

Western BoP Urban Form and Transport Initiative

May 2020

Planning Assessment of the UFTI Programmes shortlist

Contributions from

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Agreed elements to incorporate into the Optimal Programme

NPS-UD compliance – enabling growth up and out and meeting bottom lines

- The Proposed NPS-UD requires substantial planned greenfield capacity in the sub-region, as the ability of intensification to provide the required capacity is limited and the government is focused on achieving competitive land markets by requiring cities to grow both 'up' and 'out'. Agreement on detailed triggers and sequencing of the planned greenfield growth areas needs to be resolved. Other than that, as a general principle, it is agreed that substantially increasing zoned and infrastructure-serviced greenfield capacity can reduce the ability for some higher-priced intensification housing product to compete in the market. The key is to get the right balance at the time.
- There is a strong commitment across the SmartGrowth partnership and through the UFTI project to deliver the planned growth areas. However it is agreed that none of those areas are 'locked down' yet as there are many factors beyond our control. For example net migration to the sub-region, plan changes that must follow an RMA process and can be amended or declined, presence of natural hazards and other land use constraints, required funding for transformational projects affecting the transport system, resource consents for civil infrastructure, lack of funding sources (LGFA debt limits) for required 3-waters and community infrastructure. Some of these factors can be overcome by bold action, but would require removing some local democratic processes and using compulsory property acquisition.
- It is agreed that up-zoning existing urban areas and building new amenities alone does not make intensification at 30-50/Ha actually occur on the ground. It will also need a willing development sector, available finance, and willing buyers for the product. There may be a role for local and central government to be more active in unlocking and delivering intensification.

Intensification

Intensification of the existing Tauranga urban area is planned to increase to at least 40% over the next 30 years, progressed in the following order of spatial priority:

1. Te Papa Peninsula – a current project underway to develop an Indicative Business Case. Residential intensification is to be incentivised through a range of transformational interventions, including Plan Change 26, transport investments in PT and active modes, social housing, and capital investments in community infrastructure and open space. The aspirational target is for Te Papa delivering about 4,000 houses in each of the next 3 decades.
2. Tauranga West (Otumoetai/Matua/Brookfield/Judea)
3. Coastal Strip – noting there are unresolved land use constraints in parts of this city.

Planned Greenfield Growth Areas

Planned Greenfield growth areas are to be progressed through Structure Plan and RMA plan change processes provided that appropriate residential densities can be achieved (allowing for average densities and higher densities around key centres, PT). Providing high frequency PT services and good connectivity into all areas is also assumed. Our large-scale planned areas for the next 30 years to help meet statutory NPS-UD capacity requirements include, in the following order of anticipated 'shovel ready' status:

1. Omokoroa Stage 3
2. Tauriko West
3. Te Tumu
4. Keenan Rd

(Note that smaller areas of additional capacity is provided for in towns such as Te Puke and Katikati).

Longer term greenfield growth areas for 30+ years and a 400,000 population scenario

As part of the implementation of UFTI, there is a need to thoroughly investigate longer term greenfield growth areas to the east, west and north of Tauranga city that will be required following build-out of the planned areas. One of these (most likely the east) may need to be fast-tracked if one or more of the planned growth areas is not available, or delayed unduly. A key assumption is that intensification of the existing urban areas continues at a minimum of 40% of supply each year for many years beyond 2050. If intensification rates rise above 40% in the next 30 years then this will delay the need for further greenfield capacity. This will be monitored over time.

The eastern corridor is agreed to be the first location to be considered, to ensure there is balanced growth east and west. Note that the sequencing of master planning for the western and northern corridors is not yet resolved (see separate section on page 6 below which discusses the merits of the western and northern corridors).

New greenfield urban centre in the eastern corridor near Rangioru Business Park

A new eastern centre will likely be required in the 30+year timeframe, especially if the sub-region remains on track to reach 400,000 population. A new urban centre is preferred (not contiguous to Te Puke urban limits), and will include additional industrial land beyond the existing Rangioru Business Park (RBP) zoning. It is likely to be located adjoining the RBP, near the TEL-SH33 intersection, and close to the rail line.

The timeframe for an additional greenfield centre being needed is influenced by:

- availability of Te Tumu capacity in the medium or long term
- uptake of intensification and all existing zoned and planned capacity
- the need to balance urban growth between the western and eastern corridors.

Key points agreed:

- Need to make the new centre as self-sufficient as possible,
- Following the live, learn work and play SmartGrowth vision, the majority of transport movements will be contained within the wider eastern corridor.
- Te Papa Peninsula and Mount Maunganui will still contain the CBD, areas of highest employment density, and the widest range of metro facilities and amenities; but not everyone from a new centre should need to travel there for work, entertainment or recreation.
- A new eastern centre must be master planned to provide sufficient services, amenities and employment to contain movements to manage the peak travel across the harbour and to enable development at density, scale and pace.

- Given the large scale of growth that is anticipated in the eastern corridor beyond the agreed settlement pattern, it is important to ensure that planning for this growth is aligned with the planning for the transport corridors (especially the PT corridors) back into the central corridor across the harbour. There is a chance that the scale of growth in the east may need to be reconsidered if the right transport connections prove not to be achievable in the future.

Matapihi corridor – possible increased use for an east-west strategic transport link across the harbour for public transport and active modes

Kiwirail advise that the existing 1920s rail bridge replacement across harbour is due in 10-15 years. Their estimated cost at 2020 values is \$80-100 million. The current bridge is not suitable for use for passenger rail services because of lack of safe passenger emergency egress if a train is forced to stop on the bridge. As part of design and consenting for the replacement bridge there would be an option to create an additional paved bridge for buses and active modes only, connecting to existing legal road at eastern and western sides of the harbour. The narrow width of the current shared path prevents it from coping with a large increase in active modes.

For a proposed widened or separate bridge for buses and active modes, this would mean:

- Very positive potential outcomes from a transport perspective
- Significant risks around community opposition from the Matapihi community
- Resource consenting risks given that the project is located in the coastal marine area and hence the NZCPS and Regional Coastal Environment Plan both apply.
- Substantially increased costs for a new multi-modal bridge compared with a like-for-like replacement of rail bridge on existing causeway. There will also be complications resolving the right form for connection to the existing network.

Transport system impacts if new Eastern Corridor centre is part of the 30+yr optimal programme and Matapihi connection does not proceed

For the city to grow east and west of the harbour outwards, if the Matapihi connection is not an option then there would need to be other options for priority PT and improved provision for active modes on the limited east-west connections through the sub-region. This may create challenges with conflicting mode priorities and high traffic volumes, limiting the quality of LOS that may be able to be provided for buses on these alternative routes and potentially affecting mode shift potential to PT. This is especially the case for SH2 Hewletts Rd and to a lesser extent for SH29A and Turret Rd-15th Ave.

On this basis we would likely need an additional transport corridor connecting the eastern and western corridors in next 30 years to take pressure off the central corridor ring road SH2 and 29A. Three options are as follows, and how these are progressed and prioritised is not yet resolved.

1. Passenger rail in the eastern corridor long-term through to the Tauranga CBD on existing rail line via Te Maunga and the Matapihi rail bridge (once replaced), including an additional possible loop track built adjacent to the TEL in the existing NZTA corridor and connecting to the ECMT near Domain Rd.

2. Welcome Bay Road. This route currently plays a secondary function and has limited scope for upgrade to a more major role. Issues are:
 - the urban section through Welcome Bay is already under pressure and it is not realistic to widen into a high throughput arterial function.
 - It is not feasible to bypass the urban area of Welcome Bay.
 - There would be issues associated with widening the rural section such as the probable need to acquire Maori land and challenging topography.
 - A new corridor may need to be considered between Te Puke and the Western Corridor south of Welcome Bay and Ohauiti. Challenging terrain however, and not likely to be realistic.

3. SH29A and SH2 / B2B area:
 - The modelling is still developing but suspect it will show some significant issues.
 - The transport programme should signal for full upgrades to ensure it was 4 lanes in all locations, all intersections were grade separated and driveway accesses were minimised if not removed entirely. Note that we won't be able to deliver PT/managed lanes without additional capacity.

Te Puke to Pāpāmoa East Interchange road connection and Kaituna Link projects

These would better connect the various communities in the east however they face a range of issues associated with:

- flood management exacerbated by climate change and sea level rise
- Kaituna River Document objectives and desired outcomes
- Tangata whenua interests (at least one current iwi management plan expressly states that there should not be any additional vehicle bridge crossings of the Kaituna river).
- extremely poor ground conditions with susceptibility to liquefaction.
- high cost of engineering solutions
- purchase of private properties and the designation process.

It may not be possible to deliver these projects, and reliance may have to be placed on other options e.g. upgrading Te Puke Highway and Bell Rd to better connect Te Puke to Wairakei/Te Tumu.

Thresholds for if/when transition to using passenger rail

An amended version of the Connected Urban Villages programme forms the basis of the Optimal UFTI Programme, which notably includes elements of the Rail Enabled Growth programme. In particular there is significant planned intensification and greenfield growth in areas close to the rail line. There is agreement that we futureproof our planning now with respect to location of potential Park and Ride and PT hubs on the Apata – Paengaroa Corridor to support future mode shift to rail if/when it occurs.

