Auckland Rail PBC Passenger demands

- 2025 CRL opening scenario (quality compact land use)
- 2051 Lean do minimum scenario (quality compact land use)
- 2051 Reference case scenario (quality compact land use)
- 2051 Base case scenario (intensive land use)

May 2022

WSP NZ, Rail & Transit and AFC

Question today
Imagine tomorrow
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Auckland Rail Programme Business Case
Interim Report on Demand Modelling
Auckland Transport

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REV	DATE	DETAILS
1.0	7/03/2022	Internal draft for review
1.2	9/03/2022	Reflect internal review feedback and add patronage by segment
2.0	19/04/2022	Add CRL opening, quality compact and intensive land use scenarios
3.0	16/05/2022	Draft issued to Client for review

	NAME	DATE
Prepared by:	9(2)(a) - Privacy	16/05/2022
Reviewed by:		
Approved by:		

Purpose

The purpose of this document is to document the passenger demand across the rail network based on various network and land use input assumptions. It serves as input and reference document to inform the option development stage.

This document contains 4 demand scenarios:

1	**CRL Opening (2025) (with quality compact land use by 2025)**
2	**Lean do minimum (with compact land use at 2031 and 2051)**
3	**Reference case (with compact land use by 2051)**
4	**Base case (with draft intensive land use by 2051)**

Document Structure

	Key observations
1	**1.1 Description of land use scenarios** **1.2 Description of demand scenarios**
2	**Regionwide demand picture**
3	**Demand patterns for each service**
4	**Station demands**
5	**Origin destination summary**

Key observations

Land use scenarios

1. Scenario I-11.6 forecasts households to increase by 51% between 2021 and 2051. Comparing the growth rates for rail adjacent zones with those of the Auckland region as a whole shows the growth rate is significantly higher for rail adjacent zones. These are forecast to increase by 72% between 2021 to 2051

2. Employment forecast however, shows a lower growth forecast (+31%) for rail adjacent zones when compared to the Auckland Region (+36%). This suggest significant employment growth outside rail catchment areas.

3. The intensive land use scenario has similar growth rates than the Scenario I-11.6 for household, population and employment numbers in the Auckland Region. However it differs by allocating more of the growth along the isthmus and city centre. Rail adjacent households are forecast to increase by 89% between 2021 to 2051 under the intensive scenario compared to an increase of 72% under Scenario I-11.6. Employment forecast for the intensive scenario growths slightly faster than Scenario I-11.6 (+33% vs. +31%) but still lags the Auckland Region (+36%).

4. The rail adjacent corridor south of Takanini sees a significant lowering in household growth (10,500 less households) by 2051 when comparing the Intensive and I-11.6 land use scenarios.

Regional rail statistics

1. Annual weekday boardings on the public transport network is forecast to double (+108%) between 2018 and 2031, and by 2051 it is forecast to more than triple (+242%) from the 2018 base. The boardings/capita for the entire PT network is forecast to increase from 52.3 (2018 level) to 121.8 by 2051 for the Base Case.

2. Heavy rail is forecast to lose PT market share over the forecast period if no further investment is made beyond CRL Day 1 train plan (26% market share by 2026 down to 17% market share in 2051).

Key observations

Regional rail statistics

3. The number of heavy rail boardings is forecast to double from the 2018 base (+102%) by the time CRL opens (2025).
4. The annual weekday boardings are forecast to reach 34.8M by 2025 with the implementation of the CRL Day 1 train plan. By 2051 it is forecast to triple (between +176% and +207%) from the 2018 base, increasing to between 47.7M and 52.9M annual weekday boardings.
5. Rail's boardings per capita is forecast to double from 10.9 (2018 level) to between 20.95 and 22.60 by 2051.

Regional mode share

6. Private vehicle mode share is forecast to reduce from 77.8% in 2018 to 67.1% by 2051 under the Lean DM. The Base Case scenario reduces the private vehicle mode share further to 64.3%.
7. Public transport's mode share is forecast to increase from 7.5% in 2018 to 13.9% under the Lean DM scenario and 15.7% under the Base Case scenario.
8. These public transport mode share percentages are still well below the 2050 target of 35% in Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan.
9. The per capita private vehicle kilometres travelled on the network is forecast to increase between 2031 and 2051 under both the Lean DM (+1.6%) and Reference Case (+1.5%) scenarios but decrease under then Base Case scenario (-3.1%)

Patterns

10. Rail is a very attractive option for trips from rail adjacent zones to the city centre – with a vast majority of trips to the city centre via PT. The major opportunity to influence further mode shift lies within trips not going to the city centre – (internal to rail corridor).

Key observations

Patterns

11. 53% of all peak boardings on the rail network head for the 4 central city stations - Newmarket, K'Road, Aotea and Britomart. These stops remain a key market for boardings from all sections across the rail network.

12. By 2051 the southern line (Pukekohe to Homai) as well as the Eastern Line (Sylvia Park to Orakei) are forecast to deliver the highest number of passengers aligting at any of the 3 city centre stations. The southern line (Pukekohe to Homai) is also delivering the highest number of passengers to Newmarket.

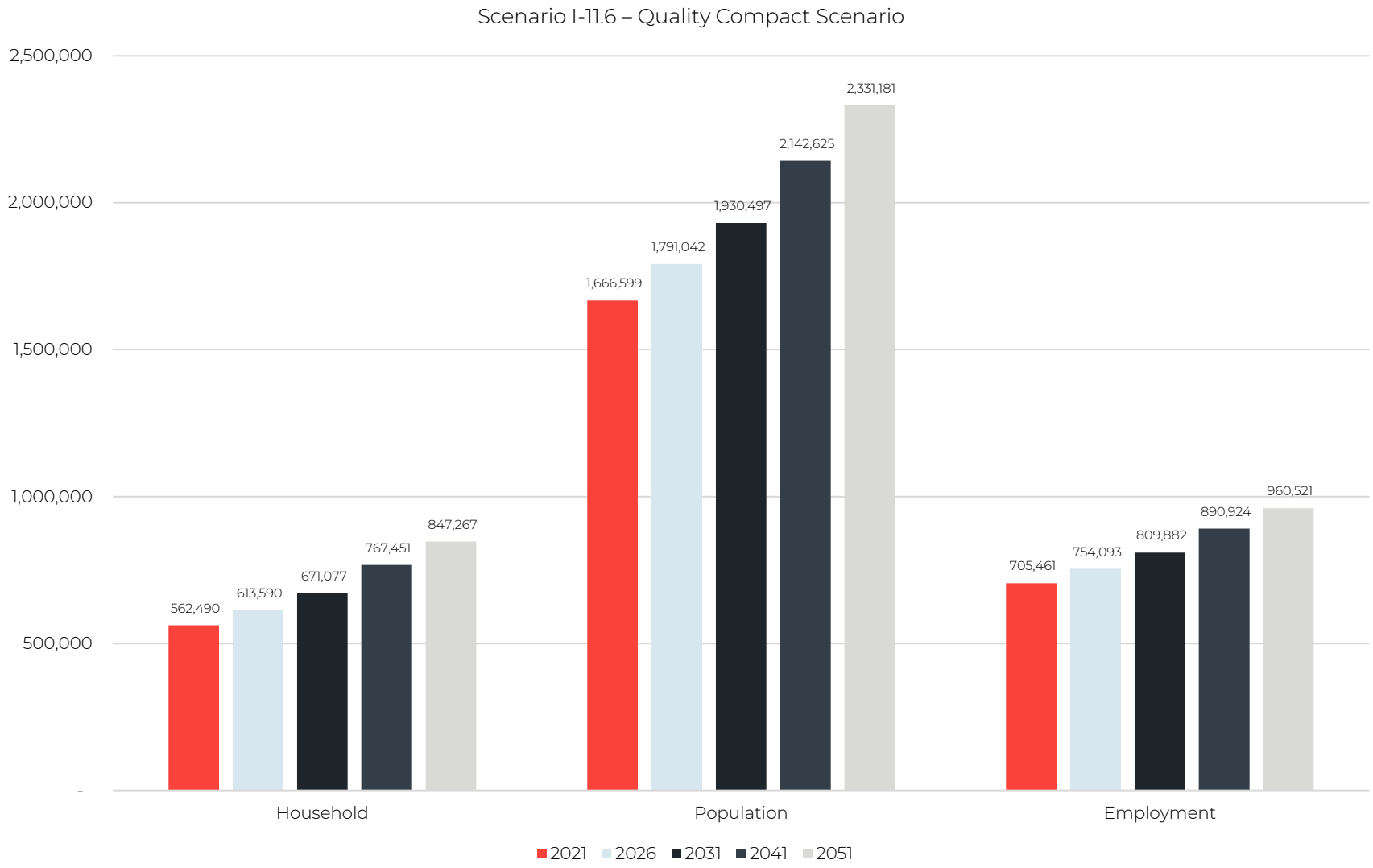
13. The western line (between Mt Albert and Kingsland stations) is forecast to experience demands between 80%-90% of available capacity as early as 2031. The introduction of the north-western light rail removed the PT capacity issues along the north-western motorway corridor and impacts demand for rail services along the western line. However, by 2051 demand is still forecast to exceed available capacity from Morningside heading towards the city.

14. The base case includes extensions to the bus lanes (and eastern busway services) along Elleslie-Panmure Highway. This reduces the demand on heavy rail travel from Panmure towards the city, however it still results in forecast demand on both the rail services and the busway services to exceed available capacity by 2051. This situation constrain public transport access from the eastern suburbs to the city centre.

15. The lower demand coming through from the southern growth areas result in the forecast demand for the southern line (between Puhinui and Otahuhu stations) to remain within the available capacity by 2051. However this demand is still well above available seated capacity (i.e. require passengers to stand for significant time periods) and policy direction on the acceptable duration to stand will influence the volume/capacity summary.

1.1 Description of land use scenarios

Quality compact land use scenario (I-11.6) region wide



Scenario I-11.6 forecasts the following increases from 2021:

1. 285,000 more households by 2051 (an increase of 51%)
2. 660,000 more people will be living in Auckland by 2051 (40% increase in the region's population)
3. 255,000 more employment opportunities by 2051 (an increase of 36%).

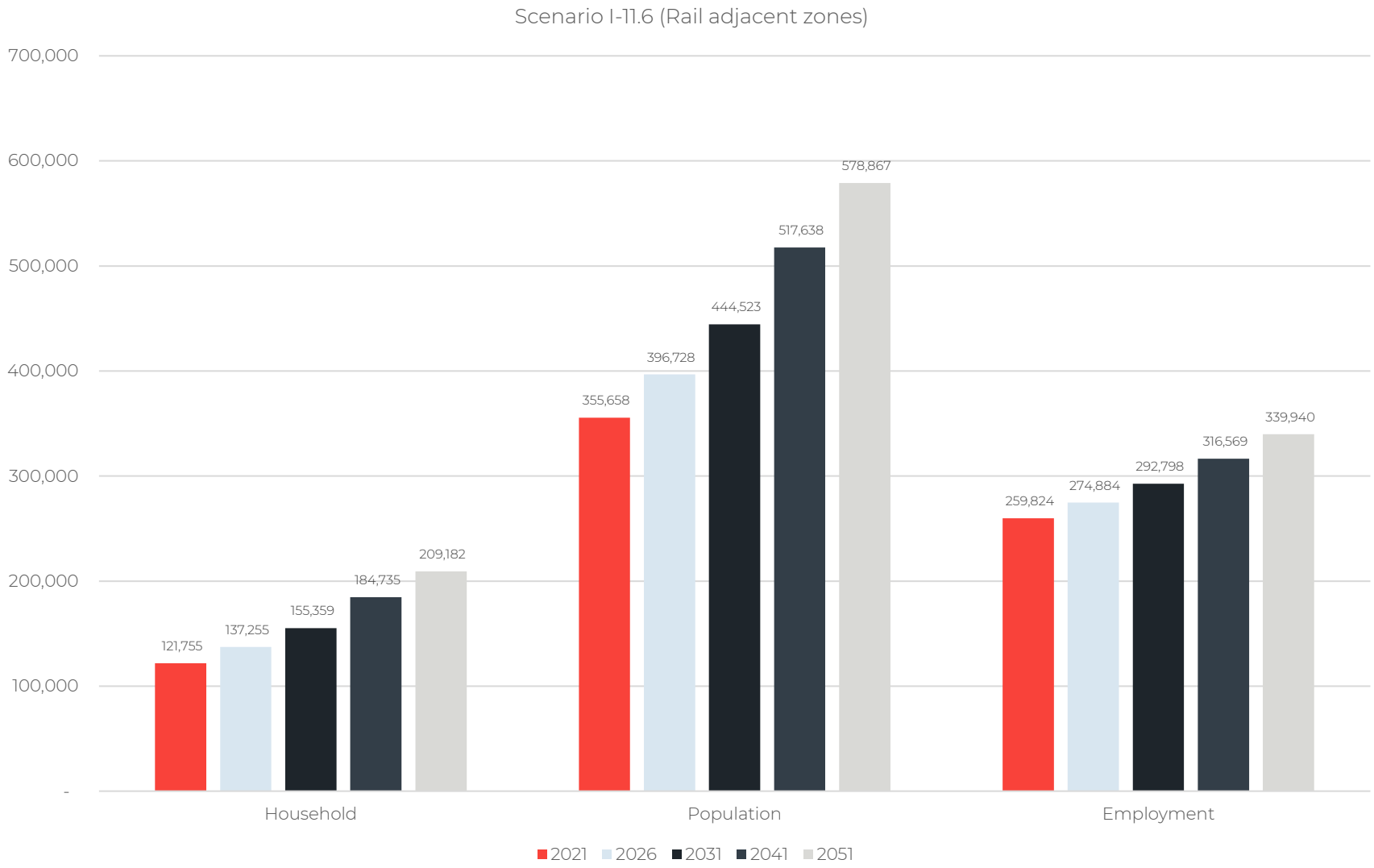
Percentage increase from 2021

Scenario I-11.6	Household	Population	Employment
2021			
2026	9%	7%	7%
2031	19%	16%	15%
2041	36%	29%	26%
2051	51%	40%	36%

Actual increase from 2021

Scenario I-11.6	Household	Population	Employment
2021			
2026	51,100	124,442	48,633
2031	108,587	263,898	104,422
2041	204,961	476,026	185,463
2051	284,777	664,582	255,060

Compact land use scenario (I-11.6) rail adjacent zones



Comparing the growth rates for rail adjacent zones with those of the Auckland region as a whole highlights the following:

1. Households are forecast to increase by 51% for the Auckland region but the growth rate is significantly higher for rail adjacent zones. These are forecast to increase by 72% between 2021 to 2051.
2. This translates to a population increase of 63% for rail adjacent zones between 2021 and 2051, compared to the Auckland region's 40% population increase.
3. Employment forecast however, shows a lower growth forecast (+31%) for rail adjacent zones when compared to the Auckland Region (+36%). This suggest significant employment growth outside rail catchment areas.

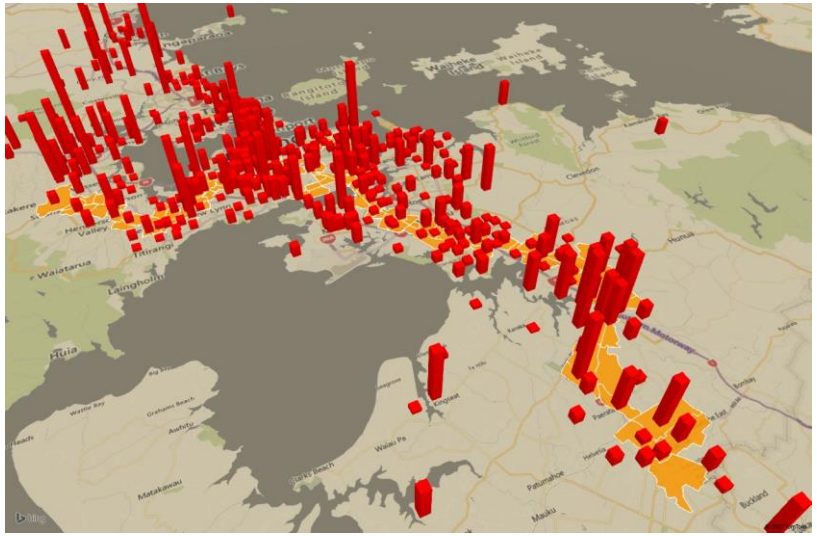
Percentage increase from 2021 (Rail adjacent)

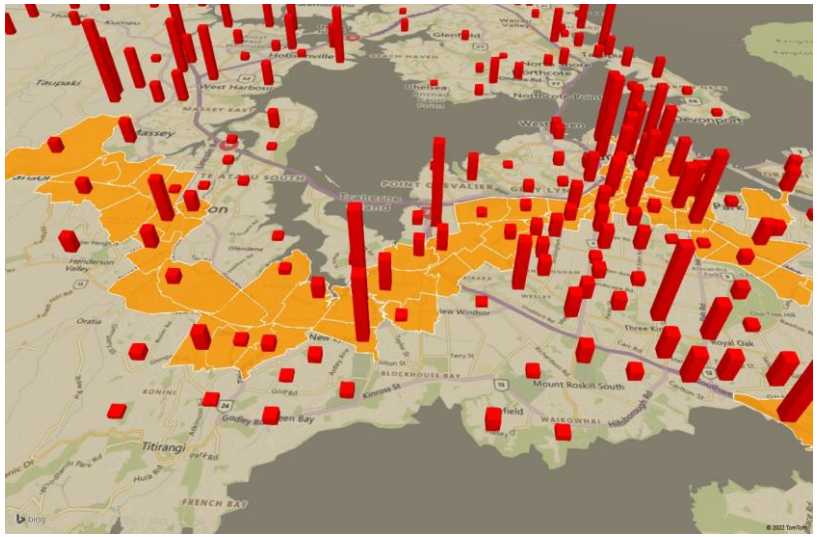
Scenario I-11.6	Household	Population	Employment
2021			
2026	13%	12%	6%
2031	28%	25%	13%
2041	52%	46%	22%
2051	72%	63%	31%

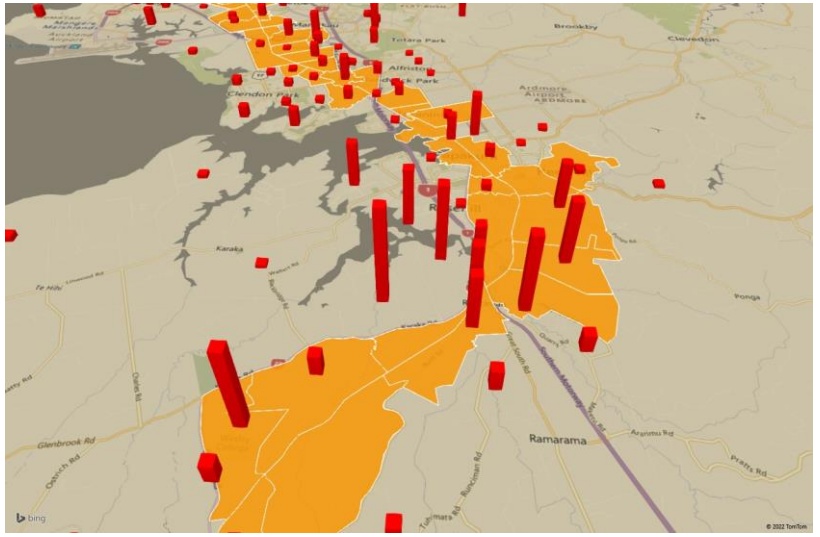
Actual increase from 2021 (Rail adjacent)

Scenario I-11.6	Household	Population	Employment
2021			
2026	15,500	41,070	15,059
2031	33,604	88,864	32,974
2041	62,980	161,980	56,745
2051	87,427	223,209	80,116

Compact land use scenario (I-11.6) rail adjacent zones



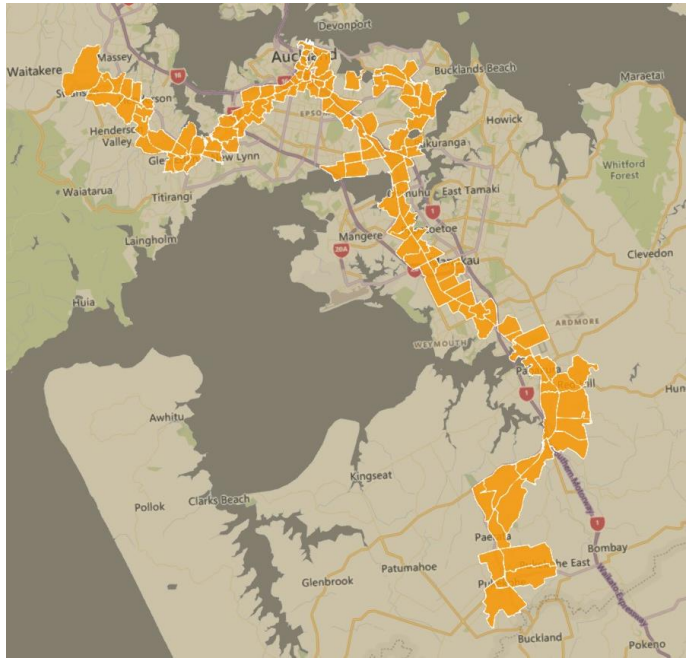




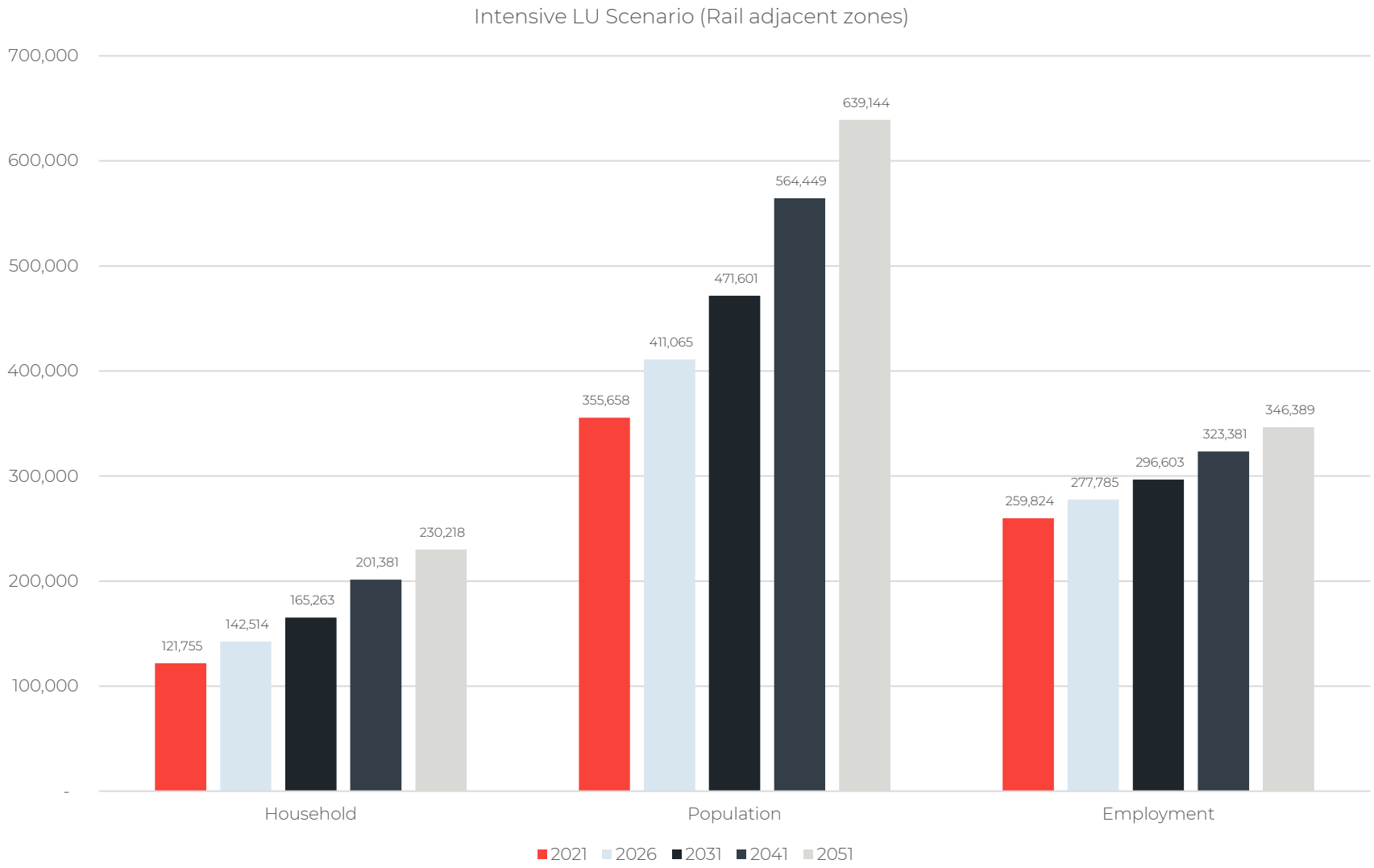
The series of images (left) illustrate the alignment of household growth with rail adjacent zones.

- Orange coloured zones = rail adjacent zones.
- Red bar – shows growth in households from 2021 to 2051 . Data filtered to only show zones with growth of more than 100 households.

Rail adjacent zones



Intensive land use scenario (Intensive) rail adjacent zones



The intensive land use scenario has similar growth rates than the Scenario I-11.6 for household, population and employment numbers in the Auckland Region. However it differs by allocating more of the growth along the isthmus and city centre.

1. Rail adjacent **households** are forecast to increase by 89% between 2021 to 2051 under the intensive scenario compared to an increase of 72% under Scenario I-11.6.
2. This translates to a **population** increase of 80% for rail adjacent zones between 2021 and 2051, compared to the 63% increase under Scenario I-11.6.
3. Employment forecast for the intensive scenario growths slightly faster than Scenario I-11.6 (+33% vs. +31%) but still lags the Auckland Region (+36%).

