative that the Council would like to will continue to explore with MBIE.
- The Crown debt funding a CCO of Council on a non-recourse basis to Council, and the CCO owning the infrastructure assets that enable the HIF goals to be achieved (other than roads that would ordinarily vest in the Crown). The debt would be repaid with development contributions, payments from developers and rates, but the Crown would take the risk that timing of those payments was not sufficient to repay the debt at the end of the 10 year period. The debt and assets could be brought onto Council's balance sheet if financial ratios could be met on a pro forma basis. The debt of the CCO would need to be excluded from the LGFA financial covenants.
- A Crown equity funding a vehicle that is owned by either the Crown or Council and otherwise on the same terms as above. The repayment mechanism would be akin to the government's Crown Fibre Holdings model, which would mean that government would take the risk that housing sales did not meet expectations and therefore funding was not available to purchase all of the government's shares.

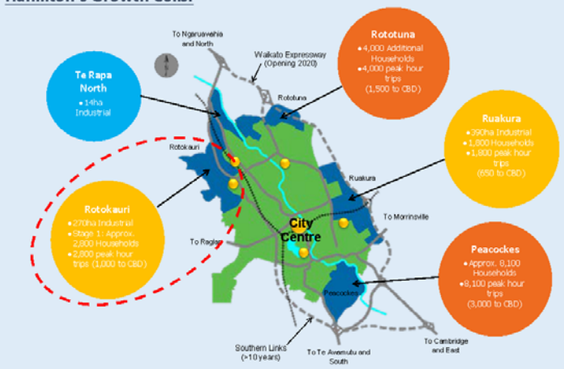
- A combination of the two options above, that permits private funding and allows charges for use of the relevant assets (e.g. toll roads/bridges or charges for availability).
- All parties satisfying themselves that the FAR funding and offset is not accounted for as debt to Council. In addition, FAR eligible works (transport operating and maintenance, renewals, capital projects) for which the offset applies could occur as early as year 2 of the 10 year payback period. Council would debt fund these projects, undoing much of the benefit of the FAR funding from the perspective of Council's financial position and so some consideration of delaying these offsets until or beyond the end of the 10 year period should be considered.
- Extended payment periods and cash flows tied to related cash flows being received by Council (e.g. developer contributions for sections sold in the growth cells being used to repay the government).
- The creation of a suspensory loan whereby the Government loans Council the necessary funds and waives loan conditions if development expectations are realised.

Problem: **We need space and homes for a growing population.**

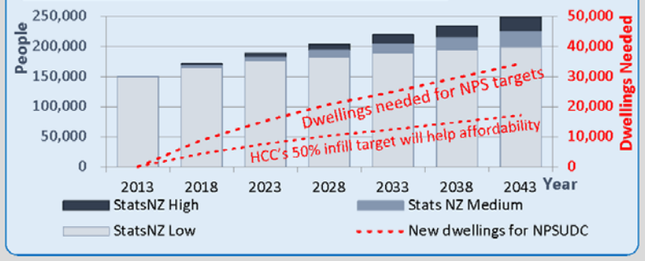
We are heading to 250,000 people by 2045. Our community will need more homes to live in and strategic infrastructure to service them. Even with 50% infill we'll need access to large areas for greenfield development.

Rotokauri Stage 1 will accommodate 2,787 homes but needs transport and stormwater infrastructure. The strategic infrastructure needed to open up growth cells comes with large up-front costs. That puts significant financial pressures on Council and developers and constrains development.

Hamilton's Growth Cells:



Hamilton's Projected Population and Dwellings Needed:



Hamilton City Council
Te kaunihera o Kirikiriroa

Rotokauri Residential Growth: Business Case Overview

Housing Infrastructure Fund (HIF) Proposal - Rotokauri

Objectives: **Room to grow, more dwellings and better choices.**

Hamilton's objectives for investment in Rotokauri Stage 1 enabled by the HIF are to:

Increase the amount of developer ready land:	– that supports Hamilton to be NZ's third city economy by 2025.
	– to support 11,638 dwellings by 2025.
	– to support the balance of the NPS-UDC dwelling requirements by 2045.
Support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase.	

Alternatives and Options:

Council considered strategic responses including doing nothing, delivery over 30 years in accordance with current plans and acceleration here and elsewhere.

Preferred Option:

Hamilton will work with NZ Government and NZ Transport Agency to invest $154.2M over 8 years on gateway transport, water and stormwater systems to facilitate access to around 230 hectares of developable land and up to 2,800 new dwellings in the Rotokauri growth cell. The proposed transport system gives effect to key infrastructure in Hamilton's Northern Growth Corridor.

Outcomes and Benefits:

The Rotokauri Proposal will contribute to the business case objectives for early access for residential development and deliver over $500M of additional economic benefits over 30 years. The road network is integrated with the Te Rapa section to leverage the benefits from HCC's and NZTA's joint investment in the Waikato Expressway. Infrastructure is bought forward by around 10 years. 75% of dwellings are put in place 9 years faster for HIF-assisted construction.

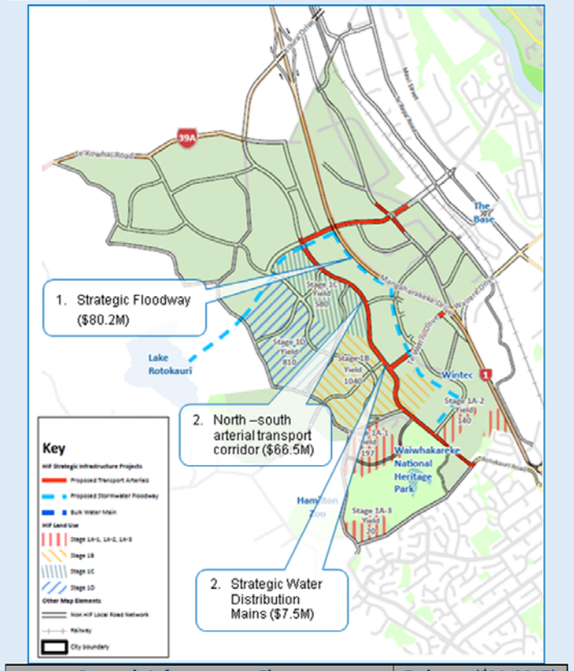
Year	Developable Land Area	Dwelling Yield	Affordable Housing
2025	Approx. 130 hectares	1,610 dwellings	Existing areas released
2045	Approx. 230 hectares	2,787 dwellings	Existing areas released

The proposal has a HIGH Strategic Fit, HIGH Effectiveness and HIGH Efficiency, with a BCR >5 .

Next Steps:

Funding agreement and detailed business case to optimise implementation.

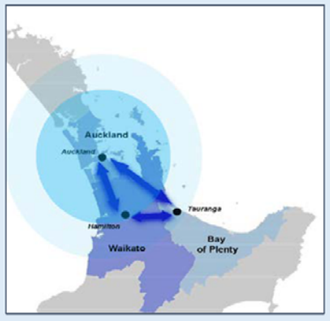
Proposal: **Gateway Infrastructure for up to 2,787 households.**



Strategic Infrastructure Element	Estimate ($M, 2017)
Stage 1 Strategic lead stormwater floodway	$80.2M
Major north-south transport corridor and network connections	$66.5M
Strategic water distribution mains	$7.5M
Rotokauri Project Total	**$154.2M**
2015 10 Year Plan $29.8M	***NZTA FAR $33.3M*** ***HIF $91.2M***

Strategic Context: **Hamilton and Rotokauri: The right locations.**

Hamilton is a young, strong and diverse economic node, part of the "Golden Triangle" of Auckland, Tauranga and Hamilton. Investment in Hamilton can leverage the HIF investment in conjunction with recent investment in the Waikato Expressway and the Ruakura and Horotiu inland ports and Innovation Park. Rotokauri forms part of the Northern Growth Corridor Agreement between NZTA, HCC and Waikato DC to integrate land use and infrastructure planning and make the most of collaborative investment.

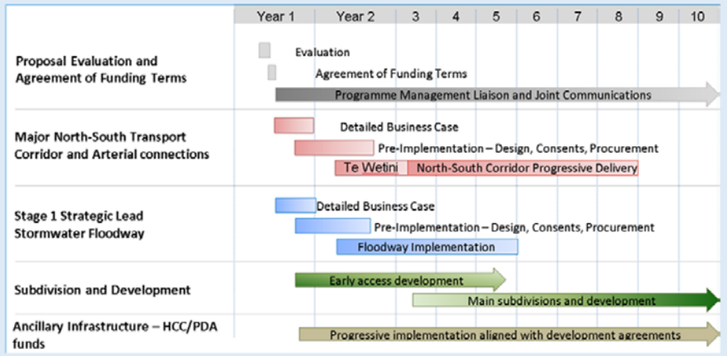


Rotokauri is a key growth area zoned residential in the north-west of the city. Land is available but costly strategic connections for transport and stormwater have deterred developers. Integration of the Rotokauri Structure Plan with the Te Rapa Bypass provides efficient access to regional links and the Waikato Expressway, and local links to nearby commercial and industrial employment nodes.

Implementation: **Careful procurement, collaborative delivery.**

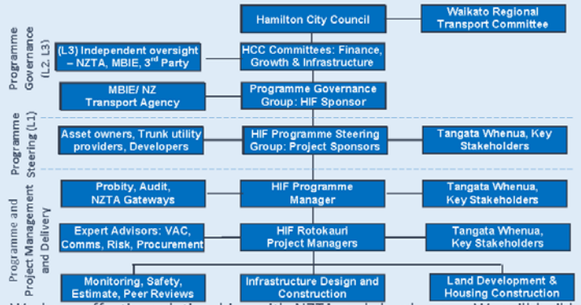
Both the road and stormwater proposals are at detailed business case stage. The land is zoned residential and the Catchment Management Plan is being finalised. The key infrastructure alignments are part of the Rotokauri Structure Plan. Preliminary designs are ready or under way.

We propose procurement using traditional staged delivery for the infrastructure with price-quality evaluation to take opportunities for cost savings without losing opportunities for innovative construction techniques and specialist skills to add value and reduce risks.



Governance and Management: Risks, opportunities and results.

We will collaborate with NZTA and NZ Government to minimise project risks, overcome barriers and ensure successful delivery. We have demonstrated our ability to deliver in the forward-funded Hamilton Ring Road and the W2 Hamilton Wastewater Treatment Plant upgrade projects.



We have effective relationships with NZTA and developers. We will build on these relationships though comprehensive developer agreements to share risk and funding requirements. Working together with clear messages and direction we can assure the HIF benefits.

Contents

1. Strategic Case

The lead strategic infrastructure needed to open up new residential developments comes with large upfront costs. These upfront costs can put significant financial pressure on Hamilton City Council and developers, and subsequently delay development.

Rotokauri was brought into the Hamilton City boundary from the Waikato District in 1989. In 1999, the zoning of the area was changed from 'rural' to 'future urban' and between 2006 and 2009 a Structure Plan was prepared. The Structure Plan for Rotokauri indicates that Stage 1 of the development will include residential and industrial land uses, while Stage 2 will be residential.

Hamilton City Council has an overarching plan for meeting the needs of growth. Rotokauri is part of this plan including the proposed network extensions for strategic water and wastewater services.

The Housing Infrastructure Fund (HIF) provides Hamilton City Council with the opportunity to finance the remaining services infrastructure needed to unlock all of the planned residential developments in Stage 1 of Rotokauri, and bring these developments forward.

This infrastructure is an integrated programme of works that includes the Rotokauri floodway and arterial roads. The HIF will accelerate investment in arterial roads in Stage 1 of Rotokauri by more than 10 years, while the investment in the Rotokauri floodway will be brought forward by six years.

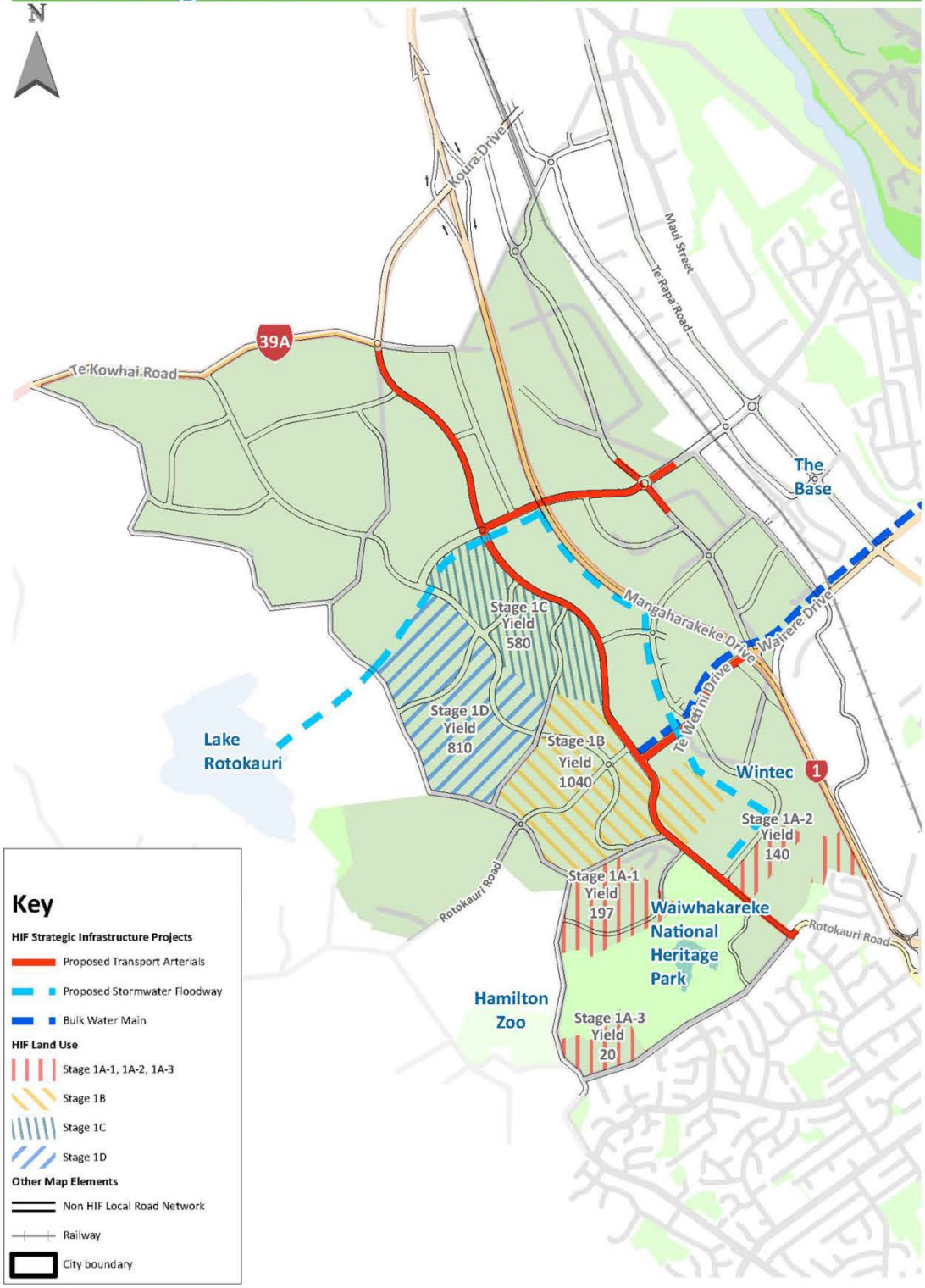
Together, this programme of works will accelerate growth in the development of Stage 1 of Rotokauri, which will yield 1,610 dwellings within 10 years and 2,787 dwellings within 30 years. The 1,610 dwellings built in Rotokauri within 10 years will meet 13% of the projected future demand for housing in Hamilton City in 2025. In addition, the average infrastructure spend per dwelling built is expected to be $57,300 within 10 years, and $33,100 within 30 years.

Overall, Stage 1 of Rotokauri will achieve 5,700 more house years than under a status quo situation, and for most of the duration of Stage 1 dwellings will be put in place two years faster with the assistance of HIF. Note house years are the number of years for each house constructed times the number of years until 2045.

The HIF-Rotokauri and HIF-Rotokauri with NZTA subsidy options have overall benefit-cost ratios of 15.71 and 18.91 respectively. Transport benefits, dwelling value appreciation and the three kinds of economic contribution all have marginal benefit-cost contributions equal or greater than one. Consequently, each option alone provides a favourable benefit-cost outcome.

This is important since the quantum of benefits outweighs the investment cost for mutually exclusive beneficiaries who are diverse across location, time, private sector, public sector and households.

HIF Strategic Infrastructure - Rotokauri



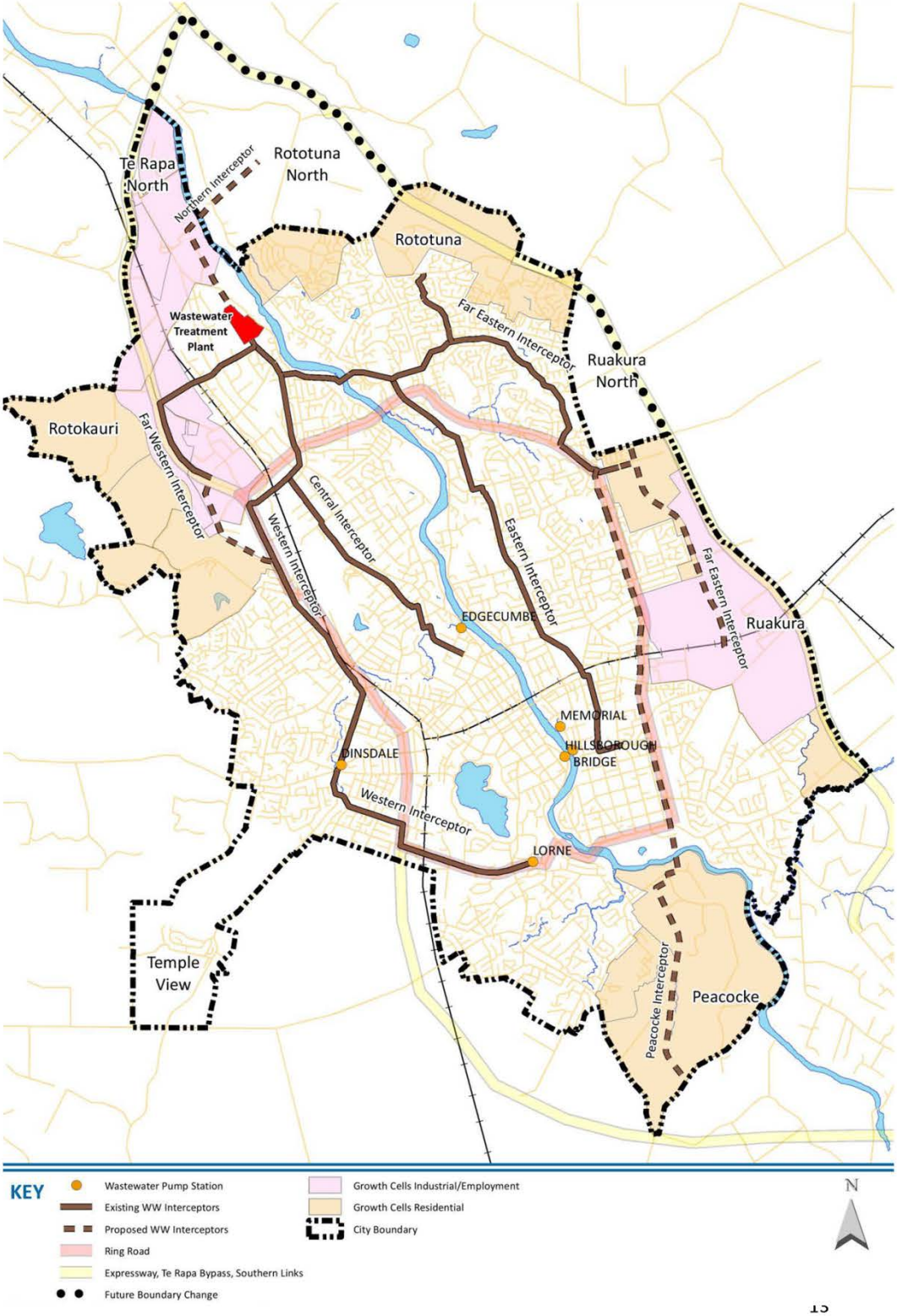
Item 5

Attachment 7

Strategic Context

Wastewater

Rotokauri needs strategic wastewater infrastructure to open up residential development in this area. To date, the Council has completed a significant interceptor extension into Rotokauri to support zoned industrial land and economic development. A further extension of the far western interceptor will provide the strategic wastewater infrastructure for the residential Stage 1 area. Construction tenders for the extension close on 23 March 2017.


Te Rapa North
Northern Interceptor
Rototuna North
Rototuna
Wastewater Treatment Plant
Far Eastern Interceptor
Ruakura North
Rotokauri
Far Western Interceptor
Central Interceptor
Western Interceptor
Eastern Interceptor
EDGECUMBE
Far Eastern Interceptor
Ruakura
MEMORIAL
HILLSBOROUGH BRIDGE
DINSDALE
Western Interceptor
LORNE
Temple View
Peacocke Interceptor
Peacocke
KEY
Wastewater Pump Station
Existing WW Interceptors
Proposed WW Interceptors
Ring Road
Expressway, Te Rapa Bypass, Southern Links
Future Boundary Change
Growth Cells Industrial/Employment
Growth Cells Residential
City Boundary
N

Water

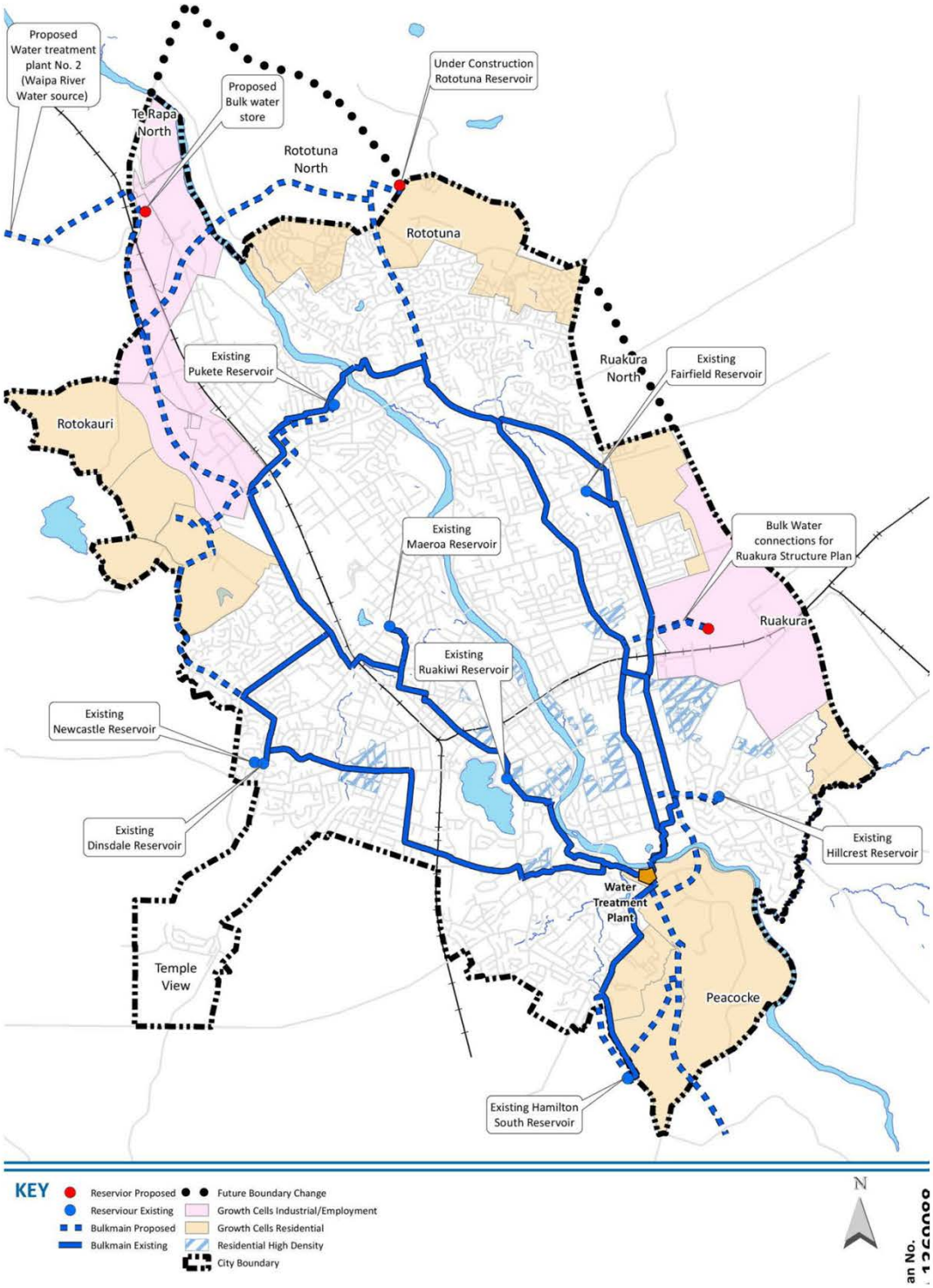
The nearby Pukete Reservoir currently provides potable water to Rototuna. Rototuna is a growth cell in the north-east of Hamilton, and a new dedicated reservoir is being built for this area. The Rototuna Reservoir is expected to be completed in late 2017. Once this occurs, the potable water from the Pukete Reservoir can be redirected to Rotokauri, allowing this growth cell to be brought online.

The reassignment of the Pukete Reservoir to Rotokauri allows the Council to use an existing asset, which decreases costs and lead times, subject to a new bulk strategic water main to Rotokauri.

The Council has already completed reconfiguration work at the Pukete Reservoir, in anticipation of this reservoir providing dedicated connections to Rotokauri. In addition, Council has - subject to the 2017/18 draft Annual Plan process - allocated $7.5 million for the new strategic bulk water connection from the Pukete Reservoir to Rotokauri.

This work is currently at the detailed design phase and Council will be in a position to call for construction tenders early in the 2017/18 financial year in anticipation of the construction being undertaken over the summer months. The construction of the strategic bulk water connection from Pukete to Rotokauri could take up to nine months, which would see the delivery of this strategic infrastructure within the 2017/18 financial year.

This new strategic bulk water connection to Rotokauri will meet the water needs of this area, unlock land for residential and industrial uses, and improve water supply resilience for the surrounding areas.


Proposed Water treatment plant No. 2 (Waipa River Water source)
Proposed Bulk water store
Te Rapa North
Rototuna North
Under Construction Rototuna Reservoir
Rototuna
Existing Pukete Reservoir
Rotokauri
Ruakura North
Existing Fairfield Reservoir
Existing Maeroa Reservoir
Bulk Water connections for Ruakura Structure Plan
Ruakura
Existing Ruakiwi Reservoir
Existing Newcastle Reservoir
Existing Dinsdale Reservoir
Existing Hillcrest Reservoir
Water Treatment Plant
Temple View
Peacocke
Existing Hamilton South Reservoir
KEY
Reservior Proposed
Reserviour Existing
Bulkmain Proposed
Bulkmain Existing
Future Boundary Change
Growth Cells Industrial/Employment
Growth Cells Residential
Residential High Density
City Boundary
N

The Integrated Catchment Management Plan

The Rotokauri Structure Plan promotes central green corridor, which is effectively a park like space, similar to those shown in the Hamilton Urban Growth Strategy: A Compact and Sustainable City (HUGS).

The proposed central green corridor is public land that incorporates stormwater conveyance and treatment, and will provide ecological connectivity between Lake Waiwhakareke and Lake Rotokauri. The green corridor may also include public access and open spaces. The green corridors could also be used for co-location of services in addition to standard road corridor provisions.

The green corridors are part of the Rotokauri Integrated Catchment Management Plan (ICMP). The ICMP provides guidance on how water, wastewater and stormwater management in the catchment can accommodate growth in an integrated manner and in accordance with proposed new land uses.

The ICMP was developed and drafted after broad community consultation, and responds to the requirements under the National Policy Statement on Freshwater Management and the Waikato River Vision and Strategy, including the proposed Waikato Regional Council "Healthy Rivers" Plan Change. The ICMP provides the Council with an integrated management approach to water management in the catchment. It is not prescriptive; instead it provides developers with options in regards to the unique characteristics of the Rotokauri environment and how to mitigate, as far as practicable, the likely effects of development on this environment.

The ICMP explored the hydrology and geology of Rotokauri; groundwater recharge and discharge and gradients; stormwater quality and contaminants; information on the two lakes and their values including aquatic biodiversity and riparian biodiversity; and the cultural value and archaeological significance of the area.

Another key part of the ICMP is that it identified options in regards to flooding, particularly a 1 in 100 year flooding event. This analysis confirmed the critical need for a floodway in Rotokauri.

Rotokauri floodway

When built, the Rotokauri floodway will have the following key benefits:

- Downstream flood protection
- Flood storage
- Manages residual flooding
- Responds to high groundwater levels
- Recognises ground constraints
- Recognises regional and national policy settings related to water quality and receiving environment health (where the water is going to)
- Recognises high value water receiving bodies
- Recognises priority contaminants – E.coli, suspended solids, phosphorous, and nitrogen - as per the National Policy Statement on Freshwater Management

- Helps address potential decline in biodiversity values
- Recognises the at-risk Giant Kokopu population
- Provides fish passage.

Hamilton City Council is best placed to provide the Rotokauri floodway rather than an individual landowner or developer. This is because of the nature of the floodway, particularly its function and related property ownership. However, the Rotokauri floodway is a significant cost for Hamilton City Council to accommodate within its financial strategy, particularly if the Council is to deliver this as lead strategic infrastructure. As such, only a proportion of the floodway costs are presently provided for in the later years of the Hamilton City Council 10-Year Plan.

The floodway is the key constraint to residential development in Rotokauri. This is the reason why the floodway is part of the request for Housing Infrastructure Funding in this indicative business case. Without the floodway it is very challenging, if not impossible for developers to individually develop a stormwater solution.

Transport networks

The Housing Infrastructure Fund request for arterial roads within Rotokauri will fund an incremental extension of the transport network to match the pace of development. This is all that is required to establish growth in the Stage 1 residential area of Rotokauri, and to leverage the strategic investment that has already occurred in this area.

Hamilton City Council has a positive and collaborative relationship with NZTA, and as a consequence the Council and NZTA have jointly approached city land use planning as it relates to transport activities. This integrative approach is heavily reflected in the Rotokauri Structure Plan and resulting networks.

The Council has entered a Memorandum of Understanding (MOU) with NZTA to capture relative responsibility for key networks. An example of this is the Te Rapa Bypass Section of the Waikato Expressway, which passes through the Rotokauri growth area.

This indicative business case relates to accelerating the arterial roads that support the Waikato Expressway and future planned land use.

Arterial roads

The Council in partnership with NZTA has invested over $180 million in designating and constructing the Te Rapa section of the Waikato Expressway and associated local road connections. This work has facilitated the Rotokauri Stage 1 industrial development, which is now largely completed or consented.

The local road connections completed are:

- Two local road bridges below the Te Rapa section of the Waikato Expressway
- The Te Wetini Drive arterial to Wintec's entrance
- A significant proportion of Arthur Porter Drive.

Land use

Stage 1 of the Rotokauri area includes around 70 hectares of industrial and commercial land. Zoned land uses potentially include light industry, storage and small scale manufacturing. This land use allocation is based on the existing business profile around this

area and the locational advantages of Rotokauri. Beyond Stage 1, further allocations of industrial and commercial land may become available in response to demand but this will be largely based on anticipated demand in Stage 1.

Alignment to existing strategies

Hamilton is growing, and is home to many young people and families. Population growth is an opportunity and a challenge for Hamilton City. The Council response is that growth needs to be managed in Hamilton City because of boundary considerations. Hamilton is the smallest metropolitan area by land area, and is one of the smallest local government areas by land size in New Zealand.

To meet the priority of being the third city economy in New Zealand by 2025, Hamilton City Council has adopted a strategic approach to the spatial development and growth of Hamilton City. This approach is documented in the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The Hamilton Urban Growth Strategy articulates areas suitable for accommodating future residential growth while ensuring that the social well-being of the community is enhanced and the local environment is protected. The Hamilton Urban Growth Strategy also identifies where to develop first, why and when; what other land uses are required for business or industrial purposes; and what city infrastructure is required to support this development.

There are two growth approaches from the Hamilton Urban Growth Strategy that are important:

- Growth Approach 1: Over the next 10-20 years, approximately 50% of Hamilton's new dwellings will be increasingly provided through regeneration of existing parts of the city. It is recognised that this will not be appropriate for all areas. Therefore this regeneration will focus in and around key nodes including the CityHeart, transport hubs, suburban centres, and areas of high public amenity such as parks and the Waikato River.
- Growth Approach 2: The commitments to developing the remainder of Rototuna and Stage 1 of both Peacocke and Rotokauri remain. The development of Rototuna and Stage 1 of both Peacocke and Rotokauri will include greater choice in living environments, for instance, more compact type developments in key areas such as town centres or around parks and open spaces.

Access Hamilton, the transport strategy for Hamilton, guides relevant land-use planning and the management, development and protection of the transport network necessary to support Hamilton's economic development, urban design and growth strategies. Access Hamilton is currently in the process of being updated.

This indicative business case builds on the Network Action Plan contained within Access Hamilton and the outcomes that it is delivering for Hamilton City. For this reason, the purpose of the Network Action Plan is listed below:

- Evaluates desirable land use and structure planning principles that minimise the need to travel and support a multi-modal transport system

- Identifies the key nodes and connections and expected movements, including rail, passenger transport, and national and regional road links
- Establishes a road hierarchy that identifies the strategic network (state highways and city roads), major and minor arterials, collectors and local access roads, and defines the role and treatment of each component of the road network
- Assesses the transport consequences of growth in line with integrated sub-regional and local growth strategies and identifies areas of concern
- Identifies a hierarchy of land use and transport interventions, activities and infrastructure necessary to sustain a network that supports an affordable, integrated, safe, responsive and sustainable transport system
- Provides an implementation framework for the prioritisation, coordination and implementation of activities.

Land use and transport integration is heavily reflected in the Rotokauri Structure Plan and resulting arterial networks.

1.1 Investment objectives, existing arrangements and business needs

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

The Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Operative District Plan and the Hamilton 10-Year Plan 2015-25, along with the 30-Year Infrastructure Plan, the Regional Land Transport Plan and the Access Hamilton Strategy – Integrated Transport Plan are all aligned to grow Hamilton to be the third city economy in New Zealand by 2025.

The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The Hamilton City Growth model, along with household and population projections provided by the National Institute of Demographic and Economic Analysis (NIDEA) at the University of Waikato, indicates the projected demand for dwellings. This demand information is then matched with household supply data from each of the greenfield areas in Hamilton and the amount of infill available. The settlement pattern that Hamilton has in place to meet this supply and demand reflects the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The settlement pattern that Hamilton City Council currently has in place is insufficient over the long-term to meet new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC). Under this National Policy Statement, Hamilton has been identified as a high growth area. This means Hamilton is required to increase the amount of residential and business land that is zoned, serviced and commercially viable. In the short to medium-term (three to 10 years) this land capacity must be over and above 20% of the projected demand for residential and business land.

To meet the NPS-UDC targets, and the associated demand for dwellings caused by projected population growth, Hamilton City Council will need to bring forward planned Greenfield areas such as Rotokauri.

Investment objectives and business needs

Hamilton City Council, through strategic planning processes, has defined four investment objectives.

These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

In a later chapter, these investment objectives are ranked against the business needs of Council and various critical success factors. This ranking allows the Council to determine what the best long and short-list options are going forward – and therefore what planned greenfield area best meets the needs of the Council - and what planned greenfield area should be put forward to receive Housing Infrastructure Funding.

Investment objective 1

Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.

Business need 1

The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.

Investment objective 2

Increase the amount of developer ready land to support 11,638 dwellings by 2025.

Business need 2

Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.

Investment objective 3

Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.

Business need 3

Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local

authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.

Investment objective 4

To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.

Business need 4

The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

Existing arrangements and business needs

Existing arrangements

Citywide water

Hamilton City Council has two treatment plants – water and wastewater. Each plant has long-term consents in place that provide for city growth. These consents are based on the projected peak demand for water and wastewater. The Hamilton City Council projects this peak water demand out to 2060 and funds infrastructure upgrades based on these projections. This means that funded investment capacity and water allocation consents provide for growth and resilience.

The water treatment plant consent allows a stepped water take from the Waikato River to match projected growth in the population and economy of Hamilton to 2044. The wastewater plant has a discharge consent that also matches demand and allows for city growth to 2027.

Hamilton City Council has a just in time investment strategy to match growth needs. This means the Council has budgeted for the upgrade of these plants in response to actual demand. Currently $54 million has been allocated across the two plants – water and wastewater – for capacity upgrades.

For the wastewater plant the capacity upgrade is in the design phase, and procurement will start for the construction phase in the next four to eight weeks. The water treatment plant upgrade has also started and the first upgrade component is under construction. The upgrade will increase the capacity of the water treatment plant and a proportion of this upgrade is currently under construction.

At present, Hamilton City has 84.4 million litres of treated water storage. The Council is in the process of completing a new reservoir to meet recent and expected capability growth in the City. This new reservoir will be online and operational in October 2017, and will increase total treated water storage by 24 million litres. This represents a $21 million investment in potable water storage and network resilience.

There are also plans for a second additional reservoir. This is forecast to be constructed and completed by June 2020 and would add a further 12 million litres in potable water storage in the City.

All of this investment in potable water is focused on meeting the projected economic and resident population growth in Hamilton City. Further, the total increase in potable water storage enables residential growth in Peacocke.

Citywide transport networks

Hamilton City Council has a positive and collaborative relationship with the regional office of the New Zealand Transport Agency (NZTA). Together, Hamilton City Council and NZTA have jointly approached strategic network planning as it relates to transport activity and planned city land use changes.

NZTA in the Waikato Expressway Network Plan noted that the Te Rapa Bypass, Waikato Expressway and Southern Links would assist in determining the settlement pattern of western and southern Hamilton, enabling an integrated approach to development which should reduce the need for travel. This conclusion was subsequently supported by further modelling carried out in the development of the Hamilton Urban Growth Strategy.

Land use and transport integration is therefore heavily reflected in the Rotokauri Structure Plan and resulting arterial networks.

Business needs – Investment objective 1

Investment objective 1 will contribute to delivering the following business needs identified by Hamilton City Council through various plans and strategies:

- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.
- The management of land use and strategic infrastructure including roads and other transport, water, wastewater, and stormwater collection and management networks. These needs are identified in the Waikato Regional Policy Statement, the Waikato Regional Land Transport Plan 2015-2045, Access Hamilton: the New Zealand Action Plan for Hamilton, and the Future Proof Growth Strategy and Implementation Plan.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

Long-term settlement pattern

Investment objective one will assist to deliver a settlement pattern that encourages families and young people to live and work in Hamilton. This meets a business need of council.

- Hamilton is home to many young people and families, and is one of only a few places in New Zealand that continues to experience growth in the youth population.
- Hamilton is a city for families, and liveability is important to encourage resident population growth.

Investing in residential areas such as Peacocke meets the long-term settlement pattern for Hamilton City, as noted in the Peacocke Structure Plan.

This development also supports the focus in the Hamilton Urban Growth Strategy on an active, strong commercial central city in Hamilton with distinctive suburban villages.

Investment objective one also contributes to and meets the business needs identified in Priority 2 and Priority 7 in the 10-Year Plan.

- Priority 2: Become the third city economy in New Zealand. Investing in community assets such as parks, playgrounds, gardens, arts and cultural and sporting facilities will support Hamilton to become the third city economy in New Zealand by 2025, as it continues to be a great place to live and work.
- Priority 7: Become an urban garden. Hamilton is green, with parks, trees, beautiful gardens and street plantings. This priority is supported by strategies that are focused on the parks, playgrounds, and river walkways in and around Hamilton, along with Hamilton Zoo and the Hamilton Gardens.

Strategic infrastructure

The business needs of Hamilton City Council to manage land use and strategic infrastructure is outlined in the 10-Year Plan and 30-Year Infrastructure Plan. Priority 3 in the 10-Year Hamilton Plan states:

- Provide outstanding infrastructure. This priority is focused on infrastructure development that prepares the City for a population of more than 200,000.

Hamilton City Council needs to manage land use and infrastructure to improve infrastructure efficiency and reduce costs. To meet business needs growth needs to occur in a manner that supports the efficient use of infrastructure (e.g. development should occur in areas that are already strategically serviced or where infrastructure is planned). Land use should also support the significant funding investment in strategic infrastructure, and not undermine it through unplanned or ad-hoc development.

The ability to provide strategic infrastructure and services is fundamental to successful growth management and becoming the third city economy by 2025.

Infrastructure - Road Transport

The most significant business needs for transport in Hamilton are defined by the Hamilton Urban Growth Strategy, the Regional Policy Statement, and the Waikato Regional Land Transport Plan 2015-2045. Together, these strategies indicate the business needs of Hamilton City Council for road transport to enable sustainable development, and support passenger transport and active modes.

Over the next three years, connections to the Waikato Expressway will be a focus along with a continued partnership approach with developers in established growth areas over 10 years. Beyond the next 10 years, investment will be required to extend the transport network into new growth areas, including providing additional river crossings in the north and south of the city.

Business needs are also noted in the 10-Year Hamilton Plan. Hamilton City Council will provide and manage a safe and efficient transport network for Hamilton that integrates

freight, private vehicles, buses, walking and cycling. This includes the operation and maintenance of existing networks, and planning for future development and growth.

There are also business needs to meet the Regional Land Transport objectives outlined in the Integrated Land Transport Plan over the next 30 years. These include the following:

- Facilitating economic development: An effective and efficient land transport system that enhances economic wellbeing, and supports growth and productivity within the Waikato region and upper North Island
- Affordability: An adaptable and flexible approach to managing and developing the land transport system that optimises funding options and provides innovative management approaches to best meet the needs of the region in an affordable way.
- Integration and forward planning: An integrated and aligned land use and transport system.

Capacity for population growth

An important business need identified by Hamilton City Council is to provide capacity within the City for population growth. Population growth will assist council to meet investment objective one and become the third city economy in New Zealand by 2025.

This resident population growth is guided by population projections. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The National Institute of Demographic and Economic Analysis (NIDEA), a University of Waikato institution, has prepared a low and medium series of household and population projections for Hamilton and other territorial authorities in the Waikato Region. These projections have been devised as part of the Future Proof project.

The Future Proof Chief Executives Advisory Group and Strategic Implementation Management Group approved the following recommendation in December 2016: *"Confirm the agreement reached on growth projections, which is to use a banded approach based on NIDEA low and medium projections for the Future Proof Strategy Update, and to use NIDEA low for the Waikato Regional Transport Model."*

The NIDEA low series of household and population projections averages 1,250 households per annum. This projection series is the preferred projection going forward, and will be used in the Hamilton Growth model, the development of the Hamilton Long Term Plan and in future infrastructure planning and development.

Business needs – Investment objective 2

Investment objective 2 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 10 years, this requirement is to provide developer-ready land that is

zoned, serviced and commercially viable for 11,638 dwellings. This figure is over and above 20% of the projected demand for residential land.

- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The National Policy Statement on Urban Development Capacity (NPS-UDC) directs local authorities to provide sufficient development capacity in their resource management plans for housing and business growth to meet demand. Hamilton City Council is a local authority that is directly impacted by the NPS-UDC as Hamilton City is considered a high growth area. The NPS-UDC therefore has a substantial impact on the business needs of the Council.

Under the NPS-UDC, Councils are required to increase feasible development capacity. This means land that is zoned, serviced, and commercially viable. The NPS-UDC is focused on feasible development capacity for housing and business land to meet projected demand over the short, medium and long-term (three, 10 and 30 years).

The NPS-UDC has also set the requirements for the additional margin of feasible development capacity. For high growth areas such as Hamilton this is 20% over the projected demand for developer ready land in the short and medium-term, and 15% in the long-term. These demand projections regarding development capacity will have a substantial effect on Council's requirements for infrastructure and developable land.