Issues requiring further discussion and resolution to finalise the Optimal Programme

Sequencing of master planning for Western and Northern corridors as Urban Growth areas for a 30+year timeframe and 400,000 sub-regional population

Our projected allocation of residential and business land capacity shows that for a scenario of 400,000 population, we are likely to need further capacity in the northern, western and eastern corridors beyond the planned areas. The merits of substantial greenfield expansion in each of the three corridors are complex in terms of land use and transport integration and there is some uncertainty around the outcomes that would be realised from both an urban form and transport perspective.

For various reasons it is agreed that a new centre in the eastern corridor will be master planned first, however the sequence of the northern and western corridors is more challenging to resolve. Understanding the trade-offs between land use and transport outcomes will be important and will need to be considered as part of the master planning of both areas. Some considerations for the northern and western corridors are set out below:

Northern corridor expansion between Omokoroa and Bethlehem (in particular Te Puna peninsula and Plummers Point).

The northern corridor has substantial committed transport system investment in the proposed Tauranga Northern Link, which should be fully optimized. Also, the rail corridor strategically passes through this area and it provides for a balanced urban form either side of the central corridor and harbour crossings. However, the land use challenges to consider include:

- cultural heritage
- sensitive coastal environment
- many small fragmented landholdings
- multiple-owned Maori land
- water and wastewater servicing

The cultural implications are similar to those at the Matapihi Peninsula.

Western corridor expansion beyond RPS urban limits - including industrial land beyond the Tauriko Business Estate extension and consideration of Merrick/Joyce and Belk Rd.

Tauriko West, TBE extension (lower Belk Rd) and Keenan Road areas are planned growth areas for the next 30 years, with three-waters and transport infrastructure planning underway. While master planning of Merrick/Joyce Roads and Belk Road areas is some time away, consideration of these areas will need to be made through structure planning for three waters and wider transport planning for Tauriko West, TBE extension and Keenan Road growth areas to ensure that the interventions don't compromise potential growth options. This will be done through considering connectivity of these potential growth areas at a conceptual level, noting some additional development capacity in the western corridor beyond the agreed growth areas may be required within the next 50 years.

The western corridor may have some challenges from a transport system perspective given its position on the key inter-regional freight corridor to the Port. Our overall ability to manage competing demands on the corridor over time still needs to be tested. Balancing these demands will be important to ensure provision of access to residential and business growth areas whilst efficient freight access to the Port is maintained. Investment is currently being planned through the Tauriko DBC.

On the positive side in terms of transport and land use integration, the western corridor will benefit from investment in PT infrastructure and priority in the central corridor down Cameron Rd which can be extended into the western corridor. It has the advantage of multiple east/west and north/south connections, including SH29, SH36, Cambridge Rd, Pyes Pa Rd/Cameron Road, proposed Western Corridor Ring Road, Oropi Rd/Fraser St and SH29A enabling resilience and allocation of different functions for different corridors. The large areas of existing and planned employment land that are establishing in the western corridor (particularly logistics and Port-related businesses) align with NZTA's strategy to promote SH1/29 as the key Upper North Island freight route into the Bay of Plenty.

There is a chance that the scale of growth in the western corridor may need to be reconsidered if the right transport connections prove not to be achievable in the future. Hence it is recommended that part of the UFTI implementation plan includes a strategic assessment of these western and northern corridors using a MCA approach to assess these issues in particular from a quantitative perspective, and ensuring we have thoroughly tested the capability of each corridor. This should occur after current processes and projects underway are completed e.g.:

- Tauriko DBC
- Western Corridor water and wastewater studies
- Western Bay Transport System Plan
- Tauranga Northern Link & 4-laning to Omokoroa Road (NZ Upgrade project)
- Revocation process for the current SH2 North from Takitimu Drive interchange to Loop Road in Te Puna.

SmartGrowth will be in a better informed position to consider the merits of these two corridors once these matters are progressed over the next 5-10 years.

Assessment of Programme A - Dispersed Growth

Key Attributes - Lower density growth across the sub-region. Transport system would need to change to provide for increased cross movements to connect people between where they live, learn, work, and play.

Table with allocation of residential capacity for the 30+ years or 62,000 dwellings:

| | |
|--|--------|
| Residential development delivered at 85% greenfield, 15% intensification. Long-term growth areas listed are for additional greenfield and contiguous expansion required <u>beyond</u> the existing zoned land and the planned GF of Te Tumu, Tauriko West, Ōmokoroa, Keenan Rd, Te Puke and Katikati in order to meet NPS-UD residential and business capacity bottom lines. Expansion of Business land also required in West, North and East. | |
| East –Te Puke, Rangiora, Paengaroa | 20,000 |
| North - Te Puna, Plummers Point, Pahoia, Katikati | 15,000 |
| West/South – Belk, Omanawa, Pyes Pa, Orophi, Ohauti | 15,000 |
| Intensification | 10,000 |
| Papakainga | 2,000 |

1. Major and unique transport and urban growth management interventions on the modelling maps

This programme is likely to require the highest level of investment in additional road capacity due to lower levels of mode shift and higher levels of reliance on private vehicles for travel. Road pricing / tolling likely to necessary as well as high parking prices as TDM measures to assist management of peak periods.

High focus required on delivering commercial (e.g. major town centres) and industrial areas in each growth corridor to minimise high distance commuting and achieve live/work/learn/play outcomes. Growth nodes/corridors should ideally be designed to function as far as possible as standalone communities.

2. **Pros and Cons** - Refer to UFTI Problems, Challenges and Investment Objectives, SmartGrowth Desired Outcomes, NPS-UD and NPS-HPL, Climate Change mitigation and adaptation, GPS-land transport (especially desired mode shift), and viability of civil and community infrastructure servicing.

Pros:

- Comfort level to current developer style, and to baby boomers who want stand alone houses and ability to drive everywhere.

- Easier to provide for natural hazards resilience (via landform design and ground improvements) in greenfield development than it is to retrofit it into existing communities.

Cons:

- Significant risks and uncertainties exist in terms of being contrary to the NPS-UD, NPS-HPL, NPS-FM, statutory climate change mitigation goals, and the GPS-land transport.
- Congestion, affects access to live, learn, work, and play.
- Significant loss of versatile soils (HPL)
- Infrastructure costs per hh
- Limited choice in housing typologies.
- Proposes continuing at approx 15% intensification which is contrary to the RPS.
- Key issue is in terms of looking beyond 20 years out, where will the new GF growth areas be to provide the required substantial capacity beyond the planned areas (e.g. Te Tumu, Tauriko West, Ōmokoroa and Keenan Rd). There's a probable need for further greenfield development north of Omokoroa in which there is only a single road corridor (network resilience risk)
- Even with significant investment in expanding the capacity of the transport network the dispersed nature of our employment, retail, healthcare, education and recreation hubs means that mode share by active modes will be challenging to increase as required by Government policy.
- Mode share growth by PT will be constrained due to dispersed growth enabling peripheral urban growth areas where the urban form is not amenable to effective and efficient PT. Successful PT requires frequency and reliability and preferably a gentle sloping topography and grid street network.
- High costs of 3 waters servicing
- Likelihood of congestion on State Highways that affect inter-regional and freight movements.
- Optimisation issues with this programme
- Contrary to current governments funding decisions. This programme doesn't acknowledge these projects (TNL). Will require further complex costly interventions on top of these projects e.g. Tauriko.
- Modal conflict (Hewletts Rd) and lack of network resilience
- Programme is not consistent with the current GPS, partner strategy direction, potentially safety worsening.

3. Uncertainties - Can these cons be resolved or mitigated? How could we improve our level of certainty over time?

Level of certainty will be influenced by legislation and global trends that are beyond scope of UFTI, e.g. conversion of the national vehicle fleet of cars and HCVs to EVs; use of technology and more working/schooling from home; amount of central government investment in major infrastructure delivery to remove it from the Council's balance sheets, etc.

Need more spatial certainty on the maps showing where the 20+ year GF residential capacity would go under the Dispersed option, as it won't be able to avoid areas constrained by hazards, steep topography, or that are protected/sensitive, or HPL or wetlands etc... Most

constraints listed should be able to be largely avoided, except for HPL – there would be a significant need to urbanise HPL (including kiwifruit and avocado land).

The maps for modelling purposes show several new local road connections - such as the Kaituna link, road connection from Te Puke northwards to PEI, link road proposed west of Wairoa River from SH29 to SH2, and western corridor connection. These type of projects carry substantial uncertainties and challenges in regards cultural and archaeological matters, ground conditions, flooding and in some case sea level rise. It is questionable whether any or all of these would ever be able to be approved or delivered.

A further uncertainty exists around land costs. Currently kiwifruit land is expensive and in some cases may be uneconomic to urbanise. Prices may increase further in future. Alternatively they may not or may reduce. Historically there have been some significant ups and down in the kiwifruit industry, the most recent down period occurring the PSA outbreak.

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| 4. How does this programme support the UFTI Investment Objectives? |
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Inclusive Access

From MCA December 2019:

Land use settlement pattern is highly dependent on transport connections that enable people to travel across the sub-region. While there is some self-containment as per SmartGrowth principles, the distances travelled and the time taken to travel will increase which reduces access beyond the travel thresholds. Developing an effective and efficient PT system to serve the dispersed growth is complex and would result in a lower uptake of PT and mode shift to improve accessibility.