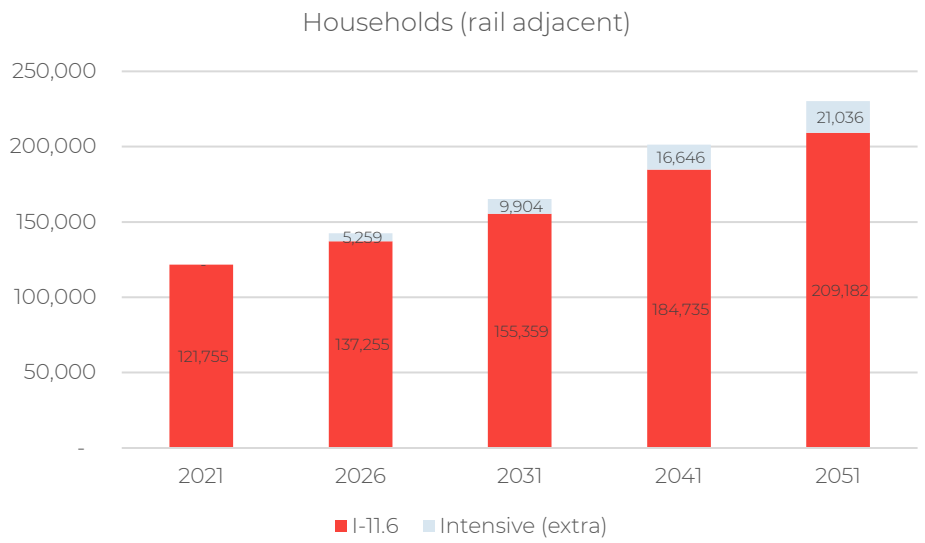
Percentage increase from 2021 (Rail adjacent)

Intensive LU Scenario	Household	Population	Employment
2021			
2026	17%	16%	7%
2031	36%	33%	14%
2041	65%	59%	24%
2051	89%	80%	33%

Actual increase from 2021 (Rail adjacent)

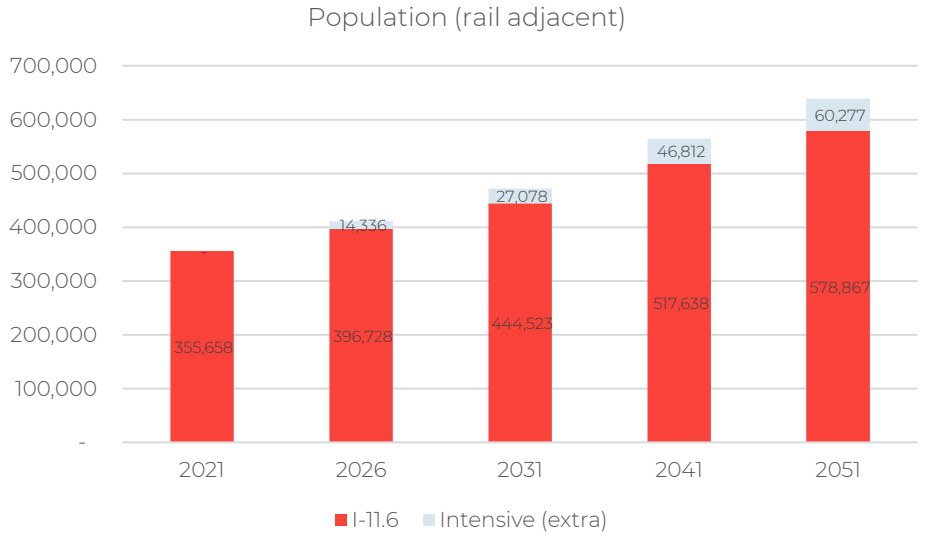
Intensive LU Scenario	Household	Population	Employment
2021			
2026	20,759	55,406	17,960
2031	43,508	115,942	36,778
2041	79,626	208,791	63,557
2051	108,462	283,486	86,565

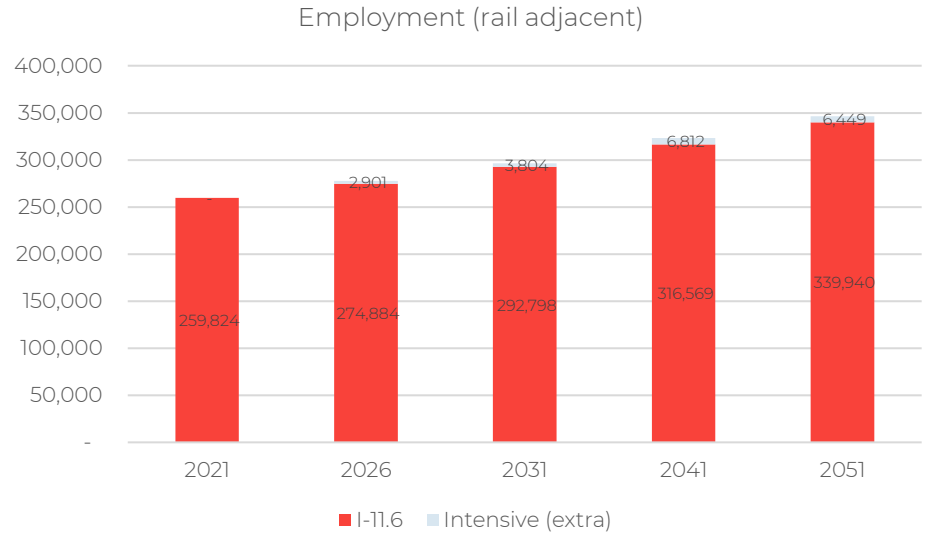
Intensive land use scenario vs scenario I-11.6 for rail adjacent zones



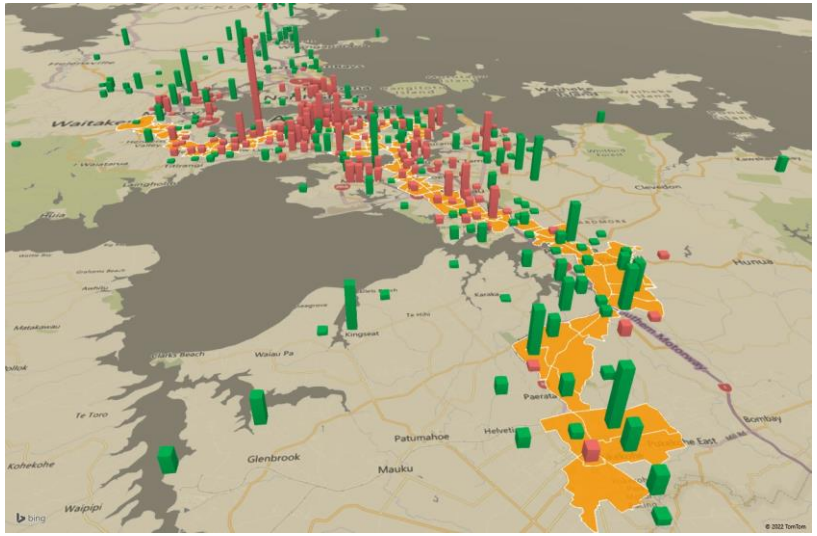
The intensive land use scenario has similar growth rates than the Scenario I-11.6 for household, population and employment numbers in the Auckland Region. However it differs by allocating more of the growth closer to the city centre. It impacts rail adjacent zones as follows.

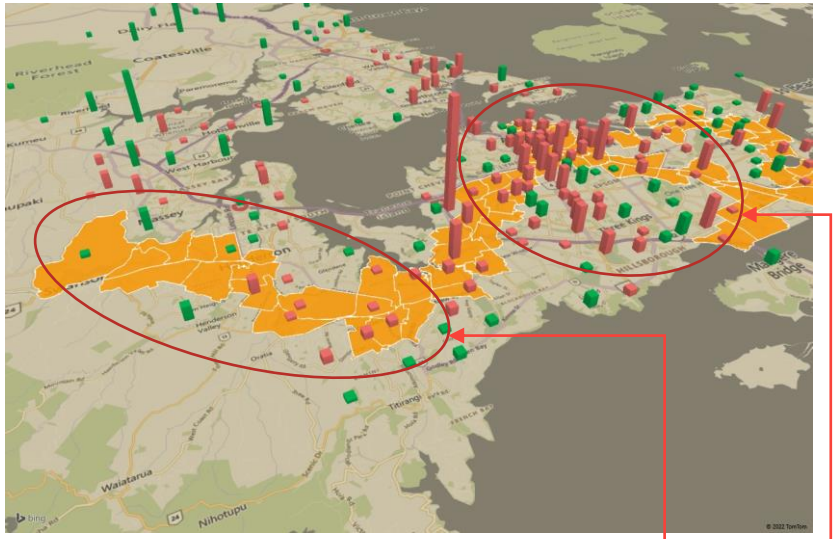
1. Rail adjacent **households** are forecast to increase by 89% between 2021 to 2051 under the intensive scenario compared to an increase of 72% under Scenario I-11.6.
2. This translates to a **population** increase of 80% for rail adjacent zones between 2021 and 2051, compared to the 63% increase under Scenario I-11.6.
3. Employment forecast for the intensive scenario growths slightly faster than Scenario I-11.6 (+33% vs. +31%) but still lags the Auckland Region (+36%).

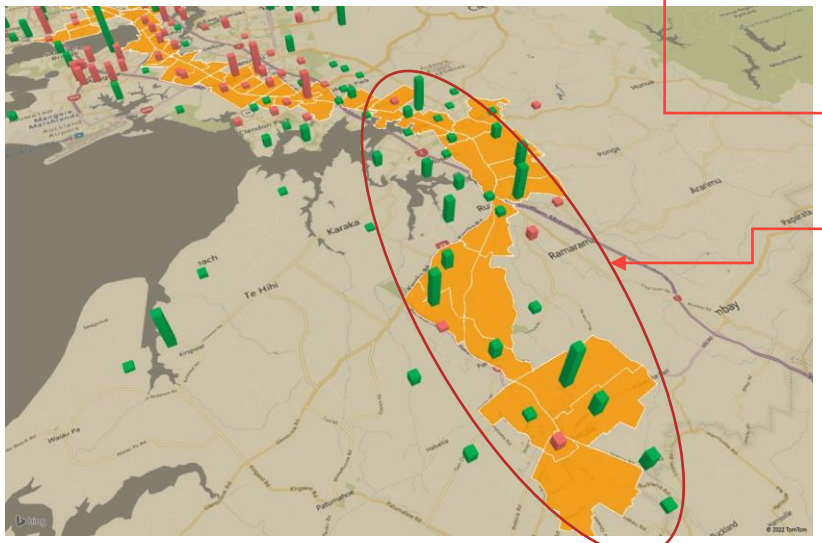




Intensive land use scenario vs scenario I-11.6 for rail adjacent zones







Series of images to illustrate where the growth shifted between Scenario I-11.6 and the Intensive Scenario

- Red bars: 2021-2051 household growth associated with the intensive land use scenario more than household growth (2021-2051) associated with Scenario I-11.6.
- Green bars: 2021-2051 household growth associated with the intensive land use scenario less than household growth (2021-2051) associated with Scenario I-11.6.
- Orange coloured zones = rail adjacent zones.
- Data filtered to only show zones with change in growth of more than 100 households.

- A key observation with this land use scenario is that it has shifted growth to the rail adjacent zones located closer to the city centre.
- Rail adjacent zones in the 'outer west' section sees a slight increase in household growth (+750 households) when compared to Scenario I-11.6
- **The rail adjacent corridor south of Takanini sees a significant lowering in household growth (10,500 less households) by 2051 when compared to Scenario I-11.6**

1.2 | Description of demand scenarios

High level description of the Lean Do Minimum

Term	Description
Land use	Based on Scenario I-11.6
Rail Plan	Reflect CRL opening. Use Scenario A8i(reduced). This rail plan kept for 2031 and 2051.
2025 Planning horizon	This represents CRL opening. For infrastructure and services it uses the 2023 network model developed from the ATAP2 Update – August 2019 with the additional modifications. Key changes include: • For rail plan it uses Scenario A8i(reduced) • PnR sites at Drury Rail Station, Drury West Rail Station and Paerata Rail Station • Lincoln Road Corridor improvements (based on AT's website this will be in place by 2025) • The north-western bus improvement project. Te Atatū interchange; Lincoln Road interchange; bus shoulders on the North-western Motorway between Westgate and Newton Road • The Wellesley Street bus improvement project (section of Wellesley Street West between Albert Street and Queen Street) • SH1 Southern Motorway widening south of Papakura.
2031 Planning horizon	Includes the changes above, plus • Full improvements as envisaged in the RLTP 2031 • CC2M light rail (between airport and city centre) but with 12 services per hour in the peaks. • Rail plan remains Scenario A8i(reduced)
2041 Planning horizon	Includes the changes above, plus • Adjustments to bus services to ensure v/c of bus network below 1.0 • Rail plan remains Scenario A8i(reduced)
2051 Planning horizon	Includes the changes above, plus • Adjustments to bus services to ensure v/c of bus network below 1.0 • Rail plan remains Scenario A8i(reduced) . CC2M headways increase to 20 services per hour.

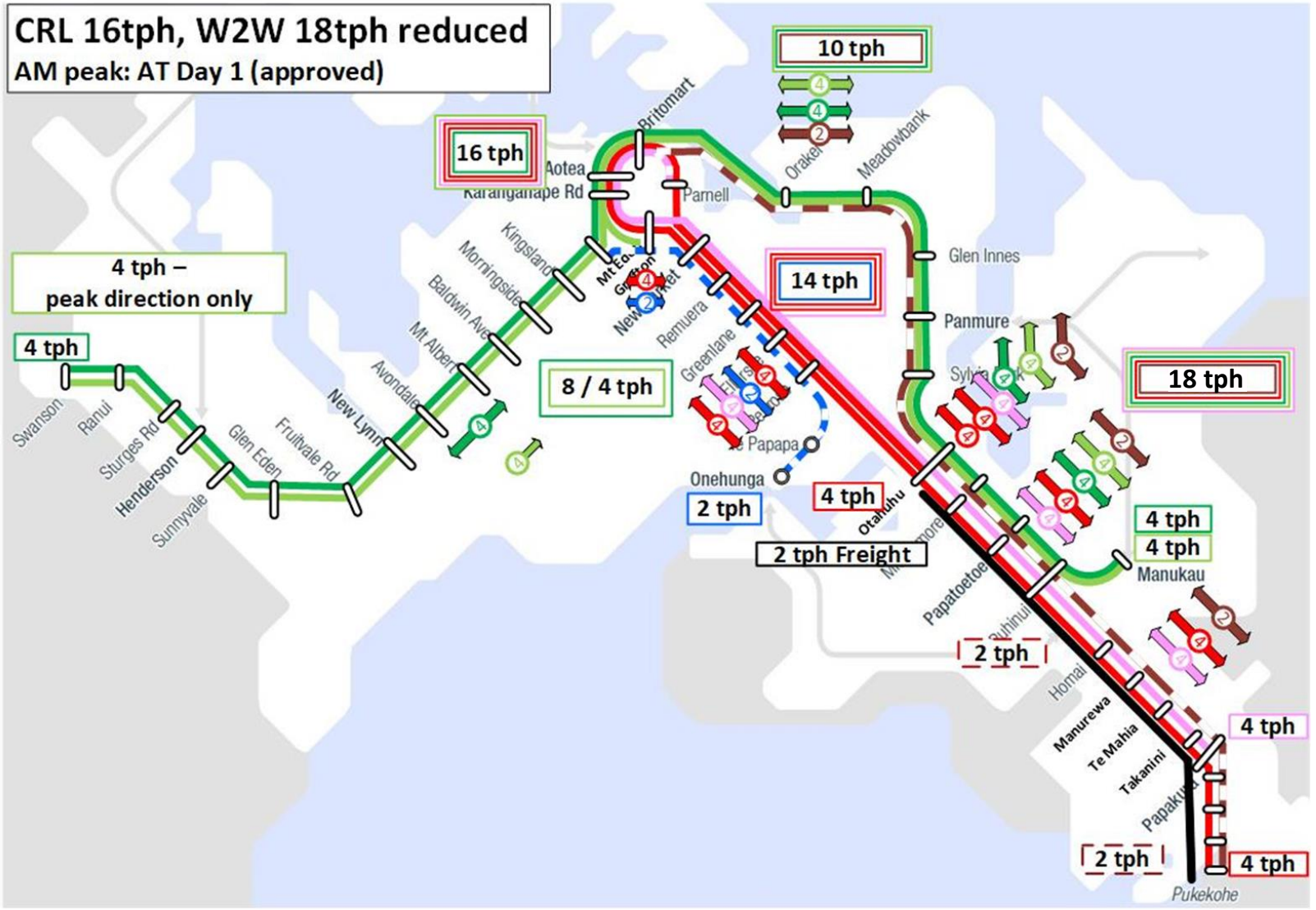
High level description of the Reference Case

Term	Description
Land use	Based on Scenario I-11.6
Rail Plan	Reflect CRL opening. Use Scenario A8i(reduced). This rail plan kept for 2051.
2025 Planning horizon	This represents CRL opening. For infrastructure and services it uses the 2023 network model developed from the ATAP2 Update – August 2019 with the additional modifications. Key changes include: • For rail plan it uses Scenario A8i(reduced) • PnR sites at Drury Rail Station, Drury West Rail Station and Paerata Rail Station • Lincoln Rd Corridor improvements (based on AT's website this will be in place by 2025) • the north-western bus improvement project. Te Atatū interchange; Lincoln Road interchange; bus shoulders on the North-western Motorway between Westgate and Newton Road • the Wellesley Street bus improvement project (section of Wellesley Street West between Albert Street and Queen Street) • SH1 Southern Motorway widening south of Papakura.
2051 Planning horizon	Includes the changes above, plus • Full improvements as envisaged in the RLTP 2031 • CC2M light rail (between airport and city centre) with 20 services per hour in the peaks. • North-western light rail with 20 services per hour in the peaks. • North-shore light rail with 40 services per hour in the peaks. • Full roll out of the supporting growth networks, connected community bus lanes, A2B Rapid Transit. • Rail plan remains Scenario A8i(reduced) • Adjustments to bus services to ensure v/c of bus network below 1.0 • Road pricing included.

High level description of the Base Case

Term	Description
Land use	Based on Intensive land use scenario (*interim only as this is not finalised yet*)
Rail Plan	Reflect CRL opening. Use Scenario A8i(reduced). This rail plan kept for 2051.
2025 Planning horizon	This represents CRL opening. For infrastructure and services it uses the 2023 network model developed from the ATAP2 Update – August 2019 with the additional modifications. Key changes include: • For rail plan it uses Scenario A8i(reduced) • PnR sites at Drury Rail Station, Drury West Rail Station and Paerata Rail Station • Lincoln Rd Corridor improvements (based on AT's website this will be in place by 2025) • the north-western bus improvement project. Te Atatū interchange; Lincoln Road interchange; bus shoulders on the North-western Motorway between Westgate and Newton Road • the Wellesley Street bus improvement project (section of Wellesley Street West between Albert Street and Queen Street) • SH1 Southern Motorway widening south of Papakura.
2051 Planning horizon	Includes the changes above, plus • Full improvements as envisaged in the RLTP 2031 • CC2M light rail (between airport and city centre) with 20 services per hour in the peaks. • North-western light rail with 20 services per hour in the peaks. • North-shore light rail with 40 services per hour in the peaks. • Full roll out of the supporting growth networks, connected community bus lanes, A2B Rapid Transit. • Rail plan remains Scenario A8i(reduced) • Adjustments to bus services to ensure v/c of bus network below 1.0 • Road pricing included.

Lean DM train plan



- The 'Lean DM' train plan is based on the AT Day 1 (approved) train plan
- Based on 4tph CRL train plan –15' pattern
- Day 1 Approved – **A8i REDUCED** with no counter peak western line
- Assumes a fleet of 95 units.

DM train plan

The MSM model assumes the following capacities:

- 3 car train has a total capacity of 380 (with 237 seats); and
- 6 car train has a total capacity of 760 (with 474 seats).

	Origin	Destin	Route	Day 1 (approved)		Note	
				Peak	IP		
1a	Pukekohe	Otahuhu	Via Newmarket, Grafton CRL, Parnell, Newmarket	15 min; Cap 4.5-car	15 min; Cap 4.5-car	• All stops, both direction	Red service
1c	Papakura	Parnell	Via Newmarket, Grafton CRL	30 min; Cap 3-car		• Both directions, PEAK overlay • Does not stop at Penrose, Ellerslie, Greenlane, Remuera	Pink service
1d	Papakura	Pukekohe		30 min; Cap 4.5-car		• Both directions, PEAK overlay – Papakura all stops to Otahuhu • Does not stop at Penrose, Ellerslie, Greenlane, Remuera • Then Newmarket, Grafton, CRL then limited stops: Panmure, Otahuhu, Puhinui, Papakura, Drury, Drury West , Paerata Pukekohe,	Brown / Pink service
2a	Swanson	Manukau	CRL to Glen Innes	15 min; Cap 4.5-car	15 min; Cap 4.5 car	• All stops, both directions	Dark Green service
2b	Swanson	Manukau	CRL to Glen Innes	15 min; Cap 4.5-car		• All stops, PEAK overlay in this direction only am peak – reverse direction pm peak	Light Green service
2c	Manukau	Grafton	Glen Innes to CRL	15 min; Cap 4.5-car		• All stops, PEAK overlay in this direction only am peak – reverse direction pm peak	Light Green service
3a	Onehunga	Henderson	Newmarket, Grafton, Mt Eden,		30 min	• All stops, both direction	Dark Blue service Peak cap: 3-car; IP cap: 3-car
3b	Onehunga	Mt Eden	Newmarket, Grafton	30 mins		• All stops, both direction	Dark Blue service Peak cap: 3-car; IP cap: 3-car
5a	Hamilton	Strand	Via Panmure	1 train am high peak	1 train	• Calls at Papakura, Puhinui,,	Frequency may be understated
5b	Strand	Hamilton	Via Panmure	1 train pm high peak	1 train	• Calls at Papakura and Puhinui	

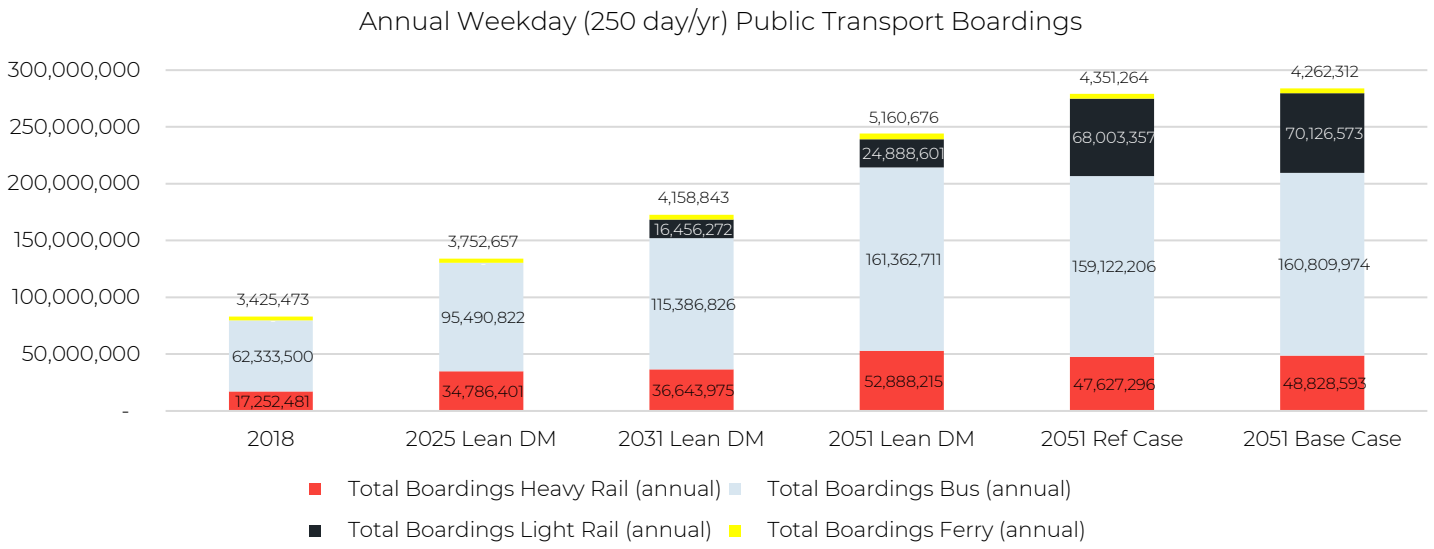
Note: this table only refers to passenger services and exclude freight. It is therefore not reflective of the full train plan on the network

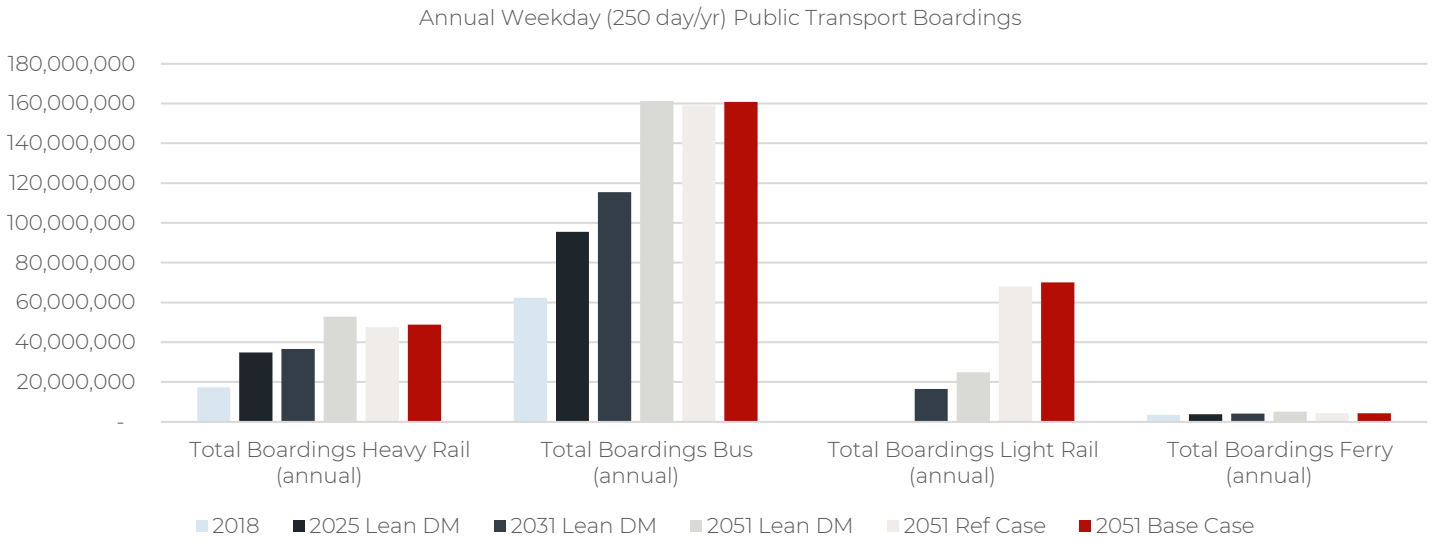
2 | Regionwide demand picture

Overall network statistics

The following increases are forecast based on the various scenarios:

1. Refer to table on next slide for detailed numbers
2. Annual weekday boardings on the public transport network is forecast to double (+108%) between 2018 and 2031, and by 2051 it is forecast to triple (+194% to +242%) from the 2018 base.
3. The total annual PT boardings on the Base Case (~284,000) is 16% higher than total annual boardings for the Lean DM (~244,000).
4. Heavy rail is forecast to grow its public transport market share from ~21% at the moment to ~26% when CRL opens. However this is forecast to decline back to 21% as CC2M opens by 2031 and down to ~17% with the opening of the other two light rail lines (north-west and north shore).
5. Heavy rail boardings will increase significantly (double ~ 101% to reach 34.8M annual boardings) from a 2018 base by time CRL opens.
6. The annual boardings for heavy rail are forecast to grow further by ~52% from CRL opening to reach 52.9M annual boardings under lean DM scenario (i.e. only 1 light rail line in operation).
7. Scenarios that include the opening of entire light rail network result ~40% forecast growth in heavy rail boardings from CRL opening to reach 48.9M annual boardings.