The difference between the NIDEA household and population projections and the NPS-UDC requirements is important. In terms of residential growth, Hamilton needs to build new dwellings to house the additional residents projected in the NIDEA low projections, and it needs to provide the capacity for growth to be constructed along the NPS-UDC lines, but dwelling construction does not need to follow this line.

The additional capacity is there to address:

- Housing affordability through an increase in the supply of developable land
- Ensure housing supply for any unprojected population increase
- Factor in the proportion of feasible development capacity that may not be developed.

The NPS-UDC defines demand in the short, medium and long-term in relation to housing as including:

- The total number of dwellings required to meet projected household growth and projected visitor accommodation growth;
- The demand for different types of dwellings;
- The demand for different locations within the urban environment; and
- The demand for different price points.

This definition of demand is central to the NPS-UDC definition of development capacity, where development capacity refers to the amount of development allowed by zoning, and the regulations in plans that are supported by infrastructure. This development can be "outwards" on greenfield sites and/or "upwards" by intensifying the existing urban environment.

Business needs – Investment objective 3

Investment objective 3 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 30 years, this requirement is to provide developer-ready land that is zoned, serviced and commercially viable. This figure is over and above 15% of the projected demand for residential land.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

There is a business need for the Council to meet the business and residential land capacity requirements in 2045, as specified in the NPS-UDC. Such requirements are similar to those described for investment objective 2 above.

Investment objective 3 has a longer term focus and recognises that council can plan for future requirements through Annual Plan reviews and the coordinated management of strategic infrastructure. However, it also recognises that investment needs to occur to meet the long-term needs of the NPS-UDC, particularly in regards to developer ready residential land.

Business needs – Investment objective 4

Investment objective 4 will contribute to delivering the following business needs identified by Hamilton City Council:

- Priority 8 in the 10-Year Hamilton Plan: Provide access to affordable housing. The city will continue to provide a balanced supply of housing options to meet the city's growth.
- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The Hamilton Growth Model is used to determine future capacity requirements in Hamilton City. The dwelling demand projections from the model are based on the NIDEA low household and population projections and the NPS-UDC requirements.

This demand scenario assumes that the resident population of Hamilton City will be 198,000 by 2030, which is 4% higher or 7,000 more people than under the old Statistics New Zealand medium population growth scenario. This is because the NIDEA low projections are projecting 1,200-1,300 new dwellings per year for 10 years, which is a lot higher than the previous five year average of about 800 new dwellings per year.

Population growth is projected to be higher than it has been in recent years according to NIDEA and Statistics New Zealand. If this projection holds true and migration and household formation is at a higher rate than that forecast, than this will likely put pressure on land use and prices.

There is insufficient future affordable housing to provide a balanced supply of housing options given projected demographics and incomes.

- Over recent years, growth has predominantly occurred in the North of the city and continuing this trend may not provide for the future social or cultural needs of all residents
- Majority of greenfield section sizes are between 600 to 800 square metres, this is leading to urban sprawl and impacting on the price of land and the cost of travel.

Other transport modes such as walking and cycling become less attractive if local activities are further away from people's homes. This issue is particularly important for local neighbourhood shopping nodes and schools.

Table 1 Summary of existing arrangements and business needs

Investment Objective One	Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.
Investment Objective Two	**Increase the amount of developer ready land to support 11,638 dwellings by 2025**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Three	**Increase the amount of developer ready land to support the balance of the NPS-UD dwelling requirements by 2045**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model; Hamilton Urban Growth Strategy; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.

Investment Objective Four	**To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase**
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045.
Business Needs	The capacity of Hamilton City to provide a balanced supply of housing options to meet resident population growth. A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.

1.2 Context for Rotokauri investment option

Rotokauri is an area of approximately 955 hectares to the north-west of the Te Rapa area in Hamilton. It was brought into the City from the then Waikato County (now the Waikato District) as a consequence of the 1989 Local Government Reforms. This area, along with Rototuna and Peacocke, was incorporated into Hamilton City to provide for long-term development and city growth.

Through the development of the Hamilton Urban Growth Strategy in 2008, Rotokauri was identified as one of the four greenfield growth cells within Hamilton City. It was also identified that Rotokauri would be developed in two stages. Stage 1 of Rotokauri was identified for development in the short to medium term, while Stage 2 would be developed after Peacocke.

Rotokauri investment proposition

Rotokauri is considered a desirable urban development location and investment option as it is located within close proximity to The Base, major transport infrastructure, the WINTEC Rotokauri campus, Hamilton Zoo, and major employment areas located on the western side of the City.

Rotokauri has high levels of amenity due to its natural landscape, which consists of defined ridgelines, remnant natural vegetation, and the Waiwhakareke Natural Heritage Park.

Rotokauri is also a viable development opportunity as it continues new urban development to the north of the established suburbs of Nawton and Dinsdale. It also leverages off the recent significant investments made by NZTA in the Te Rapa Bypass.

Council has a good relationship with existing landowners and developers in the area, and has been working with them over the past decade in a collaborative way to complete the land use and investment framework for the area. Recent development success has occurred with Hamilton Joint Venture and Rotokauri Developments Limited, which includes Tainui Group Holdings.

Structure Plan elements

A Structure Plan has been developed for the Rotokauri area. Structure planning sets out the development suitability; land use constraints and opportunities; transportation network connection requirements; indicative open space areas; and major infrastructure needed to enable the development of an identified growth area. A Structure Plan also aligns with the

growth planning outlined in the Hamilton Urban Growth Strategy and the Regional Policy Statement.

The Rotokauri Structure Plan divided the area into two stages, to reflect proposed land release planning, and in accordance with the Hamilton Urban Growth Strategy and the Long-Term Plan infrastructure programme:

- Stage 1 was zoned to enable immediate development potential
- Stage 2 was zoned "Future Urban".

The Structure Plan also set out the future intent of Stage 2 to include extensive open space, residential, commercial and industrial areas.

In 2012 two key infrastructure milestones occurred:

- the opening of the Te Rapa Bypass and associated local road connections
- the extension of the western wastewater interceptor to support industrial development in Stage 1.

It is anticipated that the development of Stage 1 of Rotokauri will include a mixture of low- and medium-density housing with a projected overall housing capacity of 2,600 dwellings with over half (1,678) of these dwellings being developed within the current 10-year Plan period. Based on current projections Rotokauri Stage 2 has a capacity of approximately 4,800 dwellings.

District Plan provisions

Rotokauri was zoned "Rural" when it was brought into Hamilton City in 1987 from Waikato County. Key planning milestones between 1987 and 2016 include:

- rezoning from "Rural" to "Future Urban" in 1997
- introduction of the Structure Plan framework via Variation 18 in 2007, with all appeals settled and the Structure Plan operative in 2011 in the Operative District Plan
- settlement of appeals in 2012 to the now Proposed Operative District Plan, which has enabled a larger area to be available for immediate development.

The PODP zones the area within Stage 1 and includes the following:

- 90 hectares of "General Residential" zoned land, allowing sites over 400m^2 in the area mainly for single or duplex dwellings.
- 98 hectares of "Special Natural" zoned land, which allows for residential development with a density between 350m^2 to 600m^2 depending on location. It is anticipated that the majority of residential development in this area will consist of single dwelling sites.
- 7.5 hectares of "Business Zone 6 " land for the purpose of establishing a town centre to service the Rotokauri residential development.
- 41 hectares of medium-density residential land located adjacent to the proposed town centre. It is anticipated this will encourage a mix of higher-density living consisting of duplex and apartment developments.

- 75 hectares of open space land, which includes the Lake Waiwhakareke Heritage Park and an area for a sports park.
- 203 hectares of land for industrial activities.

Rotokauri Stage 2 covers an area of approximately 300 hectares. This is zoned "Future Urban" under the Proposed Operative District Plan. Under this zone, subdivision and land use are tightly controlled to avoid premature development and fragmentation of the land resource.

1.3 Potential business scope and key service requirements

Hamilton City Council has identified specific strategic transport and water infrastructure projects that will enable land within the Rotokauri area to be developer ready. These infrastructure projects will accelerate the building of new dwellings in this area.

In Rotokauri, the projects that the $91.2 million in HIF funding is being sought for include:

- The floodway crossing multiple land holdings required to deal with the stormwater from Stage 1 of the growth cell including that from the sensitive Lake Rotokauri.
- Road connection to Te Wetini Drive and Te Kowhai Road to extend the Hamilton arterial transport system.

These are all new infrastructure projects and include the construction of strategic transport and water and wastewater elements.

The $91.2 million in HIF funding will accelerate development timing and bring projects that were part of the Hamilton Plan and Long-Term Infrastructure Strategy 2015-2045 forward.

- In total, 2,787 dwellings will be developed in the Stage 1 Rotokauri area between 2017/18 and 2023/24.
- Within the 10 years of the HIF, the accelerated development of 1,610 dwellings will occur in the Rotokauri Stage 1 area.

Table 2 Summary of Rotokauri dwellings and projected demand

	2016-2020 5 Years	2021-2025 10 Years	2026-2030 15 Years	2031-2045 30 Years
No. of dwellings to be constructed (within each period)	180	1,430	1,017	160
No. of lower cost dwellings to be constructed	18	143	102	16
Cumulative no. of dwellings to be constructed	180	1,610	2,627	2,787
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	3%	13%	14%	8%

The developments within Rotokauri will continue to be undertaken in stages. This means the $91.2 million in HIF funding will potentially lead to the development of:

- Stage 2 of Peacocke to be realised by 2031/32, resulting in the total development of 6,600 dwellings in Peacocke.

1.4 Main benefits

The quantifiable benefits are discussed in detail in the Economic Case. As a reference, these benefits include:

- Transport benefits to Hamilton City ratepayers (refer Annexes)
- Rates revenue to Hamilton City Council
- Wealth created for households due to appreciation in the capital value of the dwelling
- Economic contributions to Hamilton City arising from the economic activity associated with:
  - Infrastructure construction; Housing construction; Household expenditure.

The non-quantifiable benefits include:

- The optimisation of strategic infrastructure networks, including the staging of transport networks and strategic infrastructure, and the earlier opening up of the wider growth cell in Rotokauri.
- The earlier realisation of wider economic benefits that impact on the well-being of the community, including social infrastructure.
- Wider regional benefits, including the efficient operation of freight corridors and the adherence to coherent settlement patterns
- National benefits including the key role Hamilton plays in the Waikato and Upper North Island transport network

The optimisation of strategic infrastructure

The key economic benefit that the strategic infrastructure will enable is the bringing forward of a residential development in Rotokauri. Bringing forward urban development in Rotokauri through the Housing Infrastructure Fund will enable the Council to continue to meet resident population needs for water and wastewater. This infrastructure is an integrated programme of works that includes the Rotokauri Floodway and arterial roads.

The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

Wider benefits that impact on the community

The bringing forward of residential development in Rotokauri will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such

as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value.

The skills and other human capital in Hampton City will grow through projected population growth and the bringing forward of the residential development in Rotokauri. An increase in skills and other human capital also raises the capacity of a community to take-up new knowledge and technologies. This capacity is called the "absorptive capacity" for technology. Increasing absorptive capacity immediately makes a community ready to innovate, and to adopt and adapt new technologies. These activities increase the capacity of communities to participate in global value chains of supply. This is beneficial and vital for Hamilton City and for the wider rural community it services.

The earlier provision of infrastructure for social support and development will support the earlier development and deepening of social and cultural capital (e.g. safer communities). This also creates more resilient communities sooner. This social and cultural resilience has a value which, if realised earlier, provides a higher present value to communities.

Earlier realisation of development profits by developers will also release funds available for further development opportunities. Hence, the net present value of investment expenditure and thereby incomes for households and firms in Hamilton City will increase.

Regional benefits

The opportunity to leverage the Housing Infrastructure Fund in conjunction with key infrastructure and economic projects – the Waikato Expressway including the extension to Pairere; Inland Port/logistics hubs; advancement of Southern Links; Pairere to Tauranga road upgrade; and the upgrade to the East Coast Main Trunk Line underscores the power of a coordinated Hamilton and Waikato region.

As discussed earlier, the economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow and collaborate with surrounding district councils, the Waikato Regional Council, and Tauranga City council and Auckland Council.

Collaborations such as Future Proof illustrate how Hamilton city Council is working with Environment Waikato, and Waipa and Waikato District Council to strategically plan and manage growth. The Upper North Island Strategic Alliance (UNISA) is another collaboration that Hamilton City Council has been actively involved in and advocating for at a regional and national level.

This collaboration is particularly important given that approximately 16% of the national state highway network is in the Waikato, and the region is a strategic freight corridor for national road and rail freight. The transport network links primary producers with manufacturers and exporters, and is a major part in keeping the economy of New Zealand moving.

National benefits

Hamiltonians move between places in their City and Region to live, work and play. Collective planning and action between government, residents and businesses is critical to the long-term success of Hamilton city and the Waikato Region.

As discussed earlier, Rotokauri is one of the growth areas recognised in the Future Proof Growth Strategy. This growth area has been identified to assist with infrastructure and land use integration, and forms part of a wider sub-regional view of the Future Proof settlement pattern. Sub-regional and regional planning illustrates the collaborative way that Hamilton City Council works with to ensure efficient use of resources and the steady progression of Hamilton to being the third city economy in New Zealand.

Table 3 Analysis of potential benefits that can be expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Description
Transport benefits	Hamilton City ratepayers	Direct	Time saving benefits
Rates revenue	Hamilton City Council	Direct	New rates paid by new ratepayers
Developer contributions	Hamilton City Council	Direct	Funding provided by developers to be applied to meet infrastructure costs
Wealth created from households	Hamilton City	Direct	Appreciation in real value of dwelling over time
Infrastructure construction	Hamilton City	Direct	Economic contribution to economy stimulated by infrastructure construction activity
Household construction	Hamilton City	Direct	Economic contribution to economy stimulated by housing construction activity
Household expenditure	Hamilton City	Direct	Economic contribution to economy stimulated by household consumption of goods and services

Table 4 Analysis of potential benefits that cannot be reliably expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Quantitative or Qualitative?	Description and Possible Measures
Optimise strategic infrastructure	Hamilton City	Direct and Indirect	Qualitative	Enable coordination in the provision of network services.
Earlier establishment of social infrastructure including schools and community facilities	Hamilton City	Direct and Indirect	Qualitative	Resilient communities with high social and cultural capital.

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1.5 Main risks

Non-financial risks

Non-financial risks associated with the Housing Infrastructure Fund are identified in the table below with proposed bid mitigations. These mitigations have been included as HIF conditional acceptance conditions for Council.

Table 5 Initial non-financial risk analysis

Non-Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Securing developer commitment and resultant housing construction	H	M	Proposal submitted on the basis that final funding is subject to an agreed Private Developer Agreement (PDA) between Council addressing the following: Confirmation of clear housing construction targets; contributions are known; caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances.
Aligning HIF allocation with Local Government Act and Land Transport Management Act process	H	L	Final proposal submitted on the basis that it is subject to consultation with the community over the priority of advancing other capital projects in the Long-Term Plan, including any consequential impact on debt and rates.
Delivery risk	L	L	Creation of a new standalone HIF delivery team within Council and the formation of tailored industry best practice contractual delivery arrangements.
Information	H	M	Due to the compressed timeframe imposed by MBIE, some aspects of the analysis informing our understanding of costs, benefits, and impacts on the Council's finances arising from the final proposal are likely to alter through more detailed investigations in the next phase of the HIF process. This may be mitigated through the additional time and investigation phase of the next stage of the HIF process.

Financial risks

While there are financial benefits from receiving a Housing Infrastructure Fund allocation (primarily in terms of interest payments saved from the fact the Housing Infrastructure Fund would be interest free), there are potential issues with how any Housing Infrastructure Fund allocation may impact on the Council's current financial strategy.

The specific issue arising from receiving any Housing Infrastructure Fund allocation relates to how any Housing Infrastructure Fund debt will be treated both on the balance sheet and

in terms of financial debt ratios, the repayment arrangements and future commitments (especially for transport projects), and how development contributions will be levied.

The table below includes the main financial risks and the proposed mitigation/bid acceptance conditions relating to them.

Table 6 Initial financial risk analysis

Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Contingency costing	H	M	Project costs to be reviewed every three years to update for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land values).
Lack of consequential and necessary infrastructure funding	H	M	The HIF proposal does not include any allowance for consequential upsize and operating expenditure, and no allowance for community infrastructure. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue as part of any future LTP considerations.
Financial reporting of HIF in Council accounts	H	H	Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Finance Authority, credit rating agencies, NZTA and the Office of the Auditor General.
Development Contribution funding uncertainty	H	M	Final bid acceptance based on receiving confirmation that DCs can be legally collected.
Impacts on financial strategy	H	H	HIF allocation would potentially result in a breach of the financial strategy with regard to debt to revenue ratios. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue.

A risk register has been developed and will be progressively updated as more detailed analysis is undertaken in the Detailed Business Case stage.

1.6 Key constraints and dependencies

The proposal is subject to the following constraints and dependencies. The first are used by Council to guide the appropriate use of funding. The second set of dependencies are specific to the HIF proposal.

The Hamilton City Council has determined the following basic principles to guide the appropriate use of funding sources and decision-making:

- Each generation of ratepayers should pay for the services they receive and borrowing can assist to achieve this outcome.
- Subsidies, grants and other income options are fully explored prior to rates being used.
- Capital costs to replace assets that reach the end of their projected economic life is firstly funded from rates.
- Capital costs to upgrade or build new assets is funded firstly from sources other than rates (e.g. subsidies, grants, fundraising, financial contributions) and then borrowing.
- Growth related capital costs are funded by development contributions.

If no other funding source can be used it is then appropriate to fund the remaining revenue requirement for operating expenditure from rates.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the MBIE tender documentation, this indicative business case is also submitted on the following basis:

- It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.
- Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is also subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets,
- contributions are known,
- caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances,
- Letters of Intent to be provided by development partners.
- Final bid acceptance based on receiving confirmation that DC's can be legally collected under the HIF structure.
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General.

- Project costs to be reviewed every 3 years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

1.7 Housing Infrastructure Fund Criteria – Strategic Case

The following HIF criteria are critical for the strategic case for Rotokauri and have been defined for the HIF assessment process.

Table 7 HIF Criteria Assessment Factors – Strategic Case

HIF Critical Assessment Factors	Description
Number of dwellings as a proportion of total projected demand	The number of dwellings expected to be built as a result of the proposed infrastructure as a proportion of the total projected demand for housing over the construction timeframe of the dwellings.
Expected timing of dwelling construction	The expected timing within which dwellings will be built in the area to be served by infrastructure built with HIF assistance.
Degree to which timing of infrastructure construction is brought forward	The timing of infrastructure construction if provided through HIF assistance, compared to timing if no HIF assistance was provided.
Co-benefits and economic growth	The degree to which the proposed infrastructure will support or complement other investments or economic growth.
Level of lower-cost housing	The number of lower-cost dwellings expected to be built as a result of the funded infrastructure.
Contribution to development capacity under the National Policy Statement	Degree proposed infrastructure assists a territorial authority to meet development capacity targets under the NPS-UDC.

Number of dwellings as a proportion of total demand

Table 8 illustrates the number of dwellings that will be constructed in Rotokauri as a proportion of the total projected demand for housing across Hamilton City.

Table 8 Rotokauri dwelling related HIF criteria

	2016-2020 **5 Years**	2021-2025 **10 Years**	2026-2030 **15 Years**	2031-2045 **30 Years**
No. of dwellings to be constructed (within each period)	180	1,430	1,017	160
No. of lower cost dwellings to be constructed	18	143	102	16
Cumulative no. of dwellings to be constructed	180	1,610	2,627	2,787
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	3%	13%	14%	8%

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It shows that in the first five years, the number of dwellings that will be constructed in Stage 1 Rotokauri will be quite small, at 180 dwellings. This is because it takes time to build the strategic infrastructure required to accelerate housing developments in this area. During this period, Stage 1 Rotokauri will meet only three percent of the projected demand for housing in Hamilton City.

Over the next five years, however, housing construction picks up. This means by Year-10 Rotokauri is projected to meet 13 percent of the projected demand for residential dwellings in Hamilton City. This is based on the construction of 1,610 dwellings in Rotokauri over the 10-year period, and a projected demand for approximately 12,296 dwellings across the City. This projected demand is based on data from the NIDEA population and housing projections, the Hamilton City growth model, and the Future Proof Growth Strategy.

The majority of the dwellings in Stage 1 Rotokauri will be completed within a 15 year period, with capacity in the growth area being reached after approximately 30 years. Between Years-10 and 15, an additional 1,107 dwellings will be built, bring the cumulative total to 2,627 dwellings. This means after 15 years, Stage 1 Rotokauri will be providing approximately 14% of the demand for dwellings across the City.

As noted in an earlier section, approximately 41 hectares of medium-density residential land is zoned and located adjacent to the proposed town centre. It is anticipated that this will encourage a mix of higher-density living consisting of duplex and apartment developments. This zoning and the subsequent gross floor areas discussed in the Structure Plan indicate that approximately 10 percent of the dwellings in Rotokauri will be lower cost dwellings.

Degree to which timing of infrastructure construction will be brought forward

Table 9 illustrates the difference in start dates for the key infrastructure projects that will occur in Rotokauri as a result of HIF funding. This infrastructure is an integrated programme of works that includes the Rotokauri Floodway and arterial roads.

Table 9 Rotokauri infrastructure completion dates and change in timing completion

Completion dates	SQ	Rotokauri HIF	HIF (NZTA subsidy)
Transport			
Start year	2016	2017	2017
50 Percent complete	2030	2021	2023
100 percent complete	2045	2028	2028
Three waters			
Start year	2016	2017	2017
50 Percent complete	2023	2019	2019
100 percent complete	2034	2028	2028

Change in timing (years)	SQ	Rotokauri HIF	HIF (NZTA subsidy)
Transport			
Start year	0	-1	-1
50 Percent complete	0	9	7
100 percent complete	0	17	17
Three waters			
Start year	0	-1	-1
50 Percent complete	0	4	4
100 percent complete	0	6	6

The table splits the variables into SQ (Status Quo), or the timing of when the construction will occur without the HIF funding; HIF, or the timing of when the construction will occur with the HIF fund; HIF (NZTA subsidy) or the timing of when the construction will occur with the HIF funding and the impact of the HIF funding on the strategic transport infrastructure projects.

Under a status quo situation, the investment in strategic transport infrastructure associated with Rotokauri Stage 1 will occur as part of the 30-Year Infrastructure Plan. This means 50% of the associated arterial roads will be completed by 2030 and 100% will be completed by 2045. The Rotokauri Floodway is also part of this plan, with 50% of the Floodway scheduled to be completed as part of the 10-Year Plan and 100% completed by 2034.

The HIF fund will accelerate investment in strategic infrastructure. As shown in Table 10, the investment in arterial roads in Rotokauri Stage 1 is brought forward by 17 years, while the investment in the Rotokauri Floodway is brought forward by six years.

Further discussion on expected timing of dwelling construction

The expected timing of dwelling construction can be further assessed in two complementary ways:

- The number of house years – this is the number of years for each house constructed times the number of years until 2045. In the case of HIF-assisted construction, dwellings are constructed earlier and have higher house years until 2045, from which time HIF and non-HIF assisted construction will accrue house years at the same rate.
- Completion dates for percentiles of construction completed – these are the years in which 25%, 50%, 75% and 100% of the number of houses are completed. In the case of HIF construction, more house are constructed sooner and the completion dates

for non-HIF and HIF constructed houses show the reduction in time achieved due to the HIF assistance.

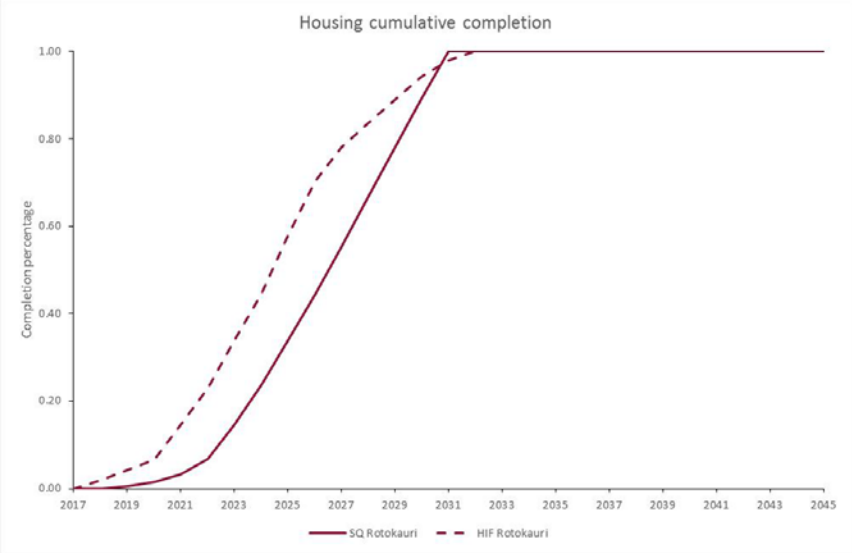
Table 10 below illustrates that with HIF funding Stage 1 of Rotokauri achieves 5,700 more house years than under a status quo situation.

Table 70 Rotokauri dwelling construction completion dates

Housing	Rotokauri SQ	Rotokauri HIF	Rotokauri HIF (subsidy)
House Years	49,979	55,704	55,704
Completion dates			
Start year	2019	2018	2018
25 percent complete	2025	2023	2023
50 percent complete	2027	2025	2025
75 percent complete	2029	2027	2027
100 percent complete	2031	2032	2032

For most of the duration of Stage 1 of Rotokauri, dwellings are put in place two years faster with HIF-assisted construction. This is illustrated in Figure 1 below.

Figure 1 Housing cumulative completion, percentage of dwellings, Rotokauri SQ & HIF



Co-benefits and economic growth

The Economic Case presents the quantitative estimates of economic activity generated by infrastructure and housing developments. In addition, there are wider unquantified social, economic, environmental and cultural benefits. Some of these have been discussed in the previous sections, entitled *Main Benefits* and *Context for Rotokauri Investment Options*. These benefits are focused on well-being and the associated social and cultural infrastructure that develops in the development of a new community.

Some of the key co-benefits of Rotokauri relate to its high amenity values, particularly the natural landscape and the Waiwhakareke Natural Heritage Park, and its proximity to major transport infrastructure, primary, secondary and tertiary education facilities, and major employment areas located on the western side of the City.

As noted, and discussed in more detail in the Economic Case, the key economic benefit that HIF fund will enable is the bringing forward of strategic infrastructure that will enable residential development in Rotokauri. The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

The bringing forward of residential development in Rotokauri will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value. In addition, the skills and other human capital in Hamilton City will grow through projected population growth.

Level of lower cost housing

Council is working in collaboration with major landowners who are looking to undertake significant new residential development in the Rotokauri area. Joint work is underway on a masterplan to enable approximately 1,000 dwellings within Stage 1 of Rotokauri.

This development will provide for differing densities, with lots ranging from 250m² to 1,000m² in the site area. Approximately 40% of the anticipated dwellings are expected to have a gross floor area of between 250 and 450m². The majority of houses constructed and sold in Hamilton since 2005 range in gross floor area of between 150 and 300m²2.

Houses with a gross floor area below 200m² are typically more affordable in Hamilton, compared to larger dwellings. From the work done in collaboration with landowners to date, Hamilton City Council anticipate approximately 10% of all houses delivered in Rotokauri will be lower in cost when compared to the median 2017 Hamilton house price.

Contribution to development capacity under National Policy Statement

Hamilton City Council is well advanced in terms of undertaking the necessary work to fulfil its obligations for residential land capacity under the NPS-UDC.

As a starting point, Hamilton is satisfying its obligations in terms of having sufficient land supply up to a 10 year period when taking in to account both greenfield and brownfield development opportunities enabled under the existing planning and investment framework. Nevertheless an independent modeller has been appointed to determine all the of supply and demand requirements articulated under the NPS-UDC. The full results of these revised supply and demand assessments will not be available until June 2017.

Hamilton's population is expected to grow from approximately 160,000 in 2017 to 236,500 in 2046, an increase of 79,500 people (or by over 50%). On this basis, the demand for new residential dwellings in Hamilton until 2025 is 9,574 dwellings, or 1,064 per year. This demand will be spread across new greenfield sites and infill in the existing urban areas of Hamilton.

As noted earlier, the NPS-UDC indicates that high growth areas such as Hamilton City must provide for an additional 20% development capacity over the current demand estimates. Applying this demand contingency means the 1,064 new dwellings required in Hamilton City increases by another 229 dwellings to 1,293 new dwellings per year, or the provision of 11,638 new dwellings to 2025.

Between 2025 and 2045 the estimate for new dwellings is approximately 23,000. Consequently, over a 30-year period, the total number of dwellings needed to be constructed in Hamilton is approximately 34,000 dwellings.

2. Economic Case

The purpose of the Economic Case is to identify the investment option that optimises value for money. Having determined the strategic context for the investment proposal and established a robust case for change, this part of the business case:

- identifies critical success factors for the investment options to:
  - align with HCC's strategic direction and its operational capacity
  - be achieved in a timely way with available funding and with available public and private resources
- generates three long-list options
- assesses the long-list options in terms of:
  - fulfilling investment objectives (strategic case) targeted to business needs (strategic case)
  - meeting the critical success factors
- assesses a limited number of short-listed options, selected from the long-options assessment in terms of:
  - benefit cost assessment of the investment options compared with the status quo
  - presents the HIF criteria for the short-listed options
- identifies a preferred way forward based on the short-listed options.

Given the timeframe to prepare this indicative business case, Hamilton City Council employed Business and Economic Research Limited (BERL) to undertake the analysis in the Economic Case.

2.1 Outline of the Economic Case

Other developments and infrastructure projects considered

The Strategic Case above and the Management Case below contain a comprehensive account of the scale, scope, timing, location and strategic connections of the proposed investment options assessed in this Economic Case.

Rationale for the development and the proposed projects

The rationale for the proposed projects in this Economic Case are described detail in the proceeding Strategic Case. The main outcome sought is the acceleration of dwelling construction, including affordable dwellings. This is to be achieved by successfully meeting investment objectives. The recommended investment options assessed in this Economic Case are designed to deliver these investment objectives.

Cost contingencies

Cost estimates are the best available estimates that Hamilton City Council could produce at this time. Escalations for the infrastructure costs discussed in this Economic Case have been accounted for using SOLGM cost adjustors and are net of CPI inflation.

2.2 Critical success factors

The following critical success factors were identified by Hamilton City Council through its recent strategic planning processes.

Table 81 Critical Success Factors

Critical Success Factors	Broad Description
Strategic fit and business needs	Alignment with other key Council growth programmes and strategies over short, medium and long-term for transport and water.
Achievability	Overall programme and direct investment can be delivered in required timescales to required standard/quality and corresponding indirect investment and outcomes can be realised, including collaboration and partnering elements.
Timing and sequencing	Acceleration of core output (housing) is achieved and wider programmes are able to be delivered as forecast or sped up.
Financial viability	Fit with funding constraints, maximises/optimises financial return and capital recycling over short, medium and long-term.
Market impacts	Developers are incentivised to expedite housing development by accelerating developments, public sector funding matches pace with private sector development and collaboration is fostered.
Risk management	Appropriate controls/frameworks, management and governance including partnering, can be established and maintained.

2.3 Long list options and initial options assessment

Investment options were defined by Hamilton City Council through a facilitated options workshop held on Thursday 2 March 2017 and refined in subsequent management discussions.

Options identification

Subsequently, BERL advisors in consultation with Hamilton City Council systematically considered all the possible ways in which the investment proposal could be delivered under each of seven dimensions or categories of choice:

- *Scoping options – What levels of road and water services are possible for each option?*
- *Service solution options – Are there policy options for road and water services?*
- *Service delivery options – Are there appropriate governance, project management and infrastructure entities in place?*
- *Implementation options - When Are services available to match the annual housing yield?*
- *Prioritisation/Sequencing – Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?*
- *Consequential housing outputs – What is the yield and timing of housing outputs?*

- *Funding – What is the likelihood of wider private investment or development?*

This led to a selection of long list of in-scope options as follows:

Table 92 Possible long-list options classified by the seven dimensions of choice

Dimension	Description	Options within each Dimension
Scale, scope and location	What level of road and water services are possible for each option?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)
Service solution	Are there policy solutions for road and water services?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)
Service delivery	Are there appropriate governance, project management and infrastructure entities in place?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)
Implementation	Are services available to match the annual housing yield?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)
Prioritisation/ Sequencing	Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)
Consequential housing outputs	Number/timescale?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)
Funding	Wider private investment/development?	Status quo HIF-Rotokauri HIF-Rotokauri (with NZTA subsidy)

The status quo and the investment options were assessed in terms of the investment objective and the critical success factors for each of the seven dimensions of choice, in terms of: *fully meeting, partially meeting, or not meeting each investment objective and critical success factor.*

The assessment methodology was informed by:

- Hamilton City Council strategic and operational plans
- An economic outlook for Hamilton City, including its capacity for major infrastructure development and residential housing construction.

The summary assessment of the long-list options is included below. A more detailed analysis is included in Annexes to this indicative business case.

The status quo option

A base case option is used as a baseline for comparing marginal costs and benefits of alternative investment options. It provides the benchmark for determining the relative marginal value for money added by the short-listed option under consideration.

The status quo option, in the present case is the non-HIF Rotokauri option. This status-quo is currently described as part of the Council's 30 year Infrastructure Plan.

Description of the status quo option

Advantages

The main advantages are that:

(i) implementation:

a. it fulfils all investment objectives

b. it fulfils all critical success factors.

Disadvantages

The main disadvantages are that:

(i) scale, scope and location:

a. it does not fulfil objectives 2 and 3

b. it does not fulfil critical success factor market impacts.

(ii) service solution

a. it does not fulfil critical success factor of achievability.

(iii) prioritisation/sequencing

a. it does not fulfil critical success factors of strategic fit, timing and sequencing, and risk management.

(iv) consequential housing outputs

a. it does not fulfil any of the investment objectives.

Conclusion

The status quo option has a low level of alignment with Hamilton City Council's NPS-UDC investment objectives, and would not deliver council requirements for consequential housing outputs.

Description of the long list options - HIF Rotokauri and HIF-Rotokauri (NZTA subsidy)

Advantages

The main advantages are that:

(i) scale, scope and location:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(ii) service solution:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(iii) service delivery:

a. it fully or partially meets all investment objectives

b. it fully meets all critical success factors except for market impacts with which it has a partial fit.

(iv) implementation:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(v) prioritisation/sequencing:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(vi) consequential housing outputs:

a. it fully meets all investment objectives

b. it fully meets all critical success factors except for financial viability with which it has a partial fit.

Conclusion

These two options are viable short-list options since they partially or fully meet all investment objectives and critical success factors.

The short-listed options

This short-list assessment is made for the investment options compared with the status quo option.

The status quo option is the non-HIF Rotokauri option. This is defined by the Hamilton City Council's Future Proof 30 year Infrastructure Plan.

On the basis of the long-list analysis, the recommended short-list for further assessment is as follows:

- Option 1: Status quo option (retained as a baseline comparator)
- Option 2: HIF Rotokauri
- Option 3: HIF Rotokauri (with NZTA subsidy)

2.4 Indicative costs and benefits

The HIF-Rotokauri and HIF-Rotokauri (NZTA subsidy) options have overall benefit-cost ratios 15.71 and 18.91 respectively. The indicative benefits and costs and the overall benefit-cost ratio of the short list options are presented in Table 13 below. The marginal benefit-cost ratios for the contributing benefits are presented in Table 14 below.

Transport benefits, dwelling value appreciation and the three kinds of economic contribution all have marginal benefit-cost contributions equal or greater than one. Consequently, each option alone provides a favourable benefit-cost outcome.

This is important since the quantum of benefits outweighs the investment cost for mutually exclusive beneficiaries who are diverse across location, time, private sector, public sector and households.

Table 13 Overall Benefit Cost Ratio for Rotokauri, Status Quo and HIF

	Rotokauri		
BCR components ($000s)	SQ	HIF	HIF (NZTA subsidy)
Houses	**2,750**	**2,787**	**2,787**
Costs			
Infrastructure capital	74,646	145,975	118,769
Infrastructure maintenance	2,542	3,820	5,651
Total Cost	**77,188**	**149,795**	**124,420**
Benefits			
Transport benefits	0	197,345	197,345
Rates revenue	68,428	78,535	78,535
Developer contribution revenue	0	13,533	13,533
Improvements value appreciation	36,810	42,215	42,215
Infrastructure construction - economic impact	80,105	153,899	153,899
Housing construction - economic impact	521,725	589,636	589,636
Household expenditure - economic impact	1,077,728	1,277,916	1,277,916
Total Benefits	**1,784,797**	**2,353,079**	**2,353,079**
Benefit Cost Ratio	**23.12**	**15.71**	**18.91**

Table 104 Marginal Cost Benefit Ratios for contributing benefits, Status Quo and HIF

	Rotokauri		
BCR components ($000s)	SQ	HIF	HIF (NZTA subsidy)
Costs	**77,188**	**149,795**	**124,420**
Transport benefits	0	197,345	197,345
Benefit Cost Ratio	0.00	1.32	1.59
Rates revenue	68,428	78,535	78,535
Benefit Cost Ratio	0.89	0.52	0.63
Developer contribution revenue	0	13,533	13,533
Benefit Cost Ratio	0.00	0.09	0.11
Improvements value appreciation	36,810	42,215	42,215
Benefit Cost Ratio	0.48	0.28	0.34
Infrastructure construction - economic impact	80,105	153,899	153,899
Benefit Cost Ratio	1.04	1.03	1.24
Housing construction - economic impact	521,725	589,636	589,636
Benefit Cost Ratio	6.76	3.94	4.74
Household expenditure - economic impact	1,077,728	1,277,916	1,277,916
Benefit Cost Ratio	13.96	8.53	10.27

The benefit-cost ratios are calculated in accordance with the following requirement set out on p18 of the "HIF Call for Final Proposals":

The benefit-cost ratio for HIF activities which provide access to housing development in high growth areas is to be calculated assuming that the level of housing development that cannot occur without the investment is advanced; the costs and benefits generated by the infrastructure work are brought forward in the benefit-cost ratio calculation.

The main quantifiable costs for Hamilton City Council are infrastructure capital and maintenance costs.

The main quantifiable economic benefits provided are:

- transport benefits to Hamilton City ratepayers
- rates revenue to Hamilton City Council
- developer contributions to Hamilton City Council
- wealth created for households due to appreciation in the capital value of the dwelling
- economic contributions to Hamilton City arising from the economic activity associated with:
    - infrastructure construction
    - housing construction
    - household expenditure (less rates payable whose economic benefit is already accounted for above).

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Assumptions

The following are data sources and assumptions used by BERL in determining these estimates of costs and benefits.

Transport benefits

The net present value of the benefits (refer Annexes) accruing from the transport infrastructure in terms of time savings for road users. These benefits were provided by Gray Matter.

Rates and Developer contributions

Average annual rates and developer contributions per new dwelling were provided by Hamilton City Council. BERL have deflated both rates and developer contributions by the projected CPI rates to ensure they reflect real price change.

Improvement value appreciation to households

BERL have assumed that the initial capital value of a new home is the same as the average new build cost of $340,000.

BERL have assumed that each new house will appreciate in value by 3% per annum once the house has been built.

BERL has then applied an annual deflator to the annual appreciation to remove the inflation component of the price change in housing, and allowed the appreciation in capital value of housing to reflect the real growth in the value of the house.

The forecast CPI series to 2045 was developed by BERL combining current inflation growth and the long run target of 2% inflation per annum (the current RBNZ inflation target).

Infrastructure Costs

All infrastructure costs were provided by Hamilton City Council for transport infrastructure and three waters infrastructure.

To reflect real changes in infrastructure costs going forward, BERL have used a cost adjustor. For this project the cost adjustor was calculated by taking a projected capital expenditure annual cost adjustor and subtracting from it the projected annual change in inflation as represented by CPI.

Using this cost adjustor means that infrastructure costs in 2045 are 19.1 percent higher than in 2017 when expressed in $2017.

Housing Construction

Average costs per square meter were used for a house of between 100 and 250 square meters. This house would have a concrete floor slab, kitchen, bathroom, WC, ensuite. Colorsteel roof, and weatherboard cladding (Linea). Fittings in the house would be of a medium quality.

The average cost per square meter for a residential house in the Waikato comes from QV CostBuilder which replaced Rawlinsons New Zealand Construction Handbook. The range per square meter for a new build was $1,700 to $1,900 in this construction handbook. BERL has used $1,700 per square meter to reflect the better economies of scale that larger housing developers are able to achieve.

To determine the overall average size of a new house, BERL used data on the number of new residential consents in the 12 months to January 2017 and the floor area of these consents. This data showed that in the 12 months to January 2017, there were 2,933 new consents for residential houses and the total floor area was 608,200 square meters, or 207.4 square meters per house. BERL therefore used 200 square meters as an average to reflect a more conservative approach, and that the average will be influenced by a small number of much larger houses potentially being built.

Therefore, BERL has assumed an average new build cost of $340,000 for a 200 square meter house.

Household Expenditure

Average weekly household expenditure is from the Statistics New Zealand Household Expenditure Survey 2013. This is a survey of New Zealand residents who own their own dwelling.

The overall household expenditure data was adjusted by 88% to reflect the difference between the New Zealand average spend and the average spend in the Waikato / Rest of North Island region. BERL also removed property rates, savings, donations, fines and overseas expenditure from the household expenditure.

The average weekly spend was then adjusted to an annual spend. This resulted in an estimate of average household expenditure in the Waikato of $51,371.25 per year, which was rounded to $51,300 for BERL calculations.

The household expenditures output to GDP co-efficient was constructed by assigning household expenditure to 21 industries (including retail, education, recreation, food and beverages services, etc.) and using the spending weight the Gross Output to GDP co-efficient of each of the 21 industries to construct an overall co-efficient. This co-efficient is 0.6.

The total GDP multiplier for household expenditure was constructed using the same weights as the Gross Output to GDP co-efficient. This co-efficient is calculated to be 1.86.

Multipliers

For this analysis, BERL has used 2013 input-output multipliers tables for New Zealand. These are calculated from the 2013 New Zealand input-output tables produced by Statistics New Zealand in 2016.

- For Local Authority rates and developer contributions, BERL used the multiplier for Local Government.
- For infrastructure construction, BERL used the multiplier for Heavy and Civil Engineering Construction.
- For residential housing construction, BERL used the multiplier for Residential Building Construction.

For each of the Local Authority rates, developer contributions, infrastructure construction, residential building construction and household expenditure, BERL transformed the gross output to GDP and then multiplied the direct GDP for each category to determine the total annual GDP contribution to the New Zealand economy.

Net Present Value

BERL have used a discount rate of 6 percent in our Net Present Value calculations.

BERL have also expressed the Net Present Values in $2017.The Recommended Preferred Way Forward

The recommended preferred way forward

On the basis of the above initial assessment, both HIF-Rotokauri options are preferred over the status quo, with the NZTA subsidised option being the best.

2.5 HIF Criteria Assessment – Economic case

The HIF criteria relevant to the economic case for the investment options are defined as shown in Table 15 below.

Table 115 HIF Criteria Assessment Factors – Economic Case

HIF Critical Assessment Factors	Description
Infrastructure spend per dwelling	The average spend would be the total value of funding assistance applied for, divided by the number of dwellings expected to be built as a result of the infrastructure provided.
Co-benefits and economic growth (where quantifiable)	The degree to which the proposed infrastructure will support or complement other investments or economic growth (where quantifiable)

Infrastructure spend per dwelling

Table 126 Infrastructure spend per dwelling, Rotokauri

	2016-2020 5 Years	2021-2025 10 Years	2026-2030 15 Years	2031-2045 30 Years
No. of dwellings to be constructed (within each period)	180	1,430	1,017	160
No. of lower cost dwellings to be constructed	18	143	102	16
Cumulative no. of dwellings to be constructed	180	1,610	2,627	2,787
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	3%	13%	14%	8%
HIF bid infrastructure cost per dwelling constructed	512,900	57,300	35,100	33,100

Table 17 above shows the infrastructure spend per dwelling in Stage 1 of Rotokauri over the next 30 years. It illustrates that in the first 10 years, the average cost per dwelling enabled by the HIF assistance sought is $57,300. This drops to an average cost per dwelling of $33,100 by 30 years.