The proportion of people living with 15-minute travel times to key services will drop significantly due to the transport interventions causing induced demand by SOVs and increased congestion at known choke points.

Ability to deliver quality PT system compromised by dispersed growth. Low uptake of PT and mode shift will limit opportunities for inclusive access. More significant infrastructure/transport costs required, and higher living costs the further out from the City.

Housing Affordability – ratio of average h/h income to average property value/rent in the WBOP is dropping

From MCA December 2019:

Land release reduces cost but lowers density and is likely to produce larger homes, reducing affordable options and typology choices. Programme unlikely to meet future demand for smaller homes. With the spread of infrastructure there is likely to be higher developer contribution costs. While the land supply could provide more affordable housing, travel costs are likely to be more because of the distance.

There's no evidence of improved h/h incomes or lowered rents from increased share of greenfield peripheral growth - as seen in the property booms of 2003-2007 and again 2015-

2017 when releases of sections and rates of greenfield new home building were peaking and yet rents and incomes remained static. Also construction costs per m² rose significantly due to demand. Council rates and DCs will have to increase due to costs of servicing the new suburbs with 3-waters and roading infrastructure (compared to intensification of established suburbs). A more dispersed growth would also increase the opex \$ for provision of new suburban PT services, and these costs would have to be passed on through targeted rates or fares.

Unlikely to deliver different typologies/ higher densities, meeting the demand for smaller/affordable housing, but may enable additional competition amongst developers which could have positive impacts on affordability. Significant additional measures would have to be implemented, many at a national level e.g. Crown led development of new areas.

Efficiency and Effectiveness of the Freight Network

From MCA December 2019:

Increased congestion and delay, needs significant investment to provide freight capacity. Constrained on key routes. No PT on rail so no sharing of rail lines, rail capacity for PoT.

Agree with comments from MCA above. Note the freight challenges won't just be within the greenfield corridors but will be felt most where these corridors come together in the central corridor. Significant investment would be required in the 'round the harbour' and 'across the harbour' routes but there are limitations around capacity improvements and management techniques like road pricing which are likely to be exceeded. Dedicated freight lanes may need to be considered, but these would have significant effects on other transport modes.

Emissions- Transport emissions in the sub-region have reduced by 2030

From MCA December 2019:

Reliant on EV uptake (same across all options). Low mode share for PT likely. Review to make sure that we're not double counting between access and emissions.

As the proposed transport interventions and more dispersed greenfield growth areas encourage significantly increased vehicle km travelled per person, any gains in reduced private vehicle emissions would have to rely on conversion of national vehicle fleet to EVs. This trend towards low emission vehicles at a national level would be the same for all programmes, so we must look at the differences that each programme would have at the local level in terms of incentives for mode shift.

Continuation of dispersed employment nodes and peripheral greenfield residential growth (i.e. to areas more than 5km from centres and not 'on the way' to anywhere) would discourage switch to active modes like cycling. On the contrary, the maps for modelling purposes show several new local road connections - such as the Kaituna link, road connection from Te Puke northwards to PEI, link road proposed west of Wairoa River from SH29 to SH2, and western corridor connection. These are not likely to be used for cycling and other active modes due to large distances for origin-destination, and any PT use of these new roads would be limited.

5. How well do each of the programmes help satisfy the spatial planning requirements under the Government’s Urban Growth Agenda?

Central Government’s Spatial Planning requirements (Source: MHUD template and guidance Feb 2020)

A long term blueprint for how a metro region would spatially grow and develop to successfully accommodate an assumed future population, society, environment and economy.

The UFTI Final Report and supporting technical reports will feed into development of the sub-region’s Spatial Plan Phase 1 still to come.

The Government’s five National Spatial Planning Objectives are very similar to the four UFTI Investment Objectives that are assessed above. Any additional partner comments on the Government’s objectives relating to facilitating significant mode shift and avoiding protected and high-risk areas are set out below. Inclusive access, transport emissions reduction and housing affordability are covered above.

To direct growth away from protected and higher risk areas

Greenfield expansion is required at a large scale and the level of detail required is not available beyond the planned growth areas. Planned or envisioned future mixed, residential or business activity focussed future urban areas need to be shown spatially for this question to be answered fully. This should be able to largely occur assuming HPL is not classified as protected areas

To facilitate significant mode shift to public transport and active modes

This will be more difficult under this programme due to dispersed growth model, longer travel times and lower assumed development densities

6. Summary Discussion

Not effective or efficient urban form. This is why we have undertaken the UFTI project to avoid this scenario. It is contrary to the four well-being aims of SmartGrowth. It does not take adequate account of increased travel time/costs of accessing employment and essential services and community infrastructure.

Not a desired urban form, not going to be support by our communities and not affordable. There are many projects underway already to shift away from this programme such as intensification plan changes, Te Papa spatial plan and higher densities within new greenfield areas like Te Tumu and Tauriko West. As such even with no additional initiatives a minimum outcome going forward should be to meet and over time significantly exceed the current RPS target of 25% intensification across the sub-region.

Very difficult to achieve alignment against principles and policies in the Urban Growth Agenda for this programme.

Assessment of Programme B - Two Urban Centres

Key Attributes:

- **Highest growth concentrated in Tauranga (Te Papa and Otumoetai Peninsulas), Tauriko up to the Lower Kaimais (Belk, Omanawa), and to the East (Wairakei, Te Tumu, Te Puke and Rangiuuru – employment only) which builds on the current SmartGrowth land use pattern.**
- **Core PT corridors provides for journeys into and around the sub-region. Core public transport spine provides frequent services to connect the two main centres and Tauriko.**
- **The new growth areas enable and support going both up and out.**

Table with allocation of residential capacity for the 30+ years or 62,000 dwellings:

| | |
|---|--------|
| Residential development delivered at 60% Greenfield, 40% Intensification. Long-term growth areas listed for east and west are for additional greenfield and contiguous expansion required <u>beyond</u> the existing zoned land and the planned GF of Te Tumu, Tauriko West, Ōmokoroa, Keenan Rd, Te Puke and Katikati in order to meet NPS-UD residential and business capacity bottom lines. Expansion of Business land also required in West, North and East. | |
| East | 25,000 |
| West | 20,000 |
| CBD Intensification | 5,000 |
| Cameron Rd Intensification | 5,000 |
| Otumoetai Intensification | 5,000 |
| Papakainga | 2,000 |

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| 1. Major and unique transport and urban growth management interventions on the modelling maps |
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Proposes a combination of:

- grade separated interchanges on SH 29 as well as new western corridor link SH36 to Ohauiti Rd
- new green bridge east-west link between Tauranga CBD and Matapihi adjacent to rail bridge, and
- The new routes serving the growth of the east - Te Puke link road north to PEI and Kaituna Link.
- Upgrade will be required for Te Puke Highway

There are some significant risks and issues with some of the transport interventions identified for this programme for example:

- The proposed bus on bridge at Matapihi –
- The Te Puke/Wairakei connection and Kaituna Link projects would better connect the various communities in the east however the face a raft of issues

Given these issues the transport programme for this option should also focus on ensuring the central corridor ring road both across and around the harbour was signalled for full upgrades to ensure it was 4 lanes in all locations, all intersections were grade separated and driveway accesses were minimised if not removed entirely.

This programme could also benefit from consideration of commuter rail in the eastern corridor long-term, especially if an additional bus only bridge at Matapihi was not achievable.

In the western corridor consideration needs to be given to protecting the inter-regional and freight functions of SH29 from urban growth pressures – perhaps through managed lanes. In addition SH29 upgrades currently being planned through the Tauriko Network Connections business case should as far as possible enable local traffic on local roads, this may require some relatively short sections of the existing SH29 to be rebuilt off line, such as the section through Tauriko village. Bus lanes should also be provided between Tauranga Crossing and Barks Cnr at the beginning of Cameron Rd.

2. **Pros and Cons** - *Refer to UFTI Problems, Challenges and Investment Objectives, SmartGrowth Desired Outcomes, NPS-UD and NPS-HPL, Climate Change mitigation and adaptation, GPS-land transport (especially desired mode shift), and viability of civil and community infrastructure servicing.*

Pros:

- Ability for East corridor to add rail later.
- Containment of movement with 30/45 min journeys to the city centre
- Growth of major employment nodes at either end of the east-west growth fronts for the city, with CBD employment in the centre which provides balance either side of the harbour ‘dividing line’ which generates the current major congestion points for all vehicles on SH 2 and 29.
- It may reduce extent of east-west commuting or inter-region travel by car if high frequency PT priority is provided from Domain Rd Pāpāmoa to Tauriko via Matapihi (as proposed on maps).
- Eastern growth front enables potential use of heavy rail line, including a potential new rail line adjacent to the TEL within that new wide corridor following full build-out of Wairakei and Te Tumu.
- Strong alignment with TPSF preferred ‘centres plus’ urban form because of the ambitious intensification aims in two urban centres UFTI Programme to deliver 10,000 dwellings throughout.
- Priority PT provision from western corridor expansion into the CBD is reliant on major transport system upgrades to connect to Greerton and Takitimu Dr, which is part of the Tauriko business case and the link between Barks and Tauriko/SH29/36/29a roundabout.
- Western corridor is relatively simple to service from a water and wastewater perspective

- further development of the western corridor would have to ensure that the freight and inter-regional function of SH29 was protected which is possible through a range of means (managed lanes, limited access, use of other corridors for local trips, delivery of a high quality PT network, ensuring TOD principles adopted in land use planning etc.).
- Ability for increment development, building on to existing urban areas (west and Te Puke) rather than the additional challenge of trying to build a new town from scratch. Likely to be more cost effective.
- Focus on having limited greenfield growth fronts open at any one time to enable funding and resourcing to be focused.
- The western corridor is a proven location for both large scale residential and industrial development, given its proximity to Waikato and Auckland.
- The land around the southern side of the TEL in the vicinity of Domain Rd could be investigated for urbanisation under this programme as it is in the east but more centrally located to Tauranga and Papamoa.