Overall network statistics

Annual Weekday (250 day/yr) Public Transport Boardings	2016	2018	2025 CRL Opening	2031 Lean DM	2051 Lean DM	2051 Ref Case	2051 Base Case
Total Boardings Heavy Rail (annual)	14,169,887	17,252,481	34,786,401	36,643,975	52,888,215	47,627,296	48,828,593
Total Boardings Bus (annual)	47,924,111	62,333,500	95,490,822	115,386,826	161,362,711	159,122,206	160,809,974
Total Boardings Light Rail (annual)	-	-	-	16,456,272	24,888,601	68,003,357	70,126,573
Total Boardings Ferry (annual)	3,642,135	3,425,473	3,752,657	4,158,843	5,160,676	4,351,264	4,262,312
Total	65,736,133	83,011,454	134,029,880	172,645,916	244,300,203	279,104,123	284,027,452

Growth in annual Weekday (250 day/yr) Public Transport Boardings from 2018	2018	2025 CRL Opening	2031 Lean DM	2051 Lean DM	2051 Ref Case	2051 Base Case
Total Boardings Heavy Rail (annual)	ref point	102%	112%	207%	176%	183%
Total Boardings Bus (annual)	ref point	53%	85%	159%	155%	158%
Total Boardings Light Rail (annual)	N/A	N/A	ref point	51%	313%	326%
Total Boardings Ferry (annual)	ref point	10%	21%	51%	27%	24%
Total	ref point	61%	108%	194%	236%	242%

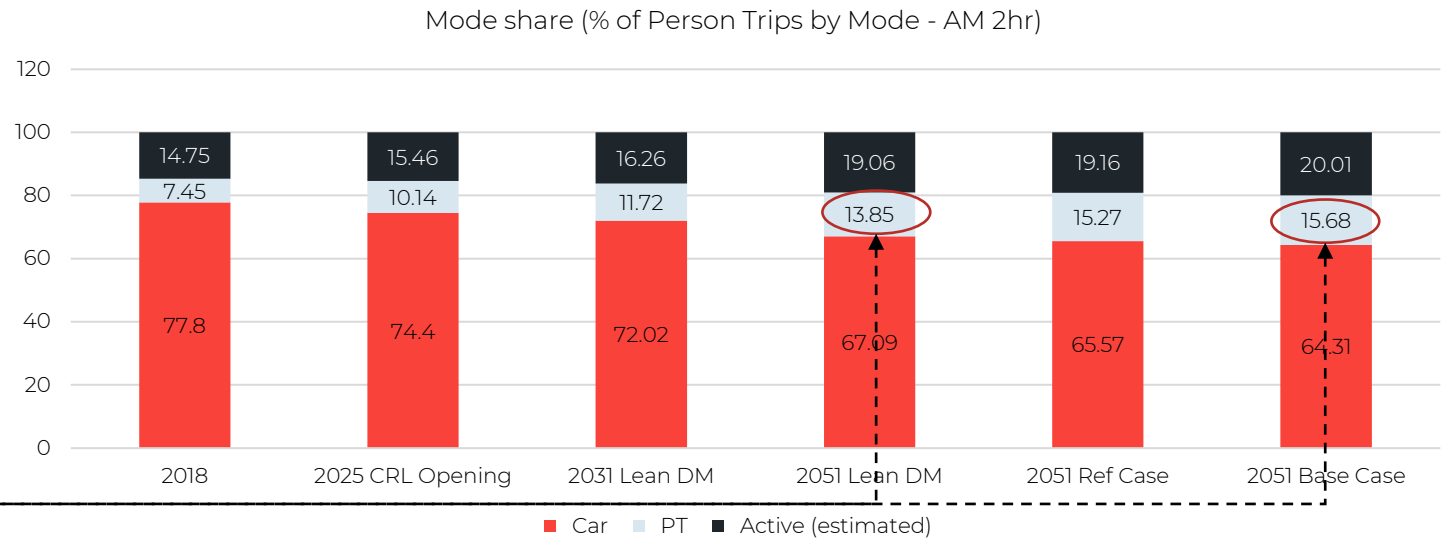
Heavy rail share of the annual weekday boardings	2016	2018	2025 CRL Opening	2031 Lean DM	2051 Lean DM	2051 Ref Case	2051 Base Case
Total Boardings Heavy Rail (annual)	22%	21%	26%	21%	22%	17%	17%

Annual Weekday (250 day/yr) Public Transport Boardings per capita	2016	2018	2025 CRL Opening	2031 Lean DM	2051 Lean DM	2051 Ref Case	2051 Base Case
Total Boardings/Capita Heavy Rail (annual)	8.92	10.87	19.71	18.98	22.69	20.43	20.95
Total Boardings/Capita Bus (annual)	30.17	39.29	54.11	59.77	69.22	68.26	68.98
Total Boardings/Capita Light Rail (annual)	0	0	0	8.52	10.68	29.17	30.08
Total Boardings/Capita Ferry (annual)	2.29	2.16	2.13	2.15	2.21	1.87	1.83
Total Boardings/Capita All (annual)	41.39	52.32	75.95	89.43	104.8	119.73	121.84

Overall mode share

The various scenarios effect the following change in mode share away from private vehicles:

1. Private vehicle mode share is forecast to reduce from 77.8% in 2018 to 67.1% by 2051 under the Lean DM. The Base Case scenario reduces the private vehicle mode share further to 64.3%.
2. Public transport's mode share is forecast to increase from 7.5% in 2018 to 13.9% under the Lean DM scenario and 15.7% under the Base Case scenario.
3. These public transport mode share percentages are still well below the 2050 target of 35% in Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan.
4. The per capita private vehicle kilometres travelled on the network is forecast to increase between 2031 and 2051 under both the Lean DM (+1.6%) and Reference Case (+1.5%) scenarios but decrease under then Base Case scenario (-3.1%).



Mode share (% of Person Trips by Mode - AM 2hr)	2016	2018	2025 CRL Opening	2031 Lean DM	2051 Lean DM	2051 Ref Case	2051 Base Case
Car	77.56	77.8	74.4	72.02	67.09	65.57	64.31
PT	7.37	7.45	10.14	11.72	13.85	15.27	15.68
Active (estimated)	15.07	14.75	15.46	16.26	19.06	19.16	20.01
	100	100	100	100	100	100	100

Mode share (Daily car VKT per capita)	2016	2018	2025 CRL Opening	2031 Lean DM	2051 Lean DM	2051 Ref Case	2051 Base Case
Car VKT per capita (daily)	20.22	20.78	20.6	20.24	20.56	20.54	19.62
Percentage reduction from 2018 level		ref point	-0.9%	-2.6%	-1.1%	-1.2%	-5.6%
				ref point	1.6%	1.5%	-3.1%

Lean DM morning peak rail demands

HOP data were analysed for the period 2018 and 2019 to determine the peak hour factor for public transport demands on the entire PT network and existing RTN network.

The existing RTN included rail and NEX boardings only. The data indicated following peak hour factors to convert 2hr demands to 1hr demands within Auckland.

Period	RTN boardings	All PT boardings
AM	0.61	0.60
IP	0.51	0.50
PM	0.55	0.54

Leaving New Lynn:
6,250 over 2hrs in 2031 growing to 7,413 by 2051.
- +19% or +1,163 pax over 2hrs
- **+800 additional pax/hr**

Leaving Morningside:
7,963 over 2hrs in 2031 growing to 9,842 by 2051
- +24% or +1,879 pax over 2hrs
- **+1,200 additional pax/hr**

CRL (citybound arriving at K' Road):
10,835 over 2hrs in 2031 growing to 13,403 by 2051
- +24% or +2,568 pax over 2hrs
- **+1,600 additional pax/hr**

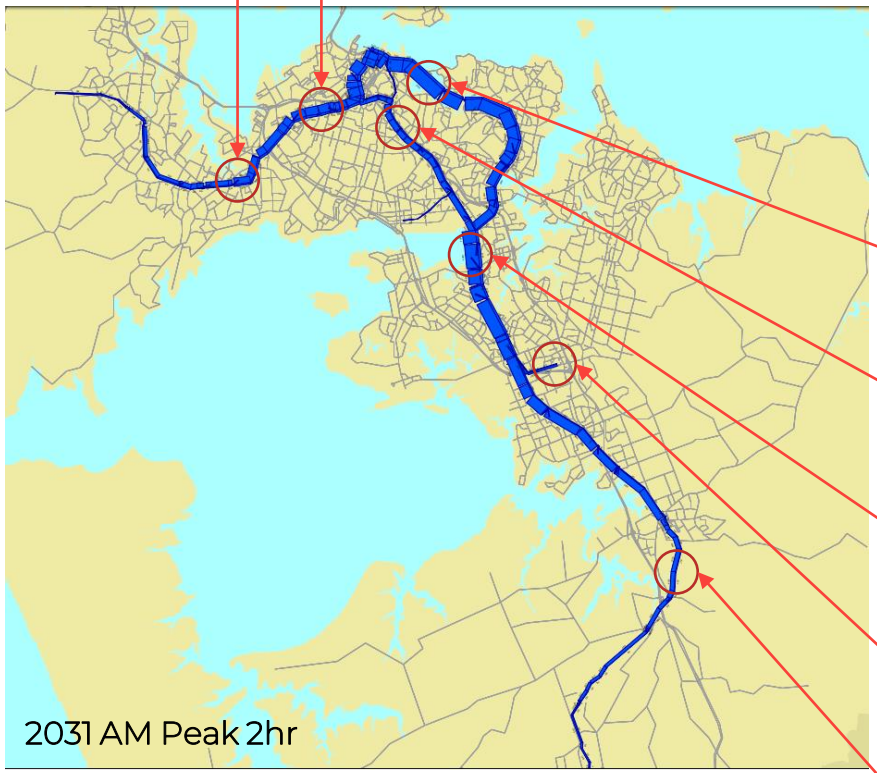
Leaving Orakei:
11,563 over 2hrs in 2031 growing to 16,673 by 2051
- +44% or +5,110 pax over 2hrs
- **+3,200 additional pax/hr**

Leaving Remuera:
5,110 over 2hrs in 2031 growing to 6,404 by 2051
- +25% or +1,294 pax over 2hrs
- **+800 additional pax/hr**

Leaving Otahuhu:
12,674 over 2hrs in 2031 growing to 16,745 by 2051
- +32% or +4,071 over 2hrs
- **+2,500 additional pax/hr**

Leaving Manukau:
1,596 over 2hrs in 2031 growing to 1,920 by 2051
- +20% or +324 pax over 2hrs
- **+ 200 additional pax/hr**

Leaving Drury (central):
4,363 over 2hrs in 2031 growing to 7,724 by 2051
- +77% or 3,361 over 2hrs
- **+ 2,100 additional pax/hr**



OBL towards Penrose:
221 over 2hrs in 2031 growing to 319 by 2051
- +44% or +98 pax over 2hrs
- **+60 additional pax/hr**

Note: pax/hr apply phf and rounded up to nearest 100.

The CC2M light rail is part of this scenario. Light rail demands are not shown in the images as it focus only on heavy rail.

Reference case morning peak rail demands

HOP data were analysed for the period 2018 and 2019 to determine the peak hour factor for public transport demands on the entire PT network and existing RTN network.

The existing RTN included rail and NEX boardings only. The data indicated following peak hour factors to convert 2hr demands to 1hr demands within Auckland.

Period	RTN boardings	All PT boardings
AM	0.61	0.60
IP	0.51	0.50
PM	0.55	0.54

Leaving New Lynn:
6,250 over 2hrs in 2031 reducing to 6,100 by 2051.
- -2.4% % or -150 pax over 2hrs
- **-90 additional pax/hr**

Leaving Morningside:
7,963 over 2hrs in 2031 growing to 8,059 by 2051
- +1.2% or +96 pax over 2hrs
- **+60 additional pax/hr**

CRL (citybound arriving at K' Road):
10,835 over 2hrs in 2031 growing to 11,053 by 2051
- +2% or +218 pax over 2hrs
- **+130 additional pax/hr**

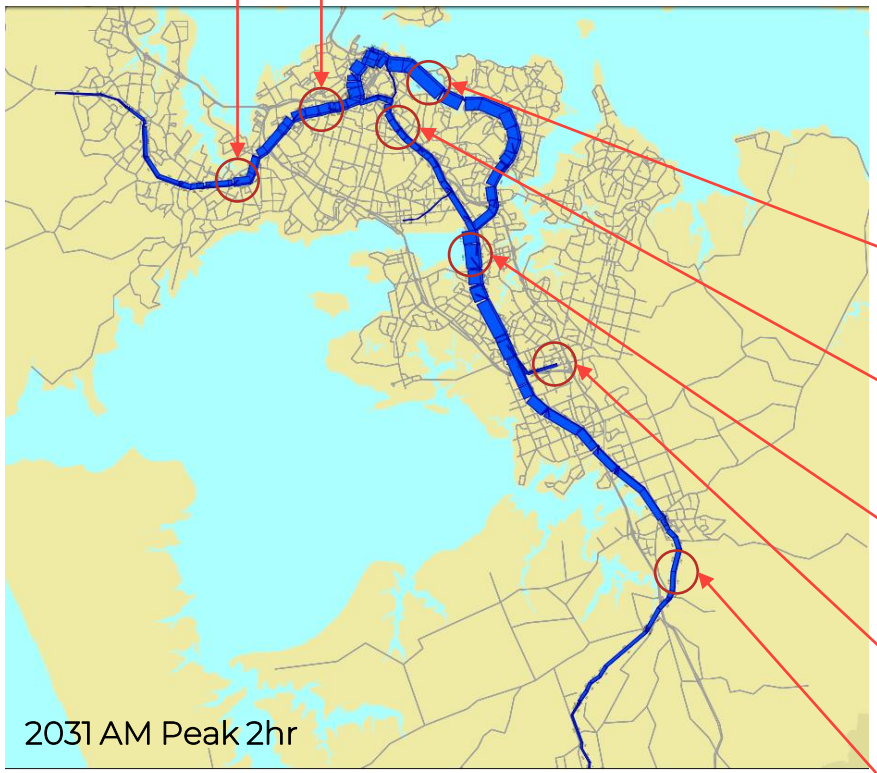
Leaving Orakei:
11,563 over 2hrs in 2031 growing to 15,203 by 2051
- +31% or +3,640 pax over 2hrs
- **+2,180 additional pax/hr**

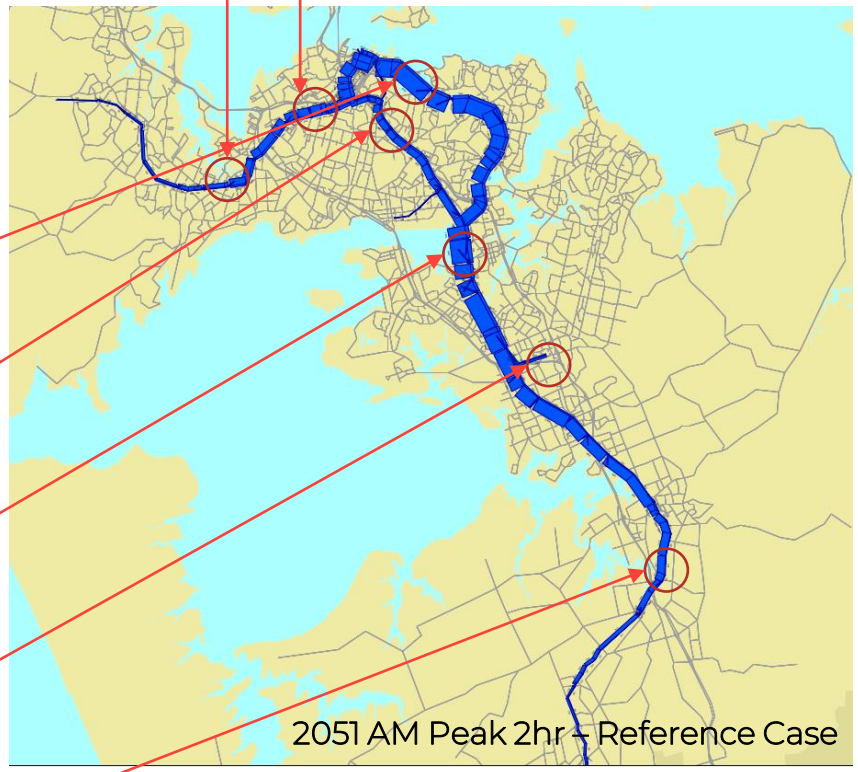
Leaving Remuera:
5,110 over 2hrs in 2031 growing to 6,037 by 2051
- +18% or +927 pax over 2hrs
- **+550 additional pax/hr**

Leaving Otahuhu:
12,674 over 2hrs in 2031 growing to 16,721 by 2051
- +32% or +4,047 over 2hrs
- **+2,400 additional pax/hr**

Leaving Manukau:
1,596 over 2hrs in 2031 growing to 1,932 by 2051
- +21% or +336 pax over 2hrs
- **+ 200 additional pax/hr**

Leaving Drury (central):
4,363 over 2hrs in 2031 growing to 7,257 by 2051
- +66% or 2,894 over 2hrs
- **+ 1,700 additional pax/hr**





OBL towards Penrose:
221 over 2hrs in 2031 growing to 245 by 2051
- +11% or +24 pax over 2hrs
- **+15 additional pax/hr**

Note: pax/hr apply phf and rounded up to nearest 10.

The CC2M light rail is part of this scenario. Light rail demands are not shown in the images as it focus only on heavy rail.

Base case morning peak rail demands

HOP data were analysed for the period 2018 and 2019 to determine the peak hour factor for public transport demands on the entire PT network and existing RTN network.

The existing RTN included rail and NEX boardings only. The data indicated following peak hour factors to convert 2hr demands to 1hr demands within Auckland.

Period	RTN boardings	All PT boardings
AM	0.61	0.60
IP	0.51	0.50
PM	0.55	0.54

Leaving New Lynn:
6,250 over 2hrs in 2031 growing to 6,468 by 2051.
- +3.5% or +218 pax over 2hrs
- **+130 additional pax/hr**

Leaving Morningside:
7,963 over 2hrs in 2031 growing to 9,110 by 2051
- +14% or +1,147 pax over 2hrs
- **+700 additional pax/hr**

CRL (citybound arriving at K' Road):
10,835 over 2hrs in 2031 growing to 11,867 by 2051
- +9.5% or +1,031 pax over 2hrs
- **+630 additional pax/hr**

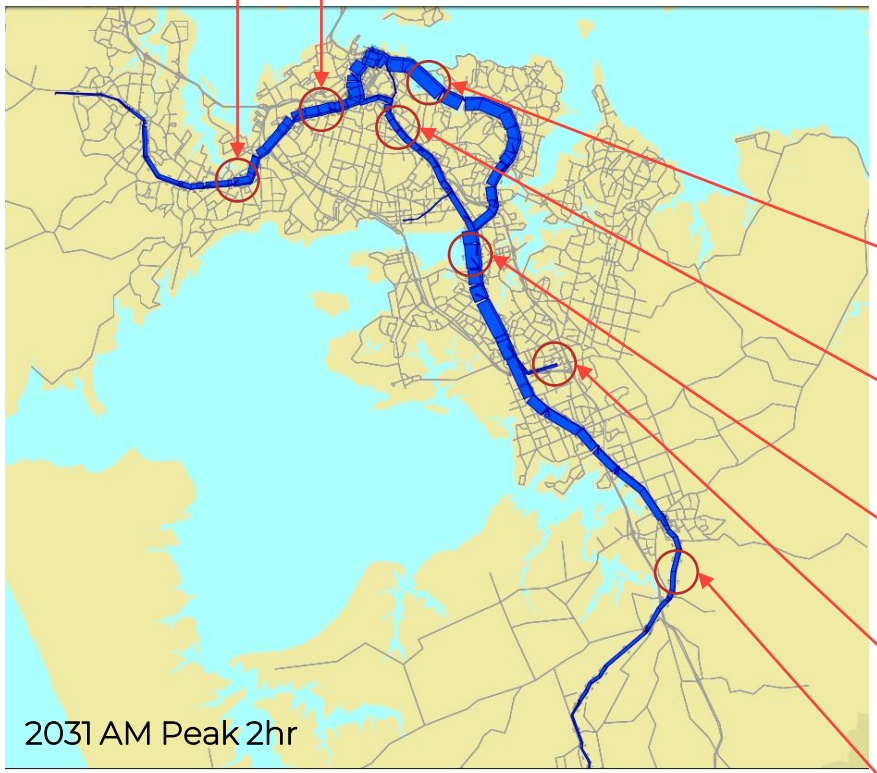
Leaving Orakei:
11,563 over 2hrs in 2031 growing to 14,475 by 2051
- +25% or +2,912 pax over 2hrs
- **+1,780 additional pax/hr**

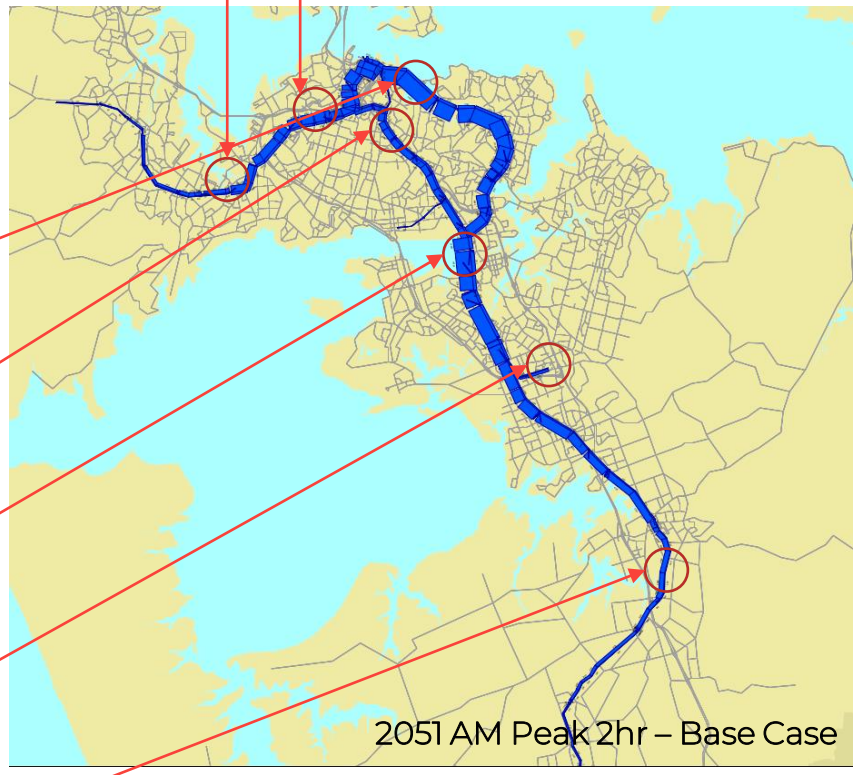
Leaving Remuera:
5,110 over 2hrs in 2031 growing to 5,708 by 2051
- +12% or +598 pax over 2hrs
- **+360 additional pax/hr**

Leaving Otahuhu:
12,674 over 2hrs in 2031 growing to 14,955 by 2051
- +18% or +2,281 over 2hrs
- **+1,400 additional pax/hr**

Leaving Manukau:
1,596 over 2hrs in 2031 growing to 2,000 by 2051
- +25% or +404 pax over 2hrs
- **+ 250 additional pax/hr**

Leaving Drury (central):
4,363 over 2hrs in 2031 growing to 4,888 by 2051
- +12% or 525 over 2hrs
- **320 additional pax/hr**





OBL towards Penrose:
221 over 2hrs in 2031 growing to 273 by 2051
- +23% or +52 pax over 2hrs
- **+30 additional pax/hr**

Note: pax/hr apply phf and rounded up to nearest 10.

The CC2M light rail is part of this scenario. Light rail demands are not shown in the images as it focus only on heavy rail.