These figures are based on the gross funding of this HIF proposal for Rotokauri of $154 million, which includes $33.3 million of NZTA subsidy and $29.8 million of Hamilton City Council funding through the Long-Term Plan. This calculation is in accordance with guidance provided by MBIE.

Co-benefits and economic growth

The Economic Case presents the quantitative estimates of economic activity generated by infrastructure and housing developments. In addition, there are wider unquantified social, economic, environmental and cultural benefits. Some of these have been discussed in the previous sections, entitled *Main Benefits* and *Context for Rotokauri Investment Options*. These benefits are focused on well-being and the associated social and cultural infrastructure that develops in the development of a new community.

Some of the key co-benefits of Rotokauri relate to its high amenity values, particularly the natural landscape and the Waiwhakareke Natural Heritage Park, and its proximity to major transport infrastructure, primary, secondary and tertiary education facilities, and major employment areas located on the western side of the City.

As noted, and discussed in more detail in the Economic Case, the key economic benefit that HIF fund will enable is the bringing forward of strategic infrastructure that will enable residential development in Rotokauri. The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

The bringing forward of residential development in Rotokauri will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value. In addition, the skills and other human capital in Hamilton City will grow through projected population growth.

3 Commercial Case

The purpose of the Commercial Case is to identify how the preferred investment option optimises value for money from a commercial perspective.

Having determined the strategic context for the investment proposal and established a robust case for change, this part of the business case examines how commercial viability can for the preferred option of funding Rotokauri can be achieved through:

- Developer commitment and general residential update
- Procurement processes
- Delivery processes.

These commercial case elements are the best mechanisms to ensure the preferred option of funding Rotokauri can come to fruition.

Commercial viability

The primary way to determine commercial viability at this stage of the indicative business case process is through developer commitment.

Hamilton City Council has a positive and collaborative working relationship with our key landowners and developers in the Rotokauri area.

For Rotokauri, Hamilton City Council has been working with RDL limited (a joint venture partnership including Tainui Group Holdings).

Letters of intent outlining a further commitment to housing delivery through the signing of detailed private developer agreements have been included in our proposal.

We have a long and proven track record of delivering excellent development outcomes in both

At Rotokauri, the HIF will enable the funding for the lead infrastructure for an initial development of 500 -750 homes (over a 5-year period and subject to market conditions) in stage 1 of the RDL/ Tainui Group Holdings development through the construction of a major floodway for stormwater.

Hamilton has minimal regulatory constraints to the proposal. The land identified is zoned and included within the October 2016 Partly Operative District Plan. For Rotokauri the land is zoned and a joint Council/developer team is working on a master plan process for staging the development.

Procurement processes

Hamilton City Council is committed to smart public procurement that delivers better public services and value for money through a strategic and structured approach to procurement.

Hamilton City Council's procurement framework is based on policy, principles and rules as contained in the Hamilton City Council Procurement Policy and Procedures Manual.

Collectively, these provide a broad framework that supports accountability for spending and delivering best value for money for ratepayers while ensuring the checks and balances expected of public sector procurement are in place.

Hamilton City Council Procurement Policy and Procedures have been developed to comply with both the Ministry of Business and Innovation and Employments "Government Rules of Sourcing –third edition 2015" as well as the requirement of NZTA's procurement processes.

The Hamilton City Council Procurement Policy is underpinned by a procedures manual that contains defined processes and templates covering end to end procurement procedures from planning and sourcing through to managing contracts. As part of the continuous improvement cycle these policies, processes and procedures are frequently reviewed to ensure compliance with best practice.

Delivery processes

All of the infrastructure proposals under the preferred option of a Rotokauri funding package are at or beyond detailed business case stage, with some road designations, key consents, and land secured.

Preliminary designs are ready or under way. We propose a combination of traditional staged delivery for routine infrastructure and design and construct models for the bridge and wastewater system where construction techniques and specialist skills can add value and reduce cost and risks with innovative and optimum designs

We will collaborate with land owners, developers, key local stakeholders, Iwi, NZTA and the NZ Government to minimise project risks, overcome barriers and ensure successful delivery.

We have demonstrated our ability to deliver in the forward-funded Hamilton Ring Road and the W2 Hamilton Wastewater Treatment Plant upgrade projects.

We have effective relationships with NZTA and developers. We will build on these relationships though comprehensive developer agreements to share risk and funding requirements. Working together with clear messages and direction we can assure the HIF benefits.

4 Financial Case

4.1 Impact on the financial statements

The following table is stated in 2017 $millions, therefore no inflation has been applied.

Table 17 Impact on the financial statements

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital	0.00	35.00	33.00	20.00	19.00	1.00	-8.00	-7.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating	0.00	0.00	0.00	0.04	0.07	0.12	0.14	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Total	**0.00**	**35.00**	**33.00**	**20.04**	**19.07**	**1.12**	**-7.86**	**-6.84**	**-1.84**	**0.16**	**0.16**	**0.16**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
Funded By:																			
Existing revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Existing capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Extra revenue - Rates	0.00	0.29	0.61	0.95	1.33	1.74	2.19	2.67	3.20	3.77	4.33	4.93	5.56	6.22	6.93	7.68	8.47	9.30	10.19
- DC's	0.00	0.50	0.50	0.50	1.50	2.00	1.50	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	0.50	0.00	0.00	0.00
Loan - HIF	0.00	34.21	31.89	18.55	16.17	-2.74	-11.69	-11.67	-7.20	-5.77	-5.33	-56.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Other	0.00	0.00	0.00	0.04	0.07	0.12	0.14	0.16	0.16	0.16	0.16	50.65	-6.39	-7.06	-7.76	-8.01	-8.30	-9.14	-10.02
Total	**0.00**	**35.00**	**33.00**	**20.04**	**19.07**	**1.12**	**-7.86**	**-6.84**	**-1.84**	**0.16**	**0.16**	**0.16**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
Net Cash Flow	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Within the above table, assumptions have been made to determine these initial estimates. The assumptions include:

- HIF loans are repaid from additional revenue received from growth in the rating base and development contributions. After 10 years it is assumed that the remaining HIF loan is repaid by refinancing from other sources (LGFA or the banks).
- Additional growth in the rating base attributed to Rotokauri HIF investment is assumed to be 0.2% which is based on expected extra demand.
- Additional development contributions revenue is based on modelling and assumptions using growth data and capital costs of growth infrastructure proposed.

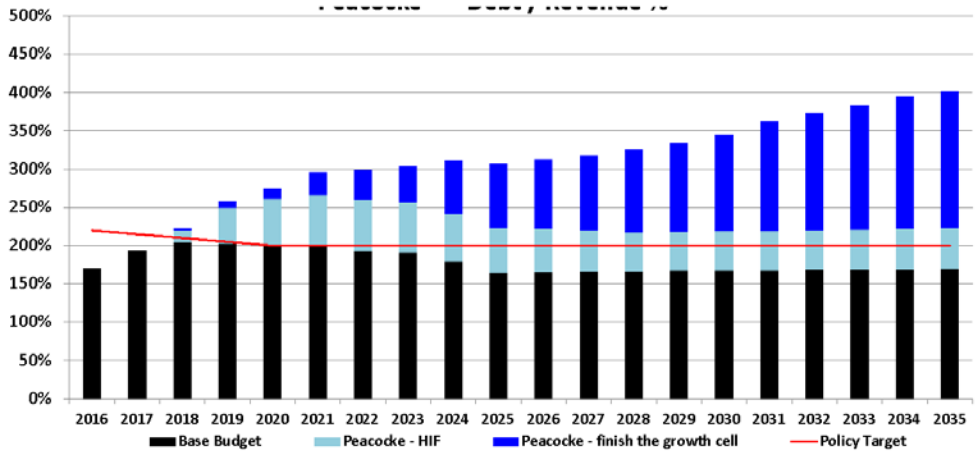
4.2 Overall affordability

The financial case includes charts that show the impact on the Council's debt to revenue ratio of accelerating the Rotokauri growth cell by using HIF loans and other loans (to complete infrastructure not included in the HIF application).

The financial case illustrates the impact on the Council is very challenging as there is currently much uncertainty on debt treatment; the level of new revenue associated with HIF; the level of developer contributions and costs met direct by developers; and other inputs to the 2018 Long-Term Plan. These are all largely unknown at this time.

This means the long-term financial predictions challenge the existing financial strategy of Hamilton City Council and the Council needs more time and opportunity to work through the financial scenarios with MBIE and other key stakeholders.

Figure 2 Debt to revenue ratio



The following assumptions and caveats have been taken into account when developing the above chart:

- The "Base Budget" is the 10-Year Plan plus decisions made since. It excludes the 2017/18 Annual Plan proposals and any potential future impacts on
- Budgets (e.g. a new Founders Theatre, a new rubbish collection contract).
- The "Base Budget" from the 2025/26 year and beyond is estimated based on a debt to revenue ratio that is constant at about 2024/25 levels.
- Inflation has been applied at the rates used in the 2015-25 10-Year Plan and from 2025/26 the average BERL rate is used per their 2016 report to local authorities.
- The Peacocke scenario includes the capital cost of the funding to be requested from the HIF and consequential operating costs and revenues associated with completing the infrastructure early.
- There is additional infrastructure required to complete the growth cell in addition to the works covered by the HIF. This additional capital and operating expenditure is included in the above chart.
- There will be considerable costs of community infrastructure required at the growth cell that is not included in this analysis.

- Additional revenues include increased Development Contributions for Peacocke and increased growth in the rating base of 0.2% per annum.
- All funds advanced either directly from the HIF or through NZTA on behalf of the HIF are assumed to be recognised as debt by the Council.
- The debt to revenue charts are calculated using the Council's calculation method. The LGFA use a different method that is more favourable.

5 Management Case

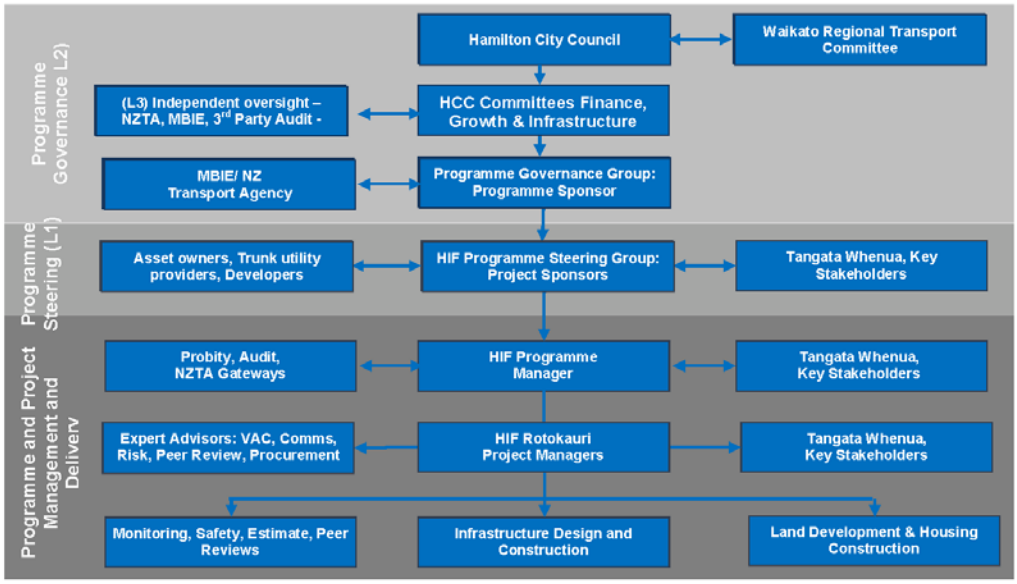
5.1 Executive Management Case

On execution of the funding agreement, Hamilton City Council will establish a project to deliver the Rotokauri HIF infrastructure and manage it in collaboration with NZTA and MBIE using HCC's existing governance and large project management systems. We operate three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

Level 1: Project management oversight, capability and experience (L1);
Level 2: Project/programme governance (L2); and,
Level 3: Independent and objective assurance (L3)

The project management and governance structure will follow HCC's standard practice for large infrastructure projects as shown below.

Figure 3 Rotokauri Trunk Utility and Arterial Transport Network project organisation chart



The Rotokauri HIF proposal comprises:

Strategic Infrastructure Element		Estimate ($M, 2017)
Stage 1 Strategic lead stormwater floodway		$80.2M
Major north-south transport corridor and network connections		$66.5M
Strategic water distribution mains		$7.5M
Rotokauri Project Total		**$154.2M**
2015 10 Year Plan $29.8M	***NZTA FAR $33.3M***	***HIF $91.2M***

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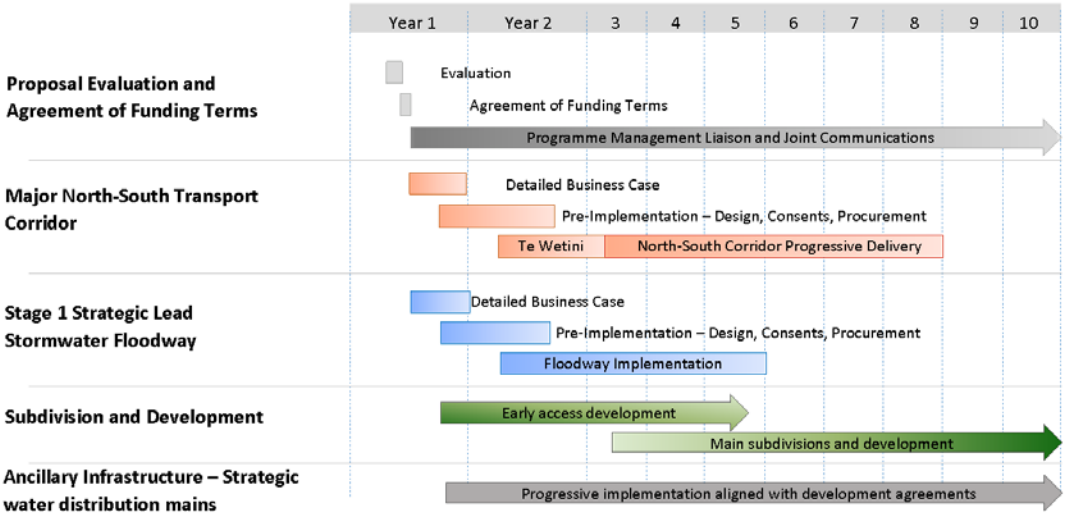
The north-south transport corridor and network connections are key infrastructure items in the Northern Growth Corridor Agreement, through which NZTA, HCC and Waikato DC are delivering integrated land use and infrastructure.

Two major gateway projects form part of the Housing Infrastructure Fund business case for Hamilton's Rotokauri growth area. These are:

- The floodway crossing multiple land holdings required to deal with the stormwater from Stage 1 of the growth cell including that from the sensitive Lake Rotokauri.
- Road connection to Te Wetini Drive and Te Kowhai Road to connect to the Hamilton arterial transport system.

Implementation will take around five years for stormwater infrastructure with the roads constructed progressively over eight years to match development and demand. Commitment to construction of the gateway infrastructure will allow early development accepting a lower level of service and greater risk on the existing networks in the interim.

Figure 4 Rotokauri Trunk Utility and Arterial Transport Network – Estimated Timeline



The Rotokauri Arterial Roads project is an integral part of the Northern Corridor road network, planned in conjunction with the Te Rapa Section of the Waikato Expressway. It includes infrastructure implementation and land use management integration in accordance with the Northern Corridor Memorandum of Understanding between NZTA, Waikato District Council and HCC. The HIF transport infrastructure matches the Northern Corridor network and the operative Rotokauri Structure Plan. A comprehensive catchment management plan is complete and in February HCC tendered a contract for implementation of strategic wastewater infrastructure to service Rotokauri growth. Detailed design work is underway for the strategic bulk water supply to Rotokauri and Council has included construction funding in the draft 2017/18 Annual Plan (subject to consultation and final Council decisions).

The strategy, framework and plan for dealing with change, contract management and risk will be founded on HCC's established quality, risk, contract and cost management policies and procedures. These are in accordance with NZTA's quality, risk and procurement requirements and the Government Rules of Sourcing. We have demonstrated our effectiveness working closely with NZTA and 100% forward funding on large projects by successfully delivering the $88M Wairere Drive Hamilton Ring Road.

Right at the beginning we will sort out what we know, what we might not know, and make sure that we target risks appropriately to establish a foundation for project development through the detailed business case and implementation. We will also use challenge and peer review methods as triggers for value engineering to build our time and budget contingencies.

5.2 Planning for successful delivery

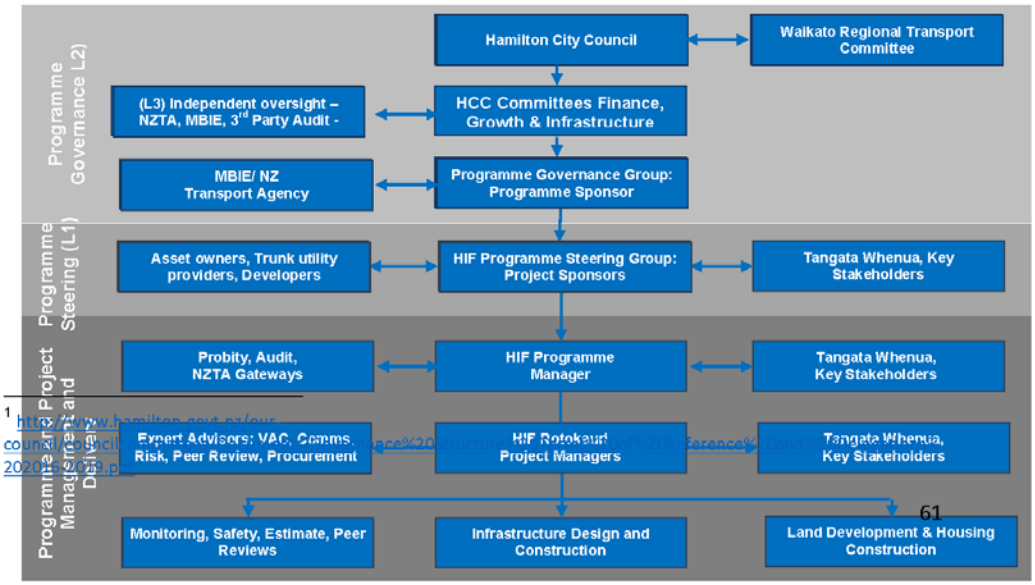
5.2.1 Governance and reporting arrangements

Governance will be in accordance with HCC's Governance Structure[1]. We will extend our highly successful Northern Growth Corridor collaboration with NZTA that led to the Te Rapa Section of the Waikato Expressway through implementation. We will update the Memorandum of Understanding, which covers risk, funding, communications, governance, scope and project management and invite MBIE to join us in governance.

The project management and governance will follow HCC's existing practice for large infrastructure projects as shown below. We operate three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience –project steering and peer reviews (L1);
- Level 2: Project/programme governance – generally Council Committees (L2); and,
- Level 3: Independent and objective assurance (L3): E.g. third party oversight by NZTA, external and internal audit to check controls are working.

Figure 5 Rotokauri Trunk Utility and Arterial Transport Network project organisation chart



[1] http://www.hamilton.govt.nz/our-council/council-organisation/governance/Documents/Governance%20Structure%20and%20Delegations%20Framework%202016-2019.pdf

5.2.2 Integration with other programmes

The HIF Programme of works will link with other infrastructure programmes. The Rotokauri Arterial Roads project is an integral part of the Northern Corridor road network, planned in conjunction with the Te Rapa Section of the Waikato Expressway. It includes infrastructure implementation and land use management integration in accordance with the Northern Corridor Memorandum of Understanding between NZTA, Waikato District Council and HCC. The HIF transport infrastructure matches the Northern Corridor network and the operative Rotokauri Structure Plan. A comprehensive catchment management plan is complete and in February HCC tendered a contract for implementation of strategic wastewater infrastructure to service Rotokauri growth. Detailed design work is underway for the strategic bulk water supply to Rotokauri and Council has included construction funding in the draft 2017/18 Annual Plan (subject to consultation and final Council decisions).

It is also part of Access Hamilton transport strategy which comprises a portfolio of key projects for the delivery of improvements to Hamilton's transport over the next 10 years. The key projects are set out in the Access Hamilton Programme Business Case (currently draft – updating the Access Hamilton Strategy 2010 – 2040). The relevant programme management arrangements will remain are as follows:

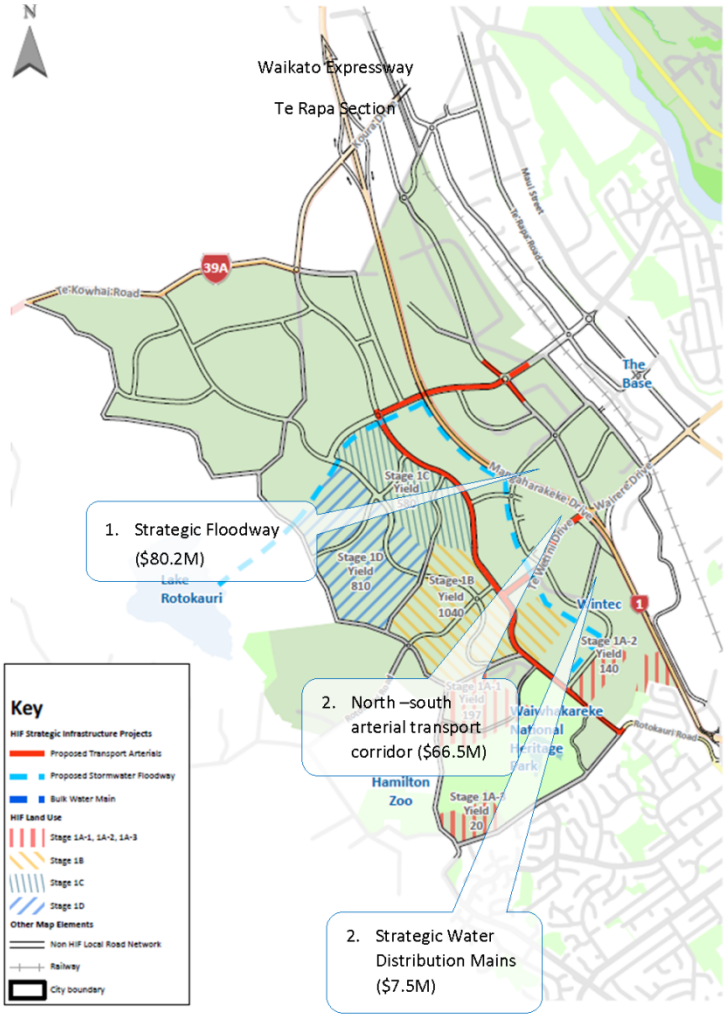
- Activity development in accordance with NZTA's Business Case approach
- Optimisation and prioritisation as part of RLTP and Hamilton LTP processes.
- Procurement and implementation in accordance with HCC's procurement procedures (NZTA Approved)
- Monitoring in accordance with One Network Road Classification and Road Efficiency Group requirements

Benefit monitoring and reporting in accordance with approved business case requirements.

5.2.3 Key activities and benefits management

The figure below shows the key activities comprising the HIF Rotokauri proposal.

Figure 6 HIF Strategic Infrastructure - Rotokauri Strategic Utility and Arterial Transport Network



5.2.4 Governance reporting and benefits realisation

The Programme Manager will produce monthly a combined programme report for the HIF Programme Governance Group that shows where all projects are at in terms of scope, time, cost and risk and whether there are any issues to deal with in order to help the projects to progress successfully. The status of the programme and each project is measured against the baselined project management plan and any changes to this will be reviewed and if appropriate approved through governance (Level 2-3 – e.g. Council Committees and NZTA VAC/NLTP Advisory Group).

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Each major project will maintain a risk register, issues register, and change register, and update the project management plan following governance approval of any changes. We will complete a post-implementation review within 6 months of completion (level 3 assurance).

We will prepare a Benefits Realisation Plan as part of the HIF detailed[2] business case. HCC's strategy for management and delivery of benefits is to establish clear measures and milestones for benefits and to test proposals and outcomes against these as the project develops and is refined and delivered. The key benefits are summarised below with likely measures.

Table 18 Benefits Management – measures and monitoring

Benefit	Measure	Monitoring/reporting	Status
Residential development	• Dwellings (No)	Building consents (applications, completions)	Existing
	• serviced land suitable for development (area, lots)	Subdivision consents	Existing
	• Trunk infrastructure capacity (households)	reserve capacity (Capacity – connections)	Existing (increase review frequency)
Transport – Travel time	• Travel time (duration)	BlipTrack bluetooth or TomTom data	Existing NZTA access
	• Trip reliability (variation)	BlipTrack bluetooth or TomTom data	Existing NZTA access
	• Delays	Traffic signal performance	Existing HCC SCATS system
		Surveys (before and after)	As required

5.2.5 Project management arrangements

General

We will establish a project to deliver the Rotokauri trunk utility and arterial transport network activities (refer Figure 1 above for structure). We will use the PRINCE2 or PMI project management methodology or equivalent. We will prepare a detailed project plan to set out the project roles and responsibilities for each major project.

We do not anticipate significant organisational changes as part of the project, other than managing the additional delivery commitment. We will deal with this by increasing internal or external resources for the project or existing commitments. We will use expert advisors to assist staged design and procurement planning and with project management if required. Suitably experienced physical works contractors will construct the works. The arterial road and stormwater works are not complex and we would prefer traditional staged delivery approaches to optimise value for money.

We have demonstrated our effectiveness working closely with NZTA and 100% forward funding on large projects by successfully delivering the $88M Wairere Drive Hamilton Ring Road. That has transformed Hamilton's transport system and successfully passed a Price Waterhouse Cooper independent audit.

[2] The Southern Links Transport components are at Pre-Implementation phase. Detailed Business Case is used to align terminology with the Request for Proposal and link with Wastewater infrastructure.

Project Timetable

Implementation will take around 5 years for stormwater infrastructure with the roads constructed progressively over 8 years to match development and demand. A timeline summarising the key projects and activities in the Rotokauri HIF programme is illustrated in Figure 7 below.

Figure 7 Rotokauri Trunk Utility and Arterial Transport Network – Estimated Timeline

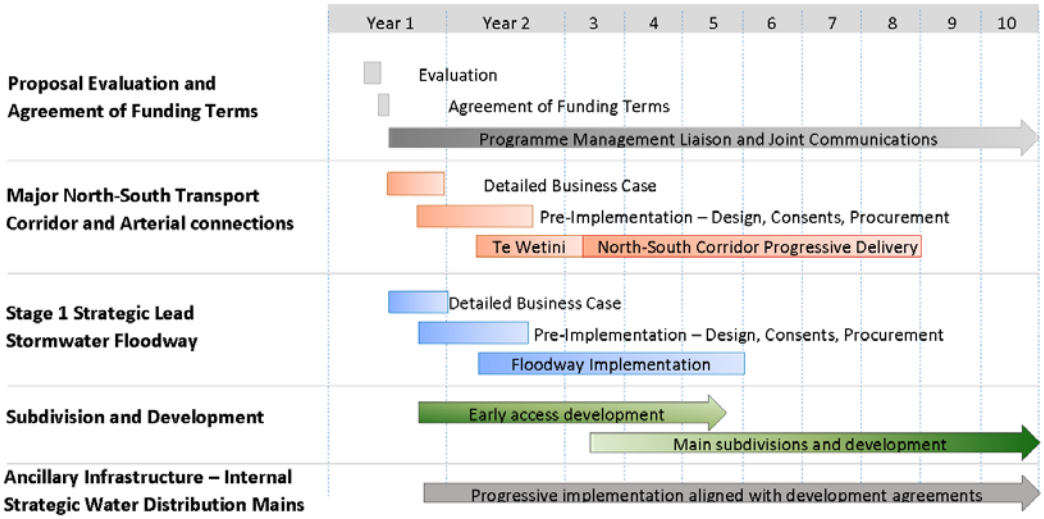


Table 1: Project plan – Preliminary timetable – subject to land and NZTA approvals

Key Project Milestone	Completion – Years following funding approval
Pre-implementation: Property, designations, consents, design, procurement planning	2
Early Access – Maximise use of existing assets	
Early access agreements between HCC, developers and NZTA	1
Procurement	2
Stormwater floodway to provide essential stormwater management functions that are critical for enabling development in stage 1 of the growth cell	5
Te Wetini Drive – East-west Arterial Link at south of growth cell	3
Full Access – Full servicing	
Major North-south transport corridor (staged delivery – progressive access available)	8
Water Distribution mains	With development
Completion	**Year 8**

Project cost control

The expected project estimates as listed below (2017 $, no escalation).

• Stage 1 Strategic lead stormwater floodway	$80.2M
• Major North-south transport corridor and network connections	$66.5M
• Strategic water distribution mains	$7.5M
• **Project Total (HIF Proposal)**	**$154.2M**

The following key assumptions were applied when developing the cost estimates:

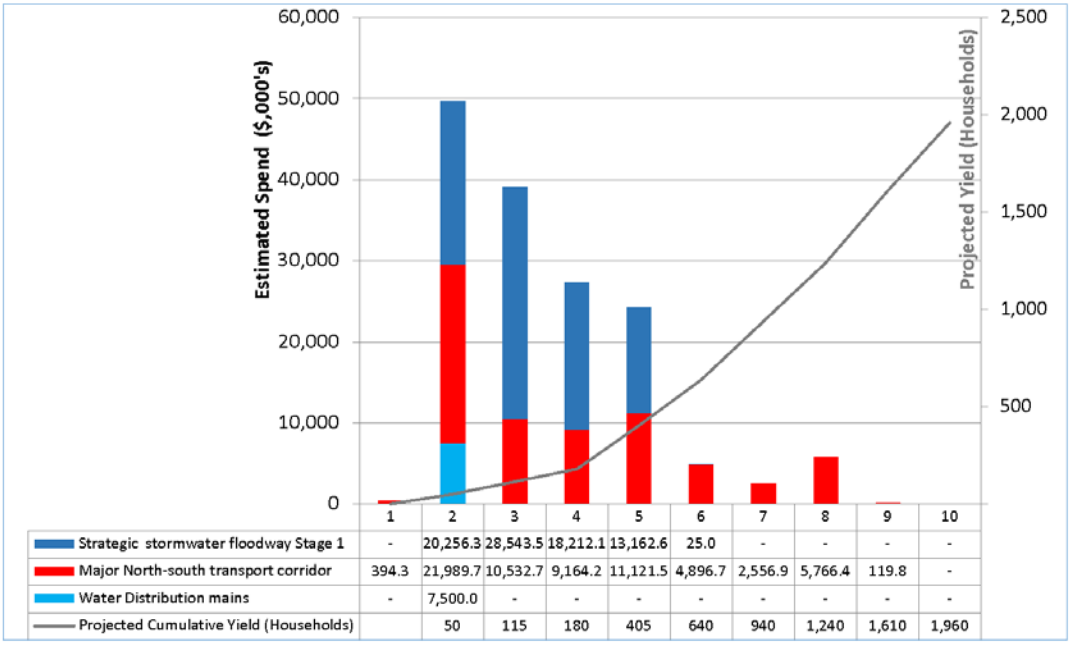
- Transport Costs
  - Costs are derived from HCC/NZTA estimates with verification from third party technical advisors
  - Cost estimates have been assessed and reviewed following best practice methodology, but still involve a level of uncertainty and will be reviewed and finalised at the next stage of the business case process
  - Costs are expected estimates (P50 confidence level) with contingency allowance typically around 20%, but with no allowance for inflation/escalation.
- Water / Waste Water
  - Costs for other water and wastewater projects are derived from HCC's Long Term Plan Standard Unit Rate estimates.
  - They are based on concepts for the specific works and reflect anticipated outturns based on similar works
  - Outturn costs could change subject to private developer agreement negotiations, efficiencies, innovations and the design approach of Developers.
  - Costs are expected estimates (P50 confidence level) with a nominal 20% contingency allowance, but with no allowance for inflation/escalation.
- Stormwater
  - Costs are derived from HCC's Long Term Plan estimates (Equivalent to indicative business case) based on high level assumptions of works, related ground conditions, engineering judgement and amounts that would likely be incurred directly by Developers
  - Costs are expected estimates (P50 confidence level) with reflective contingency allowance, but with no allowance for inflation/escalation.
  - Outturn costs will only be confirmed at the time of full design and development or through negotiation of private developer agreements.
- General Assumptions
  - Costs are in 2017 dollars without inflation.
  - Where applicable, costs include elements for land acquisition.
  - All major and minor transport corridors assume an NZTA subsidy on investigation, design, land purchase and construction. All costs to date will be included in a retrospective funding application to NZTA.
  - Costs for operating or ongoing maintenance costs related to the infrastructure are excluded and will be met by HCC
  - Costs are assumed to be for strategic trunk infrastructure and therefore exclude any allowance for local infrastructure (e.g. roads within a development site) to connect to the trunk infrastructure.
  - Local road and reticulation cost are typically the responsibility of individual developers with the specific requirements being determined via the resource consent process or private development agreements.

- Additional costs for upsizing and upgrading local development infrastructure where necessary to meet future demand from other areas are excluded at this stage and will only be confirmed at the time of full design and development or through private development agreements.

All costs will be reviewed in the post-business case stage and at three-yearly Long Term Plan resets.

The Rotokauri spend profile for the project based on estimated costs and timing is illustrated in Figure 6 below:

Figure 6: Rotokauri Trunk Utility and Arterial Transport Network – Spend Profile and Expected Yield



	1	2	3	4	5	6	7	8	9	10
Strategic stormwater floodway Stage 1	-	20,256.3	28,543.5	18,212.1	13,162.6	25.0	-	-	-	-
Major North-south transport corridor	394.3	21,989.7	10,532.7	9,164.2	11,121.5	4,896.7	2,556.9	5,766.4	119.8	-
Water Distribution mains	-	7,500.0	-	-	-	-	-	-	-	-
Projected Cumulative Yield (Households)		50	115	180	405	640	940	1,240	1,610	1,960

Project assurance

HCC operates three levels of protection for project assurance. These are appropriate project management oversight by means of steering or project control groups, project/programme governance and independent reviews and audits, such as NZTA Value Assurance.

We will complete typical NZTA project assurance activities for the transport works during the pre-implementation and implementation stages. We will incorporate the key trunk water and wastewater works with these as relevant. NZTA have supported the Rotokauri Arterials investigations as having the status of an Indicative Business Case. Additional assurance will consider details such incorporating passenger transport and walking/cycling infrastructure which need to be coordinated with the Access Hamilton programme.

Table 2: **Project Assurance** (NZTA focus to match Northern Corridor Agreement)

ITEM	COMPONENT	DESCRIPTION
Rotokauri Arterials	Optimise scope and extent for staged implementation -	Problem and benefit confirmation and review Confirmation of support and consistency with NZTA objectives for Staging/Macroscope confirmation
	3rd party funding commitments	Multi Party Funding Agreement
	Safety in design, Safety audit, estimate peer review, contract probity	Standard processes (subject to fast-tracking)

5.2.6 Risk Management

The strategy, framework and plan for dealing with the management of risk are in accordance with HCC's risk management policy[3], which outlines HCC's risk management philosophy, risk threshold and approach to managing risk. The risk register and preliminary management plan is attached. Example risks are highlighted in Table 4 below.

The fundamental HIF risk management response is to work with MBIE to achieve fair and appropriate allocation of risk to avoid unnecessary exposure for the parties involved.

[3] (http://www.hamilton.govt.nz/our-council/consultation-and-public-notices/haveyoursay/Documents/D-1629589%20%20Council%20Policy%20-%20Risk%20Management%20%20(Feb%202015).pdf).

Table 3: Potential HIF risks and management responses for risks include:

Risk Category	Risk Types	Possible Risk Management Responses
Strategic	• LTP and 3Y Plan are not aligned to HIF project resulting in impacts or exposures not considered • Ability to repay loan on time	• Effective agreement with MBIE and NZTA • Clear understanding of loan and repayment terms.
Financial risks	• Improve estimate • cost certainty and confidence • Exceeding loan capacity	• Confirmation of value for money and affordability at each business case stage • Provision for 3 yearly updates/resets (also see economic risks) • Agreement with LG debt funders
Reputation	• Poor perceptions of local and central government's roles in facilitating development • Potential for conflict of interest in communications, and in selecting priorities for investment,	• Joint messaging NZ Government, NZTA, HCC • Conflict ID and management
Compliance & regulatory risks	• Statutory timeframes for consents, designations and special consultation delay starts	• Engagement with consent authorities, standardise engagement/ application/ approvals processes, discovery protocols, • Memoranda of understanding and early escalation of issues to avoid delays.
Political	• Potential for conflicts of interest of Council and Elected Members relating to construction, developments • HIF proposal or project initiation results in community not supporting Council	• Conflict management • Effective engagement • Whole of government commitment to collaborative working • Manage implementation programmes crossing election cycles appropriately.
People risks	• Health and safety • Continuity	• HCC management systems
Technology	• Delivery speed does not allow for technology to be incorporated	• Recognise future proofing in Detailed Business Case
Disaster recovery & business continuity	• Generally opportunity for resilience • Earthquake	• Recognise in Detailed Business Case • HCC disaster management protocols
Operational	• Development raises land values and developers land bank rather than build • Land ownership for infrastructure corridors delays start (e.g.) First rights	• MOU, PDA's, financial incentives • Government and NZTA assistance
Project	• Failure in due diligence in project management • Procurement speed of delivery from builders, developers and consultants, contractors varied impacting on delivery	• Independent audit and NZTA gateway protocols • NZTA and MBIE commitment to programmes

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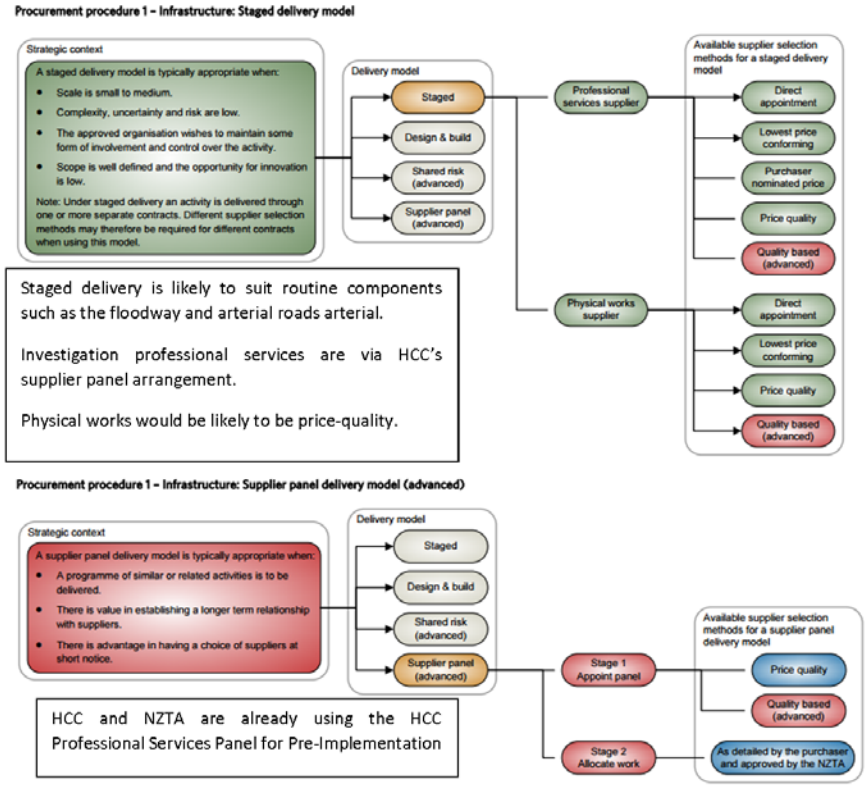
5.2.7 Procurement planning

HCC has successfully delivered the Hamilton Ring Road and similar large scale projects successfully using policies and procedures consistent with Government rules for sourcing and NZ Transport Agency requirements. HCC's procurement processes are NZTA-approved. NZTA's selection procedures will be used as a starting point for procurement decisions (Figure 4 below).

Implementation processes and procurement will depend on the extent and complexity of the stages to be completed. The shared risk model is unlikely to be necessary for the complexity and scale of the projects expected for transport or wastewater. The road links and stormwater floodway are routine and will be procured by traditional staged methods. The floodway construction will require construction expertise in dewatering and stormwater management which may match the road construction skillset and allow for earthworks optimisation. This allows us to combine or split the delivery load to deal with market capacity issues and pursue value for money.

Figure 4: Rotokauri Trunk Utility and Arterial Transport Network – Procurement Planning



Public engagement

Council-managed HIF programme engagement rather than separate project arrangements would be desirable. We propose joint messaging and an integrated communications team.

We propose to establish a joint communications protocols to include NZTA and NZ Government. Clear and consistent messaging will be desirable to manage the risk of adverse community reaction to development in one area being prioritised over another, and the potential for significant changes in Long Term funding priorities.

Consenting and designations

The Rotokauri structure plan is operational and therefore most urbanisation effects are part of the expected environment and are low risk or land matters. We will potentially require designations for the HIF arterial roads and the floodway, although there are only a few landowners who are supportive of development and the HIF bid, so vesting is an option to save time. The consents for stormwater and earthworks will be obtained at the same time.

6 Assessment Profile

The participation of Hamilton City Council in the HIF process is predicated on the HIF presenting an opportunity for Council to achieve accelerated achievement of investment objectives and business needs over a status quo approach.

Our investment objectives and business needs are outlined below:

- **Investment objective 1**
- Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.
- **Business need 1**
- The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.
- **Investment objective 2**
- Increase the amount of developer ready land to support 11,638 dwellings by 2025.
- **Business need 2**
- Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.
- **Investment objective 3**
- Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.
- **Business need 3**
- Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.
- **Investment objective 4**
- To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.
- **Business need 4**
- The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

The analysis undertaken as part of this business case indicates that all of these investment objectives and business needs can be achieved by through a Rotokauri HIF allocation when compared to a business as usual scenario or indeed without a NZTA subsidy.

Benefit cost ratio

The benefit cost ratio of funding HIF-Rotokauri (NZTA subsidy) is 18.91. The BCR reveals that large, one-off capital investments represent the bulk of the costs. The benefits are largely derived from the economic activity generated by housing construction and subsequent household expenditure. There are also transport benefits network wide.

These transport benefits have been noted by NZTA during the formation of our final HIF proposal where NZTA have confirmed Point of Entry status for Rotokauri transport elements. This is significant and indicates clearly that our projects are strongly endorsed by the NZTA as being projects worthy of NZTA funding assistance.

Despite the above, the benefits that would accrue to Council in terms of rates revenue and development contributions are less substantive.

Housing delivery results

Under the Stage 1 Rotokauri proposal, approximately 1,610 dwellings will be built within 10 years which represent 13% of the projected demand for new housing. Within 30 years, approximately 2,787 dwellings will be built in Stage 1 of Rotokauri. In addition, the average infrastructure spend per dwelling built is expected to be $57,300 within 10 years and $33,100 within 30 years.

Conclusion

On the basis of the above initial assessment, the HIF-Rotokauri (NZTA subsidy) option is preferred over the status quo.