Cons:

- Loss of versatile soils.
- Wairakei/Te Tumu and Te Puke are distinctly separate communities and should not be seen as 'one' centre.
- Quadrupling (?) of size of Te Puke will need significant new investment in all infrastructure. Development can only go south which makes for lop-sided place-making.
- TEL underutilised – Te Tumu and RBP only (unless some growth allocated away from Te Puke to other locations in the east).
- RBP remains remote from population.
- Lower Kaimais development increases congestion on SH29 mixing urban traffic with key freight route.
- Not a clear story about how the eastern corridor communities of 25000 additional dwellings over the next 50 years would connect to each other and to the amenity areas surrounding them, such as the coastline, the Kaituna River, and the wider open space network.
- Wairakei and Te Tumu can work as a coherent and resilient urban coastal strip with PT and active modes along a corridor, but cannot be connected easily with Te Puke as there is a floodplain and/or major river between them.
- Proposed road link north from Te Puke to PEI would be a major feat of engineering to cross the low-lying floodplain vulnerable to sea level rise, liquefaction, and high groundwater table. Similar comments for a Kaituna Link. 2005 and 2017 flood events are relevant. Seek engineering advice from Kaituna Catchment Team at BOPRC.
- Expansion of urban areas close to the Kaituna River, and any bridge over that river, are likely to be opposed by tangata whenua and contrary to the Objectives and desired outcomes of the Kaituna River Document.
- There are known water supply constraints in the lower Kaituna catchment due to a large number of consented groundwater takes for horticulture.
- Many of the proposed transport interventions may not be achievable
- No intensification is provided for along the coastal strip – this is where the market would best respond to intensification opportunities, but at present uncertainties exist about whether these opportunities can be enabled due to natural hazards risks (water based and earthquake based risks).

- Does not align well with Transport planning / intervention hierarchy - utilising /optimising investment in east and North /East.
- VKT increases in areas between centres where quality PT service not provided.
- Resilience -climate change East
- Significant barriers to road construction across floodplain in the East
- increased demand from freight and local resident movements along SH29 will require significant and complex infrastructure due to several pinch points causing increased congestion
- Balance of urban form - North missing (Te Puna)
- Would not encourage market to deliver intensification City centre - takes away focus (employments, residential, commercial) from centre and existing centres.
- Focus would be on the two centres with limited opportunities for shaping urban form and improving PT within existing communities - would be difficult to shift existing mode share.

3. Uncertainties - Can these cons be resolved or mitigated? How could we improve our level of certainty over time?

There's already been comprehensive studies of the western corridor and from an infrastructure perspective it is understood that it's technically possible. Eastern corridor has a very different set of constraints for 3-waters infrastructure servicing of large-scale new Greenfield growth areas.

Growth south of Te Puke urban limits would both require assessment against the NPS-HPL.

This programme delivers an appropriate balance of greenfield development vs intensification. Intensification is much higher than current levels but not at a level that may be unachievable due to a range of challenges like natural hazard management, land covenants, lack of large redevelopment sites etc....

4. How well do each of the programmes help satisfy the spatial planning requirements under the Government's Urban Growth agenda?

Central Government's Spatial Planning requirements (Source: MHUD template and guidance Feb 2020)

A long term blueprint for how a metro region would spatially grow and develop to successfully accommodate an assumed future population, society, environment and economy.

The UFTI Final Report and supporting technical reports will feed into development of the sub-region's Spatial Plan Phase 1 still to come.

The Government's five National Spatial Planning Objectives are very similar to the four UFTI Investment Objectives that are assessed above. Any additional partner comments on the Government's objectives relating to facilitating significant mode shift and avoiding protected

and high-risk areas are set out below. Inclusive access, transport emissions reduction and housing affordability are covered above.

To direct growth away from protected and higher risk areas

Greenfield expansion is required at a large scale in the eastern and western corridor and the level of detail required is not available beyond the planned growth areas. Avoiding low lying hazard-prone areas in the eastern corridor will be critical through any structure planning process, however this forces development onto highly productive land. Planned or envisioned future mixed, residential or business activity focussed future urban areas need to be shown spatially for this question to be answered fully, however UFTI can give direction to the upcoming Spatial Plan exercise.

To facilitate significant mode shift to public transport and active modes

Good opportunities for high quality PT in the central corridor and out to the western corridor e.g. bus lanes and long-term potential BRT or greater.

With sub-regional employment at both Tauriko and Rangiuru, along with a focus on CBD revitalisation and priority east-west PT spine, this will help with mode shift and local trip containment provided that there are sufficient residential densities in and around PT hubs.

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| 5. How does this programme support the Investment Objectives? |
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Inclusive Access

From MCA December 2019:

Most facilities and jobs would be within 30-45 mins and local facilities providing good local access. The three centres of Te Papa/ Otumoetai, Tauriko, and the East provides a structure to the urban form and provides good access throughout via PT services, assuming the growth is evenly spread between the centres.

Provides a level of certainty similar to other programmes in the sense of providing growth “bookends” that increase certainty in terms of investment location and patronage location. Because of the fewer growth areas, the sub region is more compact and provides greater access to the key social and economic opportunities in a shorter timeframe. However, there is considerable risk of extending further into the Kaimais which would be difficult to service via PT.

The proportion of people living with 15-minute travel times to key centres and services will significantly improve because of the extent of housing capacity (15,000 dwellings) to be provided for through intensification in Te Papa and Otumoetai areas – where mode share by active modes can more easily be achieved.

Schooling will be provided locally. Tertiary study options likely to be located primarily in Tauranga, especially in the CBD. This will require significant commute from the western and eastern corridors. Relatively high certainty that high quality PT connections will be in place

from the west along Cameron Rd, not so from the east due to uncertainties with proposed Matapihi bridge, capacity constraints in the central corridor and uncertainty about commuter rail.

Connectivity to business parks /employment centres enable close proximity and connections to residential centres - containment of movements. Further local network improvements will be required to keep up with huge demand

Housing Affordability – ratio of average h/h income to average property value/rent in the WBOP is dropping

From MCA December 2019:

Greater opportunity to go up and out with supporting eastern development to provide additional land supply. With the connection to the Rangiuru Business Park and industry in Te Puke there is potential to encourage higher wage jobs when compared to the base programme, as future economic development opportunities come on-board and provide greater depth and diversity to the economy. The requirements to go up are less than other programmes (Connected Urban Villages for example) and therefore there is greater potential to encourage more mixed use within the centres.

No conclusive influence on average house prices or weekly rent as they are primarily influenced by factors beyond control of local government such as demand, macroeconomic trends, immigration and cost/availability of finance. Intensification throughout Te Papa could be aided by construction of social housing, as there's a known shortage of this type of housing across the sub-region.

Provides for a mix of housing options and locations however ultimately outcomes are uncertain and depend on a range of other factors and interventions, especially government policy.

Effects on housing affordability relative to today or relative to the other programmes is uncertain as there are factors pushing in both directions. However not likely to result in a significant improvement in current housing affordability challenges, at least not in itself. Significant additional measures would have to be implemented, many at a national level e.g. Crown led development of new areas a la Hobsonville.

Efficiency and Effectiveness of the Freight Network

From MCA December 2019:

Growth and intensification in Tauriko, Te Papa and Otumoetai areas likely to create greater temptation to use single occupancy travel options and therefore would impact more heavily on Takitimu Dr and SH2 east, particularly as providing PT services into the Tauriko extensions is complex and difficult to do well. The temptation would need to be managed by Travel Demand Management measures and time of day/use charging. Other tools like parking plans and parking charges would need to be in place to help support the use of the PT services.

Less single occupancy vehicles than dispersed growth, but would need a major east-west PT priority route via Elizabeth Street and Matapihi for example. This is because of the likely increased demand for commuting east-west due to employment growth nodes at Tauriko and

Rangiuru-Te Puke. An alternative dedicated PT route would take cars off the state highway congestion points and lessen the need for grade separated interchanges along SH29.

The freight network through the western corridor would need to be supported through a range of measures to ensure it wasn't compromised e.g. managed lanes, tolling or road pricing, limited access to SH29, ensuring local road corridor available for local traffic, TOD development principles etc. However these initiatives are likely to all programmes not just this one.