Lean DM inter-peak rail demands

HOP data were analysed for the period 2018 and 2019 to determine the peak hour factor for public transport demands on the entire PT network and existing RTN network.

The existing RTN included rail and NEX boardings only. The data indicated following peak hour factors to convert 2hr demands to 1hr demands within Auckland.

Period	RTN boardings	All PT boardings
AM	0.61	0.60
IP	0.51	0.50
PM	0.55	0.54

Leaving New Lynn:
1,768 over 2hrs in 2031 growing to 2,235 by 2051.
- +26% or +467 pax over 2hrs
- **+300 additional pax/hr**

Leaving Morningside:
2,133 over 2hrs in 2031 growing to 2,743 by 2051
- +29% or +610 pax over 2hrs
- **+400 additional pax/hr**

CRL (citybound arriving at K' Road):
3,124 over 2hrs in 2031 growing to 4,332 by 2051
- +39% or +1,208 pax over 2hrs
- **+700 additional pax/hr**

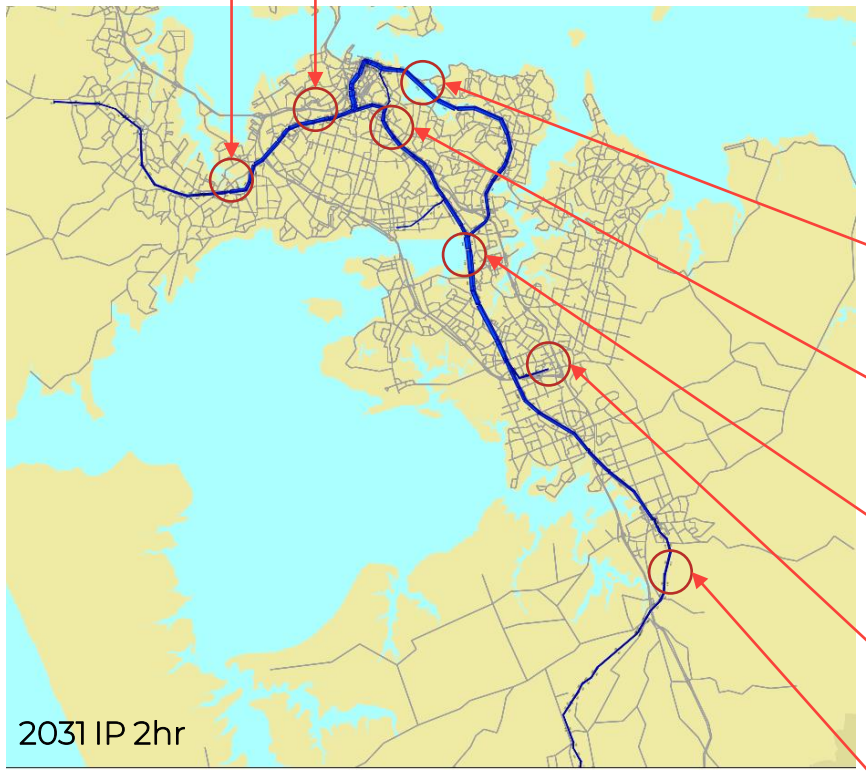
Leaving Orakei:
2,415 over 2hrs in 2031 growing to 3,546 by 2051
- +47% or +1,131 pax over 2hrs
- **+600 additional pax/hr**

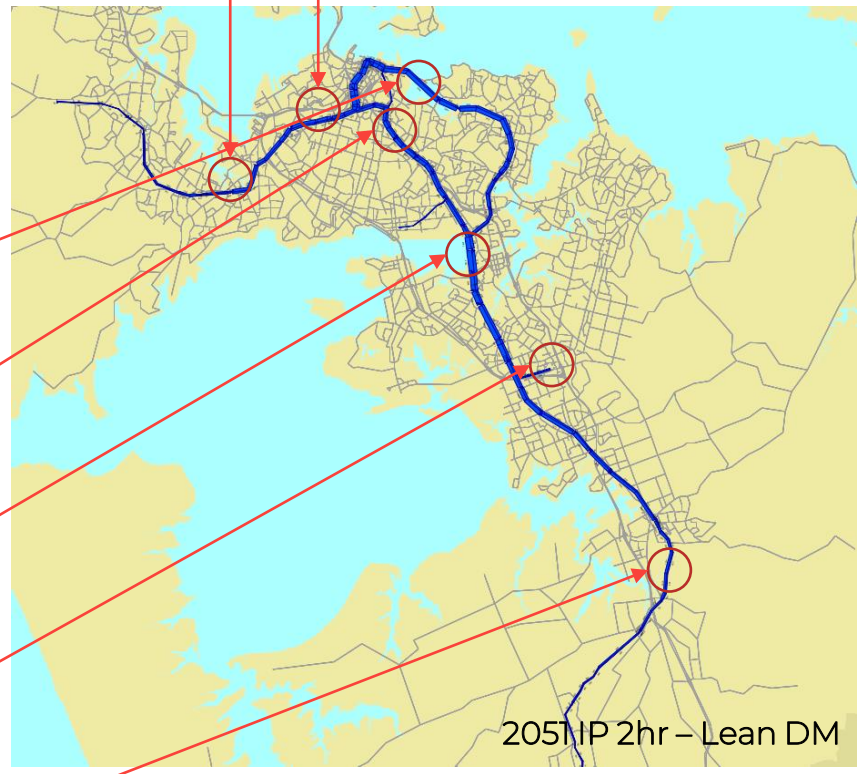
Leaving Remuera:
1,972 over 2hrs in 2031 growing to 3,010 by 2051
- +53% or +1,038 pax over 2hrs
- **+600 additional pax/hr**

Leaving Otahuhu:
3,420 over 2hrs in 2031 growing to 4,792 by 2051
- +41% or +1,372 over 2hrs
- **+700 additional pax/hr**

Leaving Manukau:
746 over 2hrs in 2031 growing to 906 by 2051
- +22% or +160 pax over 2hrs
- **+ 100 additional pax/hr**

Leaving Drury (central):
993 over 2hrs in 2031 growing to 1,914 by 2051
- +93% or 921 over 2hrs
- **+ 500 additional pax/hr**





OBL leaving Penrose:
80 over 2hrs in 2031 growing to 137 by 2051
- +72% or +57 pax over 2hrs
- **+60 additional pax/hr**

Note: pax/hr apply phf and rounded up to nearest 100.

The CC2M light rail is part of this scenario. Light rail demands are not shown in the images as it focus only on heavy rail.

Reference case inter-peak rail demands

HOP data were analysed for the period 2018 and 2019 to determine the peak hour factor for public transport demands on the entire PT network and existing RTN network.

The existing RTN included rail and NEX boardings only. The data indicated following peak hour factors to convert 2hr demands to 1hr demands within Auckland.

Period	RTN boardings	All PT boardings
AM	0.61	0.60
IP	0.51	0.50
PM	0.55	0.54

Leaving New Lynn:
1,768 over 2hrs in 2031 growing to 1,848 by 2051.
- +4.5% or +80 pax over 2hrs
- **+40 additional pax/hr**

Leaving Morningside:
2,133 over 2hrs in 2031 growing to 2,324 by 2051
- +9% or +191 pax over 2hrs
- **+100 additional pax/hr**

CRL (citybound arriving at K' Road):
3,124 over 2hrs in 2031 growing to 3,860 by 2051
- +24% or +736 pax over 2hrs
- **+380 additional pax/hr**

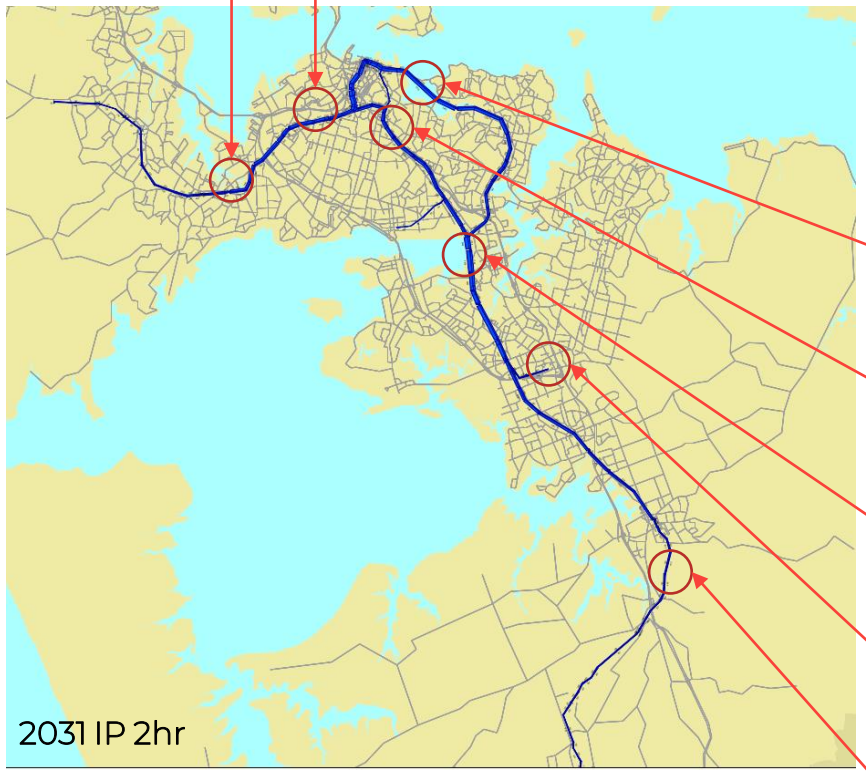
Leaving Orakei:
2,415 over 2hrs in 2031 growing to 3,503 by 2051
- +45% or +1,088 pax over 2hrs
- **+550 additional pax/hr**

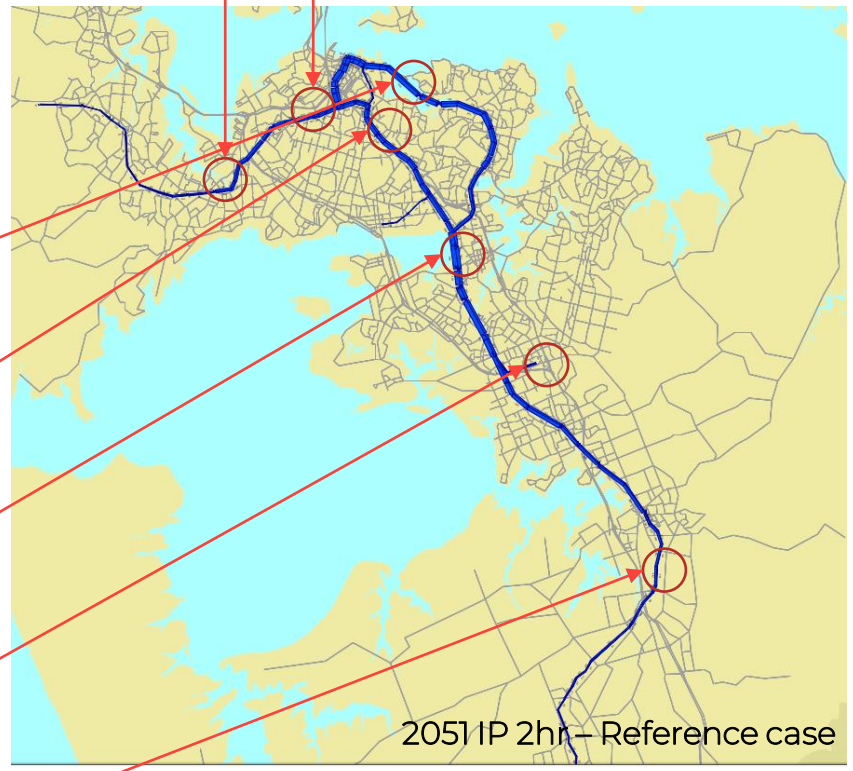
Leaving Remuera:
1,972 over 2hrs in 2031 growing to 2,920 by 2051
- +48% or +948 pax over 2hrs
- **+480 additional pax/hr**

Leaving Otahuhu:
3,420 over 2hrs in 2031 growing to 4,756 by 2051
- +39% or +1,366 over 2hrs
- **+700 additional pax/hr**

Leaving Manukau:
746 over 2hrs in 2031 growing to 808 by 2051
- +8% or +62 pax over 2hrs
- **+ 30 additional pax/hr**

Leaving Drury (central):
993 over 2hrs in 2031 growing to 1,768 by 2051
- +78% or 775 over 2hrs
- **+ 400 additional pax/hr**





OBL leaving Penrose:
80 over 2hrs in 2031 growing to 131 by 2051
- +63% or +57 pax over 2hrs
- **+30 additional pax/hr**

Note: pax/hr apply phf and rounded up to nearest 100.

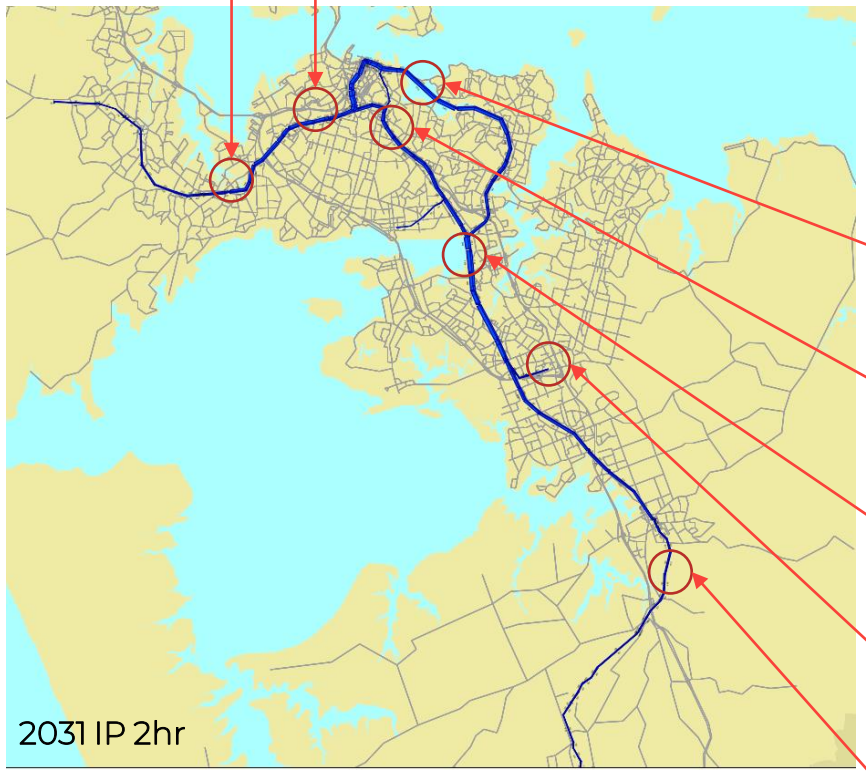
The CC2M light rail is part of this scenario. Light rail demands are not shown in the images as it focus only on heavy rail.

Base case inter-peak rail demands

HOP data were analysed for the period 2018 and 2019 to determine the peak hour factor for public transport demands on the entire PT network and existing RTN network.

The existing RTN included rail and NEX boardings only. The data indicated following peak hour factors to convert 2hr demands to 1hr demands within Auckland.

Period	RTN boardings	All PT boardings
AM	0.61	0.60
IP	0.51	0.50
PM	0.55	0.54



Leaving New Lynn:
1,768 over 2hrs in 2031 growing to 1,991 by 2051.
- +13% or +223 pax over 2hrs
- **+110 additional pax/hr**

Leaving Morningside:
2,133 over 2hrs in 2031 growing to 2,774 by 2051
- +30% or +641 pax over 2hrs
- **+320 additional pax/hr**

CRL (citybound arriving at K' Road):
3,124 over 2hrs in 2031 growing to 3,733 by 2051
- +20% or +609 pax over 2hrs
- **+310 additional pax/hr**

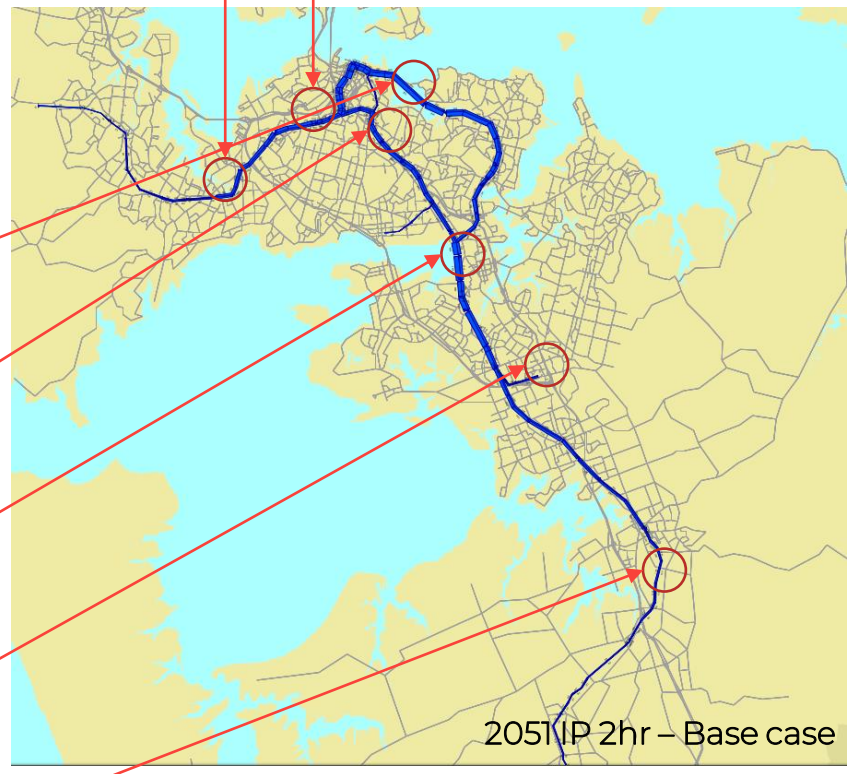
Leaving Orakei:
2,415 over 2hrs in 2031 growing to 3,941 by 2051
- +63% or +1,526 pax over 2hrs
- **+780 additional pax/hr**

Leaving Remuera:
1,972 over 2hrs in 2031 growing to 2,565 by 2051
- +30% or +593 pax over 2hrs
- **+300 additional pax/hr**

Leaving Otahuhu:
3,420 over 2hrs in 2031 growing to 4,429 by 2051
- +30% or +1,009 over 2hrs
- **+510 additional pax/hr**

Leaving Manukau:
746 over 2hrs in 2031 growing to 893 by 2051
- +20% or +147 pax over 2hrs
- **+ 70 additional pax/hr**

Leaving Drury (central):
993 over 2hrs in 2031 growing to 1,265 by 2051
- +37% or 272 over 2hrs
- **+ 140 additional pax/hr**



OBL leaving Penrose:
80 over 2hrs in 2031 growing to 167 by 2051
- +109% or +87 pax over 2hrs
- **+40 additional pax/hr**

Note: pax/hr apply phf and rounded up to nearest 100.

The CC2M light rail is part of this scenario. Light rail demands are not shown in the images as it focus only on heavy rail.

Summary comparison in 2051 AM peak rail demands

Lean DM (2051 AM)	Reference Case (2051 AM)	Base Case (2051 AM)
Leaving New Lynn: 6,250 over 2hrs in 2031 growing to 7,413 by 2051. • +19% or +1,163 pax over 2hrs • +**800 additional pax/hr**	Leaving New Lynn: 6,250 over 2hrs in 2031 reducing to 6,100 by 2051. • -2.4% % or -150 pax over 2hrs • **-90 additional pax/hr**	Leaving New Lynn: 6,250 over 2hrs in 2031 growing to 6,468 by 2051. • +3.5% or +218 pax over 2hrs • **+130 additional pax/hr**
Leaving Morningside: 7,963 over 2hrs in 2031 growing to 9,842 by 2051 • +24% or +1,879 pax over 2hrs • **+1,200 additional pax/hr**	Leaving Morningside: 7,963 over 2hrs in 2031 growing to 8,059 by 2051 • +1.2% or +96 pax over 2hrs • **+60 additional pax/hr**	Leaving Morningside: 7,963 over 2hrs in 2031 growing to 9,110 by 2051 • +14% or +1,147 pax over 2hrs • **+700 additional pax/hr**
CRL (citybound arriving at K' Road): 10,835 over 2hrs in 2031 growing to 13,403 by 2051 • +24% or +2,568 pax over 2hrs • **+1,600 additional pax/hr**	CRL (citybound arriving at K' Road): 10,835 over 2hrs in 2031 growing to 11,053 by 2051 • +2% or +218 pax over 2hrs • **+130 additional pax/hr**	CRL (citybound arriving at K' Road): 10,835 over 2hrs in 2031 growing to 11,867 by 2051 • +9.5% or +1,031 pax over 2hrs • **+630 additional pax/hr**
Leaving Orakei: 11,563 over 2hrs in 2031 growing to 16,673 by 2051 • +44% or +5,110 pax over 2hrs • **+3,200 additional pax/hr**	Leaving Orakei: 11,563 over 2hrs in 2031 growing to 15,203 by 2051 • +31% or +3,640 pax over 2hrs • **+2,180 additional pax/hr**	Leaving Orakei: 11,563 over 2hrs in 2031 growing to 14,475 by 2051 • +25% or +2,912 pax over 2hrs • **+1,780 additional pax/hr**
Leaving Remuera: 5,110 over 2hrs in 2031 growing to 6,404 by 2051 • +25% or +1,294 pax over 2hrs • **+800 additional pax/hr**	Leaving Remuera: 5,110 over 2hrs in 2031 growing to 6,037 by 2051 • +18% or +927 pax over 2hrs • **+550 additional pax/hr**	Leaving Remuera: 5,110 over 2hrs in 2031 growing to 5,708 by 2051 • +12% or +598 pax over 2hrs • **+360 additional pax/hr**
Leaving Otahuhu: 12,674 over 2hrs in 2031 growing to 16,745 by 2051 • +32% or +4,071 over 2hrs • **+2,500 additional pax/hr**	Leaving Otahuhu: 12,674 over 2hrs in 2031 growing to 16,721 by 2051 • +32% or +4,047 over 2hrs • **+2,400 additional pax/hr**	Leaving Otahuhu: 12,674 over 2hrs in 2031 growing to 14,955 by 2051 • +18% or +2,281 over 2hrs • **+1,400 additional pax/hr**
Leaving Manukau: 1,596 over 2hrs in 2031 growing to 1,920 by 2051 • +20% or +324 pax over 2hrs • **+ 200 additional pax/hr**	Leaving Manukau: 1,596 over 2hrs in 2031 growing to 1,932 by 2051 • +21% or +336 pax over 2hrs • **+ 200 additional pax/hr**	Leaving Manukau: 1,596 over 2hrs in 2031 growing to 2,000 by 2051 • +25% or +404 pax over 2hrs • **+ 250 additional pax/hr**
Leaving Drury (central): 4,363 over 2hrs in 2031 growing to 7,724 by 2051 • +77% or 3,361 over 2hrs • **+ 2,100 additional pax/hr**	Leaving Drury (central): 4,363 over 2hrs in 2031 growing to 7,257 by 2051 • +66% or 2,894 over 2hrs • **+ 1,700 additional pax/hr**	Leaving Drury (central): 4,363 over 2hrs in 2031 growing to 4,888 by 2051 • +12% or 525 over 2hrs • **320 additional pax/hr**

The various scenarios effect growth across the network as follows:

1. Demand on the outer parts of the western line could grow by up to 19% but this growth is sensitive to the introduction of light rail to the west, that has the potential to reduce growth along this section of the line.
2. The intensive land use scenario will place significant growth pressure on the inner section of the western line (leaving Morningside) that sees a 1.2% growth under scenario I-11.6 increase to 14% under the intensive land use scenario.
3. The sections of the railway along the eastern line eastern line (leaving Orakei) and southern line (leaving Otahuhu) are forecast to experience the largest total number in additional passengers under all scenarios. These sections are less sensitive to the introduction of light rail as part of the rapid transit system.
4. The southern line (leaving Drury) is also less sensitive to light rail, but are moderately impacted by improvements to the bus network along Great South Road and significantly by the lands use assumption. The intensive land use scenario moved ~10,500 households out of the catchment with associated impact on demand growth.