7 Annex

Description of options	Scale scope		Service solution		Service delivery		Implementation		Prioritisation		Consequential		Funding	
	SQ	HIF-R	SQ	HIF-R	SQ	HIF-R	SQ	HIF-R	SQ	HIF-R	SQ	HIF-R	SQ	HIF-R
Investment Objectives:														
Objective 1	P	F	F	F	F	F	F	F	F	F	N	F	P	P
Objective 2	N	F	F	F	P	P	F	P	F	F	N	F	P	P
Objective 3	N	F	F	F	P	P	F	F	F	F	N	F	P	P
Objective 4	P	F	F	F	P	P	F	F	F	F	N	F	P	P
Critical Success Factors:														
Strategic fit	F	F	F	F	F	F	F	F	N	F	F	F	P	F
Achievability	F	F	N	F	F	F	F	F	F	F	F	F	P	F
Timing and sequencing	F	F	P	F	P	F	F	F	N	F	F	F	P	F
Financial viability	F	F	F	F	F	F	F	F	F	F	F	P	F	P
Market impacts	N	F	F	F	P	P	F	F	P	F	P	F	F	F
Risk management	F	F	F	F	F	F	F	F	N	F	F	F	F	P
Summary of advantages and disadvantages:														
Overall assessment:														
Short-listed options:														
SQ														
HIF-R														
HIF-P														
HIF-R&P														

Table notes:

SQ	Status Quo: Future Proof Rotokauri and Peacocke
HIF-R	HIF Rotokauri
HIF-P	HIF Peacocke
HIF-R&P	HIF Rotokauri and HIF Peacocke
Scale scope	Scale scope and location scores: What levels of road and water services are possible for each option?
Service solution	Service solution: Are there policy solutions for road and water services?
Service delivery	Service delivery: Are there appropriate governance, project management and infrastructure entities in place?
Implementation	Implementation: Are services available to match the annual housing yield?
Prioritisation	Prioritisation / Sequencing: Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?
Consequential	Consequential housing outputs: number / timescale
Funding	Funding: Wider private investment / development
Objective 1	Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025
Objective 2	Increase the amount of developer ready land to support 11,638 dwellings by 2025
Objective 3	Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045
Objective 4	To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase
Strategic fit	Alignment with other key council growth programmes and strategies over short, medium and long term for transport and water
Achievability	Overall programme and direct investment can be delivered in required timescales to required standard/quality and corresponding indirect investment and outcomes can be realised, including collaboration and partnering elements
Timing and sequencing	Acceleration of core output (housing) is achieved and wider programmes are able to be delivered as forecast or sped up
Financial viability	Fit with funding constraints, maximises/optimises financial return and capital recycling over short, medium and long term
Market impacts	Developers are incentivised to expedite housing development by accelerating developments, public sector funding matches pace with private sector development and collaboration is fostered
Risk management	Appropriate controls/frameworks, management and governance including partnering, can be established and maintained
F	Fully meets requirements
P	Partial meets requirements
N	Does not meet requirements

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NZ TRANSPORT AGENCY
WAKA KOTAHI

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20 March 2017

Andrew Parsons
City Development Manager
Hamilton City Council
Private Bag 3010
Hamilton

Dear Andrew

Transport Infrastructure (Rotokauri Arterials) - Confirmation of Status as Indicative Business Case

Thank you for the Point of Entry Assessment dated 8 March 2017 for the Northern Hamilton Transport Infrastructure: Rotokauri Arterials and its supporting Business Case Status Summary.

I confirm that this letter shall be read in conjunction with the point of entrance statement agreed with the Transport Agency. That agreement states that the joint investigation work completed to date are equivalent to an Indicative Business Case.

Although the option development is well advanced, and also the fact that the Te Rapa Section of the Waikato Expressway has been built, The Transport Agency agrees that it would be beneficial to review the strategic context, problems and benefits and retest the proposal against the investment objectives noting that the key current problems appear consistent with the Access Hamilton PBC and Regional Transport Committee's draft high level problems and benefits relating to access for growth and access and mobility.

The appropriate point of entry for new activities transport activities in the Northern Hamilton Area Transport Infrastructure is therefore Detailed Business Case.

As discussed, we will continue to work with you to scope these Detailed Business Case activities which will include;

- Being party to an MPFA as part of the Detailed Business Case for the Rotokauri Arterials project. This is to ensure value for money and ensure that the network operates to suit NZTA's and HCC's objectives previously agreed in the Northern Corridor Memorandum of Understanding.
- Detailed project management arrangements and programmes will be in accordance with HCC's management systems and sufficient to satisfy NZ Transport Agency delivery requirements.

I understand that the details, work programme including critical dates will be confirmed once the outcomes of HCC's Long Term Plan discussions and Housing Infrastructure Fund proposal are known.

Item 5

Attachment 7

We look forward to continuing our successful collaboration with Hamilton City Council and Future Proof transport partners in delivering an effective transport system for Hamilton and its surrounding

Yours sincerely

Dennis Crequer
Regional Manager – Planning and Investment
DDI: 07 958 7850
Email: Dennis.Crequer@nzta.govt.nz

cc. James Bevan Transport Planning Manager NZTA

Glossary

HIF	Housing Infrastructure Fund
HIF Scenario	Urban development scenario based on funding from HIF
HIF (NZTA Subsidy) Scenario	Urban development scenario based on funding from HIF and NZTA funding 50% of the transport infrastructure
SQ	Status Quo
Status Quo Scenario	Urban development scenario based on Hamilton City Council Long Term Plan
BCR	Benefit Cost Ratio
NPS-UDC	National Policy Statement on Urban Development Capacity
MBIE	Ministry of Business, Innovation & Employment
NZTA	New Zealand Transport Agency
NIDEA	National Institute of Demographic and Economic Analysis, this is a University of Waikato institution
HCC	Hamilton City Council
BERL	Business and Economic Research Limited
SOLGM	New Zealand Society of Local Government Managers
SOLGM Cost Adjustors	Forecast price level change adjustors for Local Authorities
CPI	Consumers Price Index produced by Statistics New Zealand
PRINCE2	Projects IN Controlled Environments is a structured project management method

Item 5

Attachment 8

Rotokauri and Peacocke

Indicative Business Case

Housing Infrastructure Fund

March 2017

hamilton.govt.nz

Executive Summary

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

Population projections indicate that Hamilton is well on the way to being a city of 200,000 residents. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing.

Strategic Case

Hamilton City Council, through strategic planning processes, has defined four investment objectives. These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

To meet the demand for dwellings caused by projected population growth, and the new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC), Hamilton City Council will need to bring forward planned greenfield areas such as Rotokauri and Peacocke.

Rotokauri

Rotokauri is an area of approximately 955 hectares to the north-west of the Te Rapa area in Hamilton. It was brought into the City from the then Waikato County (now the Waikato District) as a consequence of the 1989 Local Government Reforms. This area, along with Rototuna and Peacocke, was incorporated into Hamilton City to provide for long-term development and growth.

Through the development of the Hamilton Urban Growth Strategy in 2008, Rotokauri was identified as one of the four greenfield growth cells in Hamilton City. It was also identified that Rotokauri would be developed in two stages. A Structure Plan has been developed for Rotokauri.

Rotokauri is considered a desirable urban development location and investment option as it is located within close proximity to the Base, major transport infrastructure, the WINTEC Rotokauri campus, Hamilton Zoo, and major employment areas located on the western side of the City. Rotokauri also has high levels of amenity due to its natural landscape.

Rotokauri is a viable development opportunity as it continues new urban development to the north of the established suburbs of Nawton and Dinsdale. It also leverages off the recent significant investments made by NZTA in the Te Rapa Bypass.

Rotokauri needs strategic bulk water and wastewater infrastructure to open up residential development in this area. It is proposed that a strategic bulk water connection will go from Pukete to Rotokauri. This will allow potable water from the Pukete Reservoir to be redirected to Rotokauri. This wastewater project will be funded by Council as part of the Long-Term Plan but is a key part of the overall programme of works in Rotokauri and the Housing Infrastructure Bid.

To date, the Council has completed a significant interceptor extension into Rotokauri to support zoned industrial land and economic development. A further extension of the far western interceptor will provide the strategic wastewater infrastructure for the residential Stage 1 area.

Stormwater is a key constraint to residential development in Rotokauri. Hamilton City Council is best placed to provide the Rotokauri floodway to deal with stormwater issues rather than an individual landowner or developer. This is because of the nature of stormwater, including the function of the floodway to deal with, this and related property ownership. However, stormwater and the construction of the Rotokauri floodway is a significant cost for Hamilton City to accommodate within its financial strategy, particularly if the Council is to deliver this as lead strategic infrastructure.

As such, only a proportion of the floodway cost is presently provided for in the later years of the Hamilton City Council 10-Year Plan. This is the reason why the floodway is part of the request for Housing Infrastructure Funding. Without the floodway it is very challenging, if not impossible, for developers to individually develop a stormwater solution.

This indicative business case relates to a preferred way forward that accelerates the arterial roads that support the Waikato Expressway and future planned land use. Hamilton City Council has a positive and collaborative relationship with NZTA, and as a consequence the Council and NZTA have jointly approached city land use planning as it relates to transport activities. This integrative approach is heavily reflected in the Rotokauri Structure Plan and resulting networks.

Peacocke

Peacocke is within the Hamilton City Council boundary and covers an area of approximately 747 hectares. This area of land was brought into the City from Waipa District in 1989 for the express purpose of providing for the City's future urban growth. This area, along with Rototuna and Rotokauri, was incorporated into Hamilton City to provide for long-term development and growth.

For many years the area was identified as 'future urban' zoning. In 1999, the area was changed from 'rural' zoning to 'future urban' and Stages 1 and 2 of the Peacocke Structure Plan was finalised through Variation 14 to the District Plan between 2009 and 2012.

Peacocke comprises two stages. Stage 1 has an initial capacity of 850 dwellings (Stage 1a 500 lots, Stage 1b 350 lots) before significant infrastructure improvements are required. Investments to upgrade and/or build further three waters infrastructure are scheduled in the Hamilton City Council 10-Year Plan 2015-2025 for the Stage 1 area.

An upgrade to the SH3 and Dixon Road intersection has also been scheduled in the current 10-Year Plan; this is a precondition to release the entire Stage 1 area. With these investments, and subject to development timing the remainder of Stage 1 will have the necessary infrastructure in place by 2025.

Stage 2 has an expected capacity for 7,500 dwellings. The development timing of Stage 2 would be brought forward if the necessary strategic infrastructure and transport networks are constructed in advance of the timeframes identified by the Hamilton City Council.

Peacocke is within five kilometres of the Hamilton CBD. The provision of appropriate transport networks will therefore encourage residents to use active modes when moving between home, work and leisure activities, which will lead to associated health benefits. These outcomes will therefore be beneficial to the economy of the City and the well-being of current and future Hamiltonians.

Economic Case

The lead strategic infrastructure needed to open up new residential developments comes with large upfront costs. These upfront costs can put significant financial pressure on Hamilton city Council and developers, and subsequently delay development.

The Housing Infrastructure Fund provides Hamilton City Council with the ability to unlock all of the planned residential developments in Stage 1 of Rotokauri and all of the greenfield residential area Peacocke, and bring these developments forward. This is the preferred option identified in this indicative business case.

The benefit cost analysis indicates that activating Peacocke and Stage 1 of Rotokauri has an overall benefit-cost ratio of 18.83. This acceleration in development will assist Hamilton City to meet an estimated 12% of the projected demand for residential dwellings within the next five years, and approximately 39% of the projected demand in 10 years. Acceleration of strategic infrastructure through the Housing Infrastructure Fund will therefore result in an estimated 4,763 additional dwellings being built in Hamilton City by 2025. The average infrastructure spend per dwelling built is expected to be $58,500 within 10 years, dropping to $25,600 within 30 years.

Rotokauri

The infrastructure is an integrated programme of works that includes the Rotokauri floodway (stormwater) and arterial roads. The Housing Infrastructure Fund will accelerate investment in arterial roads in Stage 1 of Rotokauri by more than 10 years, while the investment in Rotokauri floodway will be brought forward by six years. The construction of the strategic bulk water connection from Pukete to Rotokauri could occur within the next two years.

Together, this programme of works will accelerate growth in the development of Stage 1 of Rotokauri, which will yield 1,610 dwellings within 10 years and 2,787 dwellings within 30 years. The 1,610 dwellings built in Rotokauri within 10 years will meet 13% of the projected future demand for housing in Hamilton City in 2025. In addition, the average infrastructure spend per dwelling built is expected to be $57,300 within 10 years, dropping to $33,100 within 30 years.

Peacocke

The infrastructure funded by the Housing Infrastructure Fund is an integrated programme of works that includes a Waikato River crossing and strategic arterial roads that form part of Southern Links and the strategic Peacocke transfer wastewater pump station and rising main.

Together, this programme of works will accelerate growth in the development of Peacocke, which will yield 3,153 dwellings within 10 years and 8,103 dwellings within 30 years. The 3,153 dwellings built in Peacocke within 10 years will meet 26% of the projected future demand for housing in Hamilton City in 2025. In addition, the average infrastructure spend per dwelling built is expected to be $59,100 within 10 years, dropping to $23,000 within 30 years.

Commercial Case

Hamilton City Council has a positive and collaborative working relationship with key landowners and developers in the Rotokauri and Peacocke areas. In Rotokauri, Hamilton City Council has been working with RDL limited (a joint venture partnership including Tainui Group Holdings).

Within the Peacocke growth cell the Adare Development Group, owns 200 hectares of land and in partnership with Todd Property Group Ltd. has identified a developer funded development stage capable of producing up to 350 homes over the next three years. Adare is working in partnership with Hamilton Council City to initiate that development.

Letters of intent outlining a further commitment to housing delivery through the signing of detailed private developer agreements have been included as an attachment to our indicative business case.

Financial Case

The financial case includes charts that show the impact on the Council's debt to revenue ratio of accelerating the Peacocke growth cell by using HIF loans and other loans (to complete infrastructure not included in the HIF application).

The financial case illustrates the impact on the Council is very challenging as there is currently much uncertainty on debt treatment; the level of new revenue associated with HIF; the level of developer contributions and costs met direct by developers; and other inputs to the 2018 Long-Term Plan. These are all largely unknown at this time.

This means the long-term financial predictions challenge the existing financial strategy of Hamilton City Council and the Council needs more time and opportunity to work through the financial scenarios with MBIE and other key stakeholders.

Management Case

On execution of the funding agreement, Hamilton City Council will establish a project to deliver the strategic infrastructure and manage the programme of works in collaboration with NZTA and MBIE. This would use Hamilton City Council's existing governance and large project management systems.

The Council operates three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience
- Level 2: Project/programme governance
- Level 3: Independent and objective assurance.

The project management and governance structure will follow Hamilton City Council's standard practice for large infrastructure projects.

Preferred Way Forward

On the basis of the above initial assessment, $91.2 million in Housing Infrastructure Funding is being sought by Hamilton City Council for the Stage 1 development of the Rotokauri greenfield residential area. The new strategic infrastructure that this funding is sought for includes:

Hamilton City Council also acknowledges that the Housing Infrastructure Funding indicated in this business case, at the indicative business case stage, is non-binding. The information provided in this indicative business case may therefore change should the Council proceed through to the detailed

Commercial Case

Hamilton City Council has a positive and collaborative working relationship with key landowners and developers in the Rotokauri area. In Rotokauri, Hamilton City Council has been working with RDL limited (a joint venture partnership including Tainui Group Holdings).

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This means the long-term financial predictions challenge the existing financial strategy of Hamilton City Council and the Council needs more time and opportunity to work through the financial scenarios with MBIE and other key stakeholders.

Management Case

On execution of the funding agreement, Hamilton City Council will establish a programme of work comprising two main projects to deliver the HIF infrastructure. This programme of works will facilitate development in Rotokauri and Peacocke, and involve project management in collaboration with NZTA and MBIE. This would use Hamilton City Council's existing governance and large project management systems.

The Council operates three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience
- Level 2: Project/programme governance
- Level 3: Independent and objective assurance.

The project management and governance structure will follow Hamilton City Council's standard practice for large infrastructure projects.

Preferred Way Forward

On the basis of the above initial assessment, $273.5 million in Housing Infrastructure Funding is being sought by Hamilton City Council for the Stage 1 development of the Rotokauri greenfield residential area and for strategic infrastructure needed to unlocked planned residential developments in Peacocke. The new strategic infrastructure that this funding is sought for is outlined in the table below.

Strategic Infrastructure Element	Estimate ($M,2017)
1. Stage 1 Strategic lead stormwater floodway	$80.2M
2. Major north-south transport corridor and network connections	$66.5M
3. Rotokauri water distribution mains	$7.5M
4. Wairere Drive/Cobham Drive overbridge	$20.8M
5. Wairere Drive extension & Waikato River bridge	$113.0M
6. Peacocke Road urban upgrade	$9.7M
7. SH3 intersection and east-west arterial	$35.5M
8. North-south arterial land	$26.7M
9. Wastewater strategic storage and pressure main	$43.3M
10. Peacocke strategic wastewater network	$17.6M
11. Peacocke strategic water distribution main	$5.2M
Hamilton HIF Proposal –Project Total	$426.0M
2015 10 Year Plan $29.8M / *NZTA FAR $122.8M* / *HIF $273.5M*	

Hamilton City Council also acknowledges that the Housing Infrastructure Funding indicated in this business case, at the indicative business case stage, is non-binding. The information provided in this indicative business case may therefore change should the Council proceed through to the detailed business case stage.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the tender documentation, the final proposal is submitted to the Ministry of Business, Innovation and Employment (MBIE) on the following basis:

It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.

Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets
- Contributions are known
- Caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances
- Letters of Intent to be provided by development partners
- Final bid acceptance is based on receiving confirmation that DC's can be legally collected under the HIF structure
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General

- Project costs to be reviewed every three years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

Alternative financing models

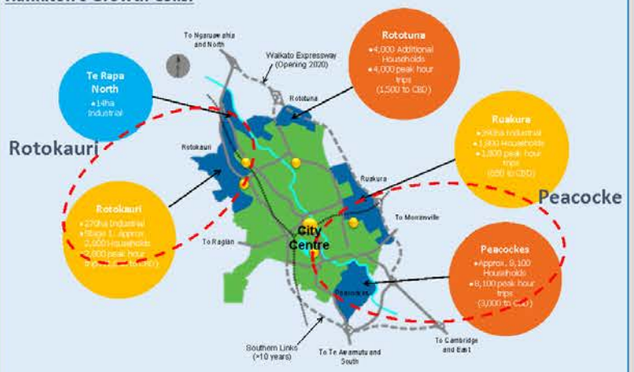
Hamilton City Council also requests that MBIE consider other alternative funding proposals to reduce the financial impacts on Council's financial strategy, including, but not limited to the following:

- The creation of a Crown-owned Special Purpose Vehicle (SPV). A SPV would result in new infrastructure constructed and managed by a crown entity with Council effectively buying shares in the entity, and thus, the infrastructure, as development rolled out in each of growth cells over time. Hamilton City Council see merit in the SPV proposal and it is a viable financial delivery alternative that the Council would like to will continue to explore with MBIE.
- The Crown debt funding a CCO of Council on a non-recourse basis to Council, and the CCO owning the infrastructure assets that enable the HIF goals to be achieved (other than roads that would ordinarily vest in the Crown). The debt would be repaid with development contributions, payments from developers and rates, but the Crown would take the risk that timing of those payments was not sufficient to repay the debt at the end of the 10 year period. The debt and assets could be brought onto Council's balance sheet if financial ratios could be met on a pro forma basis. The debt of the CCO would need to be excluded from the LGFA financial covenants.
- A Crown equity funding a vehicle that is owned by either the Crown or Council and otherwise on the same terms as above. The repayment mechanism would be akin to the government's Crown Fibre Holdings model, which would mean that government would take the risk that housing sales did not meet expectations and therefore funding was not available to purchase all of the government's shares.
- A combination of the two options above, that permits private funding and allows charges for use of the relevant assets (e.g. toll roads/bridges or charges for availability).
- All parties satisfying themselves that the FAR funding and offset is not accounted for as debt to Council. In addition, FAR eligible works (transport operating and maintenance, renewals, capital projects) for which the offset applies could occur as early as year 2 of the 10 year payback period. Council would debt fund these projects, undoing much of the benefit of the FAR funding from the perspective of Council's financial position and so some consideration of delaying these offsets until or beyond the end of the 10 year period should be considered.
  - Extended payment periods and cashflows tied to related cashflows being received by Council (e.g. developer contributions for sections sold in the growth cells being used to repay the government).
  - The creation of a suspensory loan whereby the Government loans Council the necessary funds and waives loan conditions if development expectations are realised.

Problem: **We need space and homes for a growing population.**

We are heading to 250,000 people by 2045. Our community will need more homes to live in and strategic infrastructure to service them. Even with 50% infill we'll need access to large areas for greenfield development. Our residential growth cells at Rotokauri (north) and Peacocke (south) will accommodate 10,890 dwellings but need access for transport and utilities. The strategic infrastructure needed to open up growth cells comes with large upfront costs. That puts significant financial pressures on Council and developers and constrains development.

Hamilton's Growth Cells:



Hamilton's Projected Population and Dwellings Needed:

Residential Growth: Business Case Overview

Housing Infrastructure Fund (HIF): Hamilton Proposal

Objectives: **Room to grow, more dwellings and better choices.**

Hamilton's objectives for investment in Peacocke enabled by the HIF are to:

Increase the amount of developer ready land:	– that supports Hamilton to be NZ's third city economy by 2025.
	– to support 11,638 dwellings by 2025.
	– to support the balance of the NPS-UDC dwelling requirements by 2045.

Support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase.

Alternatives and Options:

Council considered strategic responses including doing nothing, delivery over 30 years in accordance with current plans, and separate acceleration options elsewhere in Hamilton.

Preferred Option:

Hamilton will work with NZ Government and NZ Transport Agency to invest $426M over 8 years on gateway transport, water and wastewater systems to facilitate access to around 645 hectares of developable land and around 10,890 new dwellings in Hamilton's Peacocke and Rotokauri growth cells. The proposed transport systems support regional and national state highway links.

Outcomes and Benefits:

The Proposal will contribute to the business case objectives for early access for residential development and deliver over $3.5B of additional economic growth benefits over 30 years. The Peacocke road network brings forward benefits from sections of Hamilton Southern Links. Rotokauri will complete most of the Northern Growth Corridor infrastructure. The gateway infrastructure is brought forward by around 10 years, delivering over 75,700 extra house years.

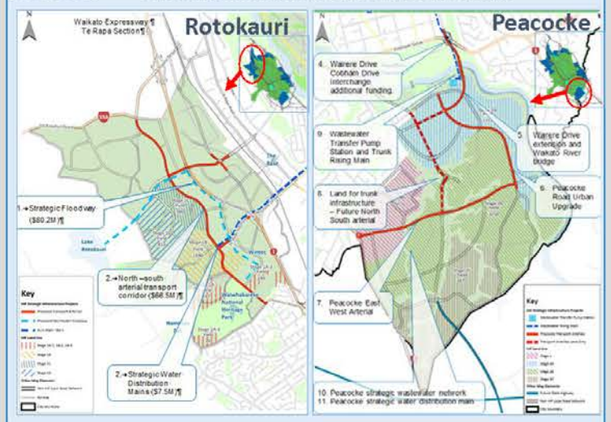
Year	Developable Land Area	Dwelling Yield	Affordable Housing
2025	Approx. 160 hectares	Approx. 4,760 dwellings	Existing areas released
2045	Approx. 645 hectares	Approx. 10,890 dwellings	Existing areas released

The proposal has a HIGH Strategic Fit, HIGH Effectiveness and HIGH Efficiency, with a BCR >5 .

Next Steps:

Funding agreement and detailed business case to optimise implementation.

Proposal: **Gateway Infrastructure for 10,890 dwellings.**



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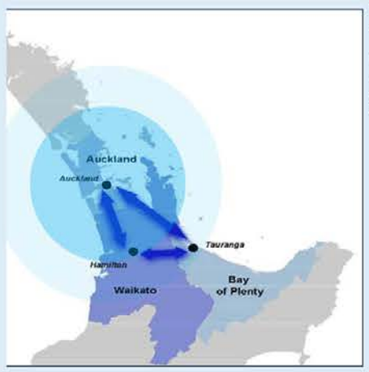
11. Peacocke strategic water distribution main	$5.2M
Hamilton Project Total	**$426.0M**
2015 10 Year Plan$29.8M	***NZTA FAR $122.8M***	***HIF $273.5M***

Strategic Context: **Hamilton and Peacocke: The right locations.**

Hamilton is a young, strong and diverse economic node, part of the "Golden Triangle" of Auckland, Tauranga and Hamilton. Investment in Hamilton can leverage the HIF investment in conjunction with recent investment in the Waikato Expressway, Southern Links, Ruakura and Hopuhopu inland ports, industrial development at Rotokauri, and Innovation Park.

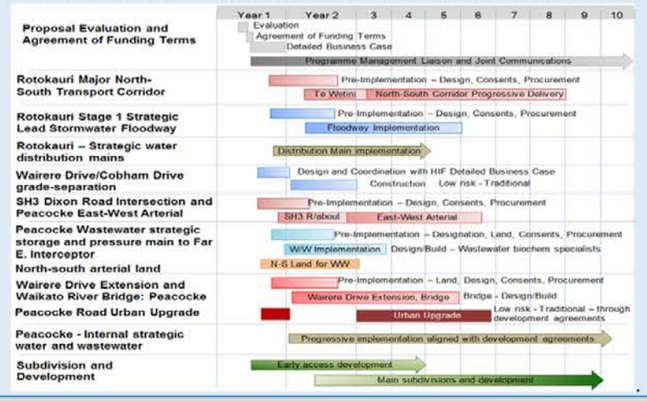
Peacocke and Rotokauri are residential zoned 10km and 10km south and north of the city centre respectively. Both have operative structure plans. The high cost of infrastructure needed for strategic services for each cells has deterred individual developers:

- Peacocke: river and gully crossings for transport and wastewater connections.
- Rotokauri: stormwater floodway and arterial road links.



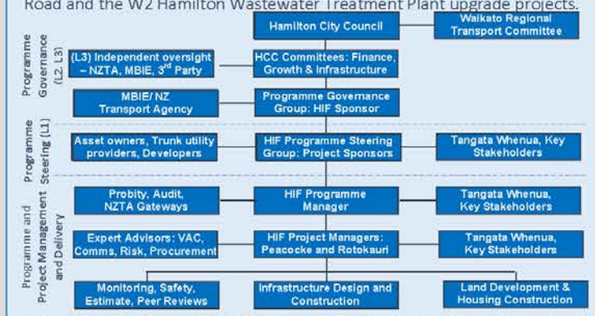
Implementation: **Careful procurement, collaborative delivery.**

All of the infrastructure proposals are at or beyond detailed business case stage, with some road designations, key consents, and land secured. Preliminary designs are ready or under way. We propose a combination of traditional staged delivery for routine infrastructure and design and construct models for the bridge and wastewater system where construction techniques and specialist skills can add value and reduce cost and risks with innovative and optimum designs.



Governance and Management: **Risks, opportunities and results.**

We will collaborate with NZTA and NZ Government to minimise project risks, overcome barriers and ensure successful delivery. We have demonstrated our ability to deliver in the forward-funded Hamilton Ring Road and the W2 Hamilton Wastewater Treatment Plant upgrade projects.



We have effective relationships with NZTA and developers. We will build on these relationships though comprehensive developer agreements to share risk and funding requirements. Working together with clear messages and direction we can assure the HIF benefits.

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Contents

1. Strategic Case - Rotokauri

The lead strategic infrastructure needed to open up new residential developments comes with large upfront costs. These upfront costs can put significant financial pressure on Hamilton City Council and developers, and subsequently delay development.

Rotokauri was brought into the Hamilton City boundary from the Waikato District in 1989. In 1999, the zoning of the area was changed from 'rural' to 'future urban' and between 2006 and 2009 a Structure Plan was prepared. The Structure Plan for Rotokauri indicates that Stage 1 of the development will include residential and industrial land uses, while Stage 2 will be residential.

Hamilton City Council has an overarching plan for meeting the needs of growth. Rotokauri is part of this plan including the proposed network extensions for strategic water and wastewater.

The Housing Infrastructure Fund (HIF) provides Hamilton City Council with the opportunity to finance the remaining services infrastructure needed to unlock all of the planned residential developments in Stage 1 of Rotokauri, and bring these developments forward.

This infrastructure is an integrated programme of works that includes the Rotokauri floodway and arterial roads. The HIF will accelerate investment in arterial roads in Stage 1 of Rotokauri by more than 10 years, while the investment in the Rotokauri floodway will be brought forward by six years.

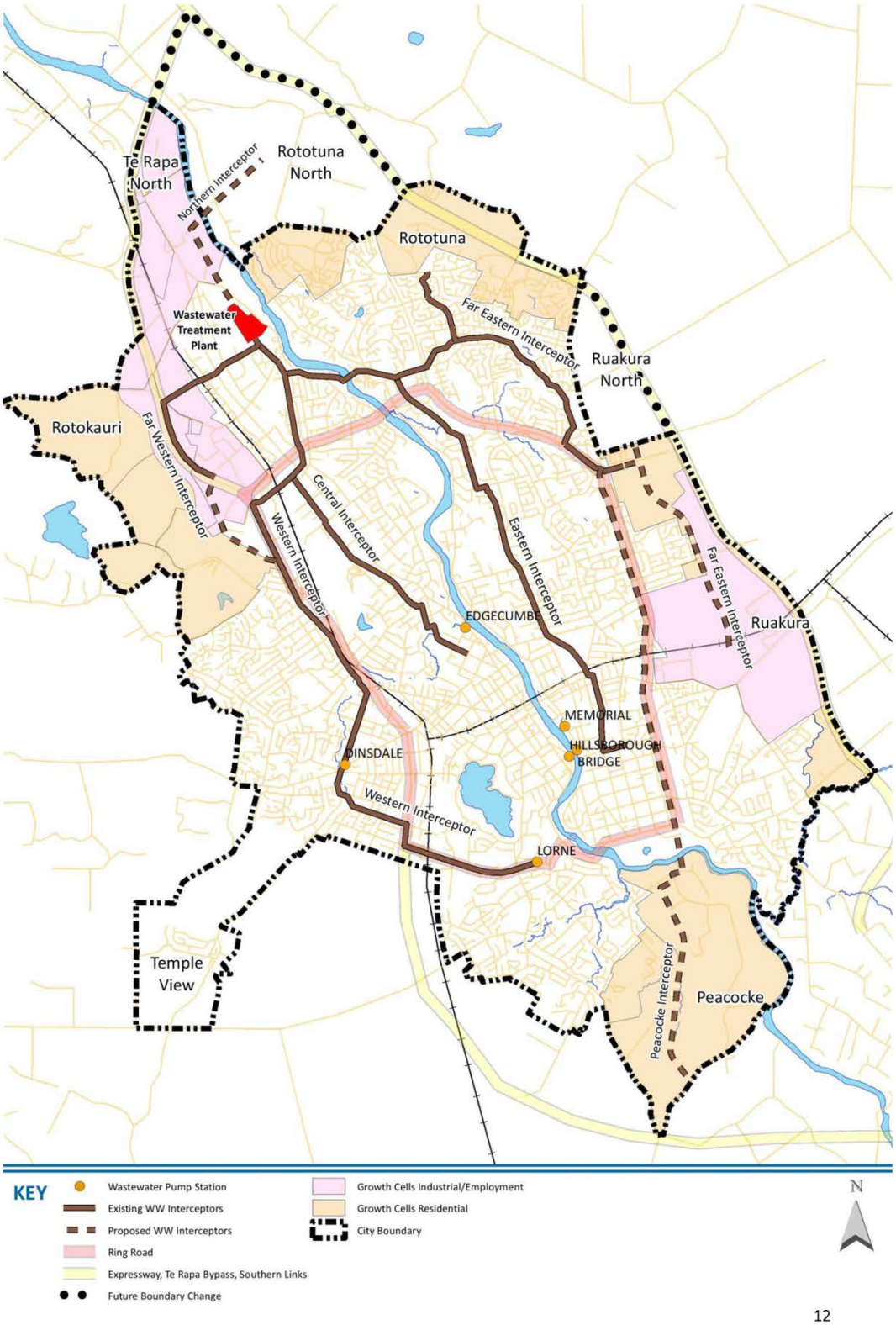
Together, this programme of works will accelerate growth in the development of Stage 1 of Rotokauri, which will yield 1,610 dwellings within 10 years and 2,787 dwellings within 30 years. The 1,610 dwellings built in Rotokauri within 10 years will meet 13% of the projected future demand for housing in Hamilton City in 2025. In addition, the average infrastructure spend per dwelling built is expected to be $57,300 within 10 years, and $33,100 within 30 years.

Overall, Stage 1 of Rotokauri will achieve 5,700 more house years than under a status quo Long-Term Plan situation, and for most of the duration of Stage 1 dwellings will be put in place two years faster with the assistance of HIF. Note house years are the number of years for each house constructed times the number of years until 2045.

Strategic Context

Wastewater

Rotokauri needs strategic wastewater infrastructure to open up residential development in this area. To date, the Council has completed a significant interceptor extension into Rotokauri to support zoned industrial land and economic development. A further extension of the far western interceptor will provide the strategic wastewater infrastructure for the residential Stage 1 area.


Te Rapa North
Northern Interceptor
Rototuna North
Rototuna
Wastewater Treatment Plant
Far Eastern Interceptor
Ruakura North
Rotokauri
Far Western Interceptor
Central Interceptor
Western Interceptor
Eastern Interceptor
EDGECUMBE
Far Eastern Interceptor
Ruakura
MEMORIAL
HILLSBOROUGH BRIDGE
DINSDALE
Western Interceptor
LORNE
Temple View
Peacocke Interceptor
Peacocke
KEY
Wastewater Pump Station
Existing WW Interceptors
Proposed WW Interceptors
Ring Road
Expressway, Te Rapa Bypass, Southern Links
Future Boundary Change
Growth Cells Industrial/Employment
Growth Cells Residential
City Boundary
N

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Water

The nearby Pukete Reservoir currently provides potable water to Rototuna. Rototuna is a growth cell in the north east of Hamilton, and a new dedicated reservoir is being built for this area.

The Rototuna Reservoir is expected to be completed in late 2017. Once this occurs, the potable water from the Pukete Reservoir can be redirected to Rotokauri, allowing this growth cell to be brought online. The reassignment of the Pukete Reservoir to Rotokauri allows the Council to use an existing asset, which decreases costs and lead times, subject to a new bulk strategic water main to Rotokauri.

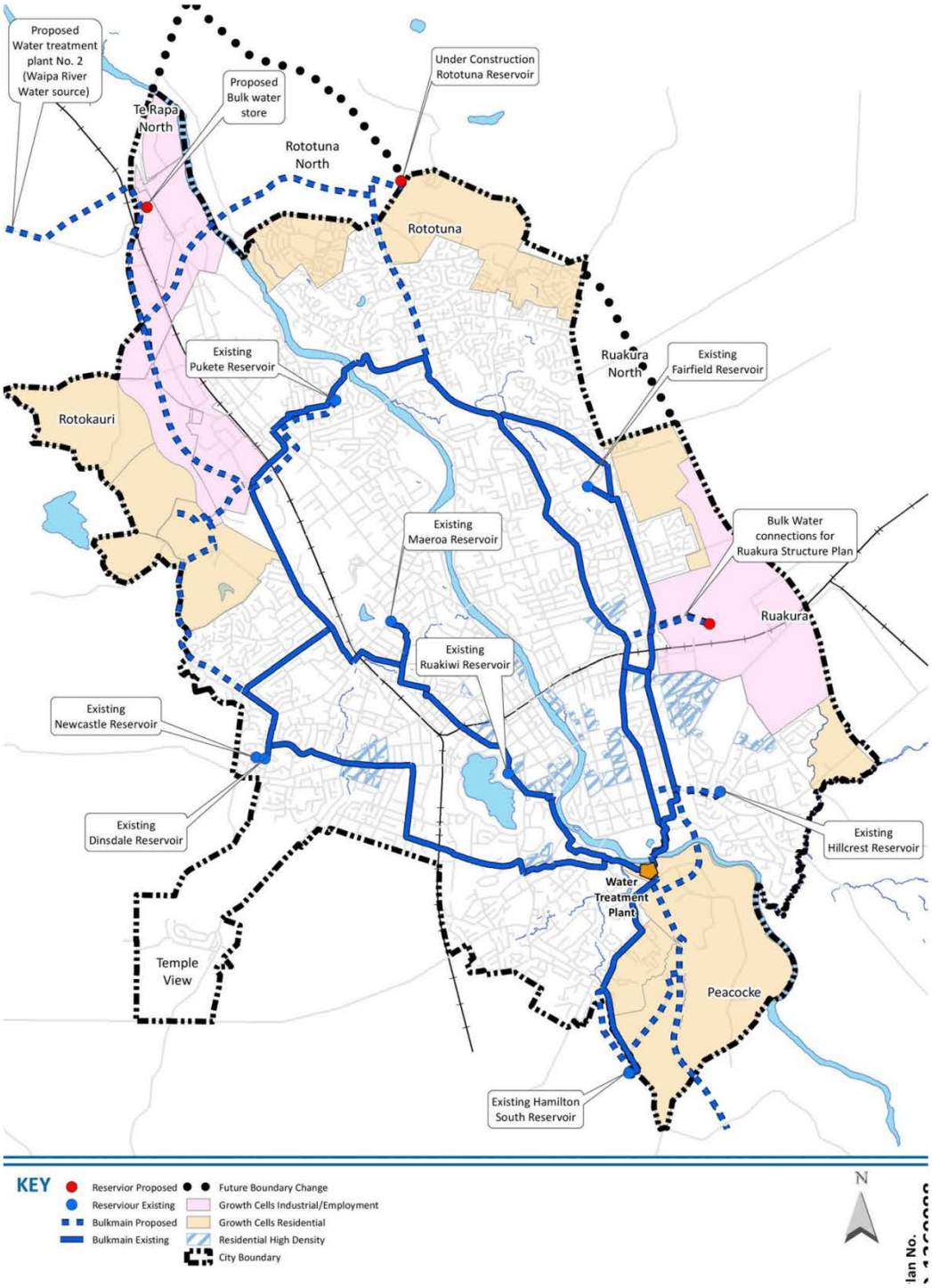
The Council has already completed reconfiguration work at the Pukete Reservoir, in anticipation of this reservoir providing dedicated connections to Rotokauri. In addition, Council has - subject to the 2017/18 draft Annual Plan process - agreed to allocate $7.5 million for the new strategic bulk water connection from the Pukete Reservoir to Rotokauri.

This work is currently at the detailed design phase, and Council will be in a position to call for construction tenders early in the 2017/18 financial year in anticipation of the construction being undertaken over the summer months. The construction of the strategic bulk water connection from Pukete to Rotokauri could take up to nine months, which would see the delivery of this strategic infrastructure within the 2017/18 financial year.

This new strategic bulk water connection to Rotokauri will meet the water needs of this area, unlock land for residential and industrial uses, and improve water supply resilience for the surrounding areas.

Item 5

Attachment 8



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The Integrated Catchment Management Plan

The Rotokauri Structure Plan promotes central green corridor, which is effectively a park like space, similar to those shown in the Hamilton Urban Growth Strategy: A Compact and Sustainable City (HUGS).

The proposed central green corridor is public land that incorporates stormwater conveyance and treatment, and will provide ecological connectivity between Lake Waiwhakareke and Lake Rotokauri. The green corridor may also include public access and open spaces. The green corridors could also be used for co-location of services in addition to standard road corridor provisions.

The green corridors are part of the Rotokauri Integrated Catchment Management Plan (ICMP). The ICMP provides guidance on how water, wastewater and stormwater management in the catchment can accommodate growth in an integrated manner and in accordance with proposed new land uses.

The ICMP was developed and drafted after broad community consultation, and responds to the requirements under the National Policy Statement on Freshwater Management and the Waikato River Vision and Strategy including the proposed Waikato Regional Council "Healthy Rivers" Plan change. The ICMP provides the Council with an integrated management approach to water management in the catchment. It is not prescriptive; instead it provides developers with options in regards to the unique characteristics of the Rotokauri environment and how to mitigate, as far as practicable, the likely effects of development on this environment.

The ICMP explored the hydrology and geology of Rotokauri; groundwater recharge and discharge and gradients; stormwater quality and contaminants; information on the two lakes and their values including aquatic biodiversity and riparian biodiversity; and the cultural value and archaeological significance of the area.

Another key part of the ICMP is that it identified options in regards to flooding, particularly a 1 in 100 year flooding event. This analysis confirmed the critical need for a floodway in Rotokauri.

Rotokauri floodway

When built, the Rotokauri floodway will have the following key benefits:

- Downstream flood protection
- Flood storage
- Manages residual flooding
- Responds to high groundwater levels
- Recognises ground constraints
- Recognises regional and national policy settings related to water quality and receiving environment health (where the water is going to)
- Recognises high value water receiving bodies
- Recognises priority contaminants – E.coli, suspended solids, phosphorous, and nitrogen - as per the National Policy Statement on Freshwater Management
- Helps address potential decline in biodiversity values
- Recognises the at-risk Giant Kokopu population
- Provides fish passage.

Hamilton City Council is best placed to provide the Rotokauri floodway rather than an individual landowner or developer. This is because of the nature of the floodway, particularly its function and

related property ownership. However, the Rotokauri floodway is a significant cost for Hamilton City Council to accommodate within its financial strategy, particularly if the Council is to deliver this as lead strategic infrastructure. As such, only a proportion of the floodway costs are presently provided for in the later years of the Hamilton City Council 10-Year Plan.

The floodway is the key constraint to residential development in Rotokauri. This is the reason why the floodway is part of the request for Housing Infrastructure Funding in this indicative business case. Without the floodway it is very challenging, if not impossible for developers to individually develop a stormwater solution.

Transport networks

The Housing Infrastructure Fund request for arterial roads within Rotokauri will fund an incremental extension of the transport network to match the pace of development. This is all that is required to establish growth in the Stage 1 residential area of Rotokauri, and to leverage the strategic investment that has already occurred in this area.

Hamilton City Council has a positive and collaborative relationship with NZTA, and as a consequence the Council and NZTA have jointly approached city land use planning as it relates to transport activities. This integrative approach is heavily reflected in the Rotokauri Structure Plan and resulting networks.

The Council has entered a Memorandum of Understanding (MOU) with NZTA to capture relative responsibility for key networks. An example of this is the Te Rapa Bypass Section of the Waikato Expressway, which passes through the Rotokauri growth area.

This indicative business case relates to accelerating the arterial roads that support the Waikato Expressway and future planned land use.

Arterial roads

The Council in partnership with NZTA has invested over $180 million in designating and constructing the Te Rapa section of the Waikato Expressway and associated local road connections. This work has facilitated the Rotokauri Stage 1 industrial development, which is now largely completed or consented.

The local road connections completed are:

- Two local road bridges below the Te Rapa section of the Waikato Expressway
- The Te Wetini Drive arterial to Wintec's entrance
- A significant proportion of Arthur Porter Drive.

Land use

Stage 1 of the Rotokauri area includes around 70 hectares of industrial and commercial land. Zoned land uses potentially include light industry, storage and small scale manufacturing. This land use allocation is based on the existing business profile around this area and the locational advantages of Rotokauri. Beyond Stage 1, further allocations of industrial and commercial land may become available in response to demand but this will be largely based on anticipated demand in Stage 1.

Alignment to existing strategies

Hamilton is growing, and is home to many young people and families. Population growth is an opportunity and a challenge for Hamilton City. The Council response is that growth needs to be managed in Hamilton City because of boundary considerations. Hamilton is the smallest metropolitan area by land area, and is one of the smallest local government areas by land size in New Zealand.

To meet the priority of being the third city economy in New Zealand by 2025, Hamilton City Council has adopted a strategic approach to the spatial development and growth of Hamilton City. This approach is documented in the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The Hamilton Urban Growth Strategy articulates areas suitable for accommodating future residential growth while ensuring that the social well-being of the community is enhanced and the local environment is protected. The Hamilton Urban Growth Strategy also identifies where to develop first, why and when; what other land uses are required for business or industrial purposes; and what city infrastructure is required to support this development.

There are two growth approaches from the Hamilton Urban Growth Strategy that are important:

- Growth Approach 1: Over the next 10-20 years, approximately 50% of Hamilton's new dwellings will be increasingly provided through regeneration of existing parts of the city. It is recognised that this will not be appropriate for all areas. Therefore this regeneration will focus in and around key nodes including the CityHeart, transport hubs, suburban centres, and areas of high public amenity such as parks and the Waikato River.
- Growth Approach 2: The commitments to developing the remainder of Rototuna and Stage 1 of both Peacocke and Rotokauri remain. The development of Rototuna and Stage 1 of both Peacocke and Rotokauri will include greater choice in living environments, for instance, more compact type developments in key areas such as town centres or around parks and open spaces.

Access Hamilton, the transport strategy for Hamilton, guides relevant land-use planning and the management, development and protection of the transport network necessary to support Hamilton's economic development, urban design and growth strategies. Access Hamilton is currently in the process of being updated.