If good PT options cannot be delivered for the eastern corridor which appears a real risk then there may be more pressure on parts of the freight network like Baylink and Hewletts Rd, compromising freight outcomes. Especially if there is no Matapihi cross harbour connection.

Increased housing and local travel demand around Tauriko will require significant infrastructure to accommodate on sH29A (3000+17000 dwellings) to ensure journey time reliability is maintained for port movements.

Emissions- Transport emissions in the sub-region have reduced by 2030

From MCA December 2019:

Proximity to jobs and other recreational facilities likely to reduce the distance travelled but on the reverse less likely to encourage significant modal shift that would be necessary to lock in emission reductions. Potentially greater reliance on electric vehicles and other low carbon technologies which could increase the risk of non-achievement.

The proposed transport interventions and more greenfield growth areas to east and west will encourage increased vehicle km travelled per person unless mode shift can be achieved. All programmes need to rely on conversion of national vehicle fleet to EVs in order to achieve the 2030 and 2070 climate change mitigation targets.

The incentives for mode shift, and consequential emissions reductions in this programme are the clearly defined east-west PT and cycling routes that could be established via three routes as shown on maps:

- Harbour Bridge – Hewletts Rd
- A new green bridge Elizabeth St to Matapihi Rd adjacent to the existing rail bridge
- 15th Ave and Turret Rd with 4-laning bridge with dedicated PT lanes

The main negative is the lack of any provision for future use of the rail corridor for passenger transport.

Freight journey reliability issues = increased emissions - Hewletts and SH29

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| 6. Summary Discussion |
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The principle of twin cities is good. It gives the necessary thresholds to ensure economies of scale for the provision of infrastructure, employment, recreational and community needs. However the wrong option for the East is given. Wairakei/Te Tumu cannot connect to Te Puke in a spatial sense – the land between is undevelopable from a natural hazards perspective. A

road could be constructed at significant expense, but the two will continue to be separate settlements. Placing all the development at Te Puke will create significant infrastructure and place-making challenges.

Supported in principle from the point of view of PT provision and higher levels of intensification to support improved environmental outcomes.

Good urban and transport outcomes can be achieved in the west and east. We support further development in the east but not agreed around the location of this development being correct (i.e. not attached directly to Te Puke). Other locational options should be explored. The scale of eastern corridor growth needs to align with there being certainty of delivery of a high quality PT corridor all the way from the east to the CBD. At the moment this is a significant risk due to competing and increasing demands through the existing corridors (SH29A and SH2 Hewletts/Maunganui) and multiple challenges in delivering a corridor through Matapihi and across the harbour whether this being greater use of the existing rail corridor or a new bus only corridor. The TEL can only assist in terms of getting vehicles to Te Maunga interchange.

Assessment of Programme C - Connected Urban Villages

Key Attributes - Growth focused along core PT prioritisation corridors. The PT corridors provide a transport spine and encourage infill development around key transport based hubs. Main PT spines are Omokoroa-Te Puna-Bethlehem-CBD-Mount-Papamoa-Wairakei-Te Tumu and from the CBD to Tauriko. PT priority corridors provide frequent and easy access for commuters and encourage both infill and modal shift.

Easy cycling, walking and active transport access to, in and through the villages with safe, easy, and close distances to local shops and services.

Table with allocation of residential capacity for the 30+ years or 62,000 dwellings:

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| Assumed approximately 30% Greenfield and 70% Intensification. Long-term growth areas listed are for additional greenfield and contiguous expansion required <u>beyond</u> the existing zoned land and the planned GF of Te Tumu, Tauriko West, Ōmokoroa, Keenan Rd, Te Puke and Katikati in order to meet NPS-UD residential and business capacity bottom lines. Expansion of Business land also required in West, North and East. | |
| CBD Intensification | 5,000 |
| Cameron Rd Intensification | 5,000 |
| Pāpāmoa – mostly greenfield in vicinity of the TEL interchange at Domain Rd | 5,000 |
| Mount Intensification | 5,000 |
| Otumoetai Intensification | 5,000 |
| Wairakei/Te Tumu Intensification | 5,000 |
| Greerton Intensification | 5,000 |
| Ōmanu-Arataki Intensification | 5,000 |
| Te Puke Intensification | 10,000 |
| Matapihi greenfield residential and Papakāinga | 5,000 |
| Papakāinga across remainder of sub-region | 2,000 |

Note Significant risks with proposed land use allocations as follows:

- Allocations along the coastal strip for intensification (10-15,000 dwellings) may not be achievable because of natural hazard risks and land covenants, lack of existing development sites etc. (note that large chunks of the coastal strip may have to be left out of the current intensification plan change we are working on because of hazard risks). Liquefaction risk is a significant barrier and may not be able to be resolved. If so, the coastal strip may have to be

largely or fully excluded from this plan change given our requirements to give effect to the RPS under the RMA. This would result in the current planning rules remaining in place which are not particularly supportive of intensification. Through the next District Plan review in the mid 2020's there is a real prospect that further land use change on the coastal strip may have to be limited further. This is an emerging situation and the situation may change in time, but currently the risk around intensification enablement in this location is significant.

- Additional 20,000 dwellings allocated down Te Papa and greater Otumoetai in addition to significant allocation in the first 30 years. This may not be realistic and needs further assessment but would be a great outcome to aspire to.
- Te Puke allocation of 10,000 dwellings must be reallocated to another location in the eastern corridor
- 5,000 dwellings in Matapihi – chance of it happening less than 10%.
- Proposed node at Domain Rd (5,000 dwellings south of TEL), which appears missing from above allocation or incorrectly allocated to Papamoa area, is likely to be too high. Land area suitable for residential development is limited and include significant areas of Maori land.
- No obvious areas to allocate additional brownfield intensification, suggest growth in west or north corridors needs to be considered.

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| <p>1. Major and unique transport and urban growth management interventions on the modelling maps</p> |
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Proposes a combination of:

- Grade-separated interchanges on SH 29 x 3 as well as four-lane bridge at Turret Rd
- New green bridge east-west link between Tauranga CBD and Matapihi adjacent to rail bridge.
- A new route Te Puke link road north to PEI and Kaituna Link as well as four-laning Te Puke highway.
- PT priority in strategic points in existing urban areas where new routes are created, and widening of Boulevard through Wairakei to allow for continuation of PT route once Te Tumu is under way.
- Ferries from Tauranga CBD to and from Ōmokoroa and Salisbury wharf at the Mount.

Comments:

- Refer to comments from two centres programme about Matapihi bus bridge, central ring road, Te Puke to Wairakei connection.
- Bus lanes should not be on Totara St, rather Maunganui Rd.
- Unsure why both high quality bus and ferry PT to Omokoroa is required – bus will be better as can deliver people directly to more destinations.
- We are not convinced by current ferry investigations from Tga to Mount as they assume significant patronage from catchment as far as Bayfair. An issue with the ferry service is the challenge to deliver sufficient park and ride on the Mount side, thereby focus is needed on walking, cycling, micro mobility and perhaps local buses to get people to the ferry.

2. **Pros and Cons** - *Refer to UFTI Problems, Challenges and Investment Objectives, SmartGrowth Desired Outcomes, NPS-UD and NPS-HPL, Climate Change mitigation and adaptation, GPS-land transport (especially desired mode shift), and viability of civil and community infrastructure servicing.*

Pros:

- Villages attractive from a community perspective. Good balance for live, learn, work, and play.
- Complies with the NPS-HPL plus the RPS policies regarding increasing the proportion of dwellings delivered through intensification.
- Complies with most of the policies of the Proposed NPS-UD except those that seek to allow out-of-sequence greenfield peripheral growth outside planned growth areas.
- Supports good environmental outcomes for freshwater quality and protection of ONFLs.
- Strongest of the UFTI programmes to facilitate mode shift due to PT-orientated focus and enabling urban renewal into dense walkable neighbourhoods.
- Very high focus on intensification of existing urban area will reap benefits if there's significant investment in resilience and amenity/placemaking. The Covid-19 pandemic has demonstrated the need for residents to have easy access to local live learn play opportunities and that there's a need for high quality public and semi-private open spaces throughout the more dense urban areas, with multimodal access to larger open spaces such as along coastline, harbours edge and sports fields that can serve multiple functions.
- Provides for an east-west strategic priority PT spine from Ōmokoroa to Pāpāmoa via Matapihi peninsula, whilst future proofing the use of the rail corridor to complement this.
- Likely to minimise investment in State Highways, transport and three waters
- Improved PT and connectivity across all villages. Increased journey time reliability and improved accessibility (pro)
- Better value in PT cost (pro)
- Optimisation, opportunity for modal shift relieving congestion to improve journey time reliability for freight movements and connections for Freight (pro)
- Advantage of programme sees more intensification within the city and higher densities in hubs (pro)
- Bigger uptake in PT services sees a reduction in emissions (pro)

Cons:

- TEL under-utilised – Te Tumu and RBP only.
- RBP remains remote from population.
- Eastern growth focused on Te Puke, rather than a new town. Trebling of population will need significant new investment in all infrastructure. Development can only go south which makes for a lop-sided place-making perspective.
- High cost of kiwifruit land around Te Puke.
- Te Puke Highway will need substantial upgrade to handle traffic.
- Density insufficient for rail?
- Achieving the intensification targets would require strict urban limits to be imposed beyond the four planned greenfield growth areas, and resistance to any further ad hoc requests for plan changes to develop land outside of those areas. This would require ongoing political support

at local and national level, as it does not seem to fully accord with government direction to build both 'up' and 'out' and to over-supply development opportunities.