Summary comparison in 2051 IP rail demands

Lean DM (2051 IP)	Reference Case (2051 IP)	Base Case (2051 IP)
Leaving New Lynn: 1,768 over 2hrs in 2031 growing to 2,235 by 2051. • +26% or +467 pax over 2hrs • **+300 additional pax/hr**	Leaving New Lynn: 1,768 over 2hrs in 2031 growing to 1,848 by 2051. • +4.5% or +80 pax over 2hrs • **+40 additional pax/hr**	Leaving New Lynn: 1,768 over 2hrs in 2031 growing to 1,991 by 2051. • +13% or +223 pax over 2hrs • **+110 additional pax/hr**
Leaving Morningside: 2,133 over 2hrs in 2031 growing to 2,743 by 2051 • +29% or +610 pax over 2hrs • **+400 additional pax/hr**	Leaving Morningside: 2,133 over 2hrs in 2031 growing to 2,324 by 2051 • +9% or +191 pax over 2hrs • **+100 additional pax/hr**	Leaving Morningside: 2,133 over 2hrs in 2031 growing to 2,774 by 2051 • +30% or +641 pax over 2hrs • **+320 additional pax/hr**
CRL (citybound arriving at K' Road): 3,124 over 2hrs in 2031 growing to 4,332 by 2051 • +39% or +1,208 pax over 2hrs • **+700 additional pax/hr**	CRL (citybound arriving at K' Road): 3,124 over 2hrs in 2031 growing to 3,860 by 2051 • +24% or +736 pax over 2hrs • **+380 additional pax/hr**	CRL (citybound arriving at K' Road): 3,124 over 2hrs in 2031 growing to 3,733 by 2051 • +20% or +609 pax over 2hrs • **+310 additional pax/hr**
Leaving Orakei: 2,415 over 2hrs in 2031 growing to 3,546 by 2051 • +47% or +1,131 pax over 2hrs • **+600 additional pax/hr**	Leaving Orakei: 2,415 over 2hrs in 2031 growing to 3,503 by 2051 • +45% or +1,088 pax over 2hrs • **+550 additional pax/hr**	Leaving Orakei: 2,415 over 2hrs in 2031 growing to 3,941 by 2051 • +63% or +1,526 pax over 2hrs • **+780 additional pax/hr**
Leaving Remuera: 1,972 over 2hrs in 2031 growing to 3,010 by 2051 • +53% or +1,038 pax over 2hrs • **+600 additional pax/hr**	Leaving Remuera: 1,972 over 2hrs in 2031 growing to 2,920 by 2051 • +48% or +948 pax over 2hrs • **+480 additional pax/hr**	Leaving Remuera: 1,972 over 2hrs in 2031 growing to 2,565 by 2051 • +30% or +593 pax over 2hrs • **+300 additional pax/hr**
Leaving Otahuhu: 3,420 over 2hrs in 2031 growing to 4,792 by 2051 • +41% or +1,372 over 2hrs • **+700 additional pax/hr**	Leaving Otahuhu: 3,420 over 2hrs in 2031 growing to 4,756 by 2051 • +39% or +1,366 over 2hrs • **+700 additional pax/hr**	Leaving Otahuhu: 3,420 over 2hrs in 2031 growing to 4,429 by 2051 • +30% or +1,009 over 2hrs • **+510 additional pax/hr**
Leaving Manukau: 746 over 2hrs in 2031 growing to 906 by 2051 • +22% or +160 pax over 2hrs • **+ 100 additional pax/hr**	Leaving Manukau: 746 over 2hrs in 2031 growing to 808 by 2051 • +8% or +62 pax over 2hrs • **+ 30 additional pax/hr**	Leaving Manukau: 746 over 2hrs in 2031 growing to 893 by 2051 • +20% or +147 pax over 2hrs • **+ 70 additional pax/hr**
Leaving Drury (central): 993 over 2hrs in 2031 growing to 1,914 by 2051 • +93% or 921 over 2hrs • **+ 500 additional pax/hr**	Leaving Drury (central): 993 over 2hrs in 2031 growing to 1,768 by 2051 • +78% or 775 over 2hrs • **+ 400 additional pax/hr**	Leaving Drury (central): 993 over 2hrs in 2031 growing to 1,265 by 2051 • +37% or 272 over 2hrs • **+ 140 additional pax/hr**

The various scenarios effect growth across the network as follows:

1. Demand growth across the network in the inter-peak is generally higher (in percentage terms) than the growth experienced through the peak period.

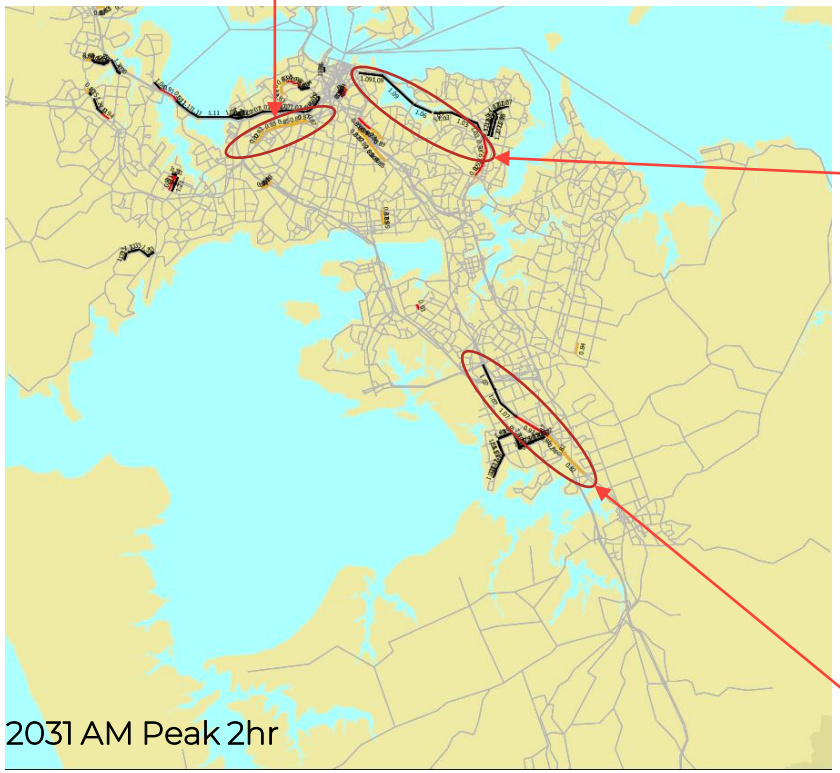
Lean DM morning peak rail capacity constraints

MSM demand for rail services, compared to capacity provisions through the A81 reduced train plan.

Demands excluded effect of crowding to inform 'true' demand under the land use and infrastructure assumptions.

The colours indicate the following volume over capacity rations:

PT V/C
0.8 - 0.9
0.9 - 1.0
1.0 -->

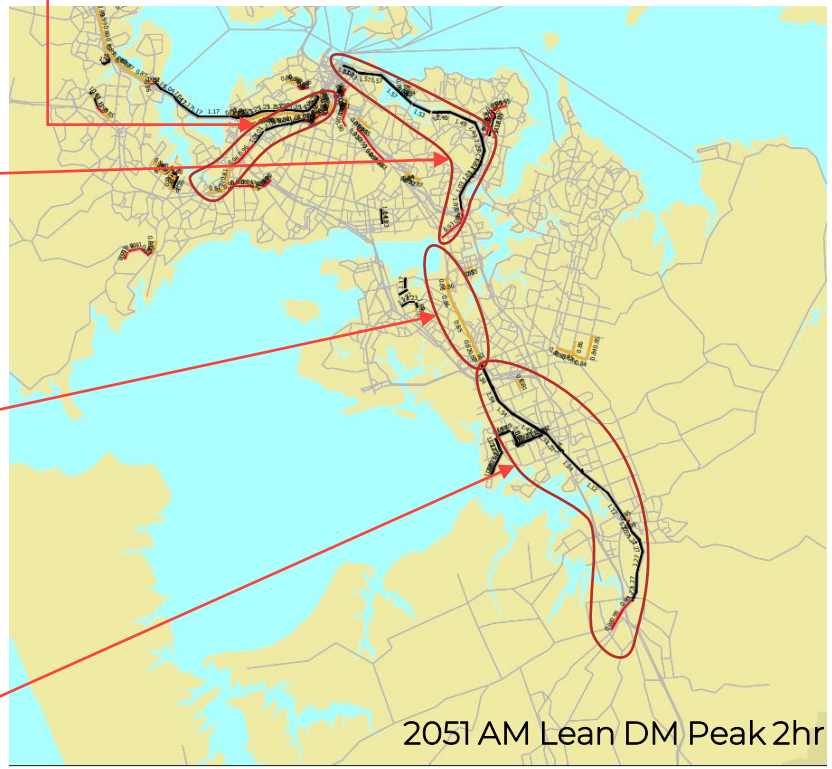


- The western line (between Mt Albert and Kingsland stations) is forecast to experience demands between 80%-90% of available capacity as early as 2031.
- By 2051 this is forecast to expand as far west as New Lynn, with the section between Mt Albert and Kingsland stations experiencing **demand of approximately 10% in excess of the available capacity**

- The eastern Busway has a significant impact on rail demand along this section of the network.
- Between Panmure and Britomart stations the network is forecast to experience **demand of approximately 10% in excess of the available capacity** as early as 2031.
- By 2051 this is forecast to expand as far south as the Westfield junction, with the section between Panmure and Britomart stations experiencing **demand of approximately 60% in excess of the available capacity**

- The southern line (between Puhinui and Otahuhu stations is forecast to experience demand between 80%-90% of available capacity by 2051.

- The southern growth areas have a significant impact on rail demand along this section of the network.
- Between Takanini and Puhinui stations the network is forecast to experience **demand of approximately 10% in excess of the available capacity** as early as 2031.
- By 2051 this is forecast to expand as far south as the Drury West station, with the line experiencing demands that exceed available capacity as far south as the Drury central station.
- At Drury central the demand is 30% higher than capacity and by the time the line reached Puhinui station **demand is forecast to exceed available capacity by approximately 54%.**



Base case morning peak rail capacity constraints

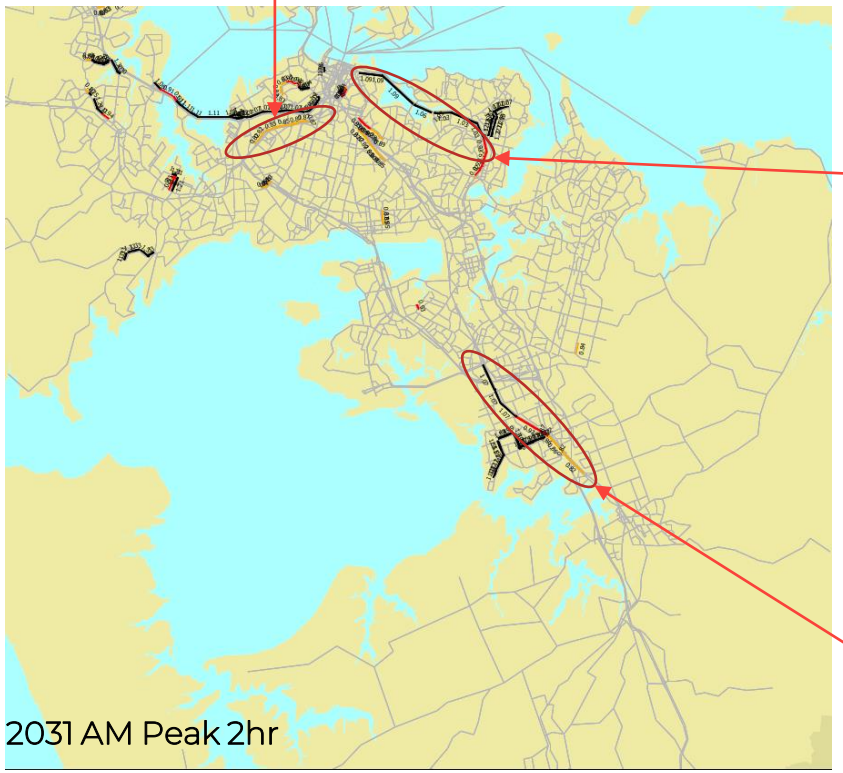
MSM demand for rail services, compared to capacity provisions through the A81 reduced train plan.

Demands excluded effect of crowding to inform 'true' demand under the land use and infrastructure assumptions.

The colours indicate the following volume over capacity rations:

PT V/C
0.8 - 0.9
0.9 - 1.0
1.0 -->

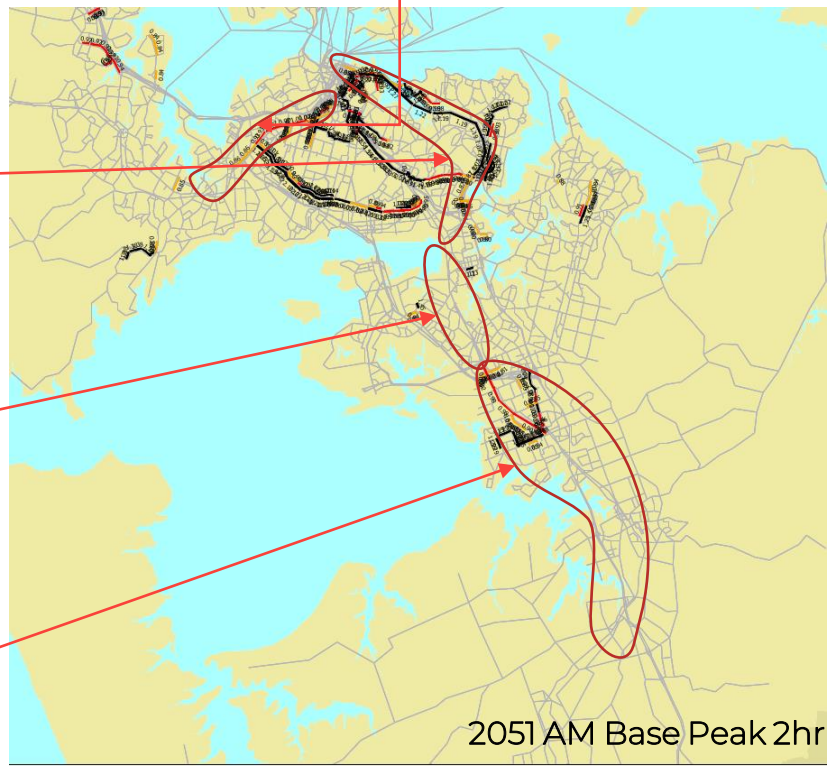
- The introduction of the north-western light rail removed the PT capacity issues along the north-western motorway corridor and impacts demand for rail services along the western line.
- However, by 2051 demand is still forecast to exceed available capacity from Morningside heading towards the city.



- The base case includes extensions to the bus lanes (and eastern busway services) along Ellerslie Panmure Highway.
- This reduces the demand on heavy rail travel from Panmure towards the city, however it still results in forecast demand on both the rail services and the busway services to exceed available capacity by 2051.
- This situation constrain public transport access from the eastern suburbs to the city centre.

- The lower demand coming through from the southern growth areas result in the forecast demand for the southern line (between Puhinui and Otahuhu stations) to remain within the available capacity by 2051.

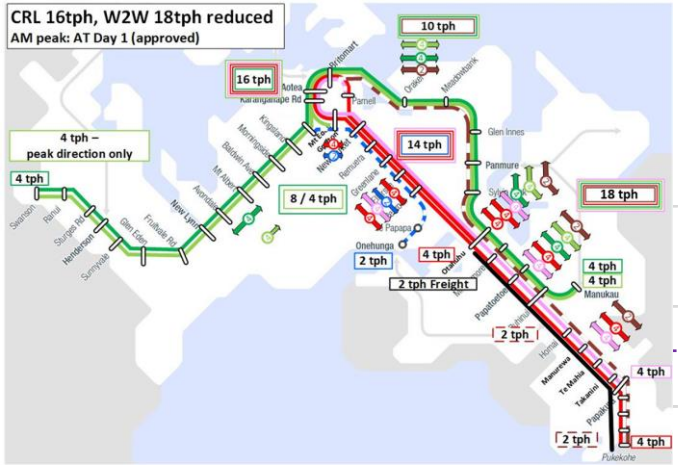
- The southern growth areas have less growth within the rail catchments compared to the Lean DM, and also have buslane improvements along Great South Road.
- If these changes occur as envisaged within this scenario it would reduce the impact of demand, with forecast demand by 2051 staying within the available capacity between on available capacity from the southern areas up to Takanini.
- Between Takanini and Puhinui demand is still forecast to reach 98% of available capacity.



3 | Demand patterns for each service

Demands along line by service

(RT1a – red service on diagram)



Segment Patronage (2-hour)

6000
5000
4000
3000
2000
1000
0
-1000
-2000

Total capacity:4,560

Seat capacity:2,844

2051 AM – Base Case

2051 AM - Lean DM

2051 AM – Reference case

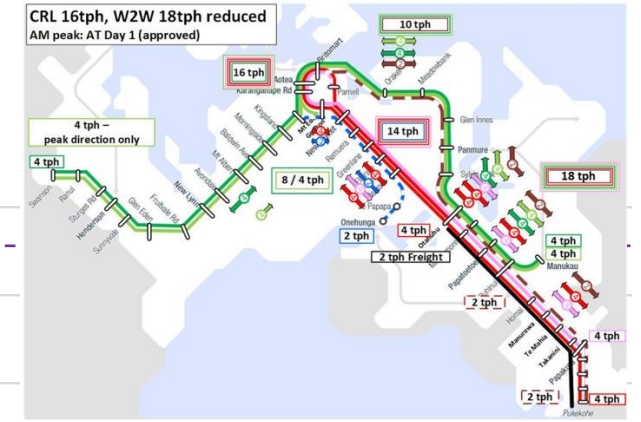
2031 AM

Pukekohe
Paerata
Drury South/Karaka
Drury
Papakura
Takanini
Te Mahia
Manurewa
Homai
Puhinui
Papatoetoe
Middlemore
Otahuhu
Penrose
Ellerslie
Greenlane
Remuera
Newmarket
Grafton
K Rd
Aotea
Britomart
Parnell
Newmarket
Remuera
Greenlane
Ellerslie
Penrose
Otahuhu

Route Section/Station

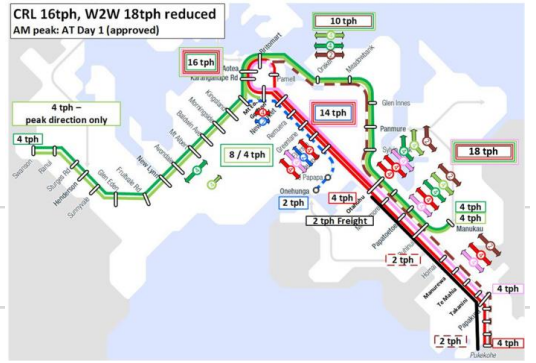
Demands along line by service

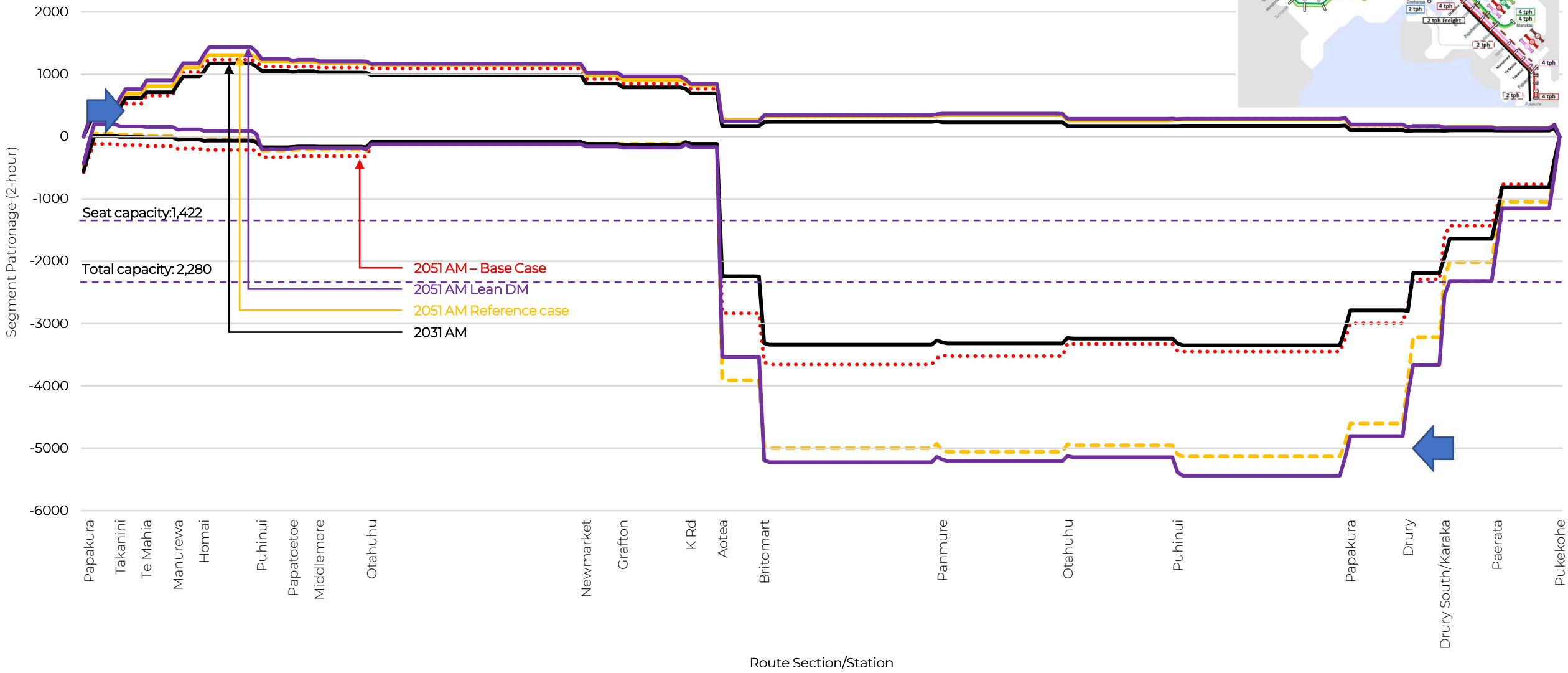
(RTIc – pink service on diagram)



Demands along line by service

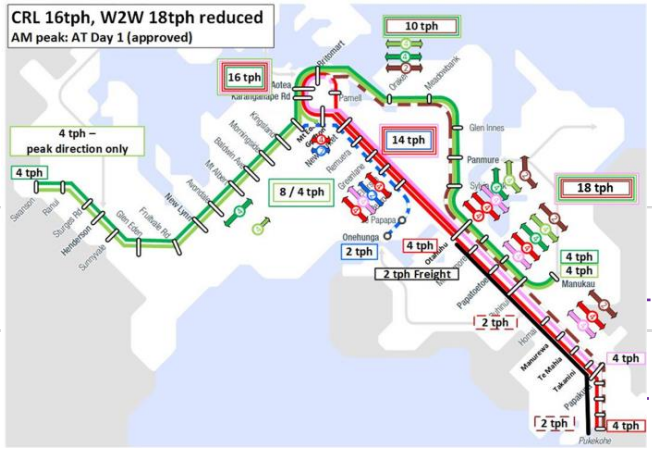
(RT1d – brown-pink service on diagram)





Demands along line by service

(RT2a – dark green service on diagram)



Segment Patronage (2-hour)

6000
4000
2000
0
-2000
-4000
-6000
-8000

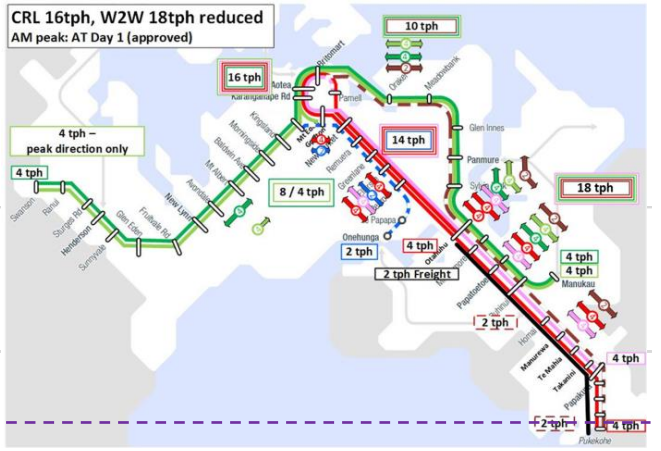
Total capacity:4,560
Seat capacity:2,844
2051 AM – Base Case
2051 AM Lean DM
2051 AM Reference case
2031 AM
Seat capacity:2,844
Total capacity:4,560

Swanson
Ranui
Sturges Rd
Henderson
Sunnyvale
Glen Eden
Fruitvale Rd
New Lynn
Avondale
Mt Albert
Baldwin Ave
Morningside
Kingsland
Mt Eden
K Rd
Aotea
Britomart
Orakei
Meadowbank
Glen Innes
Panmure
Sylvia Park
Otahuhu
Middlemore
Papatoetoe
Puhinui
Manukau

Route Section/Station

Demands along line by service

(RT2b – light green service on diagram)



Segment Patronage (2-hour)

6000
5000
4000
3000
2000
1000
0

Total capacity:4,560

Seat capacity:2,844

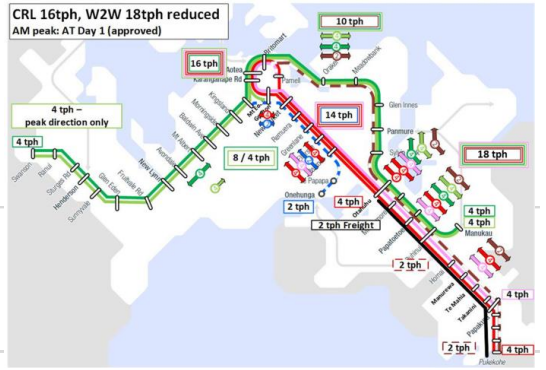
2051 AM – Base Case
2051 AM Lean DM
2051 AM Reference case
2031 AM

Swanson
Ranui
Sturges Rd
Henderson
Sunnyvale
Glen Eden
Fruitvale Rd
New Lynn
Avondale
Mt Albert
Baldwin Ave
Morningside
Kingsland
Mt Eden
K Rd
Aotea
Britomart
Orakei
Meadowbank
Glen Innes
Panmure
Sylvia Park
Otahuhu
Middlemore
Papatoetoe
Puhinui
Manukau

Route Section/Station

Demands along line by service

(RT2c – light green service on diagram)



Segment Patronage (2-hour)