This indicative business case builds on the Network Action Plan contained within Access Hamilton and the outcomes that it is delivering for Hamilton City. For this reason, the purpose of the Network Action Plan is listed below:

- Evaluates desirable land use and structure planning principles that minimise the need to travel and support a multi-modal transport system
- Identifies the key nodes and connections and expected movements, including rail, passenger transport, and national and regional road links
- Establishes a road hierarchy that identifies the strategic network (state highways and city roads), major and minor arterials, collectors and local access roads, and defines the role and treatment of each component of the road network
- Assesses the transport consequences of growth in line with integrated sub-regional and local growth strategies and identifies areas of concern
- Identifies a hierarchy of land use and transport interventions, activities and infrastructure necessary to sustain a network that supports an affordable, integrated, safe, responsive and sustainable transport system

- Provides an implementation framework for the prioritisation, coordination and implementation of activities.

Land use and transport integration is heavily reflected in the Rotokauri Structure Plan and resulting arterial networks.

1.1 Investment objectives, existing arrangements and business needs

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

The Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Operative District Plan and the Hamilton 10-Year Plan 2015-25, along with the 30-Year Infrastructure Plan, the Regional Land Transport Plan and the Access Hamilton Strategy – Integrated Transport Plan are all aligned to grow Hamilton to be the third city economy in New Zealand by 2025.

The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The Hamilton City Growth model, along with household and population projections provided by the National Institute of Demographic and Economic Analysis (NIDEA) at the University of Waikato, indicates the projected demand for dwellings. This demand information is then matched with household supply data from each of the greenfield areas in Hamilton and the amount of infill available. The settlement pattern that Hamilton has in place to meet this supply and demand reflects the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The settlement pattern that Hamilton City Council currently has in place is insufficient over the long-term to meet new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC). Under this National Policy Statement, Hamilton has been identified as a high growth area. This means Hamilton is required to increase the amount of residential and business land that is zoned, serviced and commercially viable. In the short to medium-term (three to 10 years) this land capacity must be over and above 20% of the projected demand for residential and business land.

To meet the NPS-UDC targets, and the associated demand for dwellings caused by projected population growth, Hamilton City Council will need to bring forward planned greenfields areas such as Rotokauri.

Investment objectives and business needs

Hamilton City Council, through strategic planning processes, has defined four investment objectives.

These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

In a later chapter, these investment objectives are ranked against the business needs of Council and various critical success factors. This ranking allows the Council to determine what the best long and short-list options are going forward – and therefore what planned greenfield area best meets the

needs of the Council - and what planned greenfield area should be put forward to receive Housing Infrastructure Funding.

Investment objective 1

Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.

Business need 1

The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.

Investment objective 2

Increase the amount of developer ready land to support 11,638 dwellings by 2025.

Business need 2

Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.

Investment objective 3

Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.

Business need 3

Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.

Investment objective 4

To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.

Business need 4

The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

Existing arrangements and business needs

Existing arrangements

Citywide water

Hamilton City Council has two treatment plants – water and wastewater. Each plant has long-term consents in place that provide for city growth. These consents are based on the projected peak demand for water and wastewater.

The Hamilton City Council projects this peak water demand out to 2060 and funds infrastructure upgrades based on these projections. This means that funded investment capacity and water allocation consents provide for growth and resilience.

The water treatment plant consent allows a stepped water take from the Waikato River to match projected growth in the population and economy of Hamilton to 2044. The wastewater plant has a discharge consent that also matches demand and allows for city growth to 2027.

Hamilton City Council has a just in time investment strategy to match growth needs. This means the Council has budgeted for the upgrade of these plants in response to actual demand. Currently $54 million has been allocated across the two plants – water and wastewater – for capacity upgrades.

For the wastewater plant the capacity upgrade is in the design phase, and procurement will start for the construction phase in the next four to eight weeks. The water treatment plant upgrade has also started and the first upgrade component is under construction. The upgrade will increase the capacity of the water treatment plant and a proportion of this upgrade is currently under construction.

At present, Hamilton City has 84.4 million litres of treated water storage capability. The Council is in the process of completing a new reservoir to meet recent and expected growth in the City. This new reservoir will be online and operational in October 2017, and will increase total treated water storage by 24 million litres. This represents a $21 million investment in potable water storage and network resilience.

There are also plans for a second additional reservoir. This is forecast to be constructed and completed in June 2020 and would add another 12 million litres in potable water storage in the City.

All of this investment in potable water is focused on meeting the projected economic and resident population growth in Hamilton City. Further, the total increase in potable water storage enables residential growth in Peacocke.

Citywide transport networks

Hamilton City Council has a positive and collaborative relationship with the regional office of the New Zealand Transport Agency (NZTA). Together, Hamilton City Council and NZTA have jointly approached strategic network planning as it relates to transport activity and planned city land use changes.

NZTA in the Waikato Expressway Network Plan noted that the Te Rapa Bypass, Waikato Expressway and Southern Links would assist in determining the settlement pattern of western and southern Hamilton, enabling an integrated approach to development which should reduce the need for travel. This conclusion was subsequently supported by further modelling carried out in the development of the Hamilton Urban Growth Strategy.

Land use and transport integration is therefore heavily reflected in the Rotokauri Structure Plan and resulting arterial networks.

Business needs – Investment objective 1

Investment objective 1 will contribute to delivering the following business needs identified by Hamilton City Council through various plans and strategies:

- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.
- The management of land use and strategic infrastructure including roads and other transport, water, wastewater, and stormwater collection and management networks. These needs are identified in the Waikato Regional Policy Statement, the Waikato Regional Land Transport Plan 2015-2045, Access Hamilton: the New Zealand Action Plan for Hamilton, and the Future Proof Growth Strategy and Implementation Plan.

- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

Long-term settlement pattern

Investment objective one will assist to deliver a settlement pattern that encourages families and young people to live and work in Hamilton. This meets a business need of council.

- Hamilton is home to many young people and families, and is one of only a few places in New Zealand that continues to experience growth in the youth population.
- Hamilton is a city for families, and liveability is important to encourage resident population growth.

Investing in residential areas such as Peacocke meets the long-term settlement pattern for Hamilton City, as noted in the Peacocke Structure Plan.

This development also supports the focus in the Hamilton Urban Growth Strategy on an active, strong commercial central city in Hamilton with distinctive suburban villages.

Investment objective one also contributes to and meets the business needs identified in Priority 2 and Priority 7 in the 10-Year Plan.

- Priority 2: Become the third city economy in New Zealand. Investing in community assets such as parks, playgrounds, gardens, arts and cultural and sporting facilities will support Hamilton to become the third city economy in New Zealand by 2025, as it continues to be a great place to live and work.
- Priority 7: Become an urban garden. Hamilton is green, with parks, trees, beautiful gardens and street plantings. This priority is supported by strategies that are focused on the parks, playgrounds, and river walkways in and around Hamilton, along with Hamilton Zoo and the Hamilton Gardens.

Strategic infrastructure

The business needs of Hamilton City Council to manage land use and strategic infrastructure is outlined in the 10-Year Plan and 30-Year Infrastructure Plan. Priority 3 in the 10-Year Hamilton Plan states:

- Provide outstanding infrastructure. This priority is focused on infrastructure development that prepares the City for a population of more than 200,000.

Hamilton City Council needs to manage land use and infrastructure to improve infrastructure efficiency and reduce costs. To meet business needs growth needs to occur in a manner that supports the efficient use of infrastructure (e.g. development should occur in areas that are already strategically serviced or where infrastructure is planned). Land use should also support the significant funding investment in strategic infrastructure, and not undermine it through unplanned or ad-hoc development.

The ability to provide strategic infrastructure and services is fundamental to successful growth management and becoming the third city economy by 2025.

Infrastructure - Road Transport

The most significant business needs for transport in Hamilton are defined by the Hamilton Urban Growth Strategy, the Regional Policy Statement, and the Waikato Regional Land Transport Plan 2015-2045. Together, these strategies indicate the business needs of Hamilton City Council for road transport to enable sustainable development, and support passenger transport and active modes.

Over the next three years, connections to the Waikato Expressway will be a focus along with a continued partnership approach with developers in established growth areas over 10 years. Beyond the next 10 years, investment will be required to extend the transport network into new growth areas, including providing additional river crossings in the north and south of the city.

Business needs are also noted in the 10-Year Hamilton Plan. Hamilton City Council will provide and manage a safe and efficient transport network for Hamilton that integrates freight, private vehicles, buses, walking and cycling. This includes the operation and maintenance of existing networks, and planning for future development and growth.

There are also business needs to meet the Regional Land Transport objectives outlined in the Integrated Land Transport Plan over the next 30 years. These include the following:

- Facilitating economic development: An effective and efficient land transport system that enhances economic wellbeing, and supports growth and productivity within the Waikato region and upper North Island
- Affordability: An adaptable and flexible approach to managing and developing the land transport system that optimises funding options and provides innovative management approaches to best meet the needs of the region in an affordable way.
- Integration and forward planning: An integrated and aligned land use and transport system.

Capacity for population growth

An important business need identified by Hamilton City Council is to provide capacity within the City for population growth. Population growth will assist council to meet investment objective one and become the third city economy in New Zealand by 2025.

This resident population growth is guided by population projections. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The National Institute of Demographic and Economic Analysis (NIDEA), a University of Waikato institution, has prepared a low and medium series of household and population projections for Hamilton and other territorial authorities in the Waikato Region. These projections have been devised as part of the Future Proof project.

The Future Proof Chief Executives Advisory Group and Strategic Implementation Management Group approved the following recommendation in December 2016: *"Confirm the agreement reached on growth projections, which is to use a banded approach based on NIDEA low and medium projections for the Future Proof Strategy Update, and to use NIDEA low for the Waikato Regional Transport Model."*

The NIDEA low series of household and population projections averages 1,250 households per annum. This projection series is the preferred projection going forward, and will be used in the Hamilton Growth model, the development of the Hamilton Long Term Plan and in future infrastructure planning and development.

Business needs – Investment objective 2

Investment objective 2 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 10 years, this requirement is to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings. This figure is over and above 20% of the projected demand for residential land.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The National Policy Statement on Urban Development Capacity (NPS-UDC) directs local authorities to provide sufficient development capacity in their resource management plans for housing and business growth to meet demand. Hamilton City Council is a local authority that is directly impacted by the NPS-UDC as Hamilton City is considered a high growth area. The NPS-UDC therefore has a substantial impact on the business needs of the Council.

Under the NPS-UDC, Councils are required to increase feasible development capacity. This means land that is zoned, serviced, and commercially viable. The NPS-UDC is focused on feasible development capacity for housing and business land to meet projected demand over the short, medium and long-term (three, 10 and 30 years).

The NPS-UDC has also set the requirements for the additional margin of feasible development capacity. For high growth areas such as Hamilton this is 20% over the projected demand for developer ready land in the short and medium-term, and 15% in the long-term. These demand projections regarding development capacity will have a substantial effect on Council's requirements for infrastructure and developable land.

The difference between the NIDEA household and population projections and the NPS-UDC requirements is important. In terms of residential growth, Hamilton needs to build new dwellings to house the additional residents projected in the NIDEA low projections, and it needs to provide the capacity for growth to be constructed along the NPS-UDC lines, but dwelling construction does not need to follow this line.

The additional capacity is there to address:

- Housing affordability through an increase in the supply of developable land
- Ensure housing supply for any unprojected population increase
- Factor in the proportion of feasible development capacity that may not be developed.

The NPS-UDC defines demand in the short, medium and long-term in relation to housing as including:

- The total number of dwellings required to meet projected household growth and projected visitor accommodation growth;
- The demand for different types of dwellings;
- The demand for different locations within the urban environment; and
- The demand for different price points.

This definition of demand is central to the NPS-UDC definition of development capacity, where development capacity refers to the amount of development allowed by zoning, and the regulations in plans that are supported by infrastructure. This development can be "outwards" on greenfields sites and/or "upwards" by intensifying the existing urban environment.

Business needs – Investment objective 3

Investment objective 3 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 30 years, this requirement is to provide developer-ready land that is zoned, serviced and commercially viable. This figure is over and above 15% of the projected demand for residential land.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

There is a business need for the Council to meet the business and residential land capacity requirements in 2045, as specified in the NPS-UDC. Such requirements are similar to those described for investment objective 2 above.

Investment objective 3 has a longer term focus and recognises that council can plan for future requirements through Annual Plan reviews and the coordinated management of strategic infrastructure. However, it also recognises that investment needs to occur to meet the long-term needs of the NPS-UDC, particularly in regards to developer ready residential land.

Business needs – Investment objective 4

Investment objective 4 will contribute to delivering the following business needs identified by Hamilton City Council:

- Priority 8 in the 10-Year Hamilton Plan: Provide access to affordable housing. The city will continue to provide a balanced supply of housing options to meet the city's growth.
- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The Hamilton Growth Model is used to determine future capacity requirements in Hamilton City. The dwelling demand projections from the model are based on the NIDEA low household and population projections and the NPS-UDC requirements.

This demand scenario assumes that the resident population of Hamilton City will be 198,000 by 2030, which is 4% higher or 7,000 more people than under the old Statistics New Zealand medium population growth scenario. This is because the NIDEA low projections are projecting 1,200-1,300

new dwellings per year for 10 years, which is a lot higher than the previous five year average of about 800 new dwellings per year.

Population growth is projected to be higher than it has been in recent years according to NIDEA and Statistics New Zealand. If this projection holds true and migration and household formation is at a higher rate than that forecast, than this will likely put pressure on land use and prices.

There is insufficient future affordable housing to provide a balanced supply of housing options given projected demographics and incomes.

- Over recent years, growth has predominantly occurred in the North of the city and continuing this trend may not provide for the future social or cultural needs of all residents
- Majority of greenfield section sizes are between 600 to 800 square metres, this is leading to urban sprawl and impacting on the price of land and the cost of travel.

Other transport modes such as walking and cycling become less attractive if local activities are further away from people's homes. This issue is particularly important for local neighbourhood shopping nodes and schools.

Table 1 Summary of existing arrangements and business needs

Investment Objective One	Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.
Investment Objective Two	**Increase the amount of developer ready land to support 11,638 dwellings by 2025**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Three	**Increase the amount of developer ready land to support the balance of the NPS-UD dwelling requirements by 2045**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model; Hamilton Urban Growth Strategy; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Four	**To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase**
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045.
Business Needs	The capacity of Hamilton City to provide a balanced supply of housing options to meet resident population growth. A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.

1.2 Context for Rotokauri investment option

Rotokauri is an area of approximately 955 hectares to the north-west of the Te Rapa area in Hamilton. It was brought into the City from the then Waikato County (now the Waikato District) as a consequence of the 1989 Local Government Reforms. This area, along with Rototuna and Peacocke, was incorporated into Hamilton City to provide for long-term development and city growth.

Through the development of the Hamilton Urban Growth Strategy in 2008, Rotokauri was identified as one of the four greenfield growth cells within Hamilton City. It was also identified that Rotokauri would be developed in two stages. Stage 1 of Rotokauri was identified for development in the short to medium term, while Stage 2 would be developed after Peacocke.

Rotokauri investment proposition

Rotokauri is considered a desirable urban development location and investment option as it is located within close proximity to The Base, major transport infrastructure, the WINTEC Rotokauri campus, Hamilton Zoo, and major employment areas located on the western side of the City.

Rotokauri has high levels of amenity due to its natural landscape, which consists of defined ridgelines, remnant natural vegetation, and the Waiwhakareke Natural Heritage Park.

Rotokauri is also a viable development opportunity as it continues new urban development to the north of the established suburbs of Nawton and Dinsdale. It also leverages off the recent significant investments made by NZTA in the Te Rapa Bypass.

Council has a good relationship with existing landowners and developers in the area, and has been working with them over the past decade in a collaborative way to complete the land use and investment framework for the area. Recent development success has occurred with Hamilton Joint Venture and Rotokauri Developments Limited, which includes Tainui Group Holdings.

Structure Plan elements

A Structure Plan has been developed for the Rotokauri area. Structure planning sets out the development suitability; land use constraints and opportunities; transportation network connection requirements; indicative open space areas; and major infrastructure needed to enable the development of an identified growth area. A Structure Plan also aligns with the growth planning outlined in the Hamilton Urban Growth Strategy and the Regional Policy Statement.

The Rotokauri Structure Plan divided the area into two stages, to reflect proposed land release planning, and in accordance with the Hamilton Urban Growth Strategy and the Long-Term Plan infrastructure programme:

- Stage 1 was zoned to enable immediate development potential
- Stage 2 was zoned "Future Urban".

The Structure Plan also set out the future intent of Stage 2 to include extensive open space, residential, commercial and industrial areas.

In 2012 two key infrastructure milestones occurred:

- the opening of the Te Rapa Bypass and associated local road connections
- the extension of the western wastewater interceptor to support industrial development in Stage 1.

It is anticipated that the development of Stage 1 of Rotokauri will include a mixture of low- and medium-density housing with a projected overall housing capacity of 2,600 dwellings with over half

(1,678) of these dwellings being developed within the current 10-year Plan period. Based on current projections Rotokauri Stage 2 has a capacity of approximately 4,800 dwellings.

District Plan provisions

Rotokauri was zoned "Rural" when it was brought into Hamilton City in 1987 from Waikato County. Key planning milestones between 1987 and 2016 include:

- rezoning from "Rural" to "Future Urban" in 1997
- introduction of the Structure Plan framework via Variation 18 in 2007, with all appeals settled and the Structure Plan operative in 2011 in the Operative District Plan
- settlement of appeals in 2012 to the now Proposed Operative District Plan, which has enabled a larger area to be available for immediate development.

The PODP zones the area within Stage 1 and includes the following:

- 90 hectares of "General Residential" zoned land, allowing sites over 400m^2 in the area mainly for single or duplex dwellings.
- 98 hectares of "Special Natural" zoned land, which allows for residential development with a density between 350m^2 to 600m^2 depending on location. It is anticipated that the majority of residential development in this area will consist of single dwelling sites.
- 7.5 hectares of "Business Zone 6 " land for the purpose of establishing a town centre to service the Rotokauri residential development.
- 41 hectares of medium-density residential land located adjacent to the proposed town centre. It is anticipated this will encourage a mix of higher-density living consisting of duplex and apartment developments.
- 75 hectares of open space land, which includes the Lake Waiwhakareke Heritage Park and an area for a sports park.
- 203 hectares of land for industrial activities.

Rotokauri Stage 2 covers an area of approximately 300 hectares. This is zoned "Future Urban" under the Proposed Operative District Plan. Under this zone, subdivision and land use are tightly controlled to avoid premature development and fragmentation of the land resource.

1.3 Potential business scope and key service requirements

Hamilton City Council has identified specific strategic transport and water infrastructure projects that will enable land within the Rotokauri area to be developer ready. These infrastructure projects will accelerate the building of new dwellings in this area.

In Rotokauri, the projects that the $91.2 million in HIF funding is being sought for include:

- The floodway crossing multiple land holdings required to deal with the stormwater from Stage 1 of the growth cell including that from the sensitive Lake Rotokauri.
- Road connection to Te Wetini Drive and Te Kowhai Road to extend the Hamilton arterial transport system.

These are all new infrastructure projects and include the construction of strategic transport and water and wastewater elements.

The $91.2 million in HIF funding will accelerate development timing and bring projects that were part of the Hamilton Plan and Long-Term Infrastructure Strategy 2015-2045 forward.

- In total, 2,787 dwellings will be developed in the Stage 1 Rotokauri area between 2017/18 and 2023/24.
- Within the 10 years of the HIF, the accelerated development of 1,610 dwellings will occur in the Rotokauri Stage 1 area.

Table 2 Summary of Rotokauri dwellings and projected demand

	2016-2020 5 Years	2021-2025 10 Years	2026-2030 15 Years	2031-2045 30 Years
No. of dwellings to be constructed (within each period)	180	1,430	1,017	160
No. of lower cost dwellings to be constructed	18	143	102	16
Cumulative no. of dwellings to be constructed	180	1,610	2,627	2,787
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	3%	13%	14%	8%

The developments within Rotokauri will continue to be undertaken in stages. This means the $91.2 million in HIF funding will allow to the development of:

- Stage 2 of Peacocke to be realised by 2031/32, resulting in the total development of 6,600 dwellings in Peacocke.

1.4 Main benefits

The quantifiable benefits are discussed in detail in the Economic Case. As a reference, these benefits include:

- Transport benefits to Hamilton City ratepayers (refer Annexes)
- Rates revenue to Hamilton City Council
- Wealth created for households due to appreciation in the capital value of the dwelling
- Economic contributions to Hamilton City arising from the economic activity associated with:
    - Infrastructure construction; Housing construction; Household expenditure.

The non-quantifiable benefits include:

- The optimisation of strategic infrastructure networks, including the staging of transport networks and strategic infrastructure, and the earlier opening up of the wider growth cell in Rotokauri.
- The earlier realisation of wider economic benefits that impact on the well-being of the community, including social infrastructure.
- Wider regional benefits, including the efficient operation of freight corridors and the adherence to coherent settlement patterns
- National benefits including the key role Hamilton plays in the Waikato and Upper North Island transport network

The optimisation of strategic infrastructure

The key economic benefit that the strategic infrastructure will enable is the bringing forward of a residential development in Rotokauri. Bringing forward urban development in Rotokauri through the Housing Infrastructure Fund will enable the Council to continue to meet resident population needs for water and wastewater. This infrastructure is an integrated programme of works that includes the Rotokauri Floodway and arterial roads.

The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

Wider benefits that impact on the community

The bringing forward of residential development in Rotokauri will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value.

The skills and other human capital in Hampton City will grow through projected population growth and the bringing forward of the residential development in Rotokauri. An increase in skills and other human capital also raises the capacity of a community to take-up new knowledge and technologies. This capacity is called the "absorptive capacity" for technology. Increasing absorptive capacity

immediately makes a community ready to innovate, and to adopt and adapt new technologies. These activities increase the capacity of communities to participate in global value chains of supply. This is beneficial and vital for Hamilton City and for the wider rural community it services.

The earlier provision of infrastructure for social support and development will support the earlier development and deepening of social and cultural capital (e.g. safer communities). This also creates more resilient communities sooner. This social and cultural resilience has a value which, if realised earlier, provides a higher present value to communities.

Earlier realisation of development profits by developers will also release funds available for further development opportunities. Hence, the net present value of investment expenditure and thereby incomes for households and firms in Hamilton City will increase.

Regional benefits

The opportunity to leverage the Housing Infrastructure Fund in conjunction with key infrastructure and economic projects – the Waikato Expressway including the extension to Pairere; Inland Port/logistics hubs; advancement of Southern Links; Pairere to Tauranga road upgrade; and the upgrade to the East Coast Main Trunk Line underscores the power of a coordinated Hamilton and Waikato region.

As discussed earlier, the economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow and collaborate with surrounding district councils, the Waikato Regional Council, and Tauranga City council and Auckland Council.

Collaborations such as Future Proof illustrate how Hamilton city Council is working with Environment Waikato, and Waipa and Waikato District Council to strategically plan and manage growth. The Upper North Island Strategic Alliance (UNISA) is another collaboration that Hamilton City Council has been actively involved in and advocating for at a regional and national level. This collaboration is particularly important given that approximately 16% of the national state highway network is in the Waikato, and the region is a strategic freight corridor for national road and rail freight. The transport network links primary producers with manufacturers and exporters, and is a major part in keeping the economy of New Zealand moving.

National benefits

Hamiltonians move between places in their City and Region to live, work and play. Collective planning and action between government, residents and businesses is critical to the long-term success of Hamilton city and the Waikato Region.

As discussed earlier, Rotokauri is one of the growth areas recognised in the Future Proof Growth Strategy. This growth area has been identified to assist with infrastructure and land use integration, and forms part of a wider sub-regional view of the Future Proof settlement pattern. Sub-regional and regional planning illustrates the collaborative way that Hamilton City Council works with to ensure efficient use of resources and the steady progression of Hamilton to being the third city economy in New Zealand.

Table 3 Analysis of potential benefits that can be expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Description
Transport benefits	Hamilton City ratepayers	Direct	Time saving benefits
Rates revenue	Hamilton City Council	Direct	New rates paid by new ratepayers
Developer contributions	Hamilton City Council	Direct	Funding provided by developers to be applied to meet infrastructure costs
Wealth created from households	Hamilton City	Direct	Appreciation in real value of dwelling over time
Infrastructure construction	Hamilton City	Direct	Economic contribution to economy stimulated by infrastructure construction activity
Household construction	Hamilton City	Direct	Economic contribution to economy stimulated by housing construction activity
Household expenditure	Hamilton City	Direct	Economic contribution to economy stimulated by household consumption of goods and services

Table 4 Analysis of potential benefits that cannot be reliably expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Quantitative or Qualitative?	Description and Possible Measures
Optimise strategic infrastructure	Residents of Peacocke, Hamilton and the Waikato Region	Direct and Indirect	Qualitative	Enable coordination in the provision of network services.
Earlier establishment of social infrastructure including schools and community facilities	Residents of Peacocke, Hamilton and the Waikato Region	Direct and Indirect	Qualitative	Resilient communities with high social and cultural capital.

1.5 Main risks

Non-financial risks

Non-financial risks associated with the Housing Infrastructure Fund are identified in the table below with proposed bid mitigations. These mitigations have been included as HIF conditional acceptance conditions for Council.

Table 5 Initial non-financial risk analysis

Non-Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Securing developer commitment and resultant housing construction	H	M	Proposal submitted on the basis that final funding is subject to an agreed Private Developer Agreement (PDA) between Council addressing the following: Confirmation of clear housing construction targets; contributions are known; caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances.
Aligning HIF allocation with Local Government Act and Land Transport Management Act process	H	L	Final proposal submitted on the basis that it is subject to consultation with the community over the priority of advancing other capital projects in the Long-Term Plan, including any consequential impact on debt and rates.
Delivery risk	L	L	Creation of a new standalone HIF delivery team within Council and the formation of tailored industry best practice contractual delivery arrangements.
Information	H	M	Due to the compressed timeframe imposed by MBIE, some aspects of the analysis informing our understanding of costs, benefits, and impacts on the Council's finances arising from the final proposal are likely to alter through more detailed investigations in the next phase of the HIF process. This may be mitigated through the additional time and investigation phase of the next stage of the HIF process.

Financial risks

While there are financial benefits from receiving a Housing Infrastructure Fund allocation (primarily in terms of interest payments saved from the fact the Housing Infrastructure Fund would be interest free), there are potential issues with how any Housing Infrastructure Fund allocation may impact on the Council's current financial strategy.

The specific issue arising from receiving any Housing Infrastructure Fund allocation relates to how any Housing Infrastructure Fund debt will be treated both on the balance sheet and in terms of financial debt ratios, the repayment arrangements and future commitments (especially for transport projects), and how development contributions will be levied.

The table below includes the main financial risks and the proposed mitigation/bid acceptance conditions relating to them.

Table 6 Initial financial risk analysis

Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Contingency costing	H	M	Project costs to be reviewed every three years to update for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land values).
Lack of consequential and necessary infrastructure funding	H	M	The HIF proposal does not include any allowance for consequential upsize and operating expenditure, and no allowance for community infrastructure. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue as part of any future LTP considerations.
Financial reporting of HIF in Council accounts	H	H	Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Finance Authority, credit rating agencies, NZTA and the Office of the Auditor General.
Development Contribution funding uncertainty	H	M	Final bid acceptance based on receiving confirmation that DCs can be legally collected.
Impacts on financial strategy	H	H	HIF allocation would potentially result in a breach of the financial strategy with regard to debt to revenue ratios. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue.

A risk register has been developed and will be progressively updated as more detailed analysis is undertaken in the Detailed Business Case stage.

1.6 Key constraints and dependencies

The proposal is subject to the following constraints and dependencies. The first are used by Council to guide the appropriate use of funding. The second set of dependencies are specific to the HIF proposal.

The Hamilton City Council has determined the following basic principles to guide the appropriate use of funding sources and decision-making:

- Each generation of ratepayers should pay for the services they receive and borrowing can assist to achieve this outcome.
- Subsidies, grants and other income options are fully explored prior to rates being used.
- Capital costs to replace assets that reach the end of their projected economic life is firstly funded from rates.
- Capital costs to upgrade or build new assets is funded firstly from sources other than rates (e.g. subsidies, grants, fundraising, financial contributions) and then borrowing.
- Growth related capital costs are funded by development contributions.

If no other funding source can be used it is then appropriate to fund the remaining revenue requirement for operating expenditure from rates.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the MBIE tender documentation, this indicative business case is also submitted on the following basis:

- It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.
- Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is also subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets,
- contributions are known,
- caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances,
- Letters of Intent to be provided by development partners.
- Final bid acceptance based on receiving confirmation that DC's can be legally collected under the HIF structure.
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General.
- Project costs to be reviewed every 3 years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

2. Strategic Case - Peacocke

Peacocke is a greenfield area that is zoned and planned as a growth cell in the Southern Growth Corridor of Hamilton City. This area of land was brought into the City from Waipa District in 1989. In 1999, the area was changed from 'rural' zoning to 'future urban' and Stages 1 and 2 of the Peacocke Structure Plan was finalised through Variation 14 to the District Plan between 2009-2012.

Peacocke has been prioritised for future development by Hamilton City Council due to the unique strengths this area has, and the particular outcomes it will achieve. The HIF provides Hamilton City Council with the opportunity to finance the strategic infrastructure needed to unlock planned residential developments in Peacocke, and bring these developments forward.

The infrastructure funded by the HIF is an integrated programme of works that includes the strategic Peacocke transfer wastewater pump station and rising main; and a Waikato River crossing and strategic arterial roads that form part of Southern Links. Together, this programme of works will accelerate growth in the development of Peacocke, which will yield 3,153 dwellings within 10 years and 8,103 dwellings within 30 years.

Strategic Context

Transport systems – The Southern Growth Corridor

The Southern Growth Corridor is one of four growth corridors recognised in the Future Proof Growth Strategy. The growth corridors have been identified to assist with infrastructure and land use integration. The other corridors include the Northern, Eastern and Central Growth Corridor.

The Southern Growth Corridor comprises six distinct areas of differing land uses and infrastructure needs, including Peacocke, the Hamilton Airport and adjacent lands, Tamahere, other rural residential areas, Rukuhia and the rural environment. These areas are connected by State Highways 3 and 21.

The corridors form part of wider sub-regional settlement patterns. These settlement patterns assist in the integration of land use information and infrastructure, particularly transport.

Hamilton City Council and NZTA are working in collaboration as joint clients in the Southern Growth Corridor to better understand and manage land use and strategic infrastructure. This collaboration has resulted in a Strategic Land Use and Infrastructure Plan and a Memorandum of Understanding that outlines agreed outcomes and actions.

In developing the Strategic Land Use and Infrastructure Plan, key land use and infrastructure challenges were identified for each area within the Southern Growth Corridor. Key findings in the form of options, approaches and solutions were also identified. The challenges and findings were identified through a series of workshops with the parties, subsequent feedback and supporting documents.

The Strategic Land Use and Infrastructure Plan found a key challenge of the Waikato transport network is increasing traffic volumes on State Highway 3 (SH 3) and State Highway 21 (SH21). The proposed solution was to regularly monitor land use uptake rates, rural-residential and rural development, and traffic growth and safety performance within the Southern Growth Corridor ahead of delivery of the full Southern Links Network.

In regards to Peacocke the key challenge identified was infrastructure affordability, staging and timing. In the Strategic Land Use and Infrastructure Plan, infrastructure means roads and other transport, water, wastewater, and stormwater collection and management networks.

In regards to meeting this challenge it was argued that Peacocke should continue to be developed and Stage 1 and Stage 2 of the development should be funded through the Hamilton City Council 10-Year Plan. The alternative is for Council to allow development in advance of the timeframes identified, if developers in the area provided the necessary strategic infrastructure. However, the development community is simply not able to find the $271.8 million, and this is strategic infrastructure that Council would normally provide.

Southern Links

SH3 is a regional road and SH21 is an arterial road in the Waikato Regional Land Transport Plan 2015-2025. SH3 runs from Hamilton City connecting the Waikato with the Taranaki region. SH21 provides a key link between SH1 and SH3 and access to Hamilton Airport.

Journey time and reliability, and safety are priorities for both SH3 and SH21. Both highways are identified by KiwiRAP (the New Zealand Road Assessment Programme) as having medium to high collective risk which may be exacerbated as a result of growth in the area.

High population growth in Hamilton City is accelerating problems on the transport network. These problems can be seen in:

- Congestion, safety and conflict on SH1 between Hillcrest and Kahikatea Drive
- Congestion affecting freight to Hamilton's Western Corridor to and from the South, and the increasing use of urban state highways by freight traffic
- Capacity and safety alignment on SH3 and SH21
- Access for growth in the Hamilton Airport business park areas

The majority of traffic approaching Hamilton from the south travel along SH1 and SH3, and have a destination within Hamilton City. During peak periods, there are congestion issues when entering Hamilton City along these highways.

The Hamilton Section of the Waikato Expressway will also impact on SH21. Vehicle numbers on SH21 are expected to increase, and traffic flows will change, post the completion of this section of the Expressway.

Southern Links is therefore considered by NZTA and Hamilton City Council as the optimum long-term solution to accommodate growth and manage existing traffic issues in the corridor.

Southern Links is a joint NZTA and Hamilton City Council initiative. It involves the construction of 21 kilometres of state highway, three new bridges and 11 kilometres of urban arterial roads within the Peacocke growth area.

The Southern Link project allows for a future connection to, but it is not part of the Waikato Expressway project. The Waikato Expressway is a four-lane highway from the Bombay Hills to south of Cambridge. The Expressway project aims to improve safety and reliability, and reduce travel times and congestion on SH1.

When constructed Southern Links will reduce congestion within the greater South Hamilton area, improve safety on SH1 and SH3 in the Hillcrest and Melville suburbs of Hamilton, improve freight flows and be a key part of Hamilton City's urban arterial network. It will also complement the Waikato Expressway by providing the main southern access linking Hamilton. The project has been developed with the projected growth in the Peacocke, Ruakura, Tamahere and Hamilton Airport areas in mind.

Hamilton City Council and NZTA have collaborated in investigations leading to designations for the Southern Links project. The investigation of arterial roads includes preliminary design for permanent level plans. The remaining decisions relate to staged implementation, including extents, interim

connectivity and 2/4 lane options. The proposed Waikato River crossing that is part of the Housing Infrastructure Fund is part of these preliminary designs for permanent level plans. The planned roads in the bottom of the Peacocke residential area will open up the area, as a result of the ripple effect of the larger strategic transport investment.

Wastewater

In March 2017, a feasibility and concept design study was completed by OPUS for Hamilton City Council. This study looked at the construction and operation of a strategic transfer wastewater pump station and rising main to enable growth in the Peacocke Stage 2 area.

The Peacocke area has been divided by Hamilton City Council into 17 'neighbourhoods' each with a different residential density profile. The densities differ depending on the underlying land-use zoning in the District Plan, topography and indicative educational and recreational facility locations. Wastewater 'subcatchments' and the associated pump stations have been identified based on neighbourhood size and the projected staging of the development.

In addition, as the residential area is being developed in stages the number of people that will potentially be living in the area has been calculated and with that their requirements for wastewater at a subcatchment level.

Alignment to existing strategies

Hamilton is growing, and is home to many young people and families. Population growth is an opportunity and a challenge for Hamilton City. The Council response is that growth needs to be managed in Hamilton City because of boundary considerations. Hamilton is the smallest metropolitan area by land area, and is one of the smallest local government areas by land size in New Zealand.

To meet the priority of being the third city economy in New Zealand by 2025, Hamilton City Council has adopted a strategic approach to the spatial development and growth of Hamilton City. This approach is documented in the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The Hamilton Urban Growth Strategy articulates areas suitable for accommodating future residential growth while ensuring that the social well-being of the community is enhanced and the local environment is protected. The Hamilton Urban Growth Strategy also identifies where to develop first, why and when; what other land uses are required for business or industrial purposes; and what city infrastructure is required to support this development.

There are two growth approaches from the Hamilton Urban Growth Strategy that are important:

- Growth Approach 1: Over the next 10-20 years, approximately 50% of Hamilton's new dwellings will be increasingly provided through regeneration of existing parts of the city. It is recognised that this will not be appropriate for all areas. Therefore this regeneration will focus in and around key nodes including the CityHeart, transport hubs, suburban centres, and areas of high public amenity such as parks and the Waikato River.
- Growth Approach 2: The commitments to developing the remainder of Rototuna and Stage 1 of both Peacocke and Rotokauri remain. The development of Rototuna and Stage 1 of both Peacocke and Rotokauri will include greater choice in living environments, for instance, more compact type developments in key areas such as town centres or around parks and open spaces.

Access Hamilton: the transport strategy for Hamilton, the Regional Policy Statement, the Waikato Regional Land Transport Plan 2015-2045, and the Future Proof Strategy all recognise the need to align land use and infrastructure planning.

Access Hamilton guides relevant land-use planning and the management, development and protection of the transport network necessary to support Hamilton's economic development, urban design and growth strategies. Access Hamilton is currently in the process of being reviewed. This indicative business case builds on the Network Action Plan contained within Access Hamilton and the outcomes that it is delivering for Hamilton City. For this reason, the purpose of the Network Action Plan is listed below:

- Evaluates desirable land use and structure planning principles that minimise the need to travel and support a multi-modal transport system
- Identifies the key nodes and connections and expected movements, including rail, passenger transport, and national and regional road links
- Establishes a road hierarchy that identifies the strategic network (state highways and city roads), major and minor arterials, collectors and local access roads, and defines the role and treatment of each component of the road network
- Assesses the transport consequences of growth in line with integrated sub-regional and local growth strategies and identifies areas of concern
- Identifies a hierarchy of land use and transport interventions, activities and infrastructure necessary to sustain a network that supports an affordable, integrated, safe, responsive and sustainable transport system
- Provides an implementation framework for the prioritisation, coordination and implementation of activities.

Land use and transport integration is heavily reflected in the Peacocke Structure Plan and resulting arterial networks. Access Hamilton identifies the Southern Links as a key transport project for Hamilton and the Waikato, and the Peacocke area as a key land use change.

The Regional Policy Statement (Section 6, Implementation Method 6.3.2) states that territorial authorities should, in association with Waikato Regional Council, the NZTA and other infrastructure providers, ensure infrastructure planning and land use planning initiatives are aligned, and should coordinate the provision of appropriate infrastructure and services for new development prior to development occurring.

The Waikato Regional Land Transport Plan 2015-2045 (Section 3, Policy 1) aims to ensure that the land transport system is developed and manged within the context of collaborative and integrated land use and transport planning at sub-regional, regional and wider spatial scales. Measure 2 in the Waikato Regional Land Transport Plan states that transport partners are to implement integrated land use and transport measures as directed by the Regional Policy Statement.

Also, integrating land use with infrastructure is a central tenant of the Future Proof Growth Strategy and Implementation Plan. It should be noted here that the Future Proof partners include Hamilton City, Waipa District, Waikato District, Ngā Karu Atua o te Waka and Tainui Waka Alliance.

2.1 Investment objectives, existing arrangements and business needs

The economy of Hamilton City has grown strongly over the last 15 years and the City wants to maintain this momentum. To do this, Hamilton needs to grow.

The Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Operative District Plan and the Hamilton 10-Year Plan 2015-25, along with the 30-Year Infrastructure Plan, the Regional Land Transport Plan and the Access Hamilton Strategy – Integrated Transport Plan are all aligned to grow Hamilton to be the third city economy in New Zealand by 2025.

The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The Hamilton City Growth model, along with household and population projections provided by the National Institute of Demographic and Economic Analysis (NIDEA) at the University of Waikato, indicates the projected demand for dwellings. This demand information is then matched with household supply data from each of the greenfield areas in Hamilton and the amount of infill available. The settlement pattern that Hamilton has in place to meet this supply and demand reflects the Hamilton Urban Growth Strategy: A Compact and Sustainable City.

The settlement pattern that Hamilton City Council currently has in place is insufficient over the long-term to meet new requirements under the National Policy Statement on Urban Development Capacity (NPS-UDC). Under this National Policy Statement, Hamilton has been identified as a high growth area. This means Hamilton is required to increase the amount of residential and business land that is zoned, serviced and commercially viable. In the short to medium-term (three to 10 years) this land capacity must be over and above 20% of the projected demand for residential and business land.

To meet the NPS-UDC targets, and the associated demand for dwellings caused by projected population growth, Hamilton City Council will need to bring forward planned greenfield areas such as Peacocke and Rotokauri.

Investment objectives and business needs

Hamilton City Council, through strategic planning processes, has defined four investment objectives.

These investment objectives recognise that Hamilton City Council needs to invest in strategic infrastructure to open up greenfield residential areas. The acceleration of housing in these areas will meet the current and future business needs of Hamilton City Council.

These business needs are focused on resident population growth, economic growth, and the coordinated management of land and strategic infrastructure that ensures a resilient, long-term settlement pattern for Hamilton City.

In a later chapter, these investment objectives are ranked against the business needs of Council and various critical success factors. This ranking allows the Council to determine what the best long and short-list options are going forward – and therefore what planned greenfield area best meets the needs of the Council - and what planned greenfield area should be put forward to receive Housing Infrastructure Funding.

Investment objective 1

Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.

Business need 1

The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.

Investment objective 2

Increase the amount of developer ready land to support 11,638 dwellings by 2025.

Business need 2

Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.

Investment objective 3

Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.

Business need 3

Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.

Investment objective 4

To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.

Business need 4

The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

Existing arrangements and business needs

Existing arrangements

Citywide water

Hamilton City Council has two treatment plants – water and wastewater. Each plant has long-term consents in place to 2044 that provide for city growth. These consents are based on the projected peak demand for water and wastewater. The Hamilton City Council projects this peak water demand out to 2060 and funds infrastructure upgrades based on these projections. This means that funded investment capacity and water allocation consents provide for growth and resilience.

The water treatment plant consent allows a stepped water take from the Waikato River to match projected growth in the population and economy of Hamilton to 2044. The wastewater plant has a discharge consent that also matches demand and allows for city growth to 2027.

Hamilton City Council has a just in time investment strategy to match growth needs. This means the Council has budgeted for the upgrade of these plants in response to actual demand. Currently $54 million has been allocated across the two plants – water and wastewater – for capacity upgrades.

For the wastewater plant the capacity upgrade is in the design phase, and procurement will start for the construction phase in the next four to eight weeks. The water treatment plant upgrade has also started and the first upgrade component is under construction. The upgrade will increase the capacity of the water treatment plant and a proportion of this upgrade is currently under construction.

At present, Hamilton City has 84.4 million litres of treated water storage capability. The Council is in the process of completing a new reservoir to meet recent and expected growth in the City. This new reservoir will be online and operational in October 2017, and will increase total treated water storage by 24 million litres. This represents a $21 million investment in potable water storage and network resilience.

There are also plans for a second additional reservoir. This is forecast to be constructed and completed by June 2020 and would add a further 12 million litres in potable water storage in the City.

All of this investment in potable water is focused on meeting the projected economic and resident population growth in Hamilton City. Further, the total increase in potable water storage enables residential growth in Peacocke.

Citywide transport networks

Hamilton City Council has a positive and collaborative relationship with the regional office of the New Zealand Transport Agency (NZTA). Together, Hamilton City Council and NZTA have jointly approached strategic network planning as it relates to transport activity and planned city land use changes.

NZTA in the Waikato Expressway Network Plan noted that the Te Rapa Bypass, Waikato Expressway and Southern Links would assist in determining the settlement pattern of western and southern Hamilton, enabling an integrated approach to development which should reduce the need for travel. This conclusion was subsequently supported by further modelling carried out in the development of the Hamilton Urban Growth Strategy.

Land use and transport integration is therefore heavily reflected in the Peacocke Structure Plan and resulting arterial networks.

Business needs – Investment objective 1

Investment objective 1 will contribute to delivering the following business needs identified by Hamilton City Council through various plans and strategies:

- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.
- The management of land use and strategic infrastructure including roads and other transport, water, wastewater, and stormwater collection and management networks. These needs are identified in the Waikato Regional Policy Statement, the Waikato Regional Land Transport Plan 2015-2045, Access Hamilton: the New Zealand Action Plan for Hamilton, and the Future Proof Growth Strategy and Implementation Plan.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and

Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

Long-term settlement pattern

Investment objective one will assist to deliver a settlement pattern that encourages families and young people to live and work in Hamilton. This meets a business need of council.

- Hamilton is home to many young people and families, and is one of only a few places in New Zealand that continues to experience growth in the youth population.
- Hamilton is a city for families, and liveability is important to encourage resident population growth.