- Requires a transformation of the residential development sector in the western bay from companies focused on a range of bespoke-design single storey detached dwellings to comprehensive medium and high-density projects of townhouses and stacked apartment typologies. It will take many years to transform the sector and will require intervention of Central Government to assemble land parcels and fund the bold public sector capital investment required to achieve good urban design.
- Many of the transport interventions shown for modelling purposes for this programme are for road building and there is little mention of active modes. The proposed Te Puke link to PEI as well as four-laning existing Te Puke Highway can't be justified under this high-intensification programme.
- Proposes significant intensification of the coastal strip which has risks as discussed below.
- Due to risks with a number of the areas identified for development, it is possible that housing could be significantly under-supplied and housing prices may rise significantly contrary to efforts to improve housing affordability at national and local level.
- The programme does not address industrial land needs. Industrial land needs beyond 30 years cannot all be accommodated in the eastern corridor which is the only greenfield corridor in this programme. Additional industrial land will also be required in the western and/or northern corridor
- Investment in northern corridor (e.g. TNL) not optimised
- Bus (rather than train) network more flexible to deliver people directly to dispersed employment and education hubs
- Matapihi - Can the other connections across the harbour handle demands if a new Matapihi connection is not feasible?

3. Uncertainties - Can these cons be resolved or mitigated? How could we improve our level of certainty over time?

- Need more spatial certainty on the maps and modelling to demonstrate that the capacity of the existing urban areas is sufficient to absorb the large numbers of dwellings as projected.
- Natural hazards, exacerbated by sea level rise and high groundwater table, may increase the cost of construction of infrastructure and buildings along the coastal strip Mount to Pāpāmoa.
- Long-term growth areas listed for east and west are for additional greenfield and contiguous expansion required beyond the existing zoned land and the planned GF of Te Tumu, Tauriko West, Ōmokoroa, Keenan Rd, Te Puke and Katikati in order to meet NPS-UD residential and business capacity bottom lines. Expansion of Business land also required in West, North and East.

4. How well do each of the programmes help satisfy the spatial planning requirements under the Government's Urban Growth agenda?

Central Government's Spatial Planning requirements (Source: MHUD template and guidance Feb 2020)

A long term blueprint for how a metro region would spatially grow and develop to successfully accommodate an assumed future population, society, environment and economy.

The UFTI Final Report and supporting technical reports will feed into development of the sub-region's Spatial Plan Phase 1 still to come.

The Government's five National Spatial Planning Objectives are very similar to the four UFTI Investment Objectives that are assessed above. Any additional partner comments on the Government's objectives relating to facilitating significant mode shift and avoiding protected and high-risk areas are set out below. Inclusive access, transport emissions reduction and housing affordability are covered above.

To direct growth away from protected and higher risk areas

This Programme has the least impact on HPL, agreed by all three local authorities.

To facilitate significant mode shift to public transport and active modes

This programme encourage mode shift with active modes connecting the villages and to rapid transport options. All four partners agreed, however there is a particular risk if the Matapihi connection is not delivered (high risk) and intensification outcomes are less than predicted (also high risk).

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| 5. How does this programme support the Investment Objectives? |
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Inclusive Access

From MCA December 2019:

A number of core PT nodes are established on the main transport spines with frequent and express PT services, providing excellent access to social and economic opportunities. The nodes provide infill opportunities for local communities and enable easy access to necessary facilities within the 15, 30, and 45 minute travel times.

Because the roading corridors are used, access is generally excellent but can be prone to delays particularly when incidents occur on the network. Jobs can be more dispersed and do not need to be as strongly located in the CBD as per other programmes.

Agree with MCA points above. The proportion of people living with 15-minute travel times to key centres and services will significantly improve because of the extent of housing capacity (30,000+ dwellings) to be provided for through intensification in Te Papa and established suburban areas – where active modes and high-frequency PT with priority can more easily be provided for.

Regarding proposed commuter ferries from Ōmokoroa, this appears to be merely a distraction at this point, as the 30-minute travel time appears optimistic and it will never be a genuine mass transit solution for a range of reasons.

Nature of concentrated villages supports LLWP through access to employment in the villages, or access to rapid transport as part of the village connections

Subject to successful implementation of both the proposed levels of intensification and the transport initiatives. There is significant risk around key elements of this, consequently access benefits may not be fully realised.

Better liveability with connections to commercial and activity centres

Housing Affordability – ratio of average h/h income to average property value/rent in the WBOP is dropping

From MCA December 2019:

The multiple nodes provide excellent infill opportunities and different housing typologies. Because of the road based PT system, providing good and timely access to Te Puke and Paengaroa is more complex reducing the opportunity to increase greenfield development in the east of the sub-region. The significantly improvement transport choice for the majority would help reduce the cost of travel.

No conclusive influence on average house prices or weekly rent as they are primarily influenced by factors beyond control of local government such as demand, macroeconomic trends, immigration and cost/availability of finance. Intensification throughout Te Papa could be aided by construction of social housing, as there's a known shortage of this type of housing across the sub-region. Smaller dwellings are more likely to be built under this programme which can assist with affordable rentals in particular.

As outlined above this programme risks housing under-supply and consequently significant upwards pressure on housing costs. In addition, intensification product is not cheap (e.g. apartment costs per m² GFA are circa \$10,000 per m² GFA), although it is noted that intensification can offer some more affordable options for small dwellings e.g. 2 bed 50m² apartment at approx. \$500K.

Better range of housing typologies provided by market - more affordable, easier to deliver mode shift.

This Programme likely to be better because of a greater mix of housing typologies within the villages and their surrounding areas

Efficiency and Effectiveness of the Freight Network

From MCA December 2019:

Less risk of rail capacity constraints for freight but greater potential for congestion impacts and mode conflict particularly in peak periods. Travel demand management measures, including time of day charging and parking measures, would help encourage the use of PT. SH2 corridor likely to be working hard to manage both commuter, PT and freight traffic, which will increase the risk of delays and reduce efficiency.

Less single occupancy vehicles than any other programme, but would need a major east-west PT priority route via Elizabeth Street and Matapihi for example. This is because of the likely

reduced car ownership in dense urban areas and consequent increased demand for commuting east-west due to planned employment growth nodes at Tauriko and Rangioru-Te Puke. An alternative dedicated east-west PT route would take cars off the state highway congestion points and lessen the need for expensive grade separated interchanges along SH29.

Freight function via SH29 and SH2 north protected, more pressure on SH2 (Hewletts) and TEL. TEL likely to have capacity but Baylink probably not.

SH29A could be utilised as a regional connection around the city and enable better freight journey time reliability

Emissions- Transport emissions in the sub-region have reduced by 2030

From MCA December 2019:

Use of the PT spines to move more people would reduce transport emissions and require less dependence on a high uptake of private electric vehicles, or other low carbon vehicle technology. With the PT spines there is further opportunity to provide additional walking and cycling connections to further help reduce emissions. The concentration of infill development near PT hubs is likely to help reduce travel distances and therefore reduce single occupancy vehicle trips.

The proposed transport interventions and limited greenfield growth areas will reduce vehicle km travelled per person. High degree of mode shift can be achieved. All UFTI programmes still need to rely on conversion of national vehicle fleet to EVs in order to achieve the 2030 and 2070 climate change mitigation targets.

The incentives for mode shift, and consequential emissions reductions in this programme are the increased residential densities and either a:

- new green bridge Elizabeth St to Matapihi Rd adjacent to the existing rail bridge, or
- widened 15th Ave and Turret Rd with 4-laning bridge with dedicated PT lanes.

The main negative is the lack of any provision for use of the rail corridor for passenger transport, but is accepted that it does not preclude that option.

There are good outcomes for transport emissions if programme successfully delivered, as residential density around transport hubs will result in less private vehicle use and increased mode shift to active modes.

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| 6. Summary Discussion |
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Support the concept of this programme which highly aligns with projects underway such as the Te Papa spatial plan, however we have reservations about the deliverability of this programme in terms of:

1. intensification levels and locations relative to known delivery challenges
2. the need for some of the transport interventions (e.g. Te Puke/Wairakei link)

3. the deliverability of other transport solutions (e.g. Matapihi connection)
4. the lack of provision for additional industrial land beyond the eastern corridor

Overall we would like to incorporate elements of this programme in an optimal programme but believe it is inadequate to deliver a solution for 400,000 people.

Connected Urban Villages could add a new eastern centre at 10,000 dwellings rather than allocating to Te Puke. This is a population of over 20,000 which would support a Rail hub near Rangiuuru. It would be designed to take advantage of existing infrastructure notably the TEL, Te Puke Highway and ECMT Rail. Such a new town has parallels with the Springfield example in the Comparative Places Report, and would enable place-making and sustainability to be integral in the design and development. It is located by the key employment areas of RBP and the post-harvest sector pack houses, as well as being a convenient commute for the many employed to manage or work on orchards.