6000
5000
4000
3000
2000
1000
0

Total capacity:4,560

Seat capacity:2,844

2051 AM – Base Case

2051 AM Lean DM

2051 AM Reference case

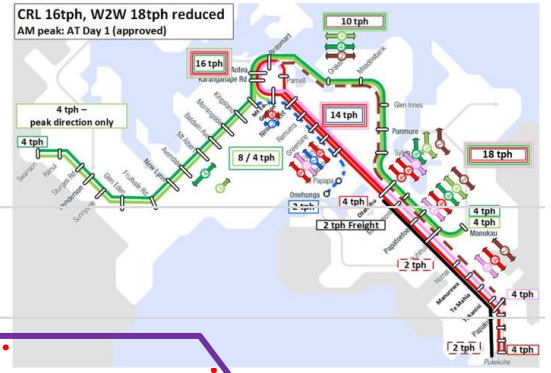
2031 AM

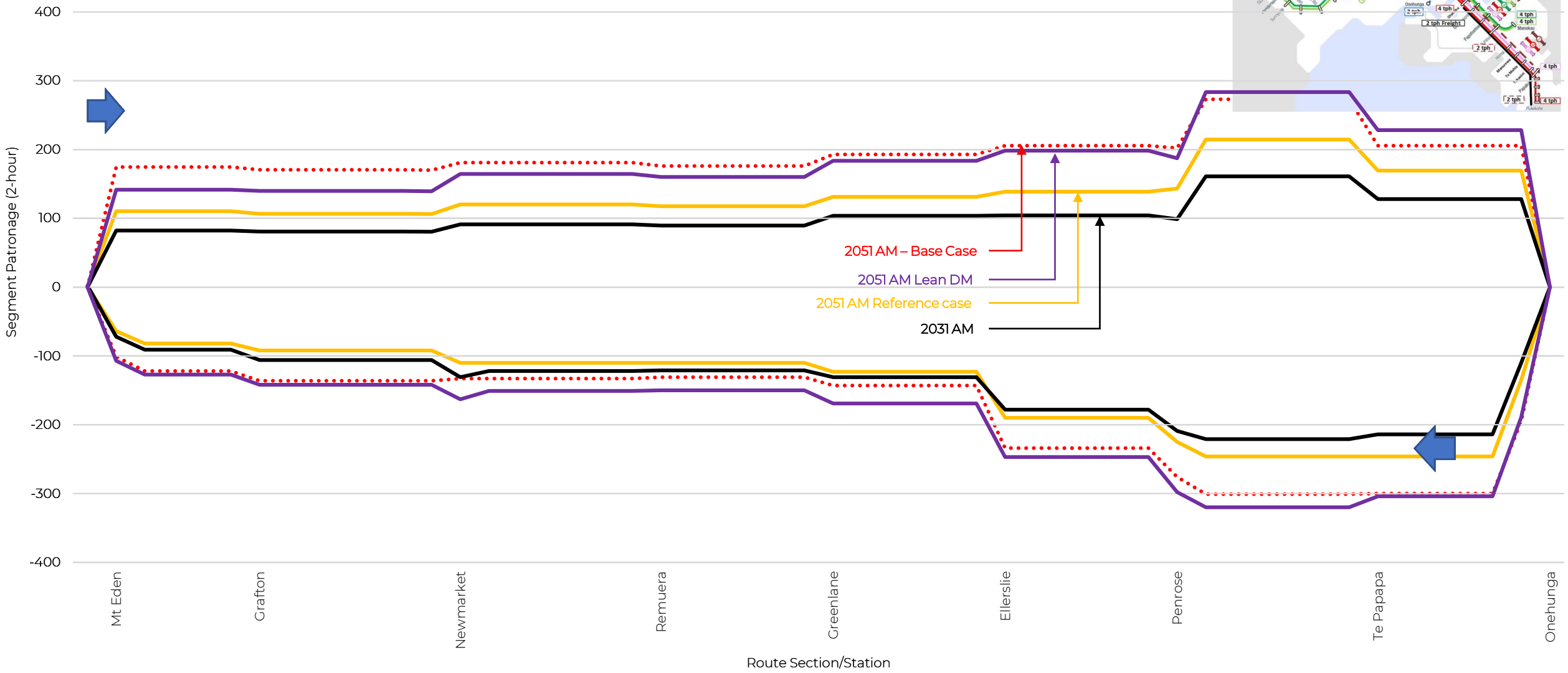
Manukau
Puhinui
Papatoetoe
Middlemore
Otahuhu
Sylvia Park
Panmure
Glen Innes
Meadowbank
Orakei
Britomart
Aotea
K Rd
Grafton

Route Section/Station

Demands along line by service

(RT3b – dark blue service on diagram)

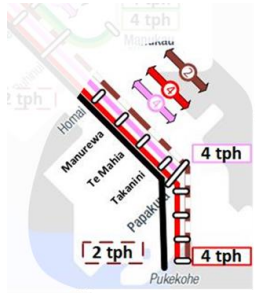




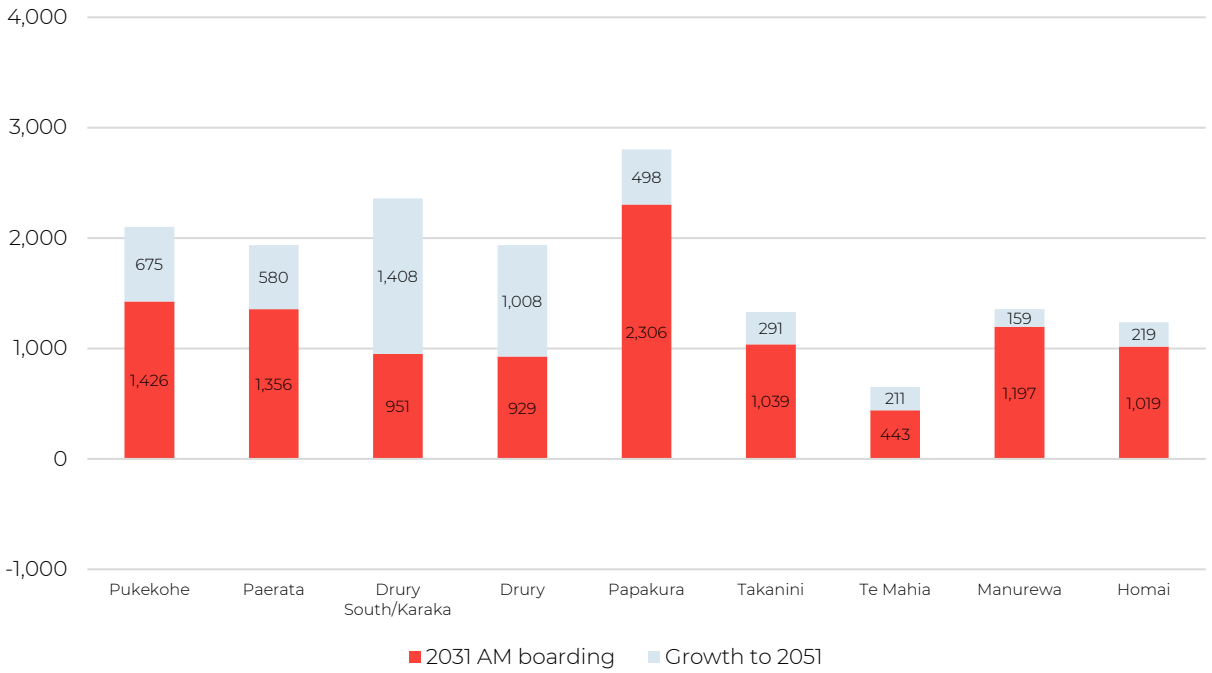
4 | Station demands

Lean DM - morning peak (2hr) station boarding and alighting

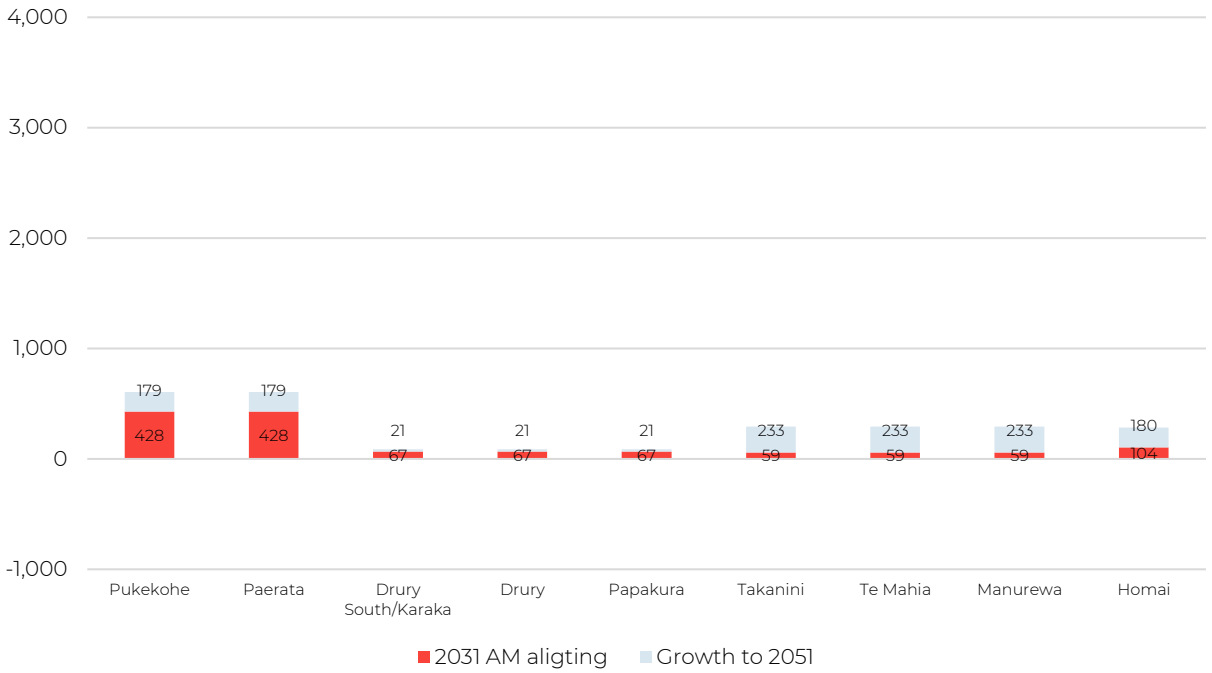
(Southern line: Pukekohe to Homai)



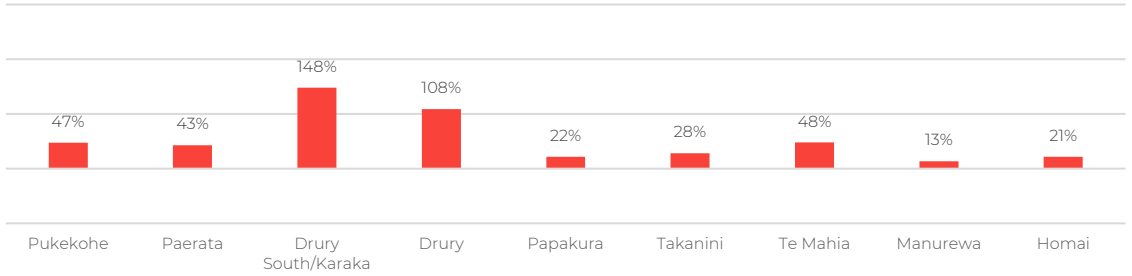
Southern line stations (AM boardings)



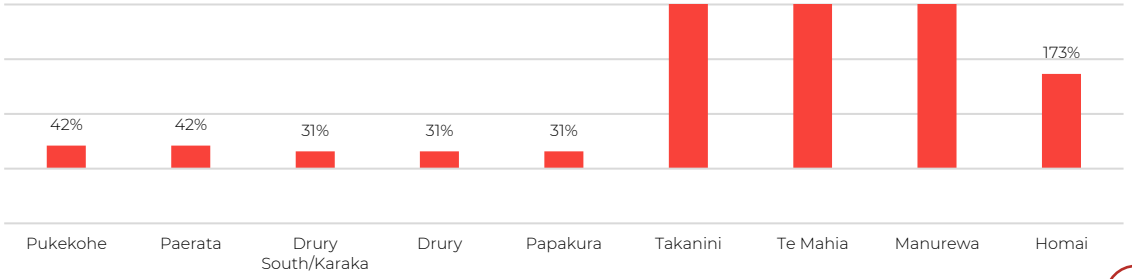
Southern line stations (AM alighting)



Percentage increase from 2031 to 2051

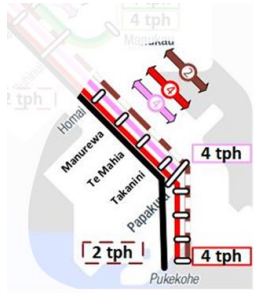


Percentage increase from 2031 to 2051

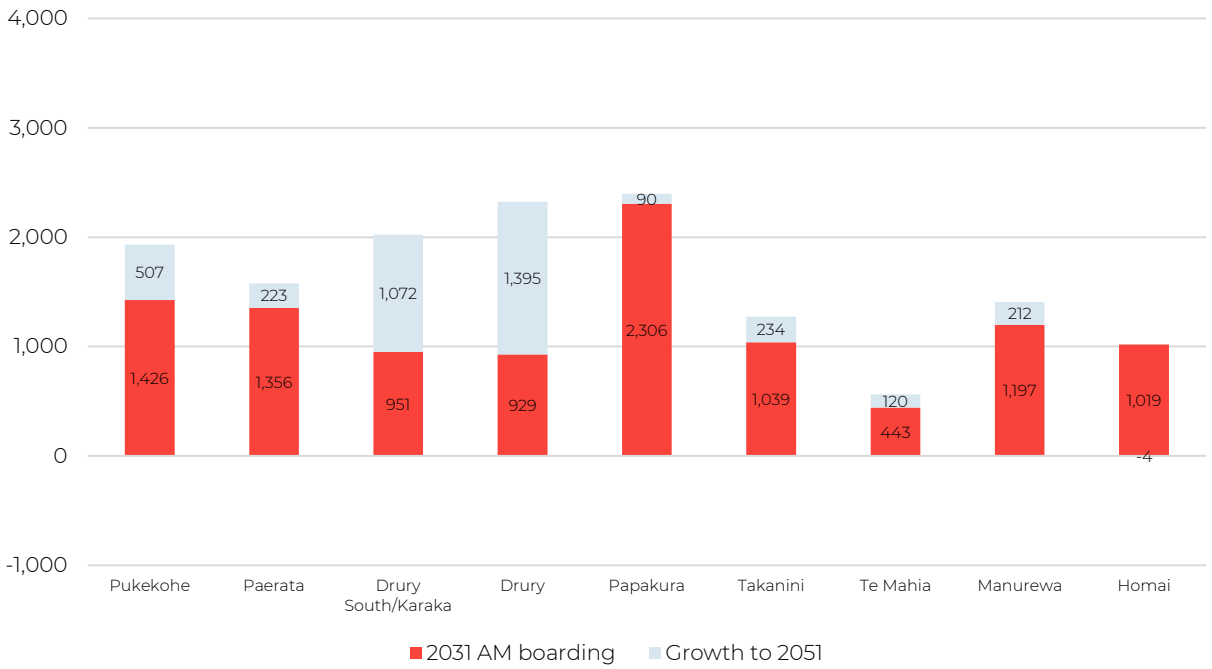


Reference case - morning peak (2hr) station boarding and alighting

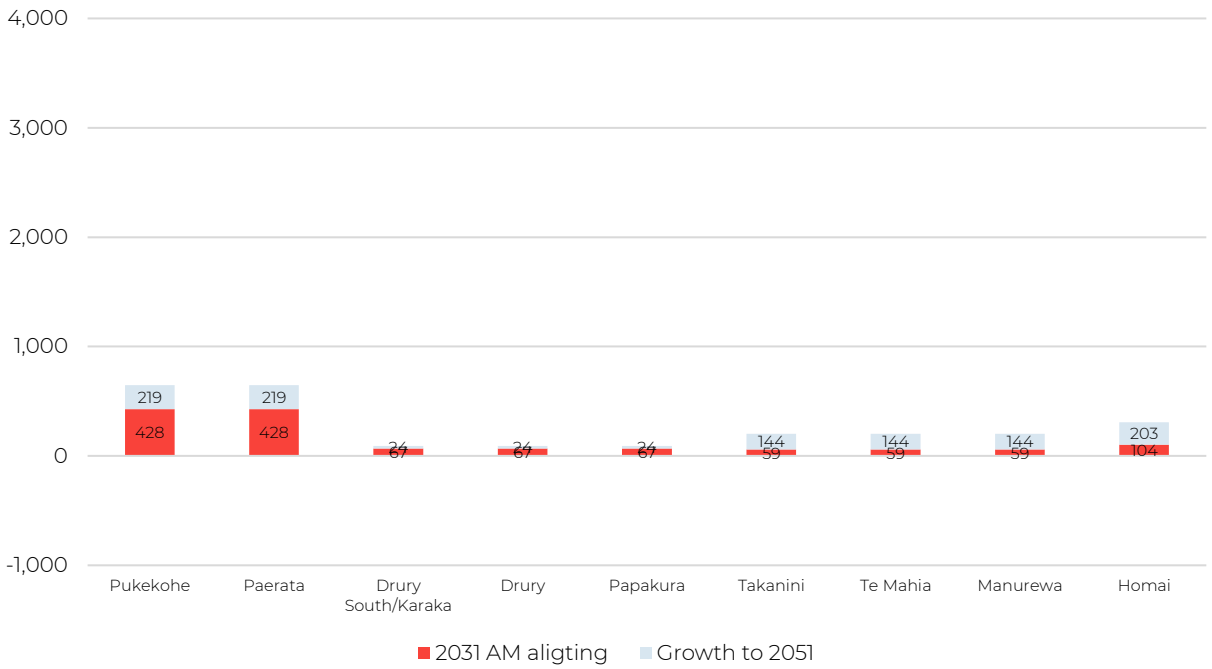
(Southern line: Pukekohe to Homai)



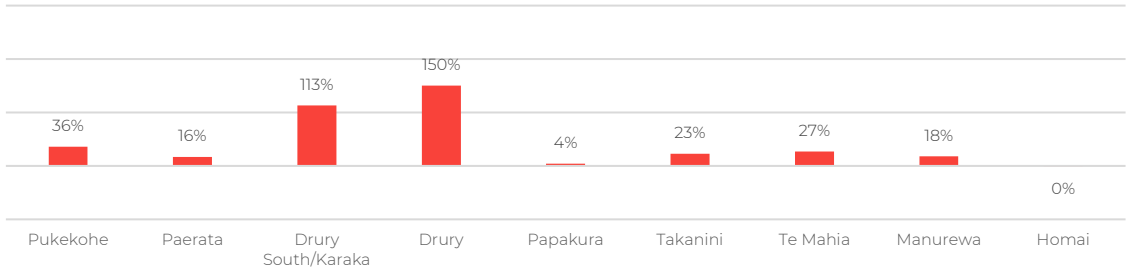
Southern line stations (AM boardings)



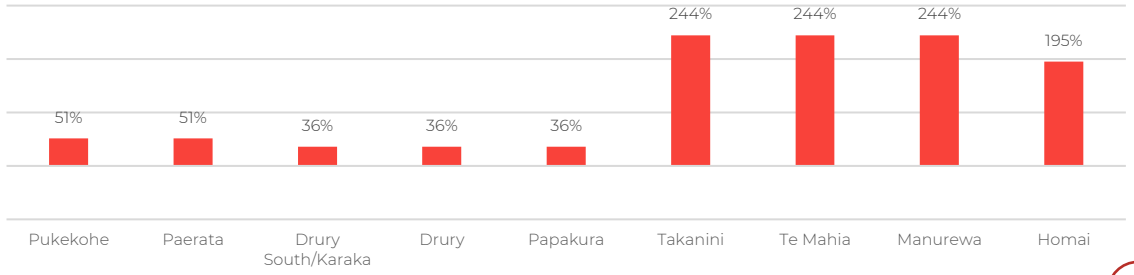
Southern line stations (AM alighting)



Percentage increase from 2031 to 2051

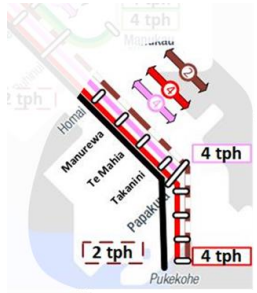


Percentage increase from 2031 to 2051



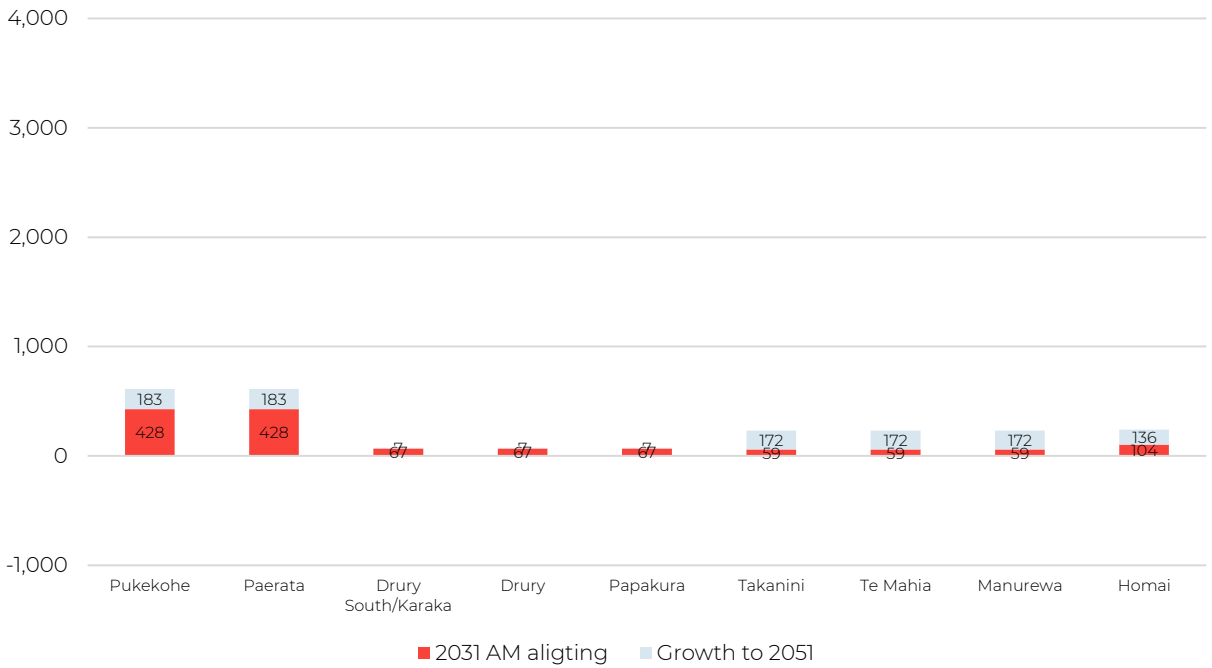
Base case - morning peak (2hr) station boarding and alighting

(Southern line: Pukekohe to Homai)

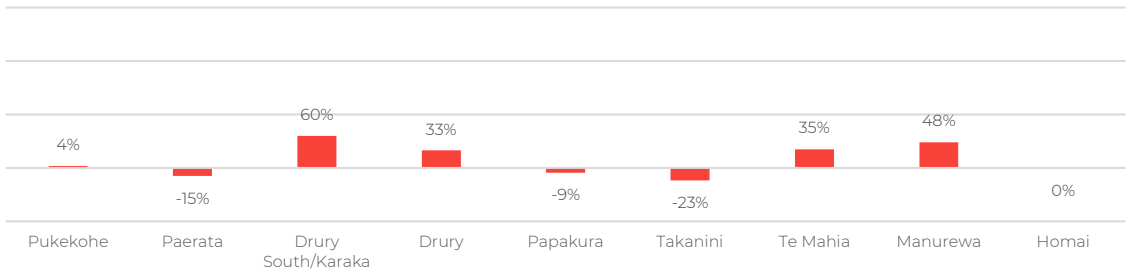


Southern line stations (AM boardings)

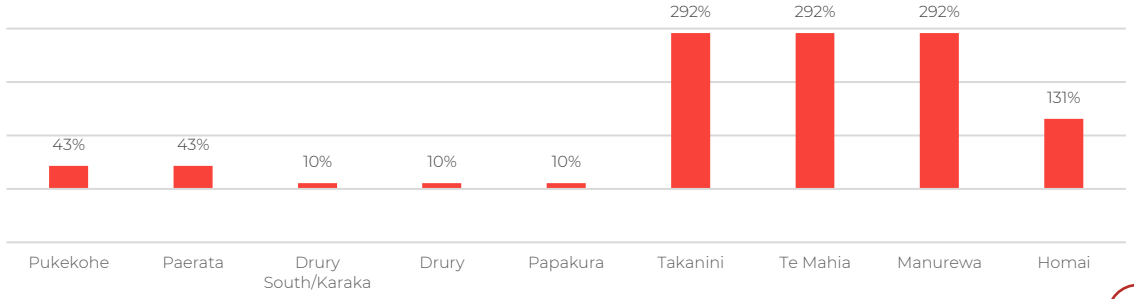
Southern line stations (AM alighting)



Percentage increase from 2031 to 2051



Percentage increase from 2031 to 2051



Base case - morning peak (2hr) station boarding and alighting

(Southern line: Pukekohe to Homai)

The 2051 AM origin/demand patterns for car and PT trips from the rail adjacent zones for the Pukekohe to Homai section of the southern line shows the following:

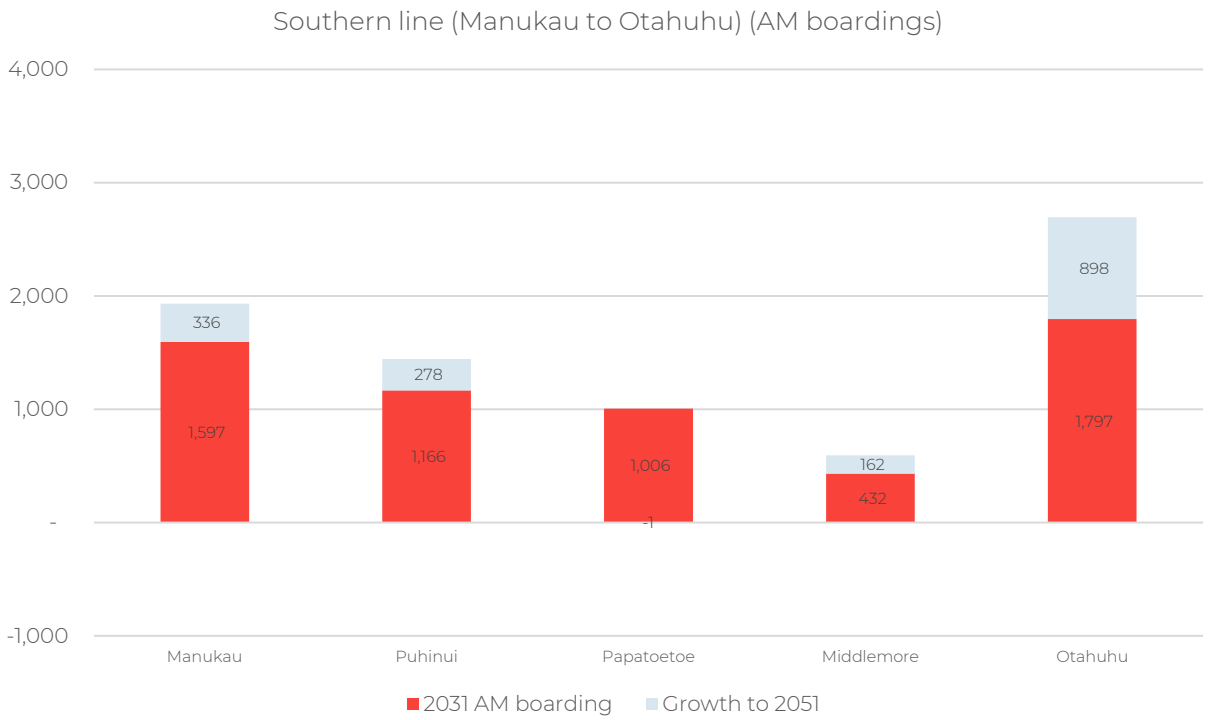
1. The city centre is a key destination for trips from these zones. It has a very high public transport mode share already.
2. The airport is a key destination and is still dominated by car trips. This should be a key opportunity for attracting trips to PT if the rail becomes more competitive in terms of travel times. (Note that the Base Case has the A2B project included).
3. The Manukau CBD is also a key market from this area, and this still show high private car share. Faster rail journeys could offer an opportunity to this location – or perhaps a direct connection from here to Manukau CBD?
4. A large part of internal trips (trips starting and ending within the yellow zones) are made by private car. This suggest rail not attractive for shorter trips – likely due to headway limitations and station access).
5. **A key focus should be to shift trips from the yellow zones to Manuka and the airport onto PT.**
6. Zones in yellow: Rail adjacent zones for the Pukekohe to Homai section.
7. Zones in orange: Rail adjacent zones across the rail network.
8. Red bars = car trips; green bars = PT trips

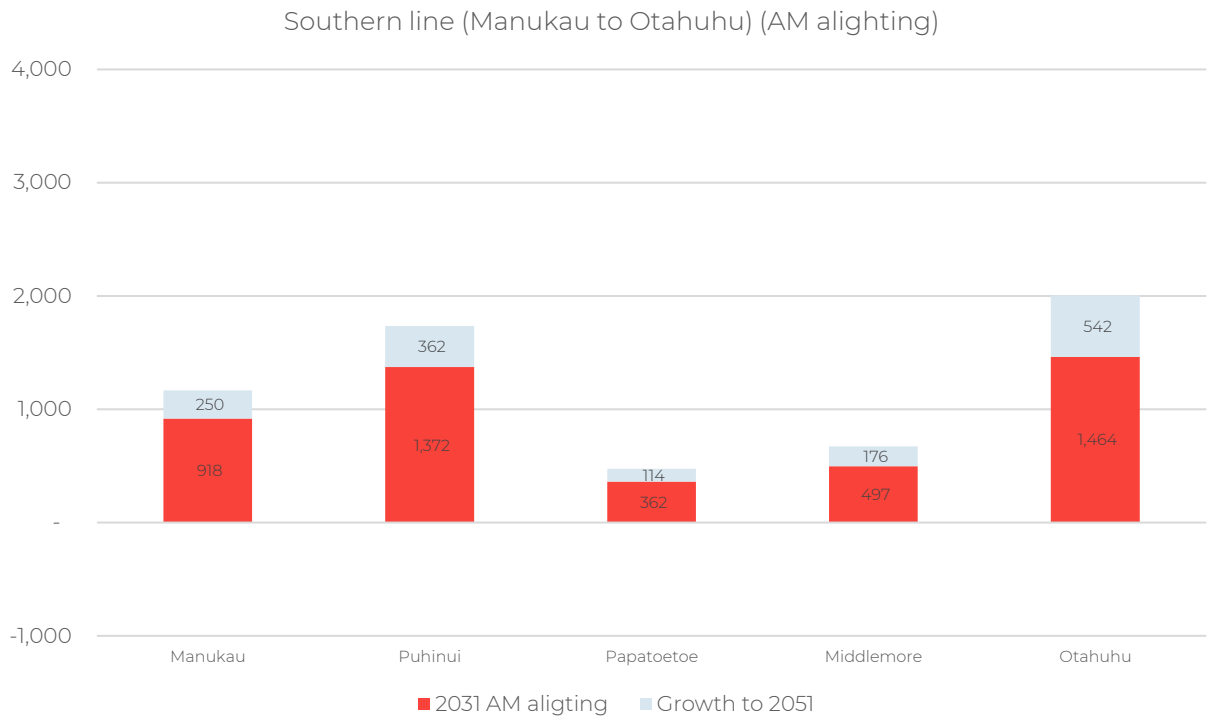
Lean DM - morning peak (2hr) station boarding and alighting

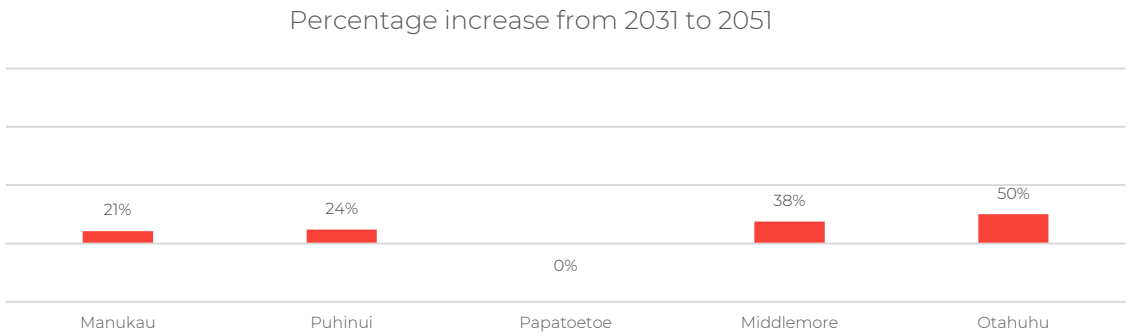
(Southern line: Manukau to Otahuhu)

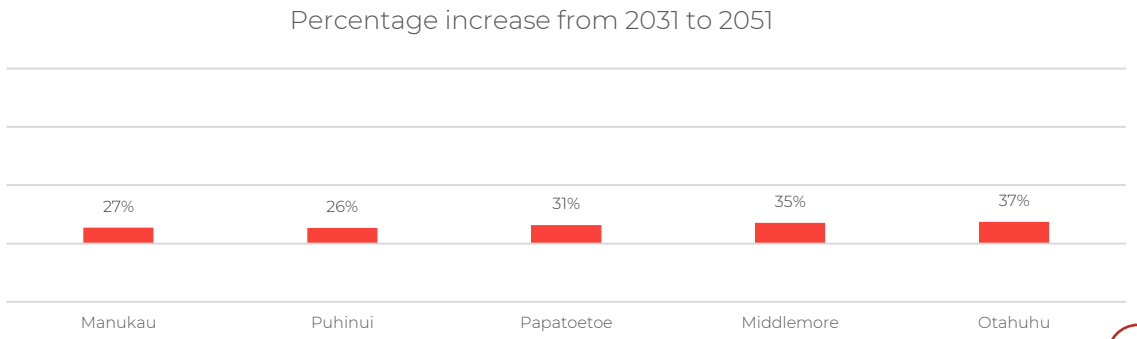
Reference case - morning peak (2hr) station boarding and alighting

(Southern line: Manukau to Otahuhu)



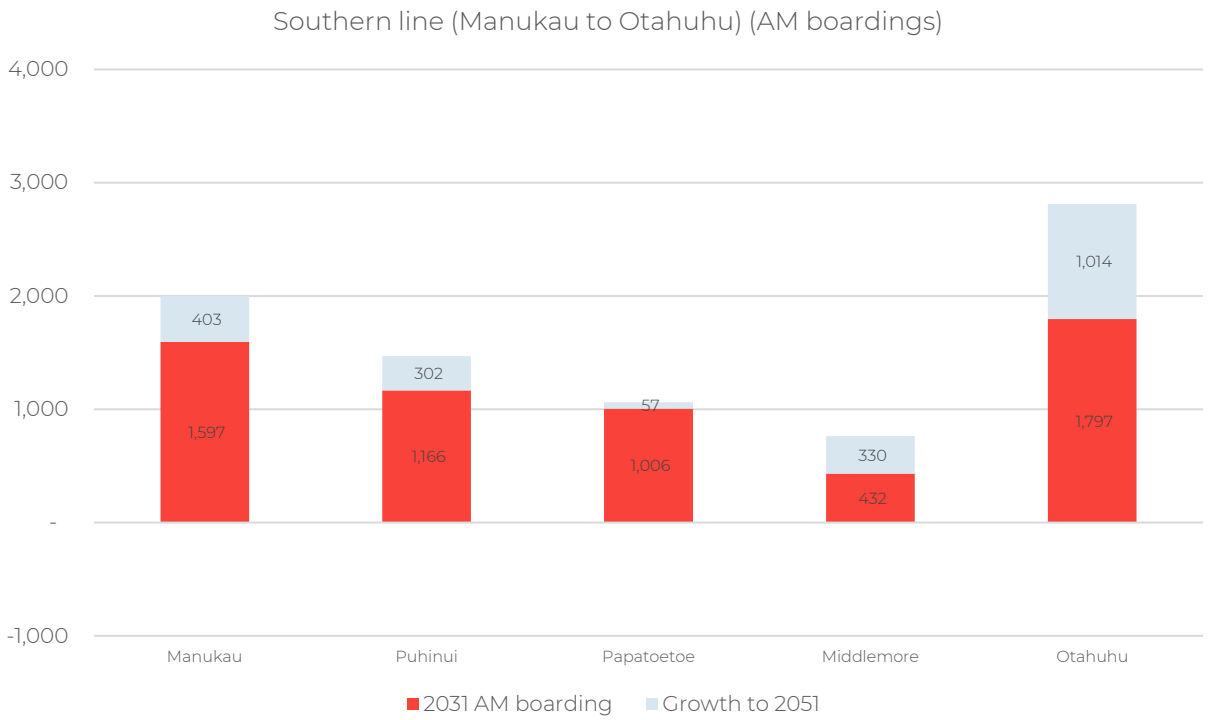


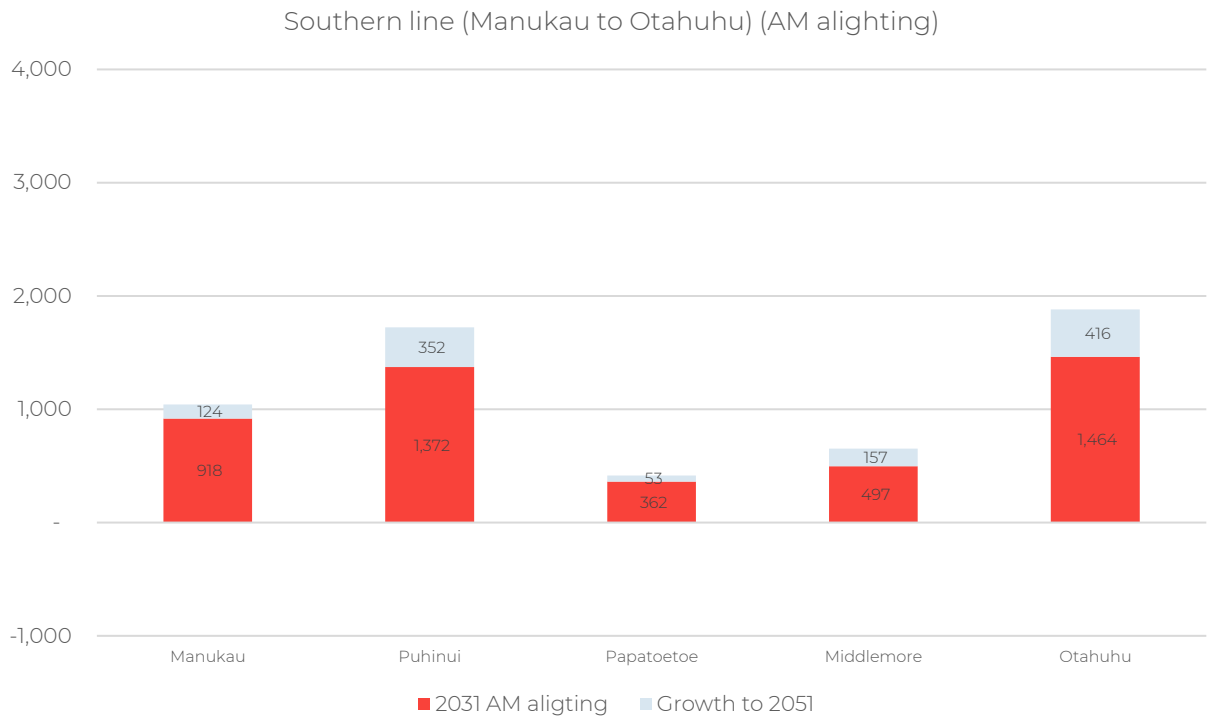


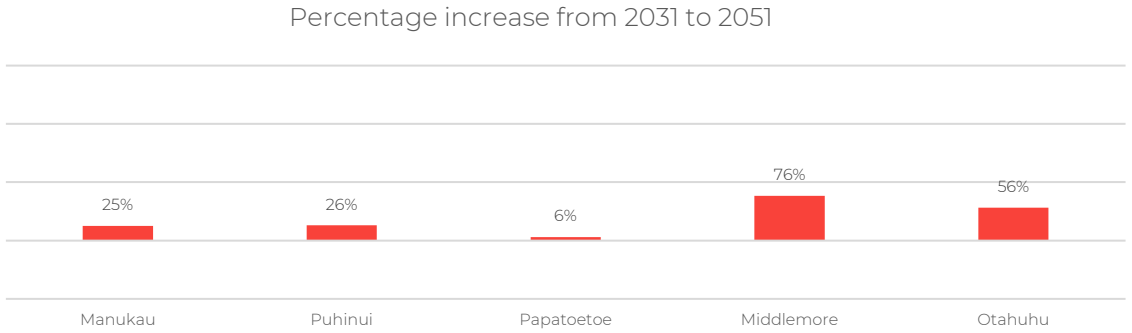


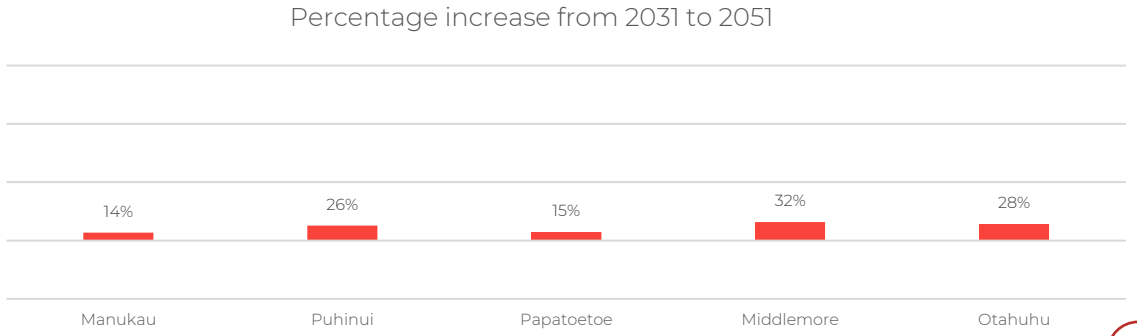
Base case - morning peak (2hr) station boarding and alighting

(Southern line: Manukau to Otahuhu)



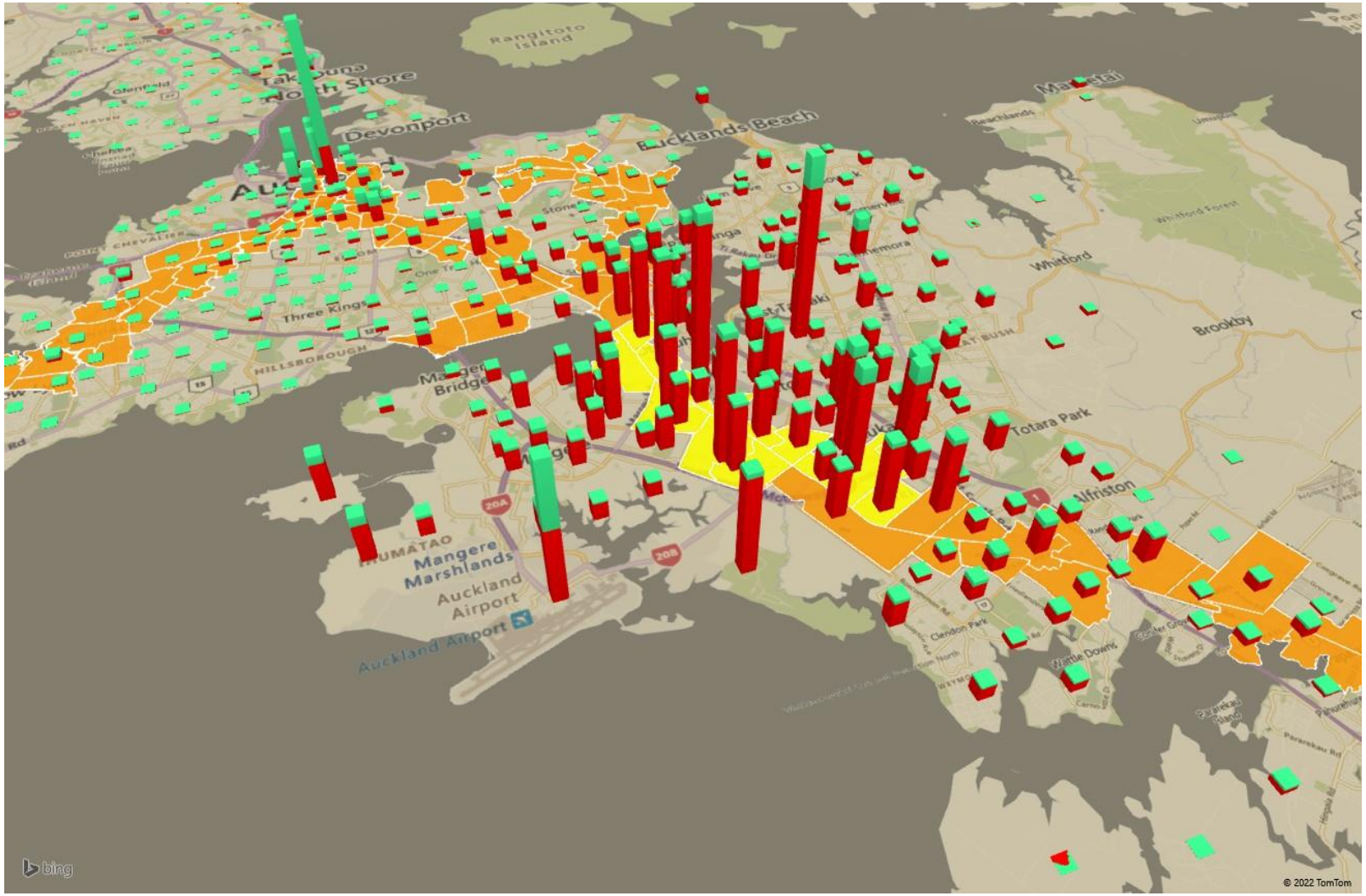






Base case - morning peak (2hr) station boarding and alighting

(Southern line: Manukau to Otahuhu)



The 2051 AM origin/demand patterns for car and PT trips from the rail adjacent zones for the Manukau to Otahuhu section of the southern line shows the following:

1. The city centre is a key destination for trips from these zones. It has a very high public transport mode share already.
2. Newmarket, Ellerslie and Manurewa are also prominent markets.
3. The airport is a key destination but limited opportunity for rail network to influence the mode share to this destination from this location.
4. Limited demand to the western line or to the southern line beyond Manurewa.
5. The eastern line is also not a strong market from this location.

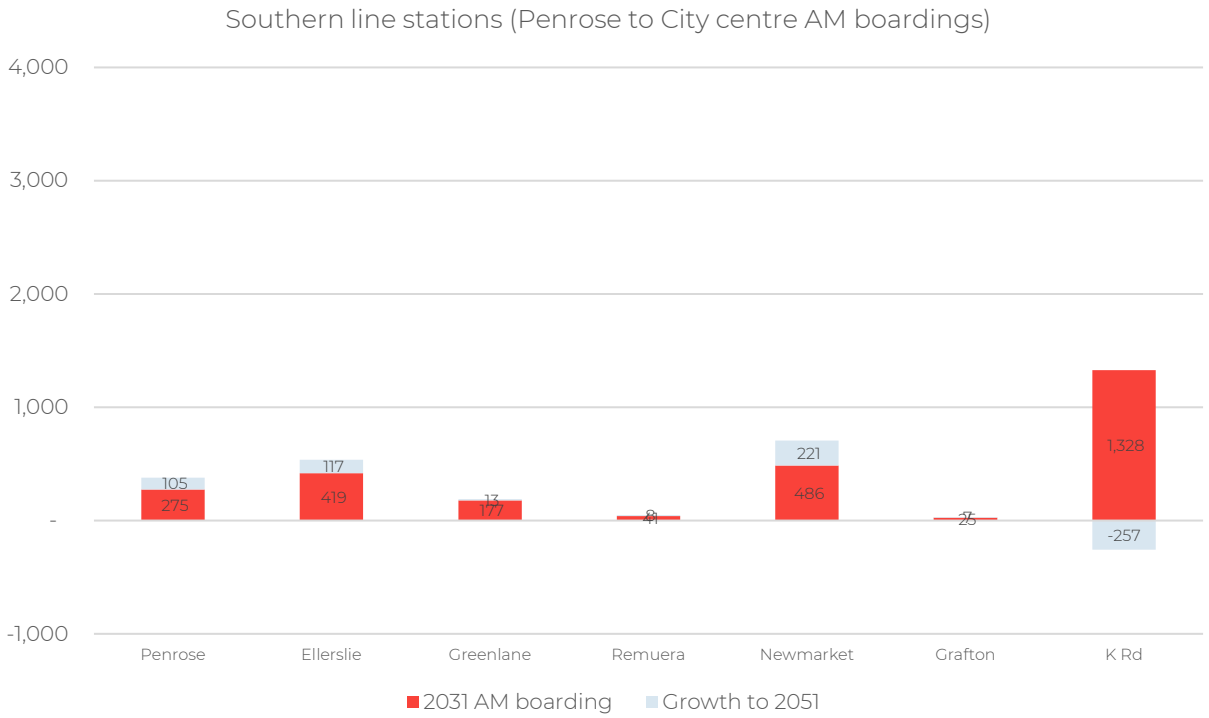
6. Zones in yellow: Rail adjacent zones for the Manukau to Otahuhu section.
7. Zones in orange: Rail adjacent zones across the rail network.
8. Red bars = car trips; green bars = PT trips

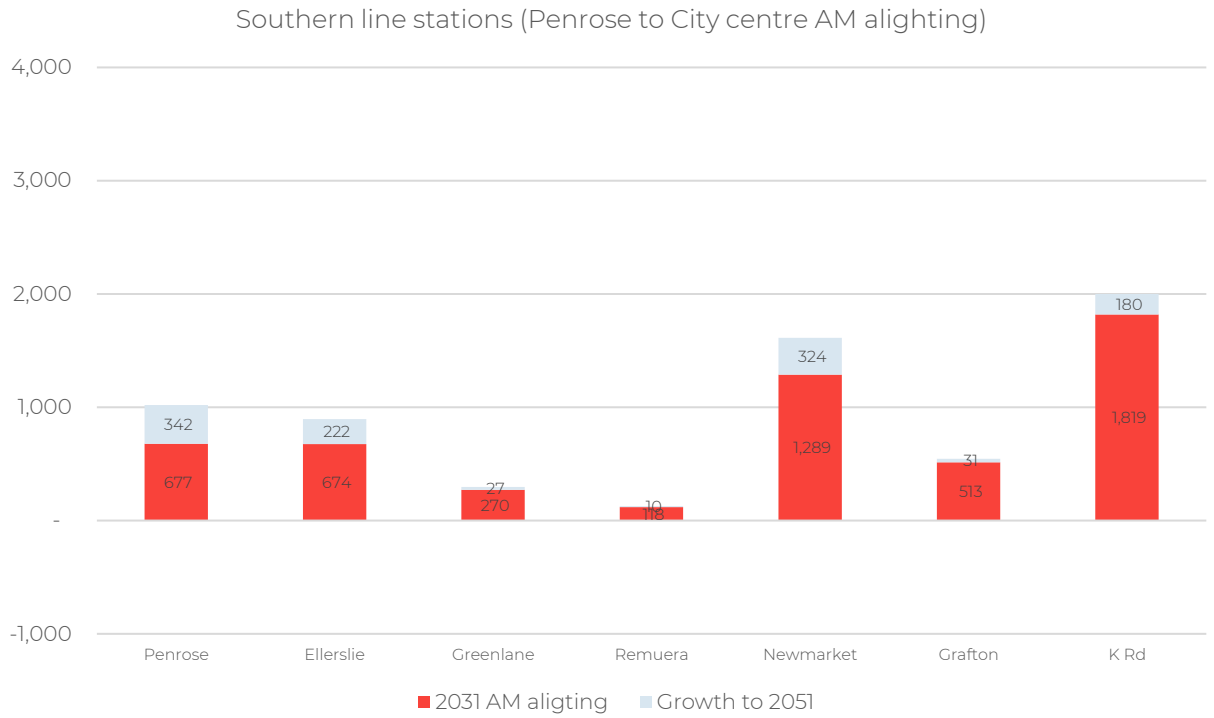
Lean DM - morning peak (2hr) station boarding and alighting

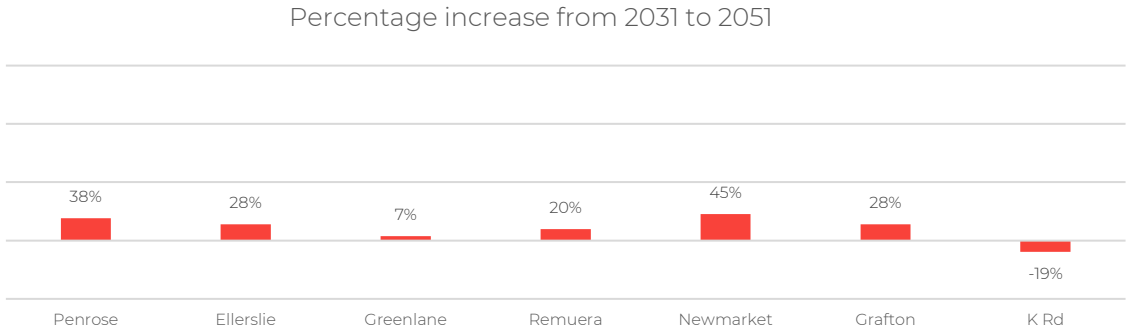
(Southern line: Penrose to city centre boundary)

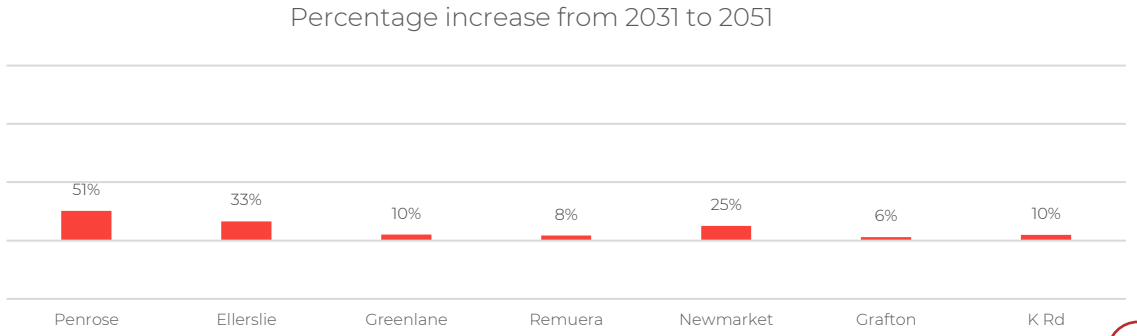
Reference case- morning peak (2hr) station boarding and alighting

(Southern line: Penrose to city centre boundary)



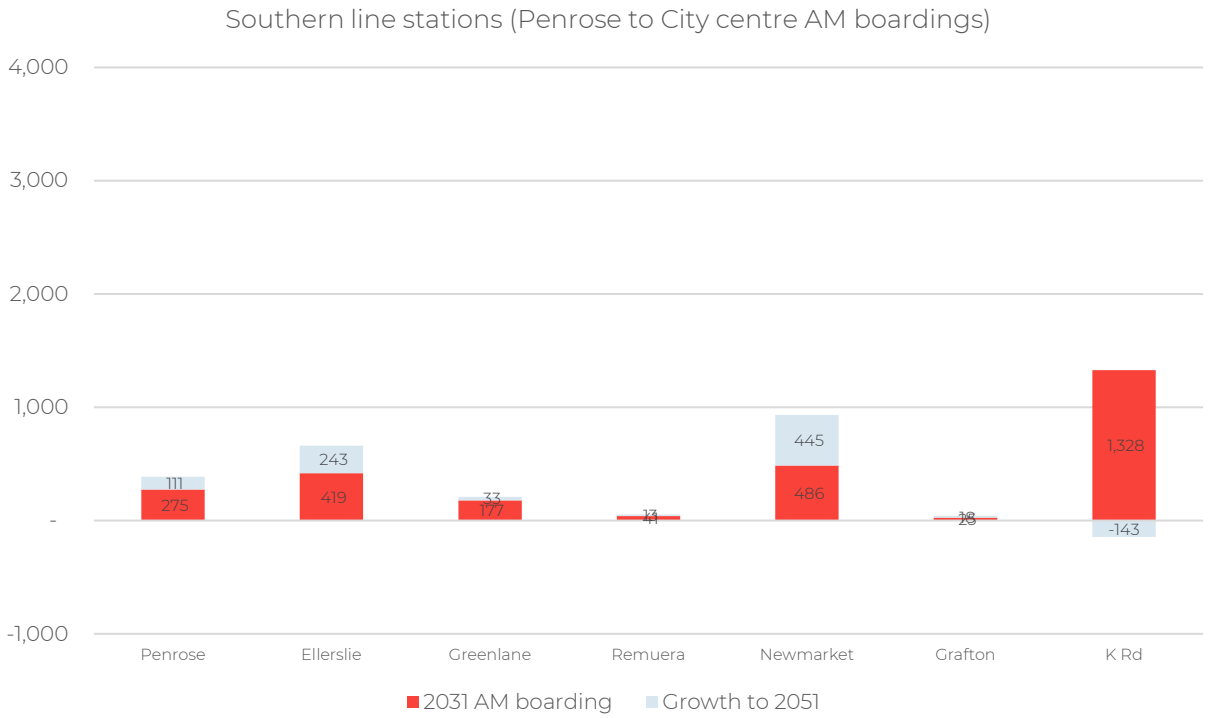


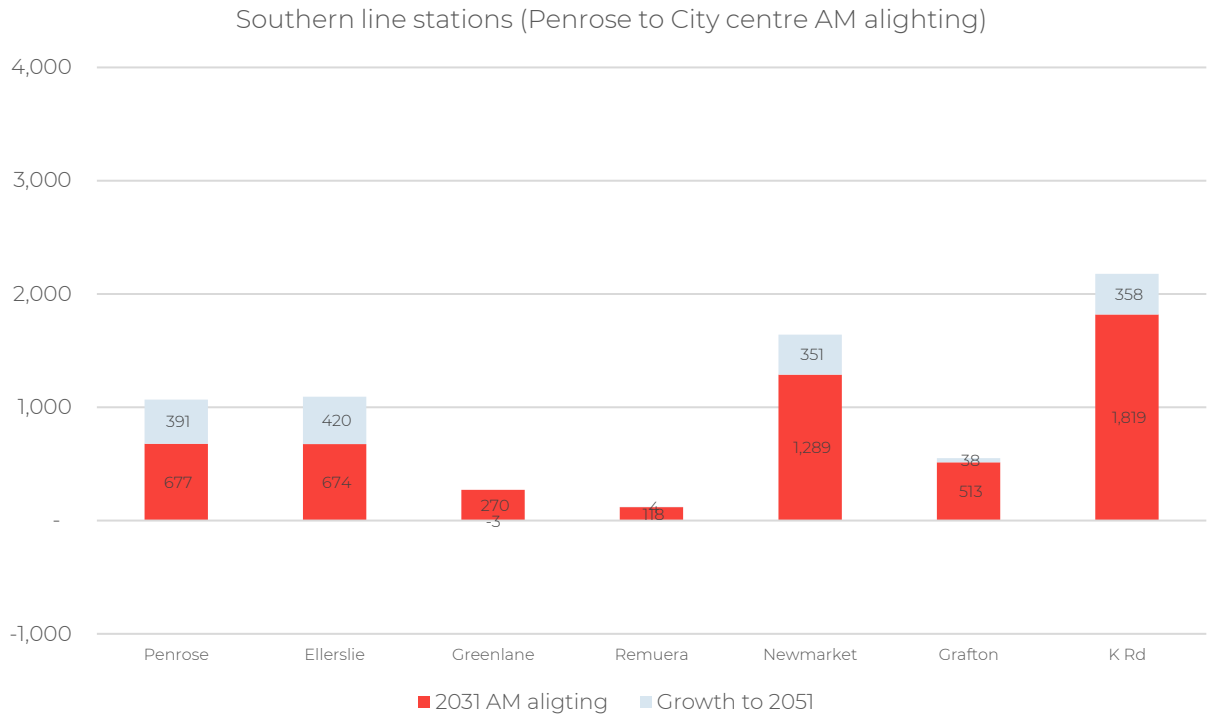


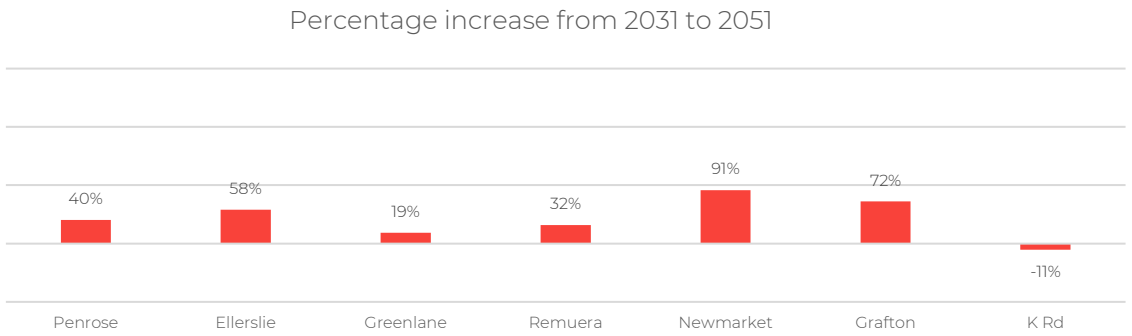


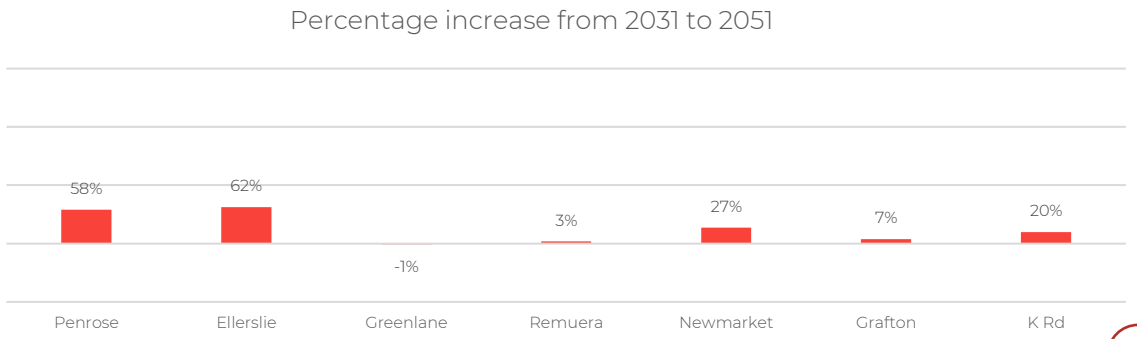
Base case- morning peak (2hr) station boarding and alighting

(Southern line: Penrose to city centre boundary)



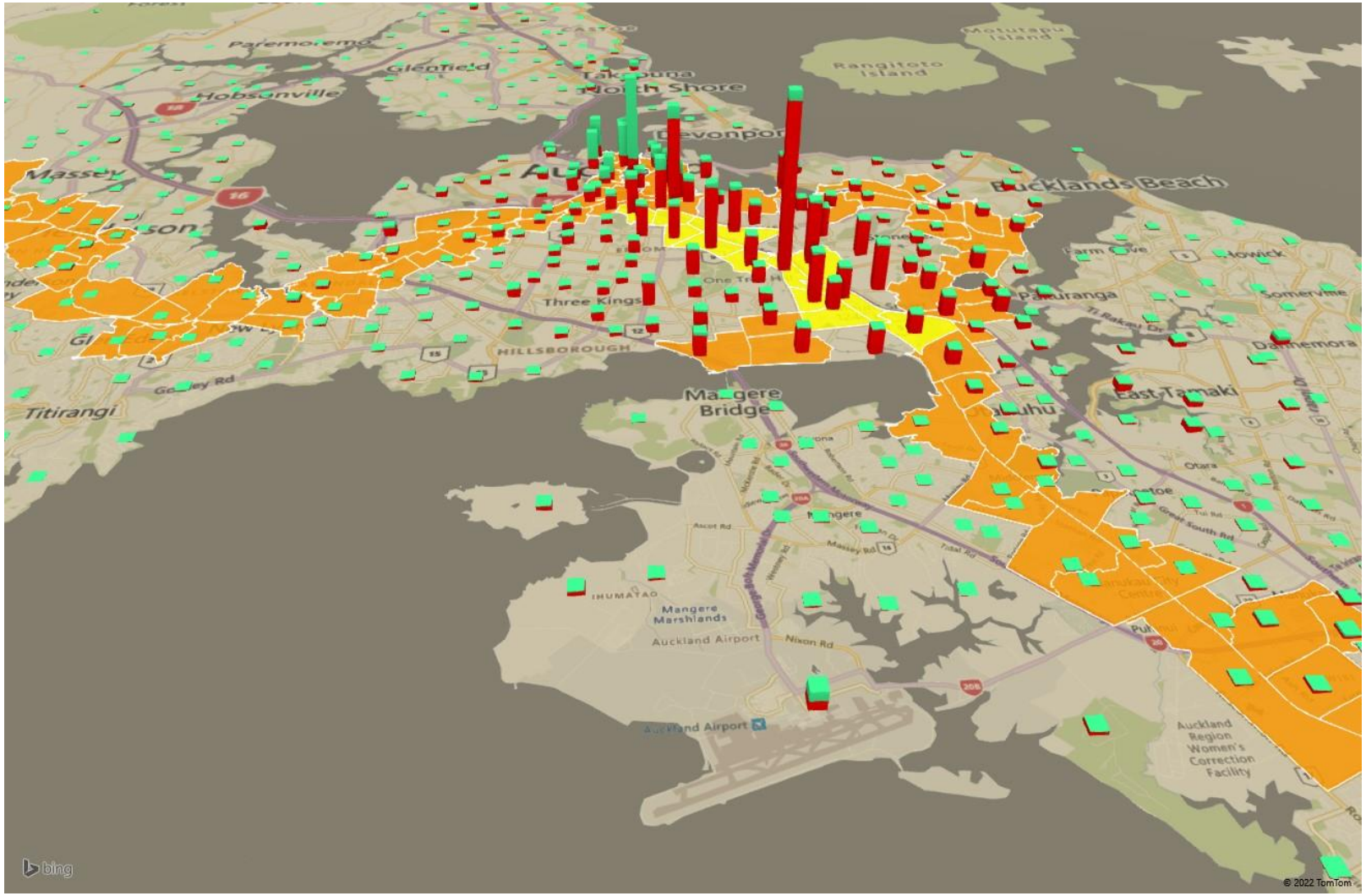






Base case- morning peak (2hr) station boarding and alighting

(Southern line: Penrose to city centre boundary)



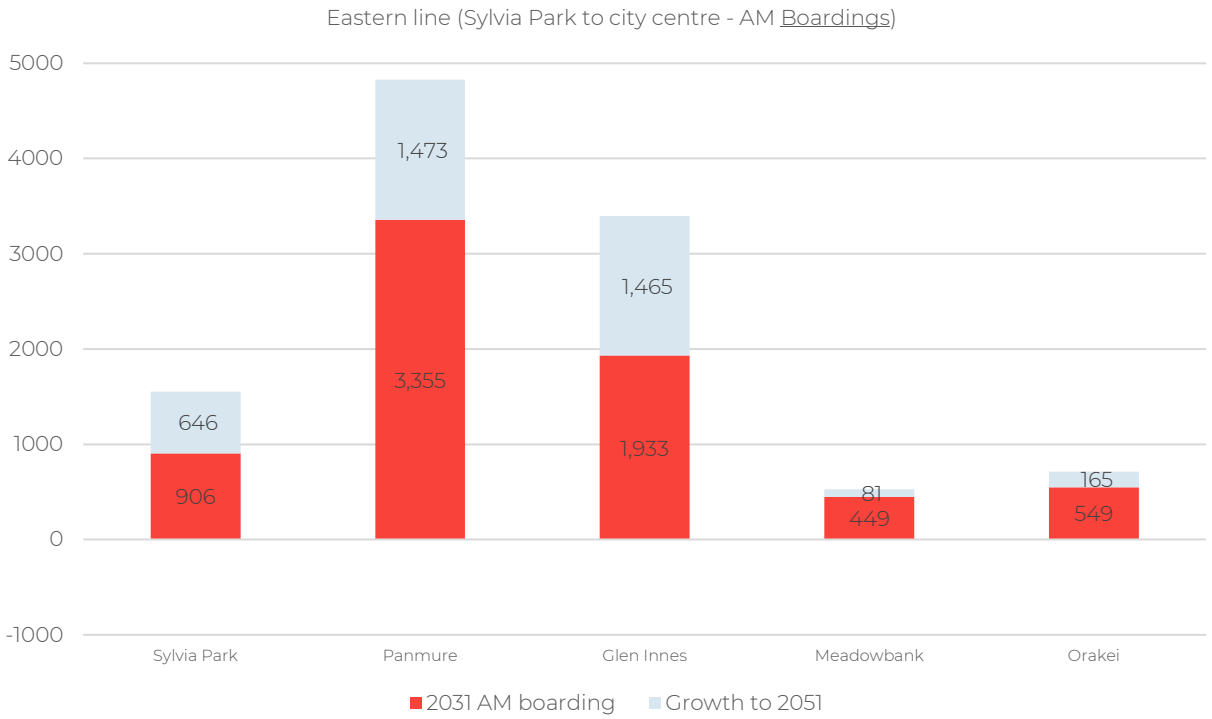
The 2051 AM origin/demand patterns for car and PT trips from the rail adjacent zones for the Penrose to City fringe section of the southern line shows the following:

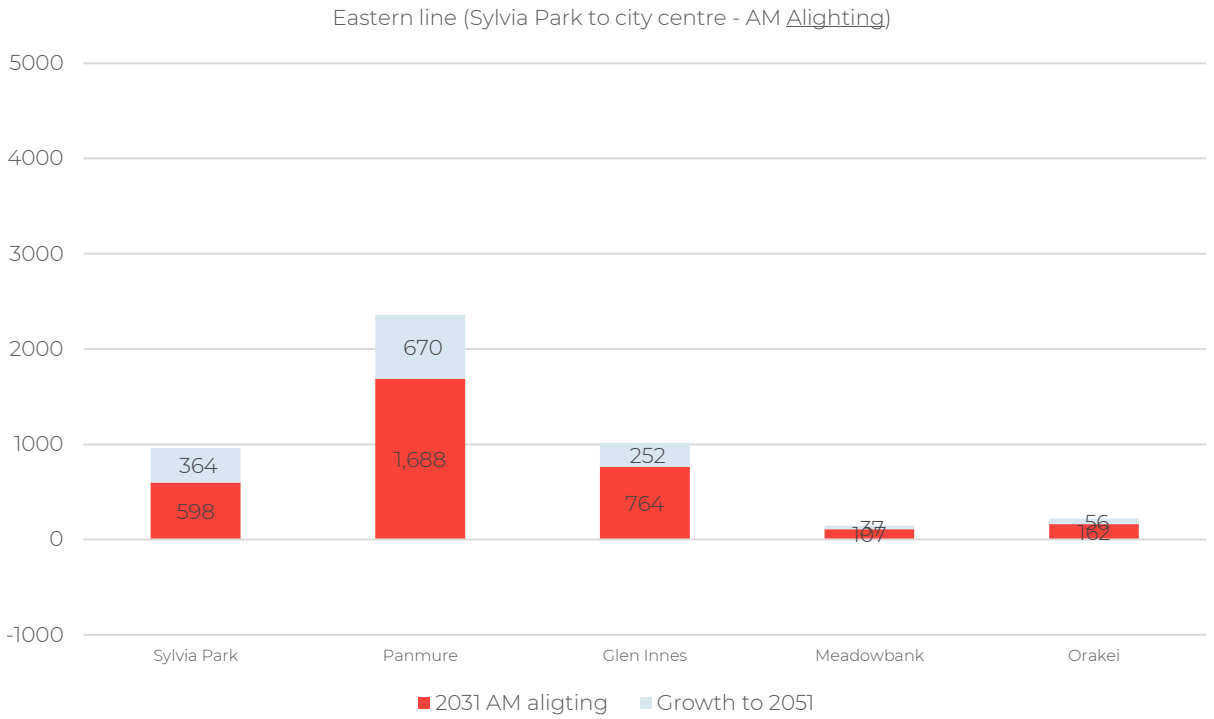
1. The city centre is a key destination for trips from these zones. It has a very high public transport mode share already.
2. Ellerslie is a key zone, with a very high car mode share.
3. Limited markets western, southern or eastern lines.
4. There is an opportunity to the Onehunga rail zones, currently with major car mode share.

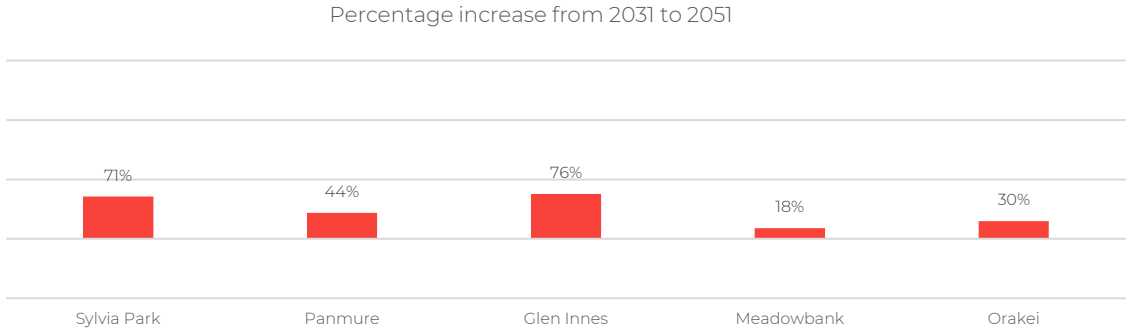
5. Zones in yellow: Rail adjacent zones for the Penrose to city fringe section.
6. Zones in orange: Rail adjacent zones across the rail network.
7. Red bars = car trips; green bars = PT trips

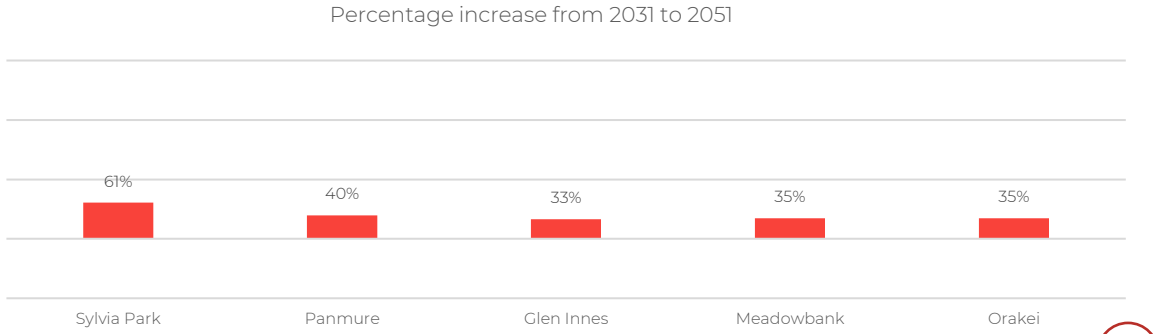
Lean DM - morning peak (2hr) station boarding and alighting

(Eastern line: Sylvia Park to city centre boundary)



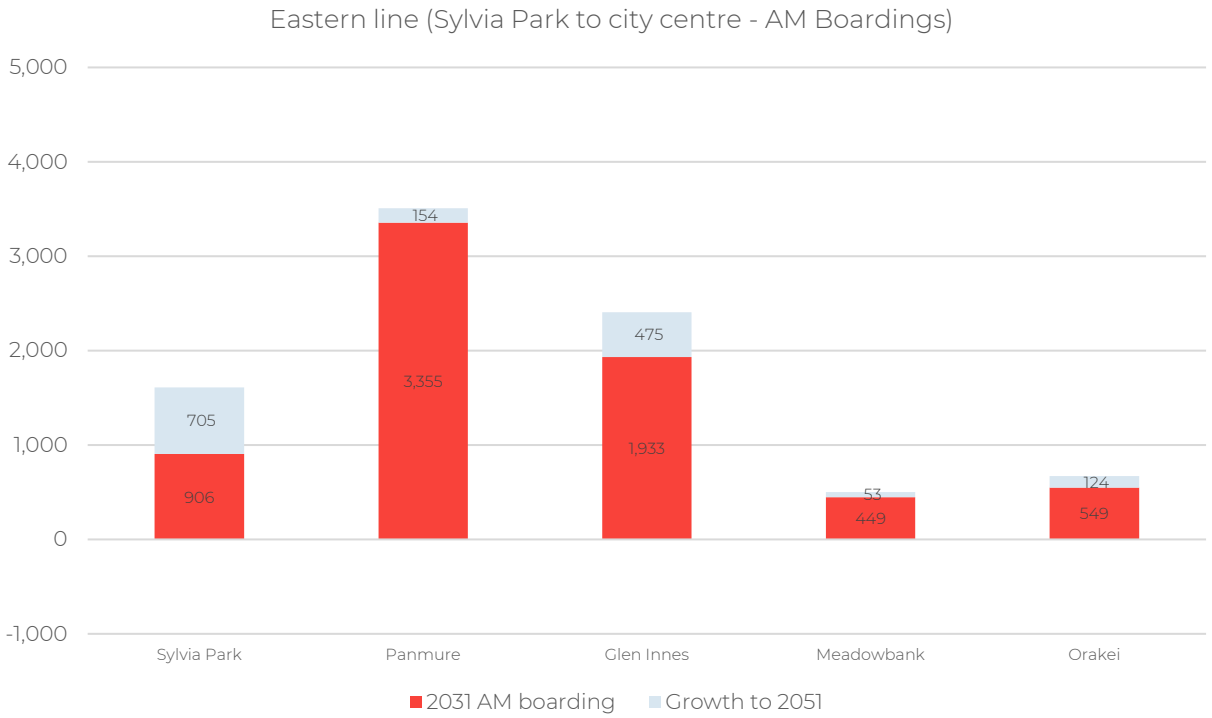