Investing in residential areas such as Peacocke meets the long-term settlement pattern for Hamilton City, as noted in the Peacocke Structure Plan.

This development also supports the focus in the Hamilton Urban Growth Strategy on an active, strong commercial central city in Hamilton with distinctive suburban villages.

Investment objective one also contributes to and meets the business needs identified in Priority 2 and Priority 7 in the 10-Year Plan.

- Priority 2: Become the third city economy in New Zealand. Investing in community assets such as parks, playgrounds, gardens, arts and cultural and sporting facilities will support Hamilton to become the third city economy in New Zealand by 2025, as it continues to be a great place to live and work.
- Priority 7: Become an urban garden. Hamilton is green, with parks, trees, beautiful gardens and street plantings. This priority is supported by strategies that are focused on the parks, playgrounds, and river walkways in and around Hamilton, along with Hamilton Zoo and the Hamilton Gardens.

Strategic infrastructure

The business needs of Hamilton City Council to manage land use and strategic infrastructure is outlined in the 10-Year Plan and 30-Year Infrastructure Plan. Priority 3 in the 10-Year Hamilton Plan states:

- Provide outstanding infrastructure. This priority is focused on infrastructure development that prepares the City for a population of more than 200,000.

Hamilton City Council needs to manage land use and infrastructure to improve infrastructure efficiency and reduce costs. To meet business needs growth needs to occur in a manner that supports the efficient use of infrastructure (e.g. development should occur in areas that are already strategically serviced or where infrastructure is planned). Land use should also support the significant funding investment in strategic infrastructure, and not undermine it through unplanned or ad-hoc development.

The ability to provide strategic infrastructure and services is fundamental to successful growth management and becoming the third city economy by 2025.

Infrastructure - Road Transport

The most significant business needs for transport in Hamilton are defined by the Hamilton Urban Growth Strategy, the Regional Policy Statement, and the Waikato Regional Land Transport Plan 2015-2045. Together, these strategies indicate the business needs of Hamilton City Council for road transport to enable sustainable development, and support passenger transport and active modes.

Over the next three years, connections to the Waikato Expressway will be a focus along with a continued partnership approach with developers in established growth areas over 10 years. Beyond the next 10 years, investment will be required to extend the transport network into new growth areas, including providing additional river crossings in the north and south of the city.

Business needs are also noted in the 10-Year Hamilton Plan. Hamilton City Council will provide and manage a safe and efficient transport network for Hamilton that integrates freight, private vehicles, buses, walking and cycling. This includes the operation and maintenance of existing networks, and planning for future development and growth.

There are also business needs to meet the Regional Land Transport objectives outlined in the Integrated Land Transport Plan over the next 30 years. These include the following:

- Facilitating economic development: An effective and efficient land transport system that enhances economic wellbeing, and supports growth and productivity within the Waikato region and upper North Island
- Affordability: An adaptable and flexible approach to managing and developing the land transport system that optimises funding options and provides innovative management approaches to best meet the needs of the region in an affordable way.
- Integration and forward planning: An integrated and aligned land use and transport system.

Capacity for population growth

An important business need identified by Hamilton City Council is to provide capacity within the City for population growth. Population growth will assist council to meet investment objective one and become the third city economy in New Zealand by 2025.

This resident population growth is guided by population projections. The resident population of Hamilton is projected to grow with economic growth, and with that the demand for housing. In 2016, the resident population of Hamilton City was approximately 155,990 people. By 2025, the resident population is projected to grow to approximately 183,800. These population projections indicate that Hamilton is well on the way to being a city of 200,000 residents.

The National Institute of Demographic and Economic Analysis (NIDEA), a University of Waikato institution, has prepared a low and medium series of household and population projections for Hamilton and other territorial authorities in the Waikato Region. These projections have been devised as part of the Future Proof project.

The Future Proof Chief Executives Advisory Group and Strategic Implementation Management Group approved the following recommendation in December 2016: *"Confirm the agreement reached on growth projections, which is to use a banded approach based on NIDEA low and medium projections for the Future Proof Strategy Update, and to use NIDEA low for the Waikato Regional Transport Model."*

The NIDEA low series of household and population projections averages 1,250 households per annum. This projection series is the preferred projection going forward, and will be used in the Hamilton Growth model, the development of the Hamilton Long Term Plan and in future infrastructure planning and development.

Business needs – Investment objective 2

Investment objective 2 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 10 years, this requirement is to provide developer-ready land that is zoned, serviced

and commercially viable for 11,638 dwellings. This figure is over and above 20% of the projected demand for residential land.

- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The National Policy Statement on Urban Development Capacity (NPS-UDC) directs local authorities to provide sufficient development capacity in their resource management plans for housing and business growth to meet demand. Hamilton City Council is a local authority that is directly impacted by the NPS-UDC as Hamilton City is considered a high growth area. The NPS-UDC therefore has a substantial impact on the business needs of the Council.

Under the NPS-UDC, Councils are required to increase feasible development capacity. This means land that is zoned, serviced, and commercially viable. The NPS-UDC is focused on feasible development capacity for housing and business land to meet projected demand over the short, medium and long-term (three, 10 and 30 years).

The NPS-UDC has also set the requirements for the additional margin of feasible development capacity. For high growth areas such as Hamilton this is 20% over the projected demand for developer ready land in the short and medium-term, and 15% in the long-term. These demand projections regarding development capacity will have a substantial effect on Council's requirements for infrastructure and developable land.

The difference between the NIDEA household and population projections and the NPS-UDC requirements is important. In terms of residential growth, Hamilton needs to build new dwellings to house the additional residents projected in the NIDEA low projections, and it needs to provide the capacity for growth to be constructed along the NPS-UDC lines, but dwelling construction does not need to follow this line.

The additional capacity is there to address:

- Housing affordability through an increase in the supply of developable land
- Ensure housing supply for any unprojected population increase
- Factor in the proportion of feasible development capacity that may not be developed.

The NPS-UDC defines demand in the short, medium and long-term in relation to housing as including:

- The total number of dwellings required to meet projected household growth and projected visitor accommodation growth;
- The demand for different types of dwellings;
- The demand for different locations within the urban environment; and
- The demand for different price points.

This definition of demand is central to the NPS-UDC definition of development capacity, where development capacity refers to the amount of development allowed by zoning, and the regulations in plans that are supported by infrastructure. This development can be "outwards" on greenfields sites and/or "upwards" by intensifying the existing urban environment.

Business needs – Investment objective 3

Investment objective 3 will contribute to delivering the following business needs identified by Hamilton City Council:

- The requirements for high-growth local authorities stipulated under the NPS-UDC. Over the next 30 years, this requirement is to provide developer-ready land that is zoned, serviced and commercially viable. This figure is over and above 15% of the projected demand for residential land.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

There is a business need for the Council to meet the business and residential land capacity requirements in 2045, as specified in the NPS-UDC. Such requirements are similar to those described for investment objective 2 above.

Investment objective 3 has a longer term focus and recognises that council can plan for future requirements through Annual Plan reviews and the coordinated management of strategic infrastructure. However, it also recognises that investment needs to occur to meet the long-term needs of the NPS-UDC, particularly in regards to developer ready residential land.

Business needs – Investment objective 4

Investment objective 4 will contribute to delivering the following business needs identified by Hamilton City Council:

- Priority 8 in the 10-Year Hamilton Plan: Provide access to affordable housing. The city will continue to provide a balanced supply of housing options to meet the city's growth.
- The long-term settlement pattern for Hamilton City including the Hamilton Urban Growth Strategy: A Compact and Sustainable City; the Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan, and the Waikato Regional Policy Statement.
- The capacity of Hamilton City to manage population growth including the Hamilton Urban Growth Strategy: A Compact and Sustainable City, the Future Proof Growth Strategy and Implementation Plan; requirements under the National Policy Statement on Urban Development Capacity; and the National Institute of Demographic and Economic Analysis (NIDEA) household and population projections for Hamilton.

The Hamilton Growth Model is used to determine future capacity requirements in Hamilton City. The dwelling demand projections from the model are based on the NIDEA low household and population projections and the NPS-UDC requirements.

This demand scenario assumes that the resident population of Hamilton City will be 198,000 by 2030, which is 4% higher or 7,000 more people than under the old Statistics New Zealand medium population growth scenario. This is because the NIDEA low projections are projecting 1,200-1,300 new dwellings per year for 10 years, which is a lot higher than the previous five year average of about 800 new dwellings per year.

Population growth is projected to be higher than it has been in recent years according to NIDEA and Statistics New Zealand. If this projection holds true and migration and household formation is at a higher rate than that forecast, than this will likely put pressure on land use and prices.

There is insufficient future affordable housing to provide a balanced supply of housing options given projected demographics and incomes.

- Over recent years, growth has predominantly occurred in the North of the city and continuing this trend may not provide for the future social or cultural needs of all residents
- Majority of greenfield section sizes are between 600 to 800 square metres, this is leading to urban sprawl and impacting on the price of land and the cost of travel.
- Other transport modes such as walking and cycling become less attractive if local activities are further away from people's homes. This issue is particularly important for local neighbourhood shopping nodes and schools.

Table 7 Summary of the existing arrangements and business needs

Investment Objective One	**Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025**
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.
Investment Objective Two	**Increase the amount of developer ready land to support 11,638 dwellings by 2025**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Three	**Increase the amount of developer ready land to support the balance of the NPS-UD dwelling requirements by 2045**
Existing Arrangements	NIDEA Population and Household Projections; Hamilton City Growth Model; Hamilton Urban Growth Strategy; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045
Business Needs	High growth local authority requirements under the National Policy Statement on Urban Development Capacity. The capacity of Hamilton City to manage resident population growth.
Investment Objective Four	**To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase**
Existing Arrangements	Hamilton Urban Growth Strategy; The Hamilton 10-Year Plan 2015-2025; the Future Proof Growth Strategy and Implementation Plan; the Waikato Regional Policy Statement; the Waikato Regional Land Transport Plan 2015-2045.
Business Needs	The capacity of Hamilton City to provide a balanced supply of housing options to meet resident population growth. A long-term settlement pattern for Hamilton City. The management of land use and strategic infrastructure. The capacity of Hamilton City to manage resident population growth.

2.2 Context for Peacocke investment option

Peacocke is within the Hamilton City Council boundary and covers an area of approximately 747 hectares. This area of land was brought into the City from Waipa District in 1989 for the express purpose of providing for the City's future urban growth.

For many years the area was identified as 'future urban' zoning. In 1999, the area was changed from 'rural' zoning to 'future urban' and Stages 1 and 2 of the Peacocke Structure Plan was finalised through Variation 14 to the District Plan between 2009-2012.

Peacocke comprises two stages. Stage 1 has an initial capacity of 850 dwellings (Stage 1a 500 lots, Stage 1b 350 lots) before significant infrastructure improvements are required. Investments to upgrade and/or build further three waters infrastructure are scheduled in the Hamilton City Council 10-Year Plan 2015-2025 for the Stage 1 area. An upgrade to the SH3 and Dixon Road intersection has also been scheduled in the current 10-Year Plan; this is a precondition to release the entire Stage 1 area. With these investments, and subject to development timing, the remainder of Stage 1 will have the necessary infrastructure in place by 2025.

Stage 2 is undeveloped and does not have an established infrastructure programme within the current 10-Year Plan. Stage 2 has an expected capacity for 7,500 dwellings. The development timing of Stage 2 could be brought forward if the necessary strategic infrastructure and transport networks are constructed in advance of the timeframes identified by the Hamilton City Council.

2.3 Potential business scope and key service requirements

The potential business scope and key service requirements were identified and assessed by Hamilton City Council. In doing this, Hamilton City Council identified specific strategic transport and water infrastructure projects that will enable land within the Peacocke area to be developer ready. These infrastructure projects will accelerate the building of new dwellings in this area.

In Peacocke, the projects that the $182.3 million in Housing Infrastructure Funding is being sought for include:

- Wairere Drive/Cobham overbridge - additional to current funding and advance fund agreement
- Wairere Drive extension and bridge over the Waikato River to Peacocke north- south arterial
- Peacocke Road urban upgrade
- SH3/Dixon Road intersection and Peacocke east-west arterial to Peacocke Road
- North-south arterial land
- The Peacocke transfer wastewater pump station and rising main.

These are all new infrastructure projects and include the construction of strategic transport and water and wastewater elements.

The potential contribution for the Waikato River crossing and arterial Peacocke roads that support the Southern Links from NZTA for transport work is $89.5 million.

The $182.3 million in Housing Infrastructure Funding will accelerate development timing and bring projects that were part of the Hamilton Plan and Long-Term Infrastructure Strategy 2015-2045 forward.

- In total, 8,103 dwellings will be developed in the Peacocke area between 2017/18 and 2038/39.

- Within the 10 years of the Housing Infrastructure Funding, the accelerated development of 3,153 dwellings in the Peacocke area.

The developments within Peacocke will continue to be undertaken in stages. This means the $182.3 million in Housing Infrastructure Funding will allow:

- Stage 1 of Peacocke to be realised within 7 years, resulting in the development of 627 dwellings
- Stage 2A of Peacocke to be realised within 11 years, resulting in the development of 1,751 dwellings
- Stages 2B and 2C of Peacocke to be realised within 15 years, resulting in the development of 5,725 dwellings. Stage 2B will be completed within the period 2019/20 to 2032/33, while Stage 2C will be undertaken as the final stage in the development between 2024/25 and 2038/39.

2.4 Main benefits

The quantifiable benefits are discussed in detail in the Economic Case. As a reference, these benefits include:

- Transport benefits to Hamilton City ratepayers (refer Annexes)
- Rates revenue to Hamilton City Council
- Wealth created for households due to appreciation in the capital value of the dwelling
- Economic contributions to Hamilton City arising from the economic activity associated with:
    - Infrastructure construction
    - Housing construction
    - Household expenditure.

The non-quantifiable benefits include:

- The optimisation of strategic infrastructure networks, including the staging of transport networks and strategic infrastructure, and the earlier opening up of the wider growth cell in Peacocke.
- The earlier realisation of wider economic benefits that impact on the well-being of the community, including social infrastructure.
- Wider regional benefits, including the efficient operation of freight corridors and the adherence to coherent settlement patterns
- National benefits including the key role Hamilton plays in the Waikato and Upper North Island transport network

The optimisation of strategic infrastructure

The key economic benefit that the strategic infrastructure will enable is the bringing forward of a residential development in Peacocke. The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.

- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

Bringing forward urban development in Peacocke through the provision of a bridge across the Waikato River will enable synergies in the provision of network services. This is because the bridge can carry strategic three waters and other infrastructure services required for the residential development.

Other benefits associated with transport infrastructure being brought forward include: travel time savings including congestion relief values; vehicle operating costs savings; accident cost savings; vehicle emission reductions; trip reliability savings; and the associated wider economic benefits. It should be noted here these benefits have been identified but not quantified in the indicative business case.

As well as local access benefits, there are also expected to be transport network benefits to other industrial, commercial and residential markets in south west Hamilton, such as the Airport Business Park, and access to additional affordable housing in the Waipa District towns of Ohaupo and Te Awamutu.

The additional Waikato River crossing is also expected to improve safety and amenity on existing corridors – SH1, SH3, SH21 - and local roads. The opening up of walking and cycle paths to and from Peacocke, and the provision of passenger transport, will also assist in managing travel demand across the Hamilton network.

Peacocke is within five kilometres of the Hamilton CBD. The provision of appropriate transport networks will therefore encourage residents to use active modes when moving between home, work and leisure activities, which will lead to associated health benefits. These outcomes will therefore be beneficial to the economy of the City and the well-being of current and future Hamiltonians.

Wider benefits that impact on the community

The bringing forward of residential development in Peacock will also have wider economic benefits on the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value.

The skills and other human capital in Hampton City will grow through projected population growth and the bringing forward of the residential development in Peacock. An increase in skills and other human capital also raises the capacity of a community to take-up new knowledge and technologies. This capacity is called the "absorptive capacity" for technology. Increasing absorptive capacity immediately makes a community ready to innovate, and to adopt and adapt new technologies. These activities increase the capacity of communities to participate in global value chains of supply. This is beneficial and vital for Hamilton City and for the wider rural community it services.

The earlier provision of infrastructure for social support and development will support the earlier development and deepening of social and cultural capital (e.g. safer communities). This also creates more resilient communities sooner. This social and cultural resilience has a value which, if realised earlier, provides a higher present value to communities.

Earlier realisation of development profits by developers will also release funds available for further development opportunities. Hence, the net present value of investment expenditure and thereby incomes for households and firms in Hamilton City will increase.

Regional benefits

The opportunity to leverage the Housing Infrastructure Fund in the south of the City in conjunction with key infrastructure and economic projects - Waikato Expressway including the extension to

Pairere; Inland Port/logistics hubs; advancement of Southern Links; Pairere to Tauranga road upgrade; and the upgrade to the East Coast Main Trunk Line underscores the power of a coordinated Hamilton and Waikato region.

As discussed earlier, the Southern Growth Corridor is one of four growth corridors recognised in the Future Proof Growth Strategy. These growth corridors have been identified to assist with infrastructure and land use integration. The corridors form part of a wider sub-regional view of the Future Proof settlement pattern to assist in achieving integration between land use information and infrastructure, particularly transport.

The Southern Links network that is part of the Southern Growth Corridor is regionally significant, and the infrastructure that is required to open up the Peacocke residential area is a part of this. This includes the Waikato River crossing and minor arterial roads.

National benefits

The Ministry of Business, Innovation & Employment (MBIE) has identified housing affordability as a significant issue for many New Zealand families, the economy and government. As a result, MBIE is undertaking a comprehensive work programme that spans five areas: the supply of land, the role of regulation, the provision of infrastructure, the cost of building materials, and increasing the skills and level of innovation in the construction sector.

A well-functioning housing market is important for social and economic well-being. This includes the number of dwellings that are in the housing stock and the quality of that stock.

Table 8 Potential benefits that can be expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Description
Transport benefits	Hamilton City ratepayers	Direct	Time saving benefits
Rates revenue	Hamilton City Council	Direct	New rates paid by new ratepayers
Developer contributions	Hamilton City Council	Direct	Funding provided by developers to be applied to meet infrastructure costs
Wealth created from households	Hamilton City	Direct	Appreciation in real value of dwelling over time
Infrastructure construction	Hamilton City	Direct	Economic contribution to economy stimulated by infrastructure construction activity
Household construction	Hamilton City	Direct	Economic contribution to economy stimulated by housing construction activity
Household expenditure	Hamilton City	Direct	Economic contribution to economy stimulated by household consumption of goods and services

Table 9 Potential benefits that cannot be reliably expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Quantitative or Qualitative?	Description and Possible Measures
Optimise strategic infrastructure	Hamilton City	Direct & Indirect	Qualitative	Enable coordination in the provision of network services.
Earlier establishment of social infrastructure including schools and community facilities	Hamilton City	Direct & Indirect	Qualitative	Resilient communities with high social and cultural capital.
Connection with Southern Links transport network	Residents of Waikato and Upper North Island. Industry road users	Direct & Indirect	Qualitative	Traffic flows, safety and reduce congestion, improve safety on SH1 & SH3, improve freight flows

2.5 Main risks

Non-financial risks

Non-financial risks associated with the Housing Infrastructure Fund are identified in the table below with proposed bid mitigations. These mitigations have been included as HIF conditional acceptance conditions for Council.

Table 10 Initial non-financial risk analysis

Non-Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Securing developer commitment and resultant housing construction	H	M	Proposal submitted on the basis that final funding is subject to an agreed Private Developer Agreement (PDA) between Council addressing the following: Confirmation of clear housing construction targets; contributions are known; caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances.
Aligning HIF allocation with Local Government Act and Land Transport Management Act process	H	L	Final proposal submitted on the basis that it is subject to consultation with the community over the priority of advancing other capital projects in the Long-Term Plan, including any consequential impact on debt and rates.
Delivery risk	L	L	Creation of a new standalone HIF delivery team within Council and the formation of tailored industry best practice contractual delivery arrangements.
Information	H	M	Due to the compressed timeframe imposed by MBIE, some aspects of the analysis informing our understanding of costs, benefits, and impacts on the Council's finances arising from the final proposal are likely to alter through more detailed investigations in the next phase of the HIF process. This may be mitigated through the additional time and investigation phase of the next stage of the HIF process.

Financial risks

While there are financial benefits from receiving a Housing Infrastructure Fund allocation (primarily in terms of interest payments saved from the fact the Housing Infrastructure Fund would be interest free), there are potential issues with how any Housing Infrastructure Fund allocation may impact on the Council's current financial strategy.

The specific issue arising from receiving any Housing Infrastructure Fund allocation relates to how any Housing Infrastructure Fund debt will be treated both on the balance sheet and in terms of financial debt ratios, the repayment arrangements and future commitments (especially for transport projects), and how development contributions will be levied.

The table below includes the main financial risks and the proposed mitigation/bid acceptance conditions relating to them.

Table 11 Initial financial risk analysis

Financial Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Contingency costing	H	M	Project costs to be reviewed every three years to update for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land values).
Lack of consequential and necessary infrastructure funding	H	M	The HIF proposal does not include any allowance for consequential upsize and operating expenditure, and no allowance for community infrastructure. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue as part of any future LTP considerations.
Financial reporting of HIF in Council accounts	H	H	Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Finance Authority, credit rating agencies, NZTA and the Office of the Auditor General.
Development Contribution funding uncertainty	H	M	Final bid acceptance based on receiving confirmation that DCs can be legally collected.
Impacts on financial strategy	H	H	HIF allocation would potentially result in a breach of the financial strategy with regard to debt to revenue ratios. Mitigation measures include the use of alternative funding arrangements of changes to service delivery and/or increased revenue.

A risk register has been developed and will be progressively updated as more detailed analysis is undertaken in the Detailed Business Case stage.

2.6 Key constraints and dependencies

The proposal is subject to the following constraints and dependencies. The first are used by Council to guide the appropriate use of funding. The second set of dependencies are specific to the HIF proposal.

The Hamilton City Council has determined the following basic principles to guide the appropriate use of funding sources and decision-making:

- Each generation of ratepayers should pay for the services they receive and borrowing can assist to achieve this outcome.
- Subsidies, grants and other income options are fully explored prior to rates being used.
- Capital costs to replace assets that reach the end of their projected economic life are firstly funded from rates.
- Capital costs to upgrade or build new assets is funded firstly from sources other than rates (e.g. subsidies, grants, fundraising, financial contributions) and then borrowing.
- Growth related capital costs are funded by development contributions.

If no other funding source can be used it is then appropriate to fund the remaining revenue requirement for operating expenditure from rates.

Bid acceptance conditions

In addition to the standard terms and conditions outlined in the MBIE tender documentation, this indicative business case is also submitted on the following basis:

- It is subject to consultation with the community over the priority of advancing other capital projects in the LTP, including any consequential impact on debt and rates.
- Any changes to the Regional Land Transport Plan need to occur before funding is received.

Final funding is also subject to an agreed Private Developer Agreement (PDA) between Council and development partners being secured and in place addressing the following:

- Confirmation of clear housing construction targets,
- contributions are known,
- caveats and appropriate payment clauses are included to allow for any substantial downturn in economic circumstances,
- Letters of Intent to be provided by development partners.
- Final bid acceptance based on receiving confirmation that DC's can be legally collected under the HIF structure.
- Bid acceptance conditional on final accounting treatment of HIF fund to be agreed by all local sector stakeholders. Currently, there are different views on accounting treatment from the Local Government Funding Agency, credit rating agencies, NZTA and the Office of the Auditor General.
- Project costs to be reviewed every 3 years to enable project updates for better project information (e.g. design, geotechnical conditions, inflation assumptions, changes in land value).

3. Economic Case

The purpose of the Economic Case is to identify the investment option that optimises value for money. Having determined the strategic context for the investment proposal and established a robust case for change, this part of the business case:

- identifies critical success factors for the investment options to:
  - align with HCC's strategic direction and its operational capacity
  - be achieved in a timely way with available funding and with available public and private resources
- generates three long-list options
- assesses the long-list options in terms of:
  - fulfilling investment objectives (strategic case) targeted to business needs (strategic case)
  - meeting the critical success factors
- assesses a limited number of short-listed options, selected from the long-options assessment in terms of:
  - benefit cost assessment of the investment options compared with the status quo
  - presents the HIF criteria for the short-listed options
- identifies a preferred way forward based on the short-listed options.

Given the timeframe to prepare this indicative business case, Hamilton City Council employed Business and Economic Research Limited (BERL) to undertake the analysis in the Economic Case.

3.1 Outline of the Economic Case

Other developments and infrastructure projects considered

The Strategic Case above and the Management Case below contain a comprehensive account of the scale, scope, timing, location and strategic connections of the proposed investment options assessed in this Economic Case.

Rationale for the development and the proposed projects

The rationale for the proposed projects in this Economic Case are described detail in the proceeding Strategic Case. The main outcome sought is the acceleration of dwelling construction, including affordable dwellings. This is to be achieved by successfully meeting investment objectives. The recommended investment options assessed in this Economic Case are designed to deliver these investment objectives.

Cost contingencies

Cost estimates are the best available estimates that Hamilton City Council could produce at this time. Escalations for the infrastructure costs discussed in this Economic Case have been accounted for using SOLGM cost adjustors and are net of CPI inflation.

3.2 Critical success factors

The following critical success factors were identified by HCC through its recent strategic planning processes.

Table 12 Critical Success Factors

Critical Success Factors	Broad Description
Strategic fit and business needs	Alignment with other key Council growth programmes and strategies over short, medium and long-term for transport and water.
Achievability	Overall programme and direct investment can be delivered in required timescales to required standard/quality and corresponding indirect investment and outcomes can be realised, including collaboration and partnering elements.
Timing and sequencing	Acceleration of core output (housing) is achieved and wider programmes are able to be delivered as forecast or sped up.
Financial viability	Fit with funding constraints, maximises/optimises financial return and capital recycling over short, medium and long-term.
Market impacts	Developers are incentivised to expedite housing development by accelerating developments, public sector funding matches pace with private sector development and collaboration is fostered.
Risk management	Appropriate controls/frameworks, management and governance including partnering, can be established and maintained.

3.3 Long list options and initial options assessment

Investment options were defined by Hamilton City Council through a facilitated options workshop held on Thursday 2 March 2017 and refined in subsequent management discussions.

Options identification

Subsequently, BERL advisors in consultation with Hamilton City Council systematically considered all the possible ways in which the investment proposal could be delivered under each of seven dimensions or categories of choice:

- *Scoping options – What levels of road and water services are possible for each option?*
- *Service solution options – Are there policy options for road and water services?*
- *Service delivery options – Are there appropriate governance, project management and infrastructure entities in place?*
- *Implementation options - When Are services available to match the annual housing yield?*
- *Prioritisation/Sequencing – Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?*
- *Consequential housing outputs – What is the yield and timing of housing outputs?*
- *Funding – What is the likelihood of wider private investment or development?*

This led to a selection of long list of in-scope options as follows:

Table 13 Possible long-list options classified by the seven dimensions of choice

Dimension	Description	Options within each Dimension
Scale, scope and location	What level of road and water services are possible for each option?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)
Service solution	Are there policy solutions for road and water services?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)
Service delivery	Are there appropriate governance, project management and infrastructure entities in place?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)
Implementation	Are services available to match the annual housing yield?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)
Prioritisation/ Sequencing	Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)
Consequential housing outputs	Number/timescale?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)
Funding	Wider private investment/development?	Status quo HIF-Rotokauri & Peacocke HIF-Rotokauri & Peacocke (with NZTA subsidy)

The status quo and the investment options were assessed in terms of the investment objective and the critical success factors for each of the seven dimensions of choice, in terms of: *fully meeting, partially meeting, or not meeting each investment objective and critical success factor.*

The assessment methodology was informed by:

- Hamilton City Council strategic and operational plans
- An economic outlook for Hamilton City, including its capacity for major infrastructure development and residential housing construction.

The summary assessment of the long-list options is included below. A more detailed analysis is included in Annexes to this indicative business case.

The status quo option

A base case option is used as a baseline for comparing marginal costs and benefits of alternative investment options. It provides the benchmark for determining the relative marginal value for money added by the short-listed option under consideration.

The status quo option, in the present case is the non-HIF Rotokauri and non-HIF Peacocke option. This status-quo is currently described as part of the Council's 30 year Infrastructure Plan.

Description of the status quo option

Advantages

The main advantages are that:

(i) implementation:

a. it fulfils all investment objectives

b. it fulfils all critical success factors.

Disadvantages

The main disadvantages are that:

(i) scale, scope and location:

a. it does not fulfil objectives 2 and 3

b. it does not fulfil critical success factor market impacts.

(ii) service solution

a. it does not fulfil critical success factor of achievability.

(iii) prioritisation/sequencing

a. it does not fulfil critical success factors of strategic fit, timing and sequencing, and risk management.

(iv) consequential housing outputs

a. it does not fulfil any of the investment objectives.

Conclusion

The status quo option has a low level of alignment with Hamilton City Council's NPS-UDC investment objectives, and would not deliver council requirements for consequential housing outputs.

Description of the long list option - HIF Rotokauri and HIF Peacocke

Advantages

The main advantages are that:

(i) scale, scope and location:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(ii) service solution:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(iii) service delivery:

a. it fully or partially meets all investment objectives

b. it fully meets all critical success factors except for market impacts with which it has a partial fit.

(iv) implementation:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(v) prioritisation/sequencing:

a. it fully meets all investment objectives

b. it fully meets all critical success factors.

(vi) consequential housing outputs:

a. it fully meets all investment objectives

b. it fully meets all critical success factors except for financial viability with which it has a partial fit.

Conclusion

These two options are viable short-list options since they partially or fully meet all investment objectives and critical success factors.

3.4 Short list options and indicative costs and benefits

This short-list assessment is made for the investment options compared with the status quo option.

The status quo option is the non-HIF Rotokauri & Peacocke option. This is defined by the Hamilton City Council's Future Proof 30 year Infrastructure Plan.

On the basis of the long-list analysis, the recommended short-list for further assessment is as follows:

- Option 1: Status quo option (retained as a baseline comparator)
- Option 2: HIF Rotokauri & Peacocke
- Option 3: HIF Rotokauri & Peacocke (with NZTA subsidy)

3.5 Indicative costs and benefits

The indicative benefits and costs and the overall benefit-cost ratio of the short list options are presented in Table 24 below. The marginal benefit-cost ratios for the contributing benefits are presented in Table 25 below.

The benefit-cost ratios are calculated in accordance with the following requirement set out on p18 of the "HIF Call for Final Proposals":

The benefit-cost ratio for HIF activities which provide access to housing development in high growth areas is to be calculated assuming that the level of housing development that cannot occur without the investment is advanced; the costs and benefits generated by the infrastructure work are brought forward in the benefit-cost ratio calculation.

The main quantifiable costs for Hamilton City Council are infrastructure capital and maintenance costs.

The main quantifiable economic benefits provided are:

- transport benefits to Hamilton City ratepayers
- rates revenue to Hamilton City Council
- developer contributions to Hamilton City Council
- wealth created for households due to appreciation in the capital value of the dwelling
- economic contributions to Hamilton City arising from the economic activity associated with:

- infrastructure construction
- housing construction
- household expenditure (less rates payable whose economic benefit is already accounted for above).

The HIF-Rotokauri and HIF-Peacocke and HIF-Rotokauri and HIF-Peacocke (NZTA subsidy) options have overall benefit-cost ratios of 15.31 and 18.83 respectively.

Transport benefits, dwelling value appreciation and the three kinds of economic contribution all have marginal benefit-cost contributions equal or greater than one. Consequently, in general, each of these options alone provides a favourable benefit-cost outcome. This is important since the quantum of benefits outweighs the investment cost for mutually exclusive beneficiaries who are diverse across location, time, private sector, public sector and households.

Table 14 Indicative costs and benefits and overall benefit-cost ratio, in present value $2017, by short-list options

	Rotokauri & Peacocke		
BCR components ($000s)	SQ	HIF	HIF (NZTA subsidy)
Houses	**10,769**	**10,890**	**10,890**
Costs			
Infrastructure capital	215,237	523,887	422,876
Infrastructure maintenance	4,407	10,736	11,697
Total Cost	**219,645**	**534,623**	**434,573**
Benefits			
Transport benefits	0	575,576	575,576
Rates revenue	158,631	277,462	277,462
Developer contribution revenue	0	54,215	54,215
Improvements value appreciation	86,703	150,092	150,092
Infrastructure construction - economic impact	228,328	552,914	552,914
Housing construction - economic impact	1,439,100	2,125,494	2,125,494
Household expenditure - economic impact	2,378,565	4,449,131	4,449,131
Total Benefits	**4,291,326**	**8,184,883**	**8,184,883**
Benefit Cost Ratio	**19.54**	**15.31**	**18.83**

Table 15 Marginal benefit-cost ratios of contributing benefits

BCR components ($000s)	Rotokauri & Peacocke		
	SQ	HIF	HIF (NZTA subsidy)
Costs	219,645	534,623	434,573
Transport benefits	0	575,576	575,576
Benefit Cost Ratio	0.00	1.08	1.32
Rates revenue	158,631	277,462	277,462
Benefit Cost Ratio	0.72	0.52	0.64
Developer contribution revenue	0	54,215	54,215
Benefit Cost Ratio	0.00	0.10	0.12
Improvements value appreciation	86,703	150,092	150,092
Benefit Cost Ratio	0.39	0.28	0.35
Infrastructure construction - economic impact	228,328	552,914	552,914
Benefit Cost Ratio	1.04	1.03	1.27
Housing construction - economic impact	1,439,100	2,125,494	2,125,494
Benefit Cost Ratio	6.55	3.98	4.89
Household expenditure - economic impact	2,378,565	4,449,131	4,449,131
Benefit Cost Ratio	10.83	8.32	10.24

3.6 Assumptions

The following are data sources and assumptions used by BERL in determining these estimates of costs and benefits.

Transport benefits

The net present value of the benefits (refer Annexes) accruing from the transport infrastructure in terms of time savings for road users. These benefits were provided by Gray Matter.

Rates and Developer contributions

Average annual rates and developer contributions per new dwelling were provided by Hamilton City Council. BERL have deflated both rates and developer contributions by the projected CPI rates to ensure they reflect real price change.

Improvement value appreciation to households

BERL have assumed that the initial capital value of a new home is the same as the average new build cost of $340,000.

BERL have assumed that each new house will appreciate in value by 3% per annum once the house has been built.

BERL has then applied an annual deflator to the annual appreciation to remove the inflation component of the price change in housing, and allowed the appreciation in capital value of housing to reflect the real growth in the value of the house.

The forecast CPI series to 2045 was developed by BERL combining current inflation growth and the long run target of 2% inflation per annum (the current RBNZ inflation target).

Infrastructure Costs

All infrastructure costs were provided by Hamilton City Council for transport infrastructure and three waters infrastructure.

To reflect real changes in infrastructure costs going forward, BERL have used a cost adjustor. For this project the cost adjustor was calculated by taking a projected capital expenditure annual cost adjustor and subtracting from it the projected annual change in inflation as represented by CPI.

Using this cost adjustor means that infrastructure costs in 2045 are 19.1 percent higher than in 2017 when expressed in $2017.

Housing Construction

Average costs per square meter were used for a house of between 100 and 250 square meters. This house would have a concrete floor slab, kitchen, bathroom, WC, ensuite. Colorsteel roof, and weatherboard cladding (Linea). Fittings in the house would be of a medium quality.

The average cost per square meter for a residential house in the Waikato comes from QV CostBuilder which replaced Rawlinsons New Zealand Construction Handbook. The range per square meter for a new build was $1,700 to $1,900 in this construction handbook. BERL has used $1,700 per square meter to reflect the better economies of scale that larger housing developers are able to achieve.

To determine the overall average size of a new house, BERL used data on the number of new residential consents in the 12 months to January 2017 and the floor area of these consents. This data showed that in the 12 months to January 2017, there were 2,933 new consents for residential houses and the total floor area was 608,200 square meters, or 207.4 square meters per house. BERL therefore used 200 square meters as an average to reflect a more conservative approach, and that the average will be influenced by a small number of much larger houses potentially being built.

Therefore, BERL has assumed an average new build cost of $340,000 for a 200 square meter house.

Household Expenditure

Average weekly household expenditure is from the Statistics New Zealand Household Expenditure Survey 2013. This is a survey of New Zealand residents who own their own dwelling.

The overall household expenditure data was adjusted by 88% to reflect the difference between the New Zealand average spend and the average spend in the Waikato / Rest of North Island region. BERL also removed property rates, savings, donations, fines and overseas expenditure from the household expenditure.

The average weekly spend was then adjusted to an annual spend. This resulted in an estimate of average household expenditure in the Waikato of $51,371.25 per year, which was rounded to $51,300 for BERL calculations.

The household expenditures output to GDP co-efficient was constructed by assigning household expenditure to 21 industries (including retail, education, recreation, food and beverages services, etc.) and using the spending weight the Gross Output to GDP co-efficient of each of the 21 industries to construct an overall co-efficient. This co-efficient is 0.6.

The total GDP multiplier for household expenditure was constructed using the same weights as the Gross Output to GDP co-efficient. This co-efficient is calculated to be 1.86.

Multipliers

For this analysis, BERL has used 2013 input-output multipliers tables for New Zealand. These are calculated from the 2013 New Zealand input-output tables produced by Statistics New Zealand in 2016.

- For Local Authority rates and developer contributions, BERL used the multiplier for Local Government.
- For infrastructure construction, BERL used the multiplier for Heavy and Civil Engineering Construction.
- For residential housing construction, BERL used the multiplier for Residential Building Construction.

For each of the Local Authority rates, developer contributions, infrastructure construction, residential building construction and household expenditure, BERL transformed the gross output to GDP and then multiplied the direct GDP for each category to determine the total annual GDP contribution to the New Zealand economy.

Net Present Value

BERL have used a discount rate of 6 percent in our Net Present Value calculations.

BERL have also expressed the Net Present Values in $2017.

3.7 The recommended preferred way forward

On the basis of the above initial assessment, both HIF-Rotokauri and HIF-Peacocke options are preferred over the status quo, with the NZTA subsidised option being the best.

3.8 Housing Infrastructure Fund Criteria – Strategic and Economic Case

The following HIF criteria are critical for the strategic case for both HIF-Rotokauri and HIF- Peacocke and have been defined for the HIF assessment process.

Table 16 HIF Criteria Assessment Factors – Strategic Case

HIF Critical Assessment Factors	Description
Number of dwellings as a proportion of total projected demand	The number of dwellings expected to be built as a result of the proposed infrastructure as a proportion of the total projected demand for housing over the construction timeframe of the dwellings.
Expected timing of dwelling construction	The expected timing within which dwellings will be built in the area to be served by infrastructure built with HIF assistance.
Degree to which timing of infrastructure construction is brought forward	The timing of infrastructure construction if provided through HIF assistance, compared to timing if no HIF assistance was provided.
Co-benefits and economic growth	The degree to which the proposed infrastructure will support or complement other investments or economic growth.
Level of lower-cost housing	The number of lower-cost dwellings expected to be built as a result of the funded infrastructure.
Contribution to development capacity under the National Policy Statement	Degree proposed infrastructure assists a territorial authority to meet development capacity targets under the NPS-UDC.

The HIF criteria relevant to the economic case for the investment options are defined as shown in Table 26 below.

Table 17 HIF Criteria Assessment Factors – Economic Case

HIF Critical Assessment Factors	**Description**
Infrastructure spend per dwelling	The average spend would be the total value of funding assistance applied for, divided by the number of dwellings expected to be built as a result of the infrastructure provided.
Co-benefits and economic growth (where quantifiable)	The degree to which the proposed infrastructure will support or complement other investments or economic growth (where quantifiable)

Number of dwellings as a proportion of total demand

Table 20 below shows that in the first five years, the number of dwellings that will be constructed in HIF-Peacocke and HIF-Rotokauri (with both areas receiving an NZTA subsidy) will be approximately 760. During this period, these two greenfield areas will meet an estimated 12% of the projected demand for housing in Hamilton City.

Within 10 years, HIF enabled infrastructure in Rotokauri and Peacocke will result in an estimated 4,763 dwellings being constructed. This housing supply will provide an estimated 39% of the projected demand for dwellings in Hamilton City. By 2030, Rotokauri and Peacocke with their associated strategic infrastructure will provide almost half of all dwelling requirements in Hamilton City.

Table 18 HIF infrastructure bid funding per dwelling

	2016-2020 5 Years	2021-2025 10 Years	2026-2030 15 Years	2031-2045 30 Years
No. of dwellings to be constructed (within each period)	761	4,002	3,967	2,160
No. of lower cost dwellings to be constructed	76	400	397	216
Cumulative no. of dwellings to be constructed	761	4,763	8,730	10,890
Project demand (cumulative)	6,148	12,296	18,167	33,188
No. of dwellings/projected demand	12%	39%	48%	33%
HIF bid infrastructure cost per dwelling constructed	366,200	58,500	31,900	25,600

Infrastructure spend per dwelling

Table 20 above shows the infrastructure spend per dwelling in HIF-Peacocke and HIF-Rotokauri over the next 30 years. It illustrates that in the first 10 years, the average cost per dwelling enabled by the HIF assistance sought is $58,500. This drops to an average cost per dwelling of $25,600 by 30 years.

These figures are based on the gross funding of this HIF proposal for Rotokauri and Peacocke of $426 million, which includes $122.8 million of NZTA subsidy and $29.8 million of Hamilton City Council funding through the Long-Term Plan. This calculation is in accordance with guidance provided by MBIE.

Co-benefits and economic growth (where quantifiable)

The Economic Case presents the quantitative estimates of economic activity generated by infrastructure and housing developments. In addition, there are wider unquantified social, economic, environmental and cultural benefits. Some of these have been discussed in the previous sections, entitled *Main Benefits* and *Context for Rotokauri Investment Options* or *Context for Peacocke Investment Options*. These benefits are focused on well-being and the associated social and cultural infrastructure that develops in the development of a new community.

Some of the key co-benefits of Rotokauri and Peacocke relate to high amenity values particularly the natural landscape, and their proximity to major transport infrastructure, primary, secondary and tertiary education facilities, and major employment areas located on the western side of the City.

As noted, and discussed in more detail in the Economic Case, the key economic benefit that HIF fund will enable is the bringing forward of strategic infrastructure that will enable residential development in Rotokauri and Peacocke. The opening up of these greenfield areas will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

The bringing forward of residential development in Rotokauri and Peacocke will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value. In addition, the skills and other human capital in Hamilton City will grow through projected population growth.

Degree to which timing of infrastructure construction will be brought forward

Table 19 illustrates the difference in completion dates for the key infrastructure projects that will occur in Rotokauri and Peacocke as a result of HIF funding. This infrastructure is an integrated programme of works and is able to be brought forward by an estimated six years.

Table 19 HIF-Rotokauri & HIF-Peacocke infrastructure completion dates and change in timing completion

Housing	Rotokauri & Peacocke SQ	HIF
House Years	120,009	199,738
Completion dates		
Start year	2018	2018
100 percent complete	2045	2039

The table splits the variables into SQ (Status Quo), or the timing of when the construction will occur without the HIF funding; and HIF or the timing of when the construction will occur with the HIF funding and the impact of the HIF funding on the transport infrastructure projects.

Co-benefits and economic growth

The Economic Case presents the quantitative estimates of economic activity generated by infrastructure and housing developments. In addition, there are wider unquantified social, economic, environmental and cultural benefits. Some of these have been discussed in the previous sections, entitled *Main Benefits* and *Context for Rotokauri Investment Options*. These benefits are focused on well-being and the associated social and cultural infrastructure that develops in the development of a new community.

Some of the key co-benefits of Rotokauri relate to its high amenity values, particularly the natural landscape and the Waiwhakareke Natural Heritage Park, and its proximity to major transport infrastructure, primary, secondary and tertiary education facilities, and major employment areas located on the western side of the City.

As noted, and discussed in more detail in the Economic Case, the key economic benefit that HIF fund will enable is the bringing forward of strategic infrastructure that will enable residential development in Rotokauri. The opening up of this greenfield area will:

- Assist Hamilton City in its capacity to provide a balanced supply of housing options to meet resident population growth.
- Meet the criteria for a long-term settlement pattern for Hamilton City.
- Ensure the management of land use and strategic infrastructure.
- Enable Hamilton City to manage resident population growth through infill and greenfield residential housing developments.