The high levels of intensification for some of the 'villages' may be unrealistic. Te Puke becomes a city, which is an overlap with the Twin City Programme. This option is considered the most resilient because of its walkability for people to access retail/food, services, schools, recreation etc.

To be the most preferred it would require less 'road widening' approach than that shown on the maps, apart from the creation of east-west PT spine and north-south (Cameron Rd) PT spine as limited funds should be spent on improving the intensification opportunities and building resilient neighbourhoods.

Regarding potential urbanisation of Te Puna and/or Plummers Point in the northern corridor, this cannot be ruled out for a 50+year timeframe, as discussed in more detail in the high-level summary sections at the start of this report.

Assessment of Programme D - Rail Enabled Growth

Key Attributes:

- **Urban villages based around key public transport hubs**
- **Additional housing and liveable communities are enabled with infill and greenfield developments**
- **Passenger rail from Ōmokoroa to Paengaroa**
- **Bus priority corridors between the CBD, Greerton, Tauriko and the Mount provide high frequency and convenient public transport access**
- **Feeder bus routes and biking/micro-mobility infrastructure linking trips.**

Table with allocation of residential capacity for the 30+ years or 62,000 dwellings:

| | |
|---|--------|
| Assumed approximately 40% Greenfield and 60% Intensification. Long-term growth allocation for east is for additional greenfield and contiguous expansion required <u>beyond</u> the existing zoned land and the planned GF of Te Tumu, and Te Puke in order to meet NPS-UD residential and business capacity bottom lines. Expansion of Business land also required in West, North and East. | |
| East (some of which is intensification in Te Puke near rail) | 20,000 |
| Te Puna | 15,000 |
| CBD Intensification | 5,000 |
| Cameron Rd Intensification | 5,000 |
| Pāpāmoa - Sandhurst to Parton Rd Intensification | 5,000 |
| Matua/Cherrywood Intensification | 5,000 |
| Ōmanu-Arataki Intensification | 5,000 |
| Papakāinga across remainder of sub-region | 2,000 |

Note: Papāmoa intensification seems to be misallocated in the table above – from memory it was to be south of the TEL interchange at Domain Rd. In this location there is some land sufficiently elevated out of the flood plain close to the rail network that could be urbanised. However area is limited in size, and much is Maori land. Unlikely 5,000 dwellings could be delivered – more likely 1,000-2,000.

1. Major and unique transport and urban growth management interventions on the modelling maps

Many transport system interventions of Rail Enabled Growth Programme are same as Connected Urban Villages. Envisions a combination of:

- Long-term planning for 10-12 future passenger rail stations along the existing Apata to Paengaroa rail route, with the ability to operate a high-capacity mass transit line along this

route. It is understood this network would only be commenced once major infrastructure upgrades occurred along this section of the ECMT line. Required upgrades include passing loops, a replacement bridge at Matapihi, and passenger facilities like platforms.

- Park and ride facilities in some locations to enable use of the rail line for commuter express services in conjunction with all-day car parking.
- Grade-separated interchanges on SH 29 x 3 as well as four-lane bridge at Turret Rd

Land use – points to note:

- Ability to deliver intensification in Te Puke likely to be limited
- Primary catchments for rail are circa 800m-1km from the station. Many of the logical station locations have significant constraints within these catchments as follows:
 - CBD – Over half catchment area is located in the harbour. Further it includes large areas that are not likely to be developed – Tga Domain. The average density would have to double where only 50% of the catchment was available for development.
 - Matua/Cherrywood – Large areas within Tga harbour
 - Bethlehem – large areas in the harbour, large areas of Maori land
 - Bayfair – industrial areas, stormwater reserves (Omanu golf course) and Tga airport. Flight path likely to limit height and proximity to airport may limit medium/high density zoning
 - Domain Rd – large areas of low lying peat, 100m wide TEL designation, Maori land
 - Omokoroa – new housing developed at low densities with land covenants – redevelopment potential is low
 - Apata – Acknowledged that only suitable for park and ride and small inland port storage.
 - Te Puke, little development land north of the rail line
 - Te Puna – there are large areas of Maori land.
- Overall significant constraints with creating density in most catchments.
- Employment projections show significant growth within the CBD – but overall employment growth is expected to remain relatively dispersed across the sub-region reflecting the current and expected economic make up with a focus on port and port related businesses, horticulture, tourism etc. Doesn't appear likely that there would be sufficient jobs and tertiary study opportunities to drive sufficient rail ridership

Transport

- There are a range of substantial issues that require further investigation in regards a high quality frequent commuter rail service in the long-term such as:
 - Demand modelling (ridership)
 - Need to replace the Matapihi rail bridge
 - Need to grade separate rail crossing – some of which may be extremely difficult or not possible (e.g. Dive Crescent to the Strand)
 - Replacement of the Matapihi Bridge
 - Need for full/partial double tracking
 - Resilience of network to climate change (much of rail network is low lying in the coastal environment and subject to climate change risks)
 - Sensitive communities (e.g. Matapihi)
 - Cost of upgrading the network (rail network, stations, rolling stock, operating costs etc.)

- Fuller analysis of rail v bus v ferry options in mode neutral manner e.g. comparing 15m or 30min trains v buses every 6 or 10mins
- Ensuring the current focus of the rail network to move freight, support the PoT and NZ Inc. is not undermined (including potential effects of closing ports of Auckland), noting some parts of the network have already been ruled out as having capacity for commuter rail (Bayfair to Mt Maunganui).
- See comments on earlier programmes around Te Puke to Wairakei connection and Kaituna Link projects

2. Suggested triggers for interventions? Consider time, population, level of intensification/density being achieved, planned growth area not being available, change in Government policy and legislation etc.

Under this Programme would want to see either the green bridge to Matapihi **or** the four-laning of Turret Rd bridge for PT lanes in next 10-15 years. BOPRC preference is for Matapihi route, which we see as either built as part of the replacement of the 1920s rail bridge or an adjacent single-lane bridge for buses and active modes only, however this would be hard to justify. This intervention would be required to provide accessibility to serve the growing population during the proposed large-scale intensification of Te Papa and the coastal strip.

Given the significant undertaking of delivering growth at scale in two new greenfield settings we suggest that there should be a focus of developing one corridor ahead of the other. Probably to east initially. To mitigate uncertainties about the desirability of growth in the east from a large-scale demand perspective it would be preferable to commence an initial stage of development within the second or third decade to test assumptions.

3. **Pros and Cons** - *Refer to UFTI Problems, Challenges and Investment Objectives, SmartGrowth Desired Outcomes, NPS-UD and NPS-HPL, Climate Change mitigation and adaptation, GPS-land transport (especially desired mode shift), and viability of civil and community infrastructure servicing.*

Pros:

- East - rail has significantly more capacity than north and therefore easier to fit passenger rail in. Rail provides a sustainable long term solution to development in the East. However this is subject to Matapihi issue and critical scale of growth in the east being achievable
- Rangiuru/Paengaroa area gives ability to develop a new town from scratch, flat land, TEL, Te Puke Highway and Rail. Also provides access to the wider BOP. Parts are in high value kiwifruit.
- Rail network already in place which makes protecting the corridor to future proof for rail quite simple
- Conceptually there are a number of benefits of commuter rail e.g. providing more transport choices, mode shift, taking pressure state highway network etc.
- Could consider long-term a branch line/realignment along TEL to provide for rail access to Te Tumu and Wairakei

- Renewed government interest in optimising use of rail network and commuter rail in metro areas
- The rail corridor runs right through the sub-region and connects us to the Waikato and Auckland. It is in public ownership and fixed in place, and therefore provides investment certainty for the Crown and investment partners.
- There is significant community support for use of passenger rail in the future to reduce peak hour traffic congestion, particularly through engagement on the Proposed FDS in 2018.
- While Te Papa intensification is a priority over the next 10 years, and is supported, it would be logical for established Tauranga suburbs along the rail corridor to be the next areas of focus under this UFTI Programme. Some of these areas have older housing stock in high amenity areas and have potential for intensification within walking distance of future rail stations.
- Buses and trains can work together effectively as parts of the transport system.

Cons:

- Te Puna transport links to the City will be via existing SH2 through Bethlehem, or via the TNL. Adding this traffic to a fully developed Omokoroa, plus Katikati and rural growth, will cause distribution problems at the City end, especially at Takitimu Drive intersection. PT will be critical, but rail is not likely to be able to solve that issue. There will be rail complications in the North, firstly because of the increase in volumes of freight on that line with the overall growth of the sub-region, but also as the Port is likely to seek an inland facility at Apata to manage its logistics.
- Te Puna has substantial constraints such as cultural, coastal, multiple small landholdings, multiple-owned Maori land, some challenging contour, lack of three waters infrastructure.
- Both East and North take up substantial areas of versatile soils.
- Programme requires development of at least 2 new towns from scratch (in Northern and Eastern corridor) reduces the ability to leverage off existing infrastructure and amenities, limited or no public (central / local government) landholdings making Hobsonville type approach more challenging.
- Significant question marks remain around the land use and transport components of this project (see earlier comments)
- Programme not likely to deliver sufficient industrial land in locations with the high demand (i.e. western corridor)
- Even if the land use and transport components of this programme were implemented there is insufficient evidence to suggest that it will create mode shift, that ridership would be sufficient to justify use of the rail line (even if subsidised) and that the wider transport system would operate satisfactorily.
- Commuter rail is not likely to be implemented for a number of decades, technological changes may mean rail is not a preferred option in the long-term
- Programme will require significant investment in bus/ferry networks ahead of rail being implemented
- Rail network doesn't serve major areas where development has occurred or is planned e.g. Mount North, Western Corridor and Wairakei/Te Tumu, Katikati as such programme will take much longer to implement than other options. Unlikely that current land use pattern would be amended in short-medium term to align with this programme given current housing supply and cost challenges which would be exacerbated by changing direction

- Because commuter rail to Mount not achievable, ability to leverage tourist and weekend demand to the beach etc. limited
- It is assumed that the amount of rail freight carried on the ECMT by diesel locomotives would continue to increase as the Port expands its volume and economic growth continues in the wider region. This would influence the logistics of high-frequency passenger rail services on the line.
- Significant infrastructure costs with upgrading the rail line and particularly the bridges.
- Consentability and constructability (to double track) on existing rail corridor difficult - bridges, coastal marine area, manage construction with existing freight movements?
- Doesn't provide balanced urban form, possibility that it would sacrifice development intensification opportunities in Te Papa / CBD with focus around rail corridor. Maybe focus on less hubs instead.
- Would not encourage market to deliver intensification in city centre - takes away focus (employments, residential, commercial) from centre/ existing centres.

4. Uncertainties - Can these cons be resolved or mitigated? How could we improve our level of certainty over time?

- Opportunity for inter-regional passenger rail to Hamilton and Auckland is uncertain due to safety issues of using the Kaimai tunnel.
- Development in the east can avoid hazard risk areas but would have to locate on highly productive land.
- Further assessment required on land use allocations and sensitivities of different land use allocations within this programme. For example what if there was less development at Domain Rd, Bayfair and eastern corridor on feasibility of rail in the east.
- Omanu/Arataki (i.e. Bayfair) intensification is questionable due to natural hazard risks 50:50 chance.
- Significant more work required to issues like ridership, infrastructure upgrade requirements, costs, cultural issues etc.

5. How well do each of the programmes help satisfy the spatial planning requirements under the Government's Urban Growth agenda?

Central Government's Spatial Planning requirements (Source: MHUD template and guidance Feb 2020)

A long term blueprint for how a metro region would spatially grow and develop to successfully accommodate an assumed future population, society, environment and economy.

The UFTI Final Report and supporting technical reports will feed into development of the sub-region's Spatial Plan Phase 1 still to come.

The Government's five National Spatial Planning Objectives are very similar to the four UFTI Investment Objectives that are assessed above. Any additional partner comments on the

Government’s objectives relating to facilitating significant mode shift and avoiding protected and high-risk areas are set out below. Inclusive access, transport emissions reduction and housing affordability are covered above.

Comments:

To direct growth away from protected and higher risk areas

Can be achieved, although significant growth on highly productive soils

To facilitate significant mode shift to public transport and active modes

The proposals for growth focused along the rail line and core PT prioritisation corridors is will incentivise mode shift to PT in particular.

Hard to gauge as ridership / demand data not available nor assessment of catchment development/redevelopment constraints; thinking is that it wouldn’t perform as well as a bus network which can be more frequent and flexible in terms of route location but more work required to compare bus, rail, ferry.

6. How does this programme support the Investment Objectives?

Inclusive Access

From MCA December 2019:

A number of transport nodes provides an opportunity for intensification along the rail corridor and increases access to social and economic opportunities within the 30 and 45 min timeframes. The self-contained local hubs provide an urban village environment with good access to education, health, and other critical service within the 15min frame.

Regular passenger trains providing access into the CBD and connecting with the Te Papa spine is assumed which will provide excellent access. Access to Mount Maunganui is via PT and prioritisation is in place as it is difficult to achieve a Mount Maunganui rail stop without impacting on export movement.

Agree with MCA points above. The proportion of people living with 15-minute travel times to key centres and services will significantly improve because of the extent of housing capacity (30,000+ dwellings) to be provided for through intensification in Te Papa and established suburban areas – where active modes and high-frequency PT with priority can more easily be provided for.

Commuter rail network would not provide direct access to a walkable radius of a number of large employment areas e.g. transfers to buses would be required for Mount North, Mount industrial area, Wairakei town centre, Hospital, Greerton & Tauriko.

Rail would have to be combined with other modes and interventions to create better access as rail doesn’t go to many key employment or education hubs. Travel via rail will require many

legs e.g. potentially, bus to rail station/drive to rail station, rail to city, transfer to bus to final destination. Travel times may be significant limiting uptake.

Housing Affordability – ratio of average h/h income to average property value/rent in the WBOP is dropping

From MCA December 2019:

The increase in infill around the PT hubs has a greater chance to achieve a mix of housing typologies. Assumes long term affordability improves with the ability to increase housing along the rail corridor over time, and consideration of the total cost of living lower with greater modal choice, and concentration of service around rail hubs has been considered.

Opportunity for lower cost housing in Te Puke and Paengaroa areas without creating additional transport costs is significant. With more CBD job growth, and increased potential for niche manufacturing, there is greater opportunity to increase average incomes and less reliance on a low wage economy.

No conclusive influence on average house prices or weekly rent as they are primarily influenced by factors beyond control of local government such as demand, macroeconomic trends, immigration and cost/availability of finance. Intensification throughout Te Papa and along the rail corridor could be aided by construction of mixed tenure and social housing close to mass transit, as there's a known shortage of this type of housing across the sub-region. Living in close proximity to a passenger rail station and local bus network can assist with reducing household travel costs through reduced car ownership.

There are high costs of building new towns that are not contiguous with existing urban development. If, from a demand perspective people may not be willing to pay as much to live in the east inland from the coast, it could present a risk to development occurring at scale and a risk to the development economics of such projects.

Efficiency and Effectiveness of the Freight Network

From MCA December 2019:

Rail capacity improvements on ECMT (double tracking, passing lanes etc.) enable freight and passenger trains to be accommodated. Modal shift to PT assumed to create capacity on roads for freight that has to travel via the SH network. Because of the reduction in the number of commuters, use of the roading network to access industrial areas and the Port etc. will have increased. Travel Demand Management measures are still required to support the use of PT.

There's a strong case that a rail service via Matapihi could provide a popular east-west PT priority route between Ōmokoroa and Pāpāmoa in particular. In respect of the MCA comments above while rail may create mode shift, this is likely to be offset by general population growth meaning roads are more congested and access to industrial areas and the Port is worse – i.e. % of commuter trips may be higher (e.g. 20% instead of 10%) but number of commuters still higher than today's levels). Much more work required to assess these issues.

Emissions- Transport emissions in the sub-region have reduced by 2030

From MCA December 2019:

Increase in modal shift to rail passenger and low emission travel options expected to reduce transport emissions. While the distances are shorter than some programmes, the concentration of growth around hubs and the rail corridor mean that travelling is predominately via the PT system.

The use of PT and the uptake of PT means there is considerably less reliance on other low carbon technologies to come to market and be viable than other options considered.

A reliable and high-frequency passenger rail service could create a high degree of mode shift to PT for regular commuters provided that other incentives (integration with local bus services, fuel taxes, car parking restrictions/pricing) were also present. The rail enabled growth programme still needs to rely on progress of conversion of national vehicle fleet to EVs in order to achieve the 2030 climate change mitigation targets however, because passenger rail service will not be available by then.

To enable increased mode shift to higher speed active modes like e-bikes and e-scooters, parts of the rail corridor could be widened and sealed to allow use for these modes until passenger rail is operating. These widened areas alongside the existing tracks could be designated for future construction of train passing loops. This would be particularly effective where the rail corridor provides a direct and safe route from residential to employment areas in comparison to the road network. Acknowledge this would be challenging though due to private property adjoining the corridor.

Conceptually this programme would deliver positive outcomes for transport emissions. However major risks exist in implementation which mean these benefits may never be realised.

7. Summary Discussion

The level of assessment of rail options is very preliminary and has significant gaps and assumptions. Our view is that we are a long way away from coming to a sound conclusion about whether commuter rail could work in a western bay context for a population of around 400,000 people. We note that our current urban form and agreed urban form for the next 30 years is not particularly supportive of implementing rail from an origin / destination perspective, including the lack of critical mass of jobs and tertiary study at the main destination of the CBD along with constraints due to line running alongside the harbour. Also this programme could conflict with planned Te Papa intensification, and it extends away from rail corridor.

We also note that significant cultural issues around using the rail network in respect of the Matapihi community.

While we are open to commuter rail long-term, our support for a rail based programme extends only to:

- protecting the rail network (which should be a given that requires little or no action)
- enabling growth in locations along the rail network e.g. in the eastern corridor or Te Puna

- enabling growth near the rail line through intensification spatial planning in suburbs like Cherrywood and (subject to natural hazard risks) Bayfair.
- ensuring growth along the rail line is not reliant on commuter rail in future i.e. can function well using bus/ferry
- exploring urban growth south of the TEL in the vicinity of the Domain Road interchange which is alongside the rail network
- exploring inter-regional rail opportunities
- ensuring the freight function of the rail network is retained and enhanced
- supporting job and tertiary study growth in the CBD