The bringing forward of residential development in Rotokauri will also have wider economic benefits for the Hamilton community. This includes an increase in social infrastructure such as schools and community facilities, as well as an increase in the demand for retail services, hospitality and health services. This infrastructure has a productive and an amenity value. In addition, the skills and other human capital in Hamilton City will grow through projected population growth.

4. Commercial Case

The purpose of the Commercial Case is to identify how the preferred investment option that optimises value for money from a commercial perspective.

Having determined the strategic context for the investment proposal and established a robust case for change, this part of the business case examines how commercial viability can for the preferred option of funding both Peacoke and Rotokauri can be achieved through:

- Developer commitment and general residential update
- Procurement processes
- Delivery processes.

These commercial case elements are the best mechanisms to ensure the preferred option of funding both Peacocke and Rotokauri can come to fruition.

Commercial viability

The primary way to determine commercial viability at this stage of the indicative business case process is through developer commitment.

Hamilton City Council has a positive and collaborative working relationship with our key landowners and developers in both the Peacocke and Rotokauri areas.

For Peacocke, HCC has been working constructively with the ADARE and Todd Property Group to bring on line additional housing and for Rotokauri HCC has been working with RDL limited (a joint venture partnership including Tainui Group Holdings).

Letters of intent outlining a further commitment to housing delivery through the signing of detailed private developer agreements have been included in our proposal.

We have a long and proven track record of delivering excellent development outcomes in both growth cells by working in partnership with key landowners and developers.

Peacocke

The Adare Development Group owns 200 ha of land at Peacocke and in partnership with Todd Property Group Ltd. has identified a developer funded development stage capable of producing up to 350 homes over the next three years. Adare is working in partnership with HCC to initiate that development. However, development for Peacocke beyond this is constrained by current lack of HCC long term infrastructure funding and privately funded viability.

HIF funding will, in addition to Adare's initial development, release development for a further 330 homes from year three which are currently restricted by roading constraints.

At the completion of construction of core infrastructure by Council (bridge, roading and water by year 4) Adare, under a Private Developer Agreement (PDA) with Council and as master developer and land owner can provide continuity for further stages that will (subject to market conditions) deliver 2000 homes in total.

Rotokauri

At Rotokauri, the HIF will enable the funding for the lead infrastructure for an initial development of 500 -750 homes (over a 5-year period and subject to market conditions) in stage 1 of the RDL/ Tainui Group Holdings development through the construction of a major floodway for stormwater.

Hamilton has minimal regulatory constraints to the proposal. The land identified is zoned and included within the October 2016 Partly Operative District Plan. For Peacocke, a land acquisition programme is underway and all designations are in place with regional consents secured for key transport related projects associated with the HIF project funding. For Rotokauri the land is zoned and a joint Council/developer team is working on a master plan process for staging the development.

Procurement processes

HCC is committed to smart public procurement that delivers better public services and value for money through a strategic and structured approach to procurement.

HCC's procurement framework is based on policy, principles and rules as contained in the HCC Procurement Policy and Procedures Manual.

Collectively, these provide a broad framework that supports accountability for spending and delivering best value for money for ratepayers while ensuring the checks and balances expected of public sector procurement are in place.

HCC Procurement Policy and Procedures have been developed to comply with both the Ministry of Business and Innovation and Employments "Government Rules of Sourcing –third edition 2015" as well as the requirement of NZTA's procurement processes.

The HCC Procurement Policy is underpinned by a procedures manual that contains defined processes and templates covering end to end procurement procedures from planning and sourcing through to managing contracts. As part of the continuous improvement cycle these policies, processes and procedures are frequently reviewed to ensure compliance with best practice.

Delivery processes

All of the infrastructure proposals under the preferred option for a combined Rotokauri and Peacocke funding package are at or beyond detailed business case stage, with some road designations, key consents, and land secured.

Preliminary designs are ready or under way. We propose a combination of traditional staged delivery for routine infrastructure and design and construct models for the bridge and wastewater system where construction techniques and specialist skills can add value and reduce cost and risks with innovative and optimum designs

We will collaborate with land owners, developers, key local stakeholders, Iwi, NZTA and the NZ Government to minimise project risks, overcome barriers and ensure successful delivery.

We have demonstrated our ability to deliver in the forward-funded Hamilton Ring Road and the W2 Hamilton Wastewater Treatment Plant upgrade projects.

We have effective relationships with NZTA and developers. We will build on these relationships though comprehensive developer agreements to share risk and funding requirements. Working together with clear messages and direction we can assure the HIF benefits.

5. Financial Case

2.1 Impact on the financial statements

The following table is stated in 2017 $millions, therefore no inflation has been applied.

Table 20 Impact on financial statements

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital	0.00	68.00	103.00	57.00	42.00	11.00	-1.00	-5.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating	0.00	0.00	0.05	0.10	0.15	0.22	0.27	0.32	0.34	0.35	0.36	0.38	0.38	0.40	0.41	0.41	0.43	0.44	0.44
Total	**0.00**	**68.00**	**103.05**	**57.10**	**42.15**	**11.22**	**-0.73**	**-4.68**	**-1.66**	**0.35**	**0.36**	**0.38**	**0.38**	**0.40**	**0.41**	**0.41**	**0.43**	**0.44**	**0.44**
Funded By:																			
Existing revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Existing capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Extra revenue - Rates	0.00	0.29	0.61	0.95	1.33	1.74	2.19	2.67	3.20	3.77	4.33	4.93	5.56	6.22	6.93	7.68	8.47	9.30	10.19
- DC's	0.00	1.50	2.50	2.50	4.50	6.00	5.00	5.00	5.00	4.50	4.00	4.50	5.00	5.50	5.00	5.00	4.00	2.50	2.50
Loan - HIF	0.00	66.21	99.89	53.55	36.17	3.26	-8.19	-12.67	-10.20	-8.27	-8.33	-211.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Other	0.00	0.00	0.05	0.10	0.15	0.22	0.27	0.32	0.34	0.35	0.36	202.36	-10.17	-11.32	-11.52	-12.27	-12.04	-11.36	-12.24
Total	**0.00**	**68.00**	**103.05**	**57.10**	**42.15**	**11.22**	**-0.73**	**-4.68**	**-1.66**	**0.35**	**0.36**	**0.38**	**0.38**	**0.40**	**0.41**	**0.41**	**0.43**	**0.44**	**0.44**
Net Cash Flow	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

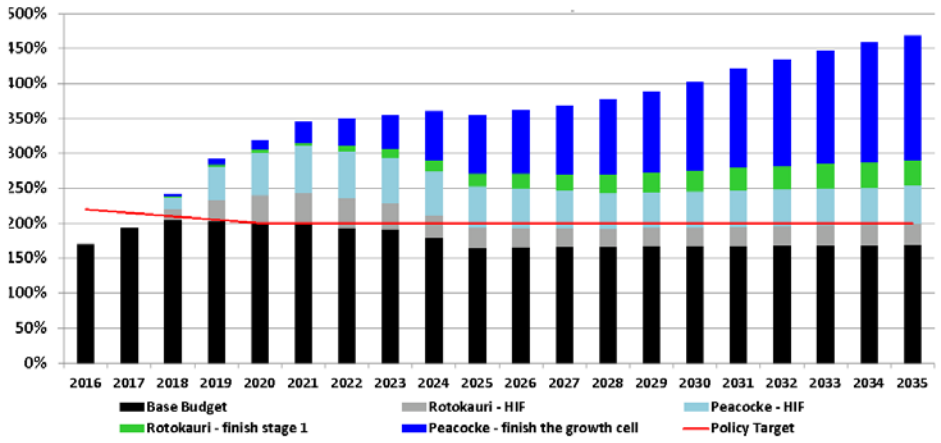
Within the above table, assumptions have been made to determine these initial estimates. The assumptions include:

- The table assumes that HIF loans are repaid from additional revenue received from growth in the rating base and development contributions. After 10 years it is assumed that the remaining HIF loan is repaid by refinancing from other sources (LGFA or the banks).
- Additional growth in the rating base attributed to Peacocke and Rotokauri HIF investment is assumed to be 0.2% which is based on expected extra demand.
- Additional development contributions revenue is based on modelling and assumptions using growth data and capital costs of growth infrastructure proposed.

2.2 Overall affordability

The following chart shows the impact on the Council's debt to revenue ratio of accelerating the Rotokauri growth cell by using HIF loans and other loans (to complete infrastructure not included in the HIF application). The debt to revenue ratio exceeds the prudential limit of 250% in 2019 and continues to increase over the entire period as servicing the debt becomes impossible. Repayment of the debt extends beyond the 10 years of the HIF loan.

Figure 1 – Debt to revenue ratio



The following assumptions and caveats have been taken into account when developing the above chart:

- The "Base Budget" is the 10-Year Plan plus decisions made since. It excludes the 2017/18 Annual Plan proposals and any potential future impacts on budgets (eg a new Founders Theatre, a new rubbish collection contract).
- The "Base Budget" from the 2025/26 year and beyond is estimated based on a debt to revenue ratio that is constant at about 2024/25 levels.
- Inflation has been applied at the rates used in the 2015-25 10-Year Plan and from 2025/26 the average berl rate is used per their 2016 report to local authorities.
- The Rotokauri plus Peacocke scenario includes the capital cost of the funding to be requested from the HIF and consequential operating costs and revenues associated with completing the infrastructure early.
- There is additional infrastructure required to complete the growth cells in addition to the works covered by the HIF. This additional capital and operating expenditure is included in the above chart.
- There will be considerable costs of community infrastructure required at the growth cells that is not included in this analysis.
- Additional revenues include increased Development Contributions and increased growth in the rating base of 0.2% per annum.
- All funds advanced either directly from the HIF or through NZTA on behalf of the HIF are assumed to be recognised as debt by the Council.
- The debt to revenue charts are calculated using the Council's calculation method. The LGFA use a different method that is more favourable.

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Attachment 8

6. Management Case

On execution of the funding agreement, Hamilton City Council will establish a programme of work comprising two main projects to deliver the HIF infrastructure. This programme of works will facilitate development in Rotokauri and Peacocke, and involve project management in collaboration with NZTA and MBIE.

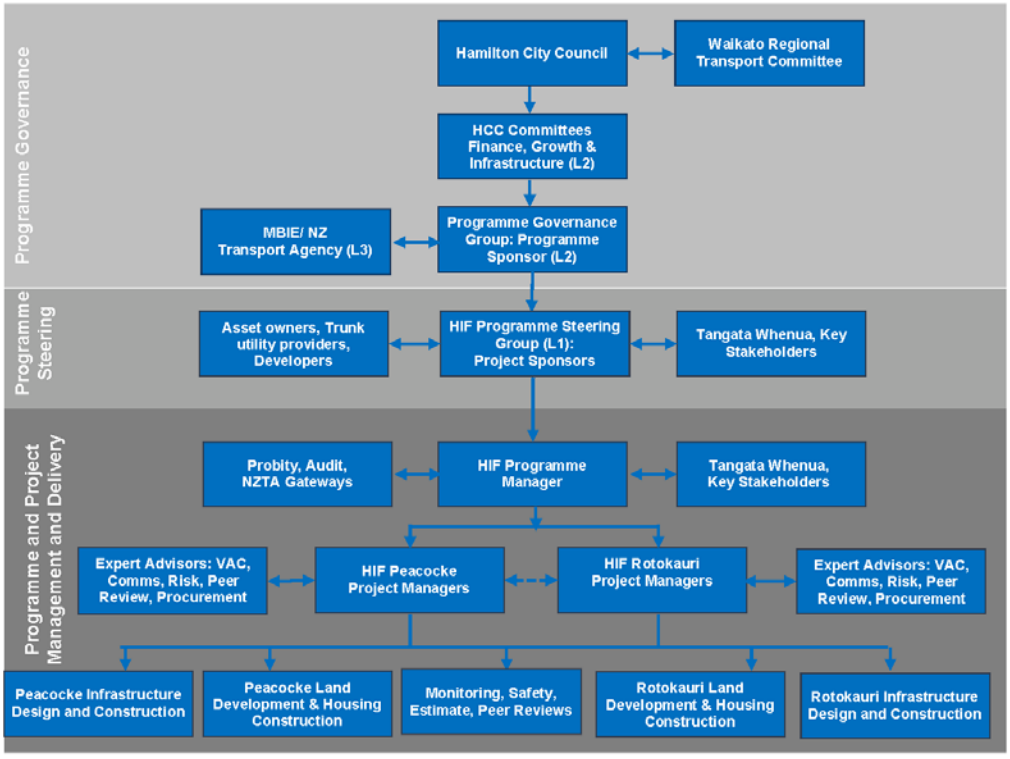
Project management

Hamilton City Council will use their existing governance and large project management systems to undertake this programme of work. The Council operates three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience (L1);
- Level 2: Project/programme governance (L2); and,
- Level 3:Independent and objective assurance (L3)

The project management and governance structure will follow Hamilton City Council's standard practice for large infrastructure projects as shown in Figure 3 below.

Figure 1 Combined HIF Trunk Utility and Arterial Transport Network programme organisation chart



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The strategy, framework and plan for dealing with change, contract management and risk can be founded within Hamilton City Council's established quality, risk, contract and cost management policies and procedures. These are in accordance with NZTA's quality, risk and procurement requirements and the Government Rules of Sourcing. Further, Hamilton City Council has demonstrated their effectiveness in working closely with NZTA and 100% forward funding on large projects through their successful delivery of the $88M Wairere Drive Hamilton Ring Road.

The HIF infrastructure programmes of work

As a well-advanced project developed in collaboration with NZTA, the Peacocke HIF transport infrastructure matches the proposed Hamilton Southern Links. This programme of work has a detailed risk management plan, with peer reviews of key outputs such as designs and estimates. There is also a comprehensive environmental management plan in development and a Public Engagement Plan already underway.

The Rotokauri HIF infrastructure also forms part of an agreed infrastructure/land use package - the Hamilton Northern Growth Corridor - agreed on between the Council, NZTA and the Waikato District Council.

Determining and measuring risk

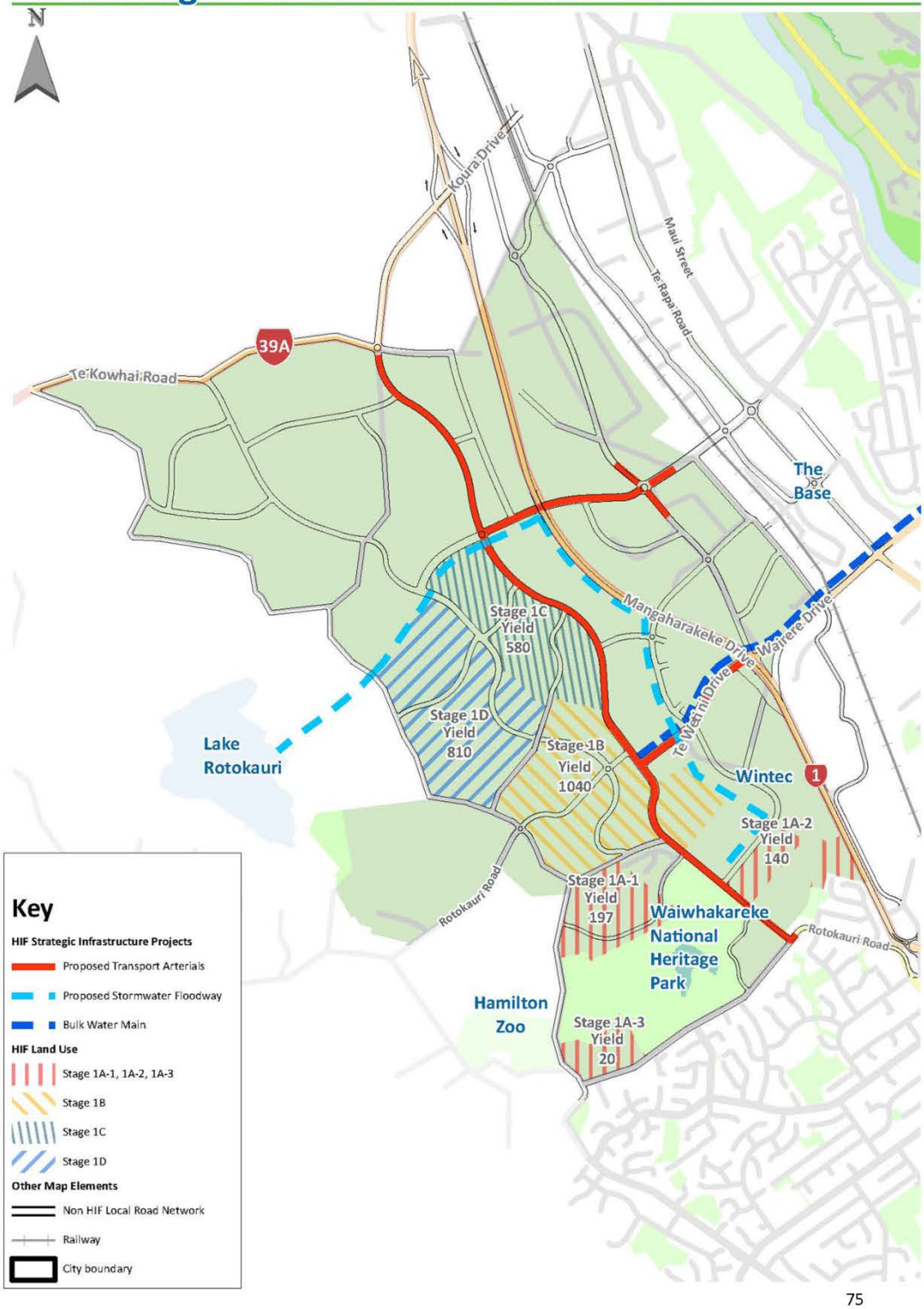
From the beginning of the programme of works, the Council will determine – what we know, what we might not know, and target risks appropriately. This will establish a foundation for the development of each project through the detailed business case development and into implementation. The Council will then also use challenge and peer review methods as triggers for value engineering to build time and budget contingencies.

The key infrastructure for each is shown below and described in the subsequent sections.

Item 5

Attachment 8

HIF Strategic Infrastructure - Rotokauri



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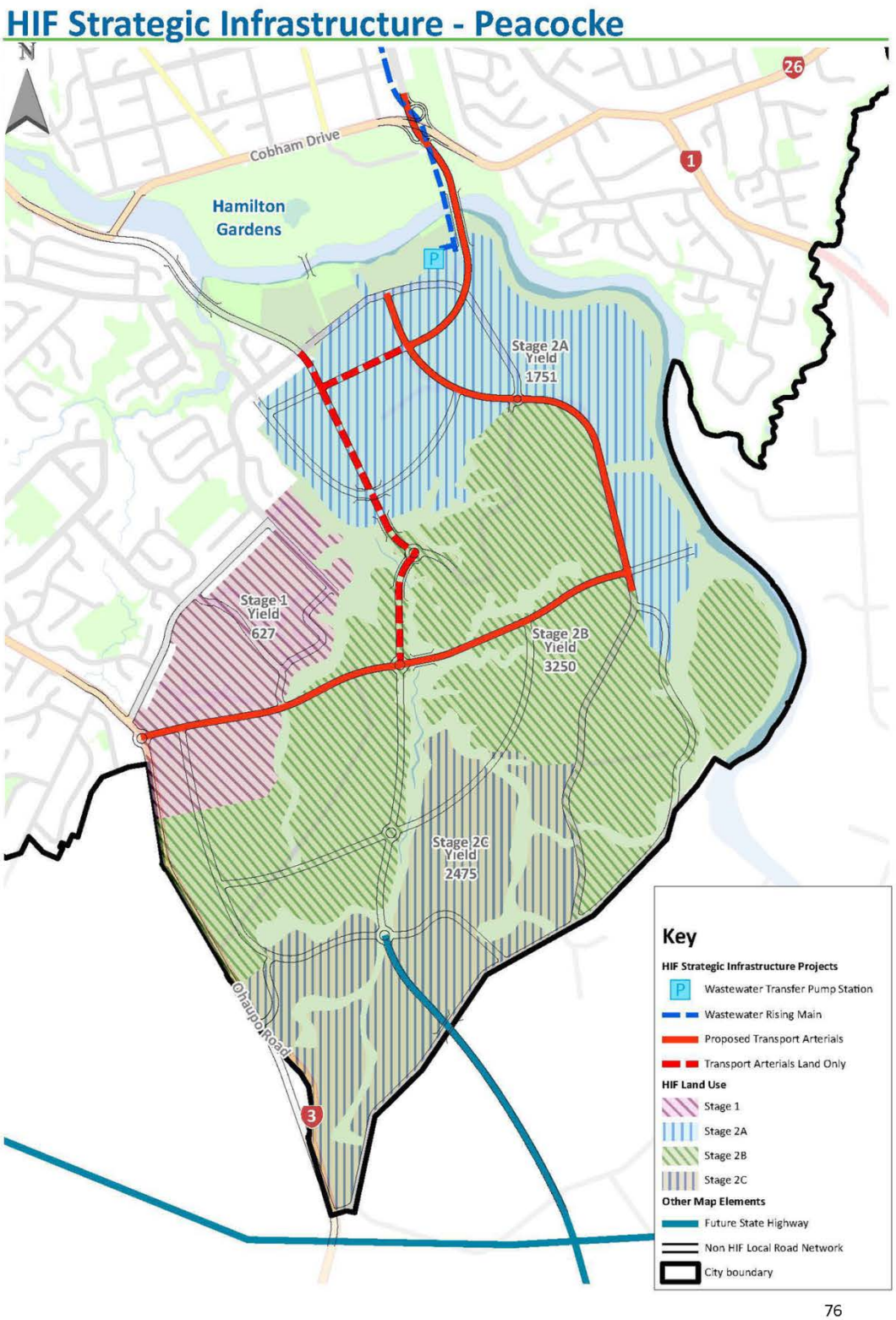
HIF Strategic Infrastructure - Peacocke
N
Cobham Drive
Hamilton Gardens
26
1
P
Stage 2A Yield 1751
Stage 1 Yield 627
Stage 2B Yield 3250
Stage 2C Yield 2475
Ohaupo Road
3
Key
HIF Strategic Infrastructure Projects
Wastewater Transfer Pump Station
Wastewater Rising Main
Proposed Transport Arterials
Transport Arterials Land Only
HIF Land Use
Stage 1
Stage 2A
Stage 2B
Stage 2C
Other Map Elements
Future State Highway
Non HIF Local Road Network
City boundary

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The combined programme is for approximately $430M:

Peacocke HIF Proposal	$272.1M
Rotokauri HIF Proposal	$154.2M
Total amount proposed for HIF infrastructure	**$426.3M**

Strategic Infrastructure Element	**Estimate** ($M,2017)
Wairere Drive/Cobham Drive overbridge	$20.8M
Wairere Drive extension and Waikato River bridge	$113.0M
Peacocke Road urban upgrade	$9.7M
SH3 intersection and east-west arterial	$35.5M
Wastewater strategic storage and pressure main	$43.3M
North-south arterial land	$26.7M
Internal strategic wastewater network	$17.6M
Internal strategic water distribution main	$5.2M
HIF Proposal – Peacocke Project Total	**$271.8M**
2015 10 Year Plan $0M NZTA FAR $89.5M	***HIF $182.3M***

Strategic Infrastructure Element	**Estimate** ($M, 2017)
Stage 1 Strategic lead stormwater floodway	$80.2M
Major north-south transport corridor and network connections	$66.5M
Strategic water distribution mains	$7.5M
HIF Proposal – Rotokauri Project Total	**$154.2M**
2015 10 Year Plan $29.8M NZTA FAR $33.3M	***HIF $91.2M***

Peacocke HIF Proposal

The Peacocke HIF proposal comprises:

Wairere Drive/Cobham overbridge - additional to current funding	$20.8M
Wairere Drive extension and bridge over Waikato river to Peacocke north south arterial:	$113.0M
Peacocke Road urban upgrade	$10.1M
SH3/Dixon road intersection and Peacocke east west arterial to Peacocke Road	$35.5M
Wastewater strategic storage and pressure main back to the existing far eastern interceptor	$43.3M
North south arterial Land	$26.7M
Internal strategic water and wastewater	$22.8M
Project Total (HIF Proposal)	**$272.1M**

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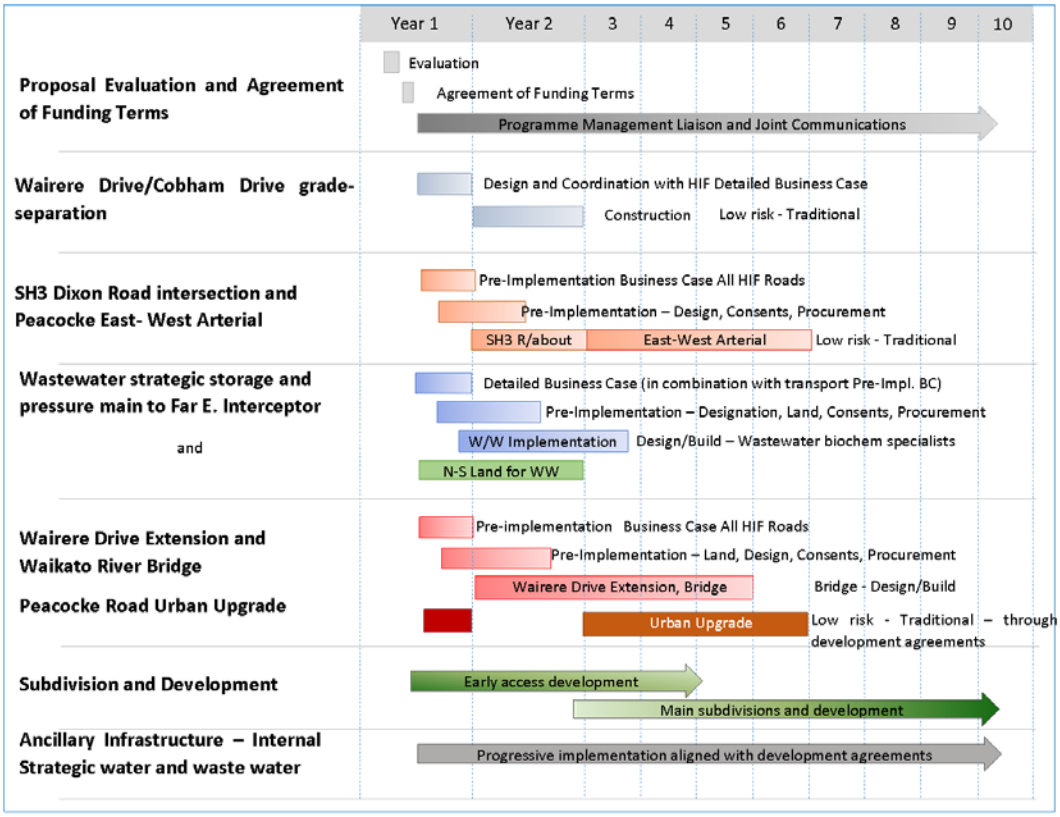
Two major gateway projects form part of the HIF indicative business case for Peacocke. These are the bridge over the Waikato River and associated new transport link and, the proposed wastewater transfer pump station and rising main. An east-west link and road upgrade support additional development and generate additional travel time savings through early construction of part of the Hamilton Southern Links transport network. Implementation will take around six years, and commitment to the construction of the gateway infrastructure will allow early development, accepting a lower level of service and greater risk on the existing networks in the interim.

Figure 2: Peacocke Trunk Utility and Arterial Transport Network – Estimated Timeline



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Rotokauri HIF Proposal

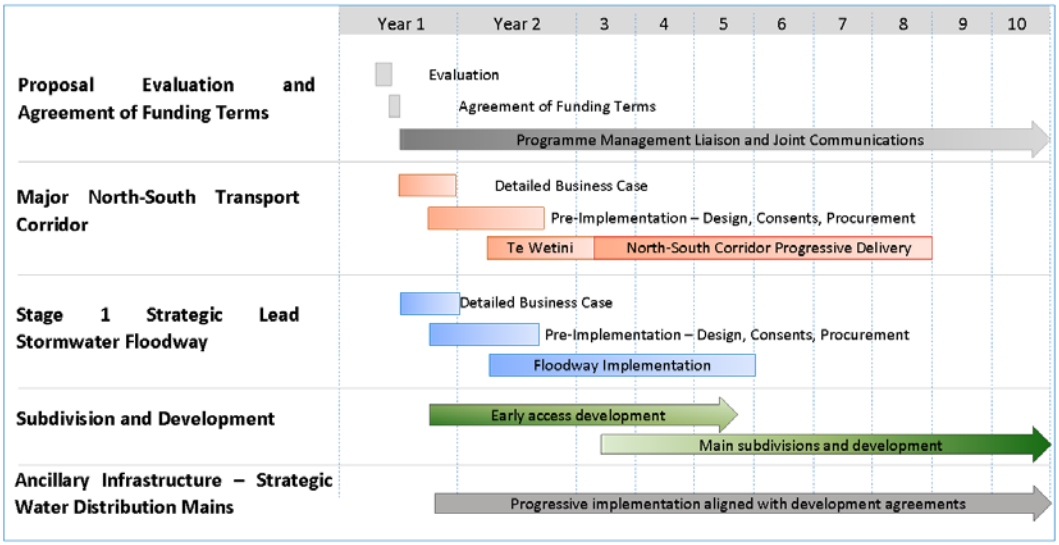
Rotokauri HIF Proposal	$m
Stage 1 Strategic lead stormwater floodway	$80.2.
Major North-South transport corridor	$66.5
Strategic water distribution mains	$7.5
Project total (HIF proposal)	**$154.2**

Two major gateway projects form part of the HIF indicative business case for Rotokauri. These are:

- The floodway crossing multiple land holdings required to deal with the stormwater from Stage 1 of the growth cell including that from the sensitive Lake Rotokauri.
- The road connection to Te Wetini Drive and Te Kowhai Road to connect to the Hamilton arterial transport system.

Implementation will take around five years for stormwater infrastructure with the roads constructed progressively over eight years to match development and demand. Commitment to construction of the gateway infrastructure will allow early development accepting a lower level of service and greater risk on the existing networks in the interim.

Figure 3: Rotokauri Trunk Utility and Arterial Transport Network – Estimated Timeline



The Rotokauri Arterial Roads project is an integral part of the Northern Corridor road network, planned in conjunction with the Te Rapa Section of the Waikato Expressway. It includes infrastructure implementation and land use management integration in accordance with the Northern Corridor Memorandum of Understanding between NZTA, Waikato District Council and HCC. The HIF transport infrastructure matches the Northern Corridor network and the operative Rotokauri Structure Plan. A comprehensive catchment management plan is complete and in February HCC tendered a contract for implementation of trunk wastewater infrastructure to service Rotokauri growth.

5.1 Planning for successful delivery

Governance and reporting arrangements

Governance will be in accordance with HCC's Governance Structure[1]. We will extend our highly successful Southern Links investigation and Northern Growth Corridor collaboration with NZTA through implementation. We will update the relevant agreements, which cover risk, funding, communications, governance, scope and project management and invite MBIE to join us in governance. The project management and governance will follow HCC's existing practice for large infrastructure projects as shown below.

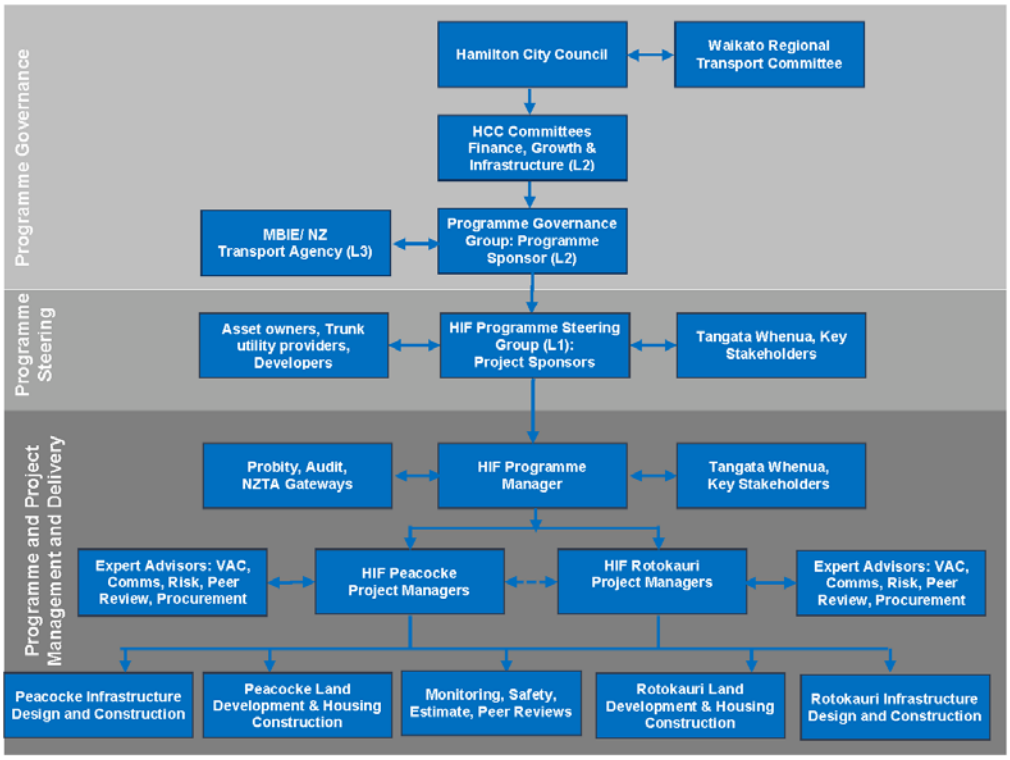
On execution of the funding agreement, we will establish a programme comprising two main projects to deliver the HIF infrastructure to facilitate development in each of Rotokauri and Peacocke and manage it using HCC's existing governance and large project management systems.

Governance will be in accordance with HCC's Governance Structure. The project management and governance structure will follow HCC's standard practice for large infrastructure projects as shown below. We operate three levels of assurance to ensure effective delivery, starting from the ground up and comprising:

- Level 1: Project management oversight, capability and experience –project steering and peer reviews (L1);
- Level 2: Project/programme governance – generally Council Committees (L2); and,
- Level 3: Independent and objective assurance (L3): E.g. third party oversight by NZTA, external and internal audit to check controls are working.

[1] http://www.hamilton.govt.nz/our-council/councilcommittees/Documents/Governance%20Structure%20Terms%20of%20Reference%20and%20Delegations%202016-2019.pdf

Figure 4: Combined Trunk Utility and Arterial Transport Network programme organisation chart



We have demonstrated our effectiveness working closely with NZTA and 100% forward funding on large projects by successfully delivering the $88M Wairere Drive Hamilton Ring Road. That has transformed Hamilton's transport system and successfully passed a Price Waterhouse Cooper independent audit.

Integration with other programmes

The HIF Programme of works will link with other infrastructure programmes.

The Peacocke trunk utility and arterial transport network activities form part of the Southern Links project. This is an established project developed jointly by HCC and NZTA. The HIF transport infrastructure matches the Southern Links network and the operative Peacocke Structure Plan

The Rotokauri Arterial Roads project is an integral part of the Northern Corridor road network, planned in conjunction with the Te Rapa Section of the Waikato Expressway. It includes infrastructure implementation and land use management integration in accordance with the Northern Corridor Memorandum of Understanding between NZTA, Waikato District Council and HCC. The HIF transport infrastructure matches the Northern Corridor network and the operative Rotokauri Structure Plan. A comprehensive catchment management plan is complete and in February HCC tendered a contract for implementation of strategic wastewater infrastructure to service Rotokauri growth. Detailed design work is underway for the strategic bulk water supply to Rotokauri and Council has included construction funding in the draft 2017/18 Annual Plan (subject to consultation and final Council decisions).

The transport components for both areas are integral parts of the draft Access Hamilton Programme. Access Hamilton comprises a portfolio of key projects for the delivery of improvements to Hamilton's transport over the next 10 years. The key projects are set out in the Access Hamilton Programme Business Case (currently draft – updating the Access Hamilton Strategy 2010 – 2040). The relevant programme management arrangements will remain are as follows:

- Activity development in accordance with NZTA's Business Case approach
- Optimisation and prioritisation as part of RLTP and Hamilton LTP processes.
- Procurement and implementation in accordance with HCC's procurement procedures (NZTA Approved)
- Monitoring in accordance with One Network Road Classification and Road Efficiency Group requirements
- Benefit monitoring and reporting in accordance with approved business case requirements.

Governance Reporting and Benefits realisation

The Programme Manager will produce monthly a combined programme report for the HIF Programme Governance Group that shows where all projects are at in terms of scope, time, cost and risk and whether there are any issues to deal with in order to help the projects to progress successfully. The status of the programme and each project is measured against the baselined project management plan and any changes to this will be reviewed and if appropriate approved through governance (Level 2-3 – e.g. Council Committees and NZTA VAC/NLTP Advisory Group).

Each major project will maintain a risk register, issues register, and change register, and update the project management plan following governance approval of any changes. We will complete a post-implementation review within 6 months of completion (level 3 assurance).

We will prepare a Benefits Realisation Plan as part of the HIF detailed[2] business case. HCC's strategy for management and delivery of benefits is to establish clear measures and milestones for benefits and to test proposals and outcomes against these as the project develops and is refined and delivered.

The key benefits are summarised below with likely measures.

[2] The Southern Links Transport components are at Pre-Implementation phase. Detailed Business Case is used to align terminology with the Request for Proposal and link with Wastewater infrastructure.

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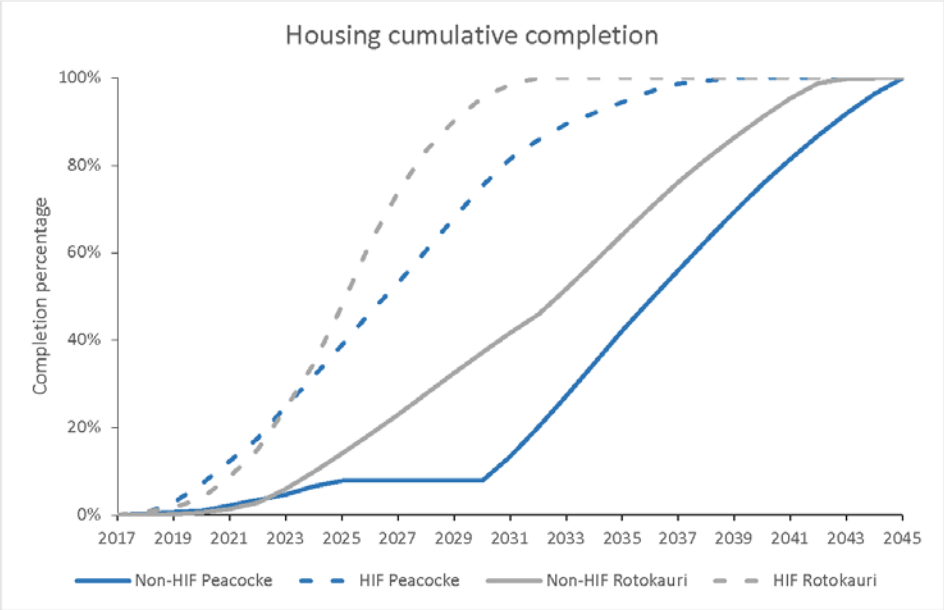
Attachment 8

Table 21 Benefits Management – measures and monitoring

Benefit	Measure	Monitoring/reporting	Status
Residential development	• Dwellings (No) – see cumulative completion expectation in figure below)	Building consents (applications, completions)	Existing
	• serviced land suitable for development (area, lots)	Subdivision consents	Existing
	• Trunk infrastructure capacity (households)	reserve capacity (Capacity – connections)	Existing (increase review frequency)
Transport – Travel time	• Travel time (duration)	BlipTrack bluetooth or TomTom data	Existing NZTA access
	• Trip reliability (variation)	BlipTrack bluetooth or TomTom data	Existing NZTA access
	• Delays	Traffic signal performance	Existing HCC SCATS system
		Surveys (before and after)	As required



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Cost estimates

The following key assumptions were applied when developing the cost estimates:

- Transport Costs
  - Costs are derived from HCC/NZTA estimates with verification from third party technical advisors
  - Transport costs have come from the Hamilton Southern Links project estimates (detailed business case status approved by HCC and NZTA and estimates peer reviewed 2017).
  - Cost estimates have been assessed and reviewed following best practice methodology, but still involve a level of uncertainty and will be reviewed and finalised at the next stage of the business case process
  - Costs are expected estimates (P50 confidence level) with contingency allowance typically around 20%, but with no allowance for inflation/escalation.
- Water / Waste Water
  - For the strategic wastewater transfer pump station and rising main, cost estimates have been assessed and developed via third party experts following best practice methodology. There is still a level of uncertainty and will be reviewed and finalised at the next stage of the business case process
  - Costs for other water and wastewater projects are derived from HCC's Long Term Plan Standard Unit Rate estimates.
  - They are based on concepts for the specific works and reflect anticipated outturns based on similar works
  - Outturn costs could change subject to private developer agreement negotiations, efficiencies, innovations and the design approach of Developers.
  - Costs are expected estimates (P50 confidence level) with a nominal 20% contingency allowance, but with no allowance for inflation/escalation.
- Stormwater
  - Costs are derived from HCC's Long Term Plan estimates (Equivalent to indicative business case) based on high level assumptions of works, related ground conditions, engineering judgement and amounts that would likely be incurred directly by Developers
  - Costs are expected estimates (P50 confidence level) with reflective contingency allowance, but with no allowance for inflation/escalation.
  - Outturn costs will only be confirmed at the time of full design and development or through negotiation of private developer agreements.
- General Assumptions
  - All costs are 2017 dollars with no inflation.
  - Where applicable, costs include elements for land acquisition (other than land subject to rights of first refusal).

- All major and minor transport corridors assume an NZTA subsidy on investigation, design, land purchase and construction. All costs to date will be included in a retrospective funding application to NZTA.
- Costs for operating or ongoing maintenance costs related to the infrastructure are excluded and will be met by HCC
- Costs are assumed to be for strategic trunk infrastructure and therefore exclude any allowance for local infrastructure (e.g. roads within a development site) to connect to the trunk infrastructure.
- Local road and reticulation cost are typically the responsibility of individual developers with the specific requirements being determined via the resource consent process or private development agreements.
- Additional costs for upsizing and upgrading local development infrastructure where necessary to meet future demand from other areas are excluded at this stage and will only be confirmed at the time of full design and development or through private development agreements.

All costs will be reviewed in the post-business case stage and at three-yearly Long Term Plan resets.

Project assurance

HCC operates three levels of protection for project assurance. These are appropriate project management oversight by means of steering or project control groups, project/programme governance and independent reviews and audits, such as NZTA Value Assurance.

We will complete typical NZTA project assurance activities for the transport works during the pre-implementation and implementation stages. We will incorporate the strategic water and wastewater works with these as relevant.

The Southern Links macroscope and Wairere Drive/Cobham Drive Interchange has already been presented to VAC.

NZTA have supported the Rotokauri Arterials investigations as having the status of an Indicative Business Case. Additional assurance for both projects will consider details such incorporating passenger transport and walking/cycling infrastructure which need to be coordinated with the Access Hamilton programme.

Table 22 Project Assurance (NZTA focus)

Item	Component	Description
Southern Links Peacocke Arterials and Rotokauri Arterials	Optimise scope and extent for staged implementation -	Problem and benefit confirmation and review Confirmation of support and consistency with NZTA objectives for Southern Links state highway and Northern Corridor. Staging/Macroscope confirmation
	3rd party funding commitments	Multi Party Funding Agreement
	Safety in design, Safety audit, estimate peer review, contract probity	Standard processes (subject to fast-tracking)

Risk Management

The strategy, framework and plan for dealing with the management of risk are in accordance with HCC's risk management policy[3], which outlines HCC's risk management philosophy, risk threshold and approach to managing risk. The risk register and preliminary management plan is attached. Example risks are highlighted in Table 4 below.

The fundamental HIF risk management response is to work with MBIE to achieve fair and appropriate allocation of risk to avoid unnecessary exposure for the parties involved.

Table 23 Potential HIF risks and management responses for risks include:

RISK CATEGORY	RISK TYPES	POSSIBLE RISK MANAGEMENT RESPONSES
Strategic	• LTP and 3Y Plan are not aligned to HIF project resulting in impacts or exposures not considered • Ability to repay loan on time	• Effective agreement with MBIE and NZTA • Clear understanding of loan and repayment terms.
Financial risks	• Improve estimate	• confirmation of value for money and

[3] (http://www.hamilton.govt.nz/our-council/consultation-and-public-notices/haveyoursay/Documents/D-1629589%20%20Council%20Policy%20-%20Risk%20Management%20%20(Feb%202015).pdf).

	• cost certainty and confidence • Exceeding loan capacity	affordability at each business case stage • provision for 3 yearly updates/resets (also see economic risks) • Agreement with LG debt funders
Reputation	• Poor perceptions of local and central government's roles in facilitating development • Potential for conflict of interest in communications, and in selecting priorities for investment,	• Joint messaging NZ Government, NZTA, HCC • Conflict ID and management
Compliance & regulatory risks	• Statutory timeframes for consents, designations and special consultation delay starts	• Engagement with consent authorities, standardise engagement/ application/ approvals processes, discovery protocols, • Memoranda of understanding and early escalation of issues to avoid delays.
Political	• Potential for conflicts of interest of Council and Elected Members relating to construction, developments • HIF proposal or project initiation results in community not supporting Council	• Conflict management • Effective engagement • Whole of government commitment to collaborative working • Manage implementation programmes crossing election cycles appropriately.
People risks	• Health and safety • Continuity	• HCC management systems
Technology	• Delivery speed does not allow for technology to be incorporated	• Recognise future proofing in Detailed Business Case
Disaster recovery & business continuity	• Generally opportunity for resilience • Earthquake	• Recognise in Detailed Business Case • HCC disaster management protocols
Operational	• Development raises land values and developers land bank rather than build • Land ownership for infrastructure corridors delays start (e.g.) First rights	• MOU, PDA's, financial incentives • Government and NZTA assistance
Project	• Failure in due diligence in project management • Procurement speed of delivery from builders, developers and consultants, contractors varied impacting on delivery	• Independent audit and NZTA gateway protocols • NZTA and MBIE commitment to programmes

In addition to HCC's risk processes, the Southern Links risks management, previously in accordance with NZTA's risk management minimum standard Z/44 and the Agency's Risk Management Process Manual[4], will be incorporated in the HIF programme risk files.

[4] (https://www.nzta.govt.nz/resources/risk-management-process-manual/).

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Procurement planning

HCC has successfully delivered the Hamilton Ring Road and similar large scale projects successfully using policies and procedures consistent with Government rules for sourcing and NZ Transport Agency requirements. HCC's procurement processes are NZTA-approved. NZTA's selection procedures will be used as a starting point for procurement decisions (Figure 4 below).

Implementation processes and procurement will depend on the extent and complexity of the stages to be completed. The shared risk model is unlikely to be necessary for the complexity and scale of the projects expected for transport or wastewater.

Public engagement

Council-managed HIF programme engagement rather than separate project arrangements would be desirable. We propose joint messaging and an integrated communications team.

HCC is already collaborating on public engagement with NZ Transport Agency for Hamilton Southern Links as part of a comprehensive Pre-Construction Consultation and Engagement Plan and Property Acquisition and Management Engagement Practice required as part of Southern Links designation conditions.

We propose joint communications protocols to include NZ Government and NZTA. Clear and consistent messaging will be desirable to manage the risk of adverse community reaction to development in one area being prioritised over another, and the potential for significant changes in Long Term funding priorities.

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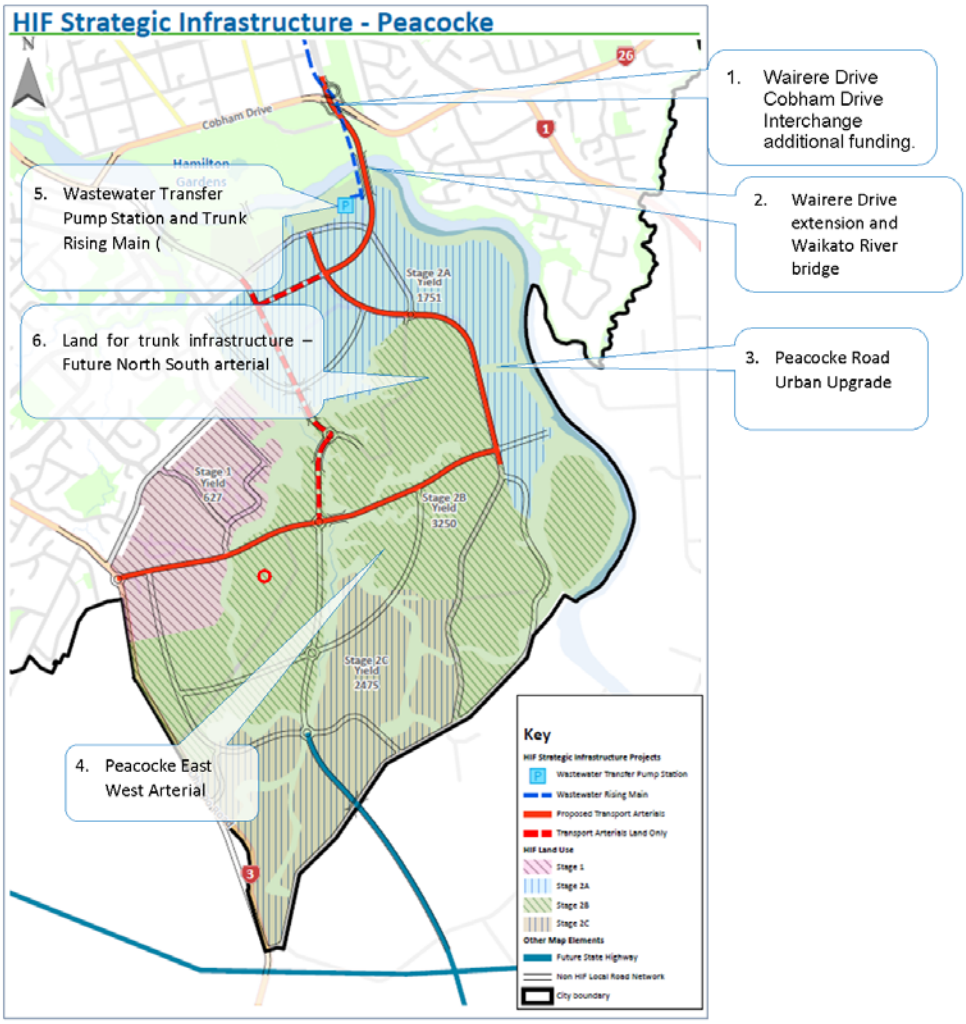
Attachment 8

5.2 Project Details

Peacocke - Key Activities

The key activities comprising the Peacocke HIF proposal are shown in Figure 2 below.

Figure 6: HIF Strategic Infrastructure - Peacocke Trunk Utility and Arterial Transport Network



Two major gateway projects form part of the business case infrastructure. These are the bridge over the Waikato River and associated new transport link, and the proposed wastewater transfer pump station and rising main. In addition, an east-west arterial connection from State highway 3 Ohaupo Road and an urban upgrade to Peacocke Road to link to the bridge over the Waikato River can start early and facilitate early access to deliver housing benefits early and transport network benefits as soon as the bridge is connected. Additional HIF funding will top up the committed funding for the

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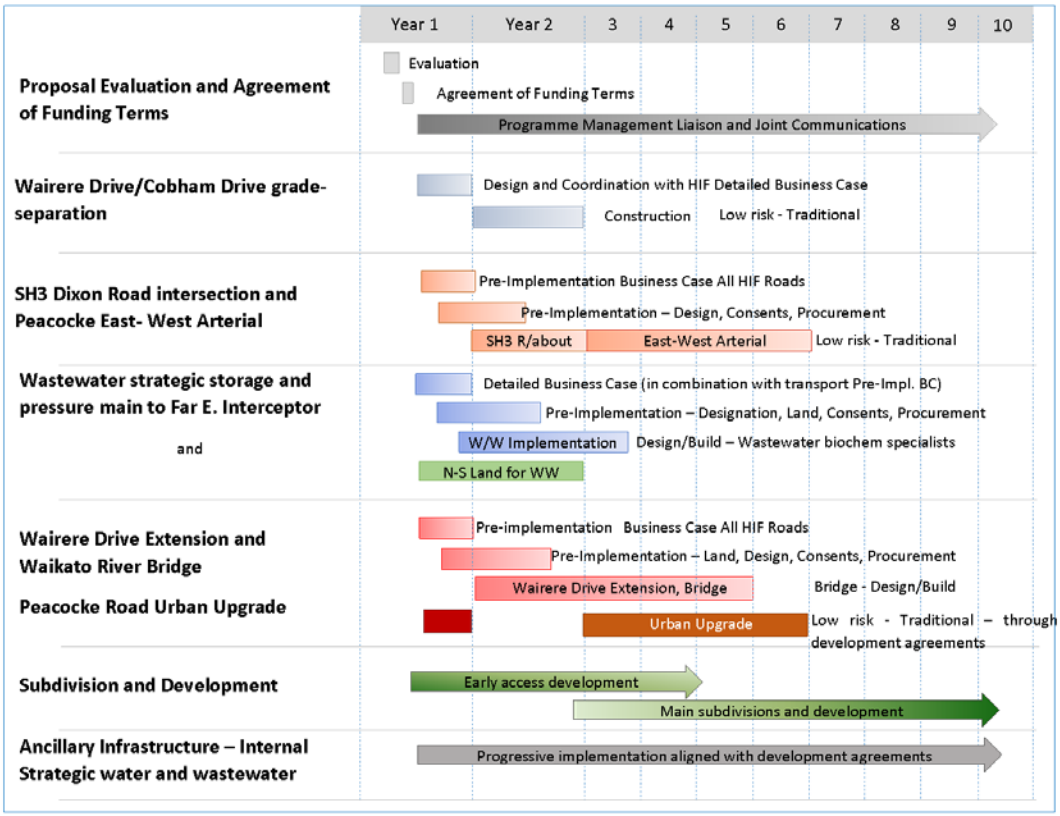
Wairere Drive/Cobham Drive interchange to grade separate the link between the Hamilton ring road and the he bridge over the Waikato River. NZTA Value Assurance Committee approved the interchange in March 2017 as part of our ring road project assurance procedures.

Project Timetable – Key Gateway Infrastructure Activities

The major projects will run over three stages (Pre-implementation, Early Access, and Full Access) and will take approximately six years to complete. A timeline summarising the key projects and activities in the Peacocke HIF programme is below.

Figure 7: Peacocke Trunk Utility and Arterial Transport Network – Estimated Timeline



Project plan – Preliminary timetable – subject to land and NZTA approvals

Key Project Milestone	Completion Year
HIF Proposal Funding Agreement – Negotiation and Executions	0
DBC/Pre-implementation – Property, consents, design, procurement	1-2
Wairere Drive/Cobham Drive Grade Separation – facilitate construction	2
Early Access – Maximise use of existing assets	
Early access agreements between HCC, developers and NZTA	1
Procurement	1
Construction - East/West access to SH3	2 Roundabout 6 East West Connection
Construction - Wastewater	3
Full Access – Full servicing	
Procurement	1
Ring Road Link and Gardens Bridge including final Wastewater connections	5
Construction – Peacocke arterial roads	6
Completion –subject to statutory limitations and engagement	**6**

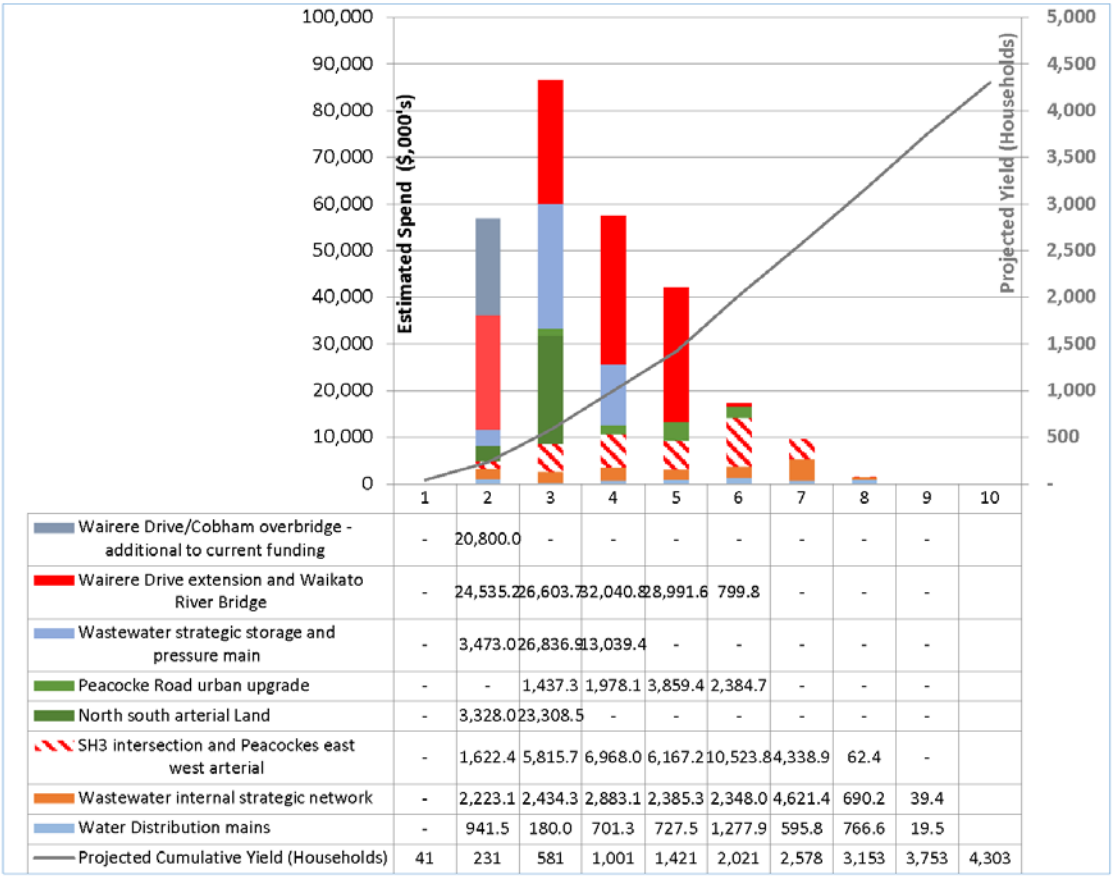
Project Cost Control

The Peacocke HIF proposal comprises:

Wairere Drive/Cobham overbridge - additional to current funding	$20.8M
Wairere Drive extension and bridge over Waikato river to Peacocke north south arterial	$113.0M
Peacocke Road urban upgrade	$9.7M
SH3/Dixon road intersection and Peacocke east west arterial to Peacocke Road	$35.5M
Wastewater strategic storage and pressure main back to the existing far eastern interceptor	$43.3M
North south arterial Land	$26.7M
Internal strategic wastewater	$17.7M
Internal strategic water Distribution mains	$5.3M
Project Total (HIF Proposal)	**$271.9M**

The Peacocke spend profile for the project based on estimated costs and timing is illustrated in Figure 8 below:

Figure 8: Peacocke Strategic Utility and Arterial Transport Network – Spend Profile, Expected Yield (Year 1 nominally 2017/18)



	1	2	3	4	5	6	7	8	9	10
Wairere Drive/Cobham overbridge - additional to current funding	-	20,800.0	-	-	-	-	-	-	-	
Wairere Drive extension and Waikato River Bridge	-	24,535.2	26,603.7	32,040.8	28,991.6	799.8	-	-	-	
Wastewater strategic storage and pressure main	-	3,473.0	26,836.9	13,039.4	-	-	-	-	-	
Peacocke Road urban upgrade	-	-	1,437.3	1,978.1	3,859.4	2,384.7	-	-	-	
North south arterial Land	-	3,328.0	23,308.5	-	-	-	-	-	-	
SH3 intersection and Peacockes east west arterial	-	1,622.4	5,815.7	6,968.0	6,167.2	10,523.8	4,338.9	62.4	-	
Wastewater internal strategic network	-	2,223.1	2,434.3	2,883.1	2,385.3	2,348.0	4,621.4	690.2	39.4	
Water Distribution mains	-	941.5	180.0	701.3	727.5	1,277.9	595.8	766.6	19.5	
Projected Cumulative Yield (Households)	41	231	581	1,001	1,421	2,021	2,578	3,153	3,753	4,303

Peacocke Procurement

The road links in Peacocke are routine and will be procured by traditional staged methods. The river bridge will suit design/build. The wastewater system will require chemical/biological/automation control system expertise and therefore specialist design/build expertise distinct from the bridge skillset. This allows us to split the delivery load, avoid market capacity issues and pursue value for money.

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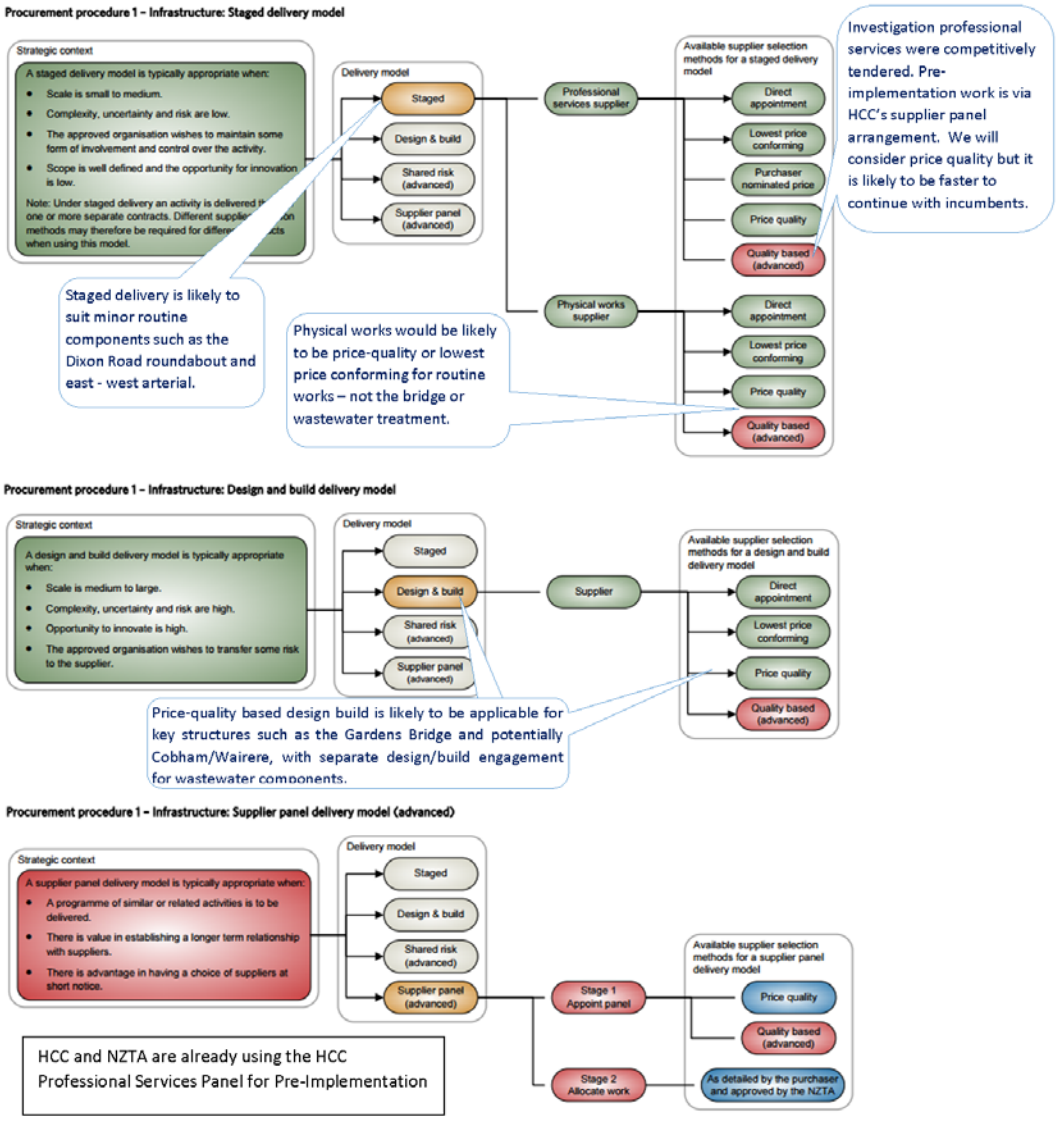
Item 5

Attachment 8

Figure 9: Peacocke Trunk Utility and Arterial Transport Network – Procurement Planning



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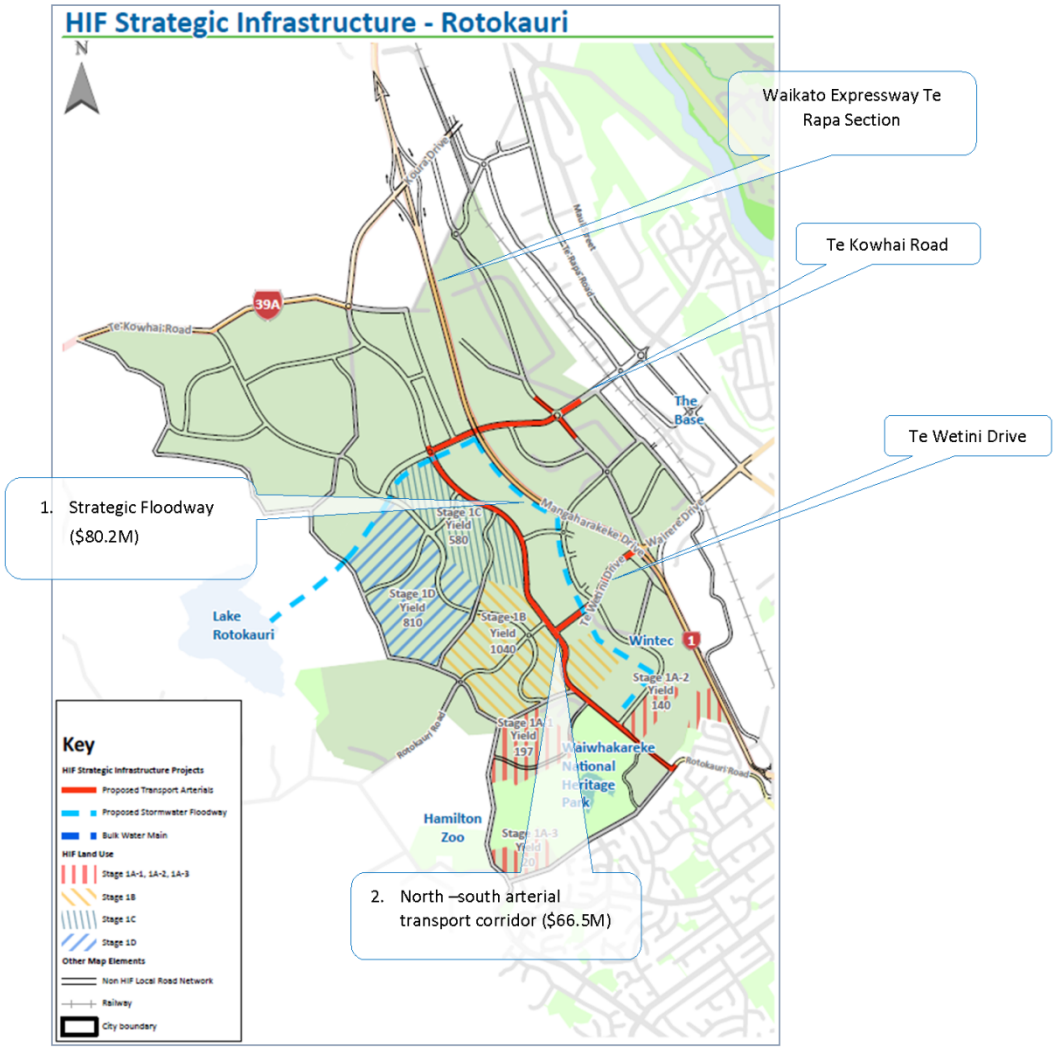
Rotokauri

Key Activities

The key activities comprising the HIF Rotokauri proposal are shown in Figure 3 below.

Figure 10: HIF Strategic Infrastructure - Rotokauri Trunk Utility and Arterial Transport Network



We do not anticipate significant organisational changes as part of the project, other than managing the additional delivery commitment. We will deal with this by increasing internal or external resources for the project or existing commitments. We will use expert advisors to assist staged design and procurement planning and with project management if required. Suitably experienced physical works contractors will construct the works. For complex projects such as the river bridge and the wastewater works we would prefer design and build approaches to optimise value for money.

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Project Timetable – Key Gateway Infrastructure Activities

Implementation will take around 5 years for stormwater infrastructure with the roads constructed progressively over 8 years to match development and demand. A timeline summarising the key projects and activities in the Rotokauri HIF programme is below.

Figure 11: Rotokauri Trunk Utility and Arterial Transport Network – Estimated Timeline

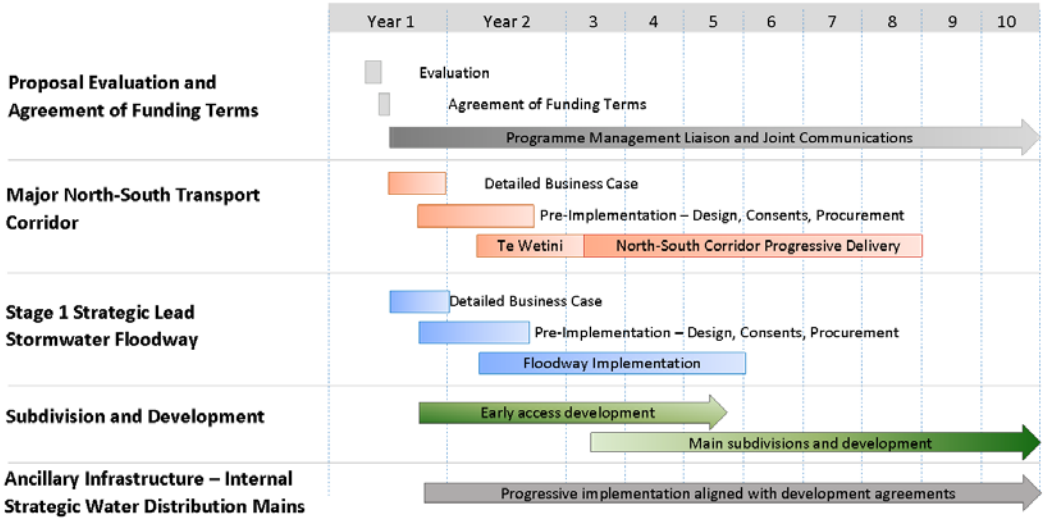


Table 24 Project plan – Preliminary timetable – subject to land and NZTA approvals

Key Project Milestone	Completion – Years following funding approval
Pre-implementation – Property, designations, consents, design, procurement planning	2
Early Access – Maximise use of existing assets	
Early access agreements between HCC, developers and NZTA	1
Procurement	2
Stormwater floodway to provide essential stormwater management functions that are critical for enabling development in stage 1 of the growth cell	5
Te Wetini Drive – East-west Arterial Link at south of growth cell	3
Full Access – Full servicing	
Major North-south transport corridor (staged delivery – progressive access available)	8
Water Distribution mains	With development
Completion	Year 8

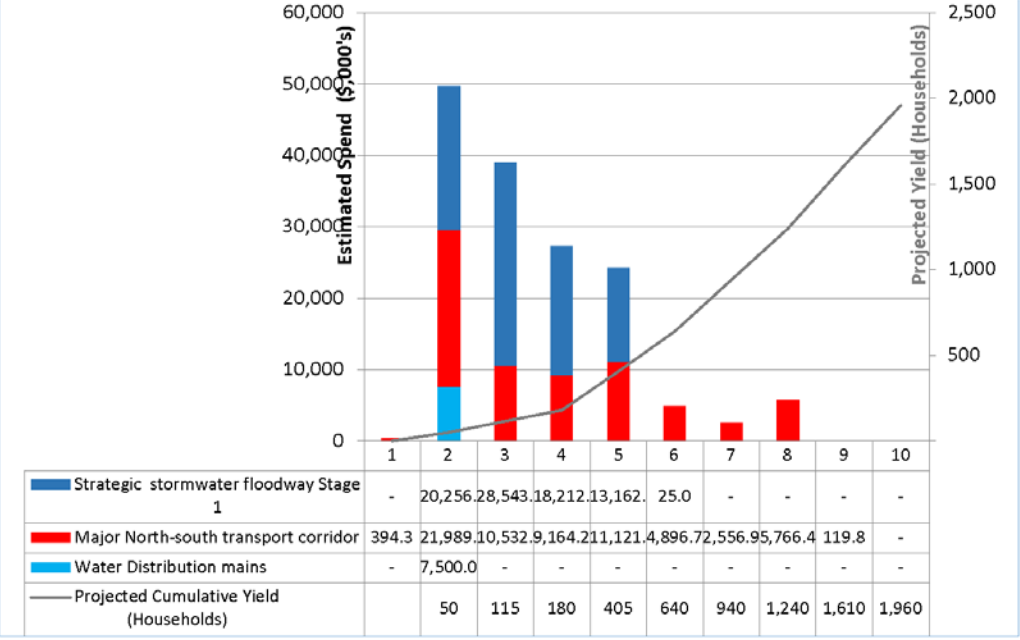
Project Cost Control

The expected project estimates as listed below (2017 $ no escalation).

Stage 1 Strategic lead stormwater floodway	$80.2M
Major North-south transport corridor and network connections	$66.5M
Strategic water distribution mains	$7.5M
Project Total (HIF Proposal)	**$154.2M**

The Peacocke spend profile for the project based on estimated costs and timing is illustrated in Figure 12 below:

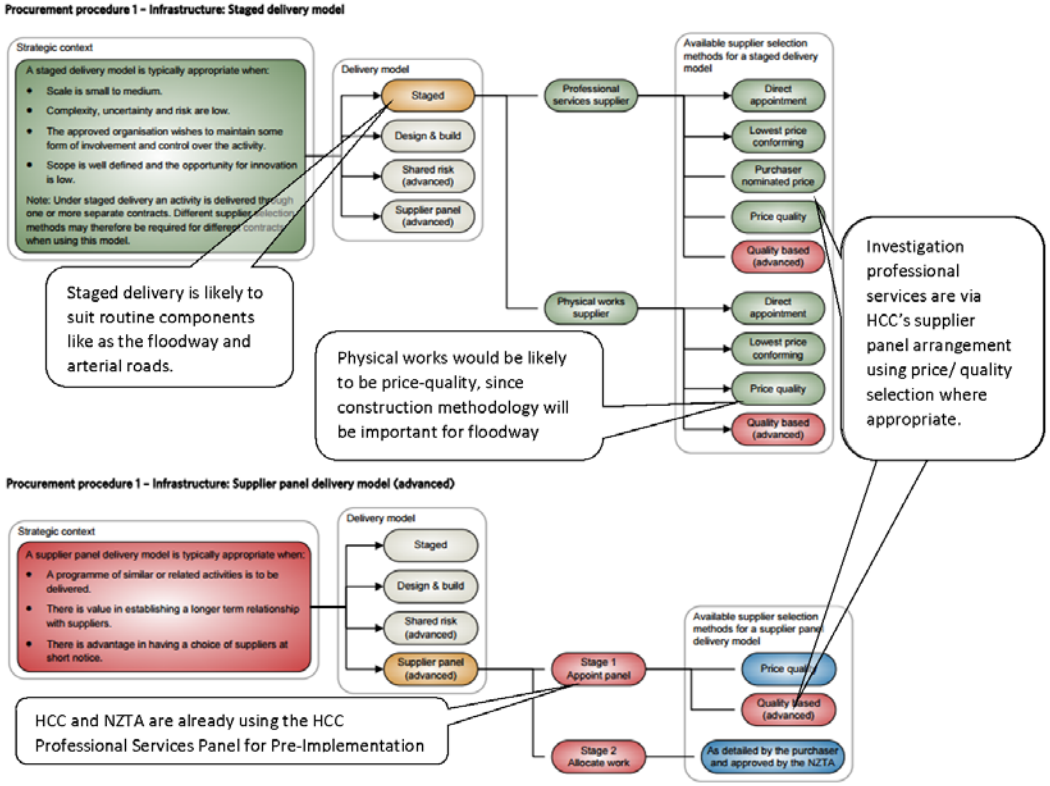
Figure 12: Rotokauri Strategic Utility and Arterial Transport Network – Spend Profile, Expected Yield (Year 1 nominally 2016/17)



Rotokauri Procurement

The road links and stormwater floodway in Rotokauri are routine and will be procured by traditional staged methods. The floodway construction will require construction expertise in dewatering and stormwater management which may match the road construction skillset and allow for earthworks optimisation. This allows us to combine or split the delivery load to deal with market capacity issues and pursue value for money.

Figure 13: Rotokauri Trunk Utility and Arterial Transport Network – Procurement Planning



Rotokauri- Consenting and designations

The Rotokauri structure plan is operational and therefore most urbanisation effects are part of the expected environment and are low risk or land matters. We will potentially require designations for the HIF arterial roads and the floodway, although there are only a few landowners who are supportive of development and the HIF bid, so vesting is an option to save time. The consents for stormwater and earthworks will be obtained at the same time.

6 Assessment Profile

Hamilton City Council's participation in the HIF process is predicated on the HIF presenting an opportunity for Council to achieve accelerated achievement of investment objectives and business needs over a status quo approach.

Our investment objectives and business needs are outlined below:

- **Investment objective 1**
- Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025.
- **Business need 1**
- The Hamilton Urban Growth Strategy states that Hamilton is a city of compact form with infill development, consolidation around key nodes, and an emphasis on the city centre.
- **Investment objective 2**
- Increase the amount of developer ready land to support 11,638 dwellings by 2025.
- **Business need 2**
- Over the next 10 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable for 11,638 dwellings by 2025. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 20% of the projected demand for residential land.
- **Investment objective 3**
- Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045.
- **Business need 3**
- Over the next 30 years, Hamilton is required to provide developer-ready land that is zoned, serviced and commercially viable. This land capacity is a requirement of high-growth local authorities under the NPS-UDC, and is over and above 15% of the projected demand for residential land.
- **Investment objective 4**
- To support affordable housing by 2025 through the allocation of developer ready land for infill, intensification and density increase.
- **Business need 4**
- The Hamilton City Council 10-Year Plan states in Priority 8 that the City will provide access to affordable housing. In the Hamilton Urban Growth Strategy, it is also stated that Hamilton City will provide a range of lifestyle choices with blocks of small and large sections.

The analysis undertaken as part of this business case indicates that all of these investment objectives and business needs can be achieved by through a joint Rotokauri / Peacocke HIF allocation when coma[pared to a business as usual scenario or indeed without a NZTA subsidy.

Benefit cost ratio

The benefit cost ratio of funding both Peacocke and Rotokauri results in a BCR of 18.83.

For each option, the BCR's reveal that large one off capital investments represent the bulk of the costs (e.g., a floodway in Rotokauri and a bridge for Peacocke). The benefits are largely derived from the economic activity generated by housing construction and subsequent household expenditure. There are also transport benefits network wide.

These transport benefits have been noted by NZTA during the formation of our final HIF proposal where NZTA have confirmed Point of Entry status for Peacocke and Rotokauri transport elements. This is significant and indicates clearly that our projects are strongly endorsed by the NZTA as being projects worthy of NZTA funding assistance.

Despite the above, the benefits that would accrue to Council in terms of rates revenue and development contributions are less substantive.

Housing delivery results

Under the combined HIF proposal for both Peacocke and Rotokauri, approximately 4,700 dwellings will be built within 10 years which represent 39% of new housing demand.

In addition, the average infrastructure spend per dwelling built in both growth cells is estimated to be approximately $58,780 within 10 years, and approximately $25,700 within 30 years. These figures do not represent indicative development contributions, and are just aggregated costs divided by dwelling yields across both growth cells.

Conclusion

On the basis of the above initial assessment, both the HIF-Peacocke and HIF-Peacocke (NZTA subsidy) options are preferred over the status quo, with the NZTA subsidised option being the best.

7 Annex

7.1 Funding sources

The funding sources are discusses in the above sections.

Description of options	Scale scope		Service solution		Service delivery		Implementation		Prioritisation		Consequential		Funding	
	SQ	HIF-R&P	SQ	HIF-R&P	SQ	HIF-R&P	SQ	HIF-R&P	SQ	HIF-R&P	SQ	HIF-R&P	SQ	HIF-R&P
Investment Objectives:														
Objective 1	P	F	F	F	F	F	F	F	F	F	N	F	P	P
Objective 2	N	F	F	F	P	P	F	F	F	F	N	F	P	P
Objective 3	N	F	F	F	P	P	F	F	F	F	N	F	P	P
Objective 4	P	F	F	F	P	P	F	F	F	F	N	F	P	P
Critical Success Factors:														
Strategic fit	F	F	F	F	F	F	F	F	N	F	F	F	P	F
Achievability	F	F	N	F	F	F	F	F	F	F	F	F	P	F
Timing and sequencing	F	F	P	F	P	F	F	F	N	F	F	F	P	F
Financial viability	F	F	F	F	F	F	F	F	F	F	F	P	F	P
Market impacts	N	F	F	F	P	P	F	F	P	F	P	F	F	F
Risk management	F	F	F	F	F	F	F	F	N	F	F	F	F	P
Summary of advantages and disadvantages:														
Overall assessment:														
Short-listed options:														
SQ														
HIF-R														
HIF-P														
HIF-R&P														

Table notes:

SQ	Status Quo: Future Proof Rotokauri and Peacocke
HIF-R	HIF Rotokauri
HIF-P	HIF Peacocke
HIF-R&P	HIF Rotokauri and HIF Peacocke
Scale scope	Scale scope and location scores: What levels of road and water services are possible for each option?
Service solution	Service solution: Are there policy solutions for road and water services?
Service delivery	Service delivery: Are there appropriate governance, project management and infrastructure entities in place?
Implementation	Implementation: Are services available to match the annual housing yield?
Prioritisation	Prioritisation / Sequencing: Are transport and water services given appropriate prioritisation and sequencing to meet the annual housing yield?
Consequential	Consequential housing outputs: number / timescale
Funding	Funding: Wider private investment / development
Objective 1	Increase the amount of developer ready land that supports Hamilton to be the third city economy in New Zealand by 2025
Objective 2	Increase the amount of developer ready land to support 11,638 dwellings by 2025
Objective 3	Increase the amount of developer ready land to support the balance of the NPS-UDC dwelling requirements by 2045
Objective 4	To support affordable housing by 2025 through allocation of developer ready land for infill, intensification and density increase
Strategic fit	Alignment with other key council growth programmes and strategies over short, medium and long term for transport and water
Achievability	Overall programme and direct investment can be delivered in required timescales to required standard/quality and corresponding indirect investment and outcomes can be realised, including collaboration and partnering elements
Timing and sequencing	Acceleration of core output (housing) is achieved and wider programmes are able to be delivered as forecast or sped up
Financial viability	Fit with funding constraints, maximises/optimises financial return and capital recycling over short, medium and long term
Market impacts	Developers are incentivised to expedite housing development by accelerating developments, public sector funding matches pace with private sector development and collaboration is fostered
Risk management	Appropriate controls/frameworks, management and governance including partnering, can be established and maintained
F	Fully meets requirements
P	Partial meets requirements
N	Does not meet requirements

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7.2 Glossary

HIF	Housing Infrastructure Fund
HIF Scenario	Urban development scenario based on funding from HIF
HIF (NZTA Subsidy) Scenario	Urban development scenario based on funding from HIF and NZTA funding 50% of the transport infrastructure
SQ	Status Quo
Status Quo Scenario	Urban development scenario based on Hamilton City Council Long Term Plan
BCR	Benefit Cost Ratio
NPS-UDC	National Policy Statement on Urban Development Capacity
MBIE	Ministry of Business, Innovation & Employment
NZTA	New Zealand Transport Agency
NIDEA	National Institute of Demographic and Economic Analysis, this is a University of Waikato institution
HCC	Hamilton City Council
BERL	Business and Economic Research Limited
SOLGM	New Zealand Society of Local Government Managers
SOLGM Cost Adjustors	Forecast price level change adjustors for Local Authorities
CPI	Consumers Price Index produced by Statistics New Zealand
PRINCE2	Projects IN Controlled Environments is a structured project management method

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20 March 2017

Andrew Parsons
City Development Manager
Hamilton City Council
Private Bag 3010
Hamilton

Dear Andrew

Transport Infrastructure (Rotokauri Arterials) - Confirmation of Status as Indicative Business Case

Thank you for the Point of Entry Assessment dated 8 March 2017 for the Northern Hamilton Transport Infrastructure: Rotokauri Arterials and its supporting Business Case Status Summary.

I confirm that this letter shall be read in conjunction with the point of entrance statement agreed with the Transport Agency. That agreement states that the joint investigation work completed to date are equivalent to an Indicative Business Case.

Although the option development is well advanced, and also the fact that the Te Rapa Section of the Waikato Expressway has been built, The Transport Agency agrees that it would be beneficial to review the strategic context, problems and benefits and retest the proposal against the investment objectives noting that the key current problems appear consistent with the Access Hamilton PBC and Regional Transport Committee's draft high level problems and benefits relating to access for growth and access and mobility.

The appropriate point of entry for new activities transport activities in the Northern Hamilton Area Transport Infrastructure is therefore Detailed Business Case.

As discussed, we will continue to work with you to scope these Detailed Business Case activities which will include;

- Being party to an MPFA as part of the Detailed Business Case for the Rotokauri Arterials project. This is to ensure value for money and ensure that the network operates to suit NZTA's and HCC's objectives previously agreed in the Northern Corridor Memorandum of Understanding.
- Detailed project management arrangements and programmes will be in accordance with HCC's management systems and sufficient to satisfy NZ Transport Agency delivery requirements.

I understand that the details, work programme including critical dates will be confirmed once the outcomes of HCC's Long Term Plan discussions and Housing Infrastructure Fund proposal are known.

Item 5

Attachment 8

We look forward to continuing our successful collaboration with Hamilton City Council and Future Proof transport partners in delivering an effective transport system for Hamilton and its surrounding

Yours sincerely

Dennis Crequer
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cc. James Bevan Transport Planning Manager NZTA

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13 March 2017

Andrew Parsons
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Dear Andrew

Transport Infrastructure - Southern Links. Confirmation of Status as Detailed Business Case

Thank you for the Point of Entry Assessment dated 14 February 2017 for the Southern Hamilton Area Transport Infrastructure and its supporting Business Case Status Summary.

I confirm that the investigations including the corridor designation work completed to date for both the NZ Transport Agency (Transport Agency) and Hamilton City council (HCC) components are equivalent to a Detailed Business Case, and that the appropriate point of entry for activities identified as part of the Southern Hamilton Area Transport Infrastructure are therefore determined to be at the Pre-Implementation stage.

I note that it is expected that NZTA and HCC will continue to collaborate during the Pre-Implementation phase activities under way in response to designation conditions and property acquisition. The investigation phase Multi-Party Funding Agreement (MPFA) is being extended to include the current activities.

As discussed, we will continue to work with you to scope these pre-implementation activities, which are likely to include:

- Optimising the network form and function including for walking, cycling and passenger transport infrastructure
- Confirming the mix of modes to progress towards the wider network outcomes agreed through Access Hamilton.
- Remaining consents and ongoing engagement;
- Optimising all project stages and phasing for implementation; and,
- Detailed scoping, design and procurement planning.

Also, as has been the approach with the Southern Links project to date, the Transport Agency expects to be party to an MPFA as part of each implementation phase for the Southern Links commences to ensure; value for money and that the network operates to suit NZTA's and HCC's objectives.

It is expected that prior to implementation there will be a project hold point to allow the Transport Agency to ensure that network form and function, phase scope and multi-party funding agreements are agreed.

We understand that detailed project management arrangements and procurement programmes will be in accordance with HCC's management systems and are sufficient to satisfy the Transport Agency delivery requirements.

We look forward to continuing our successful collaboration with Hamilton City Council and Future Proof transport partners in delivering an effective transport system for Hamilton and its surrounding area.

Yours sincerely

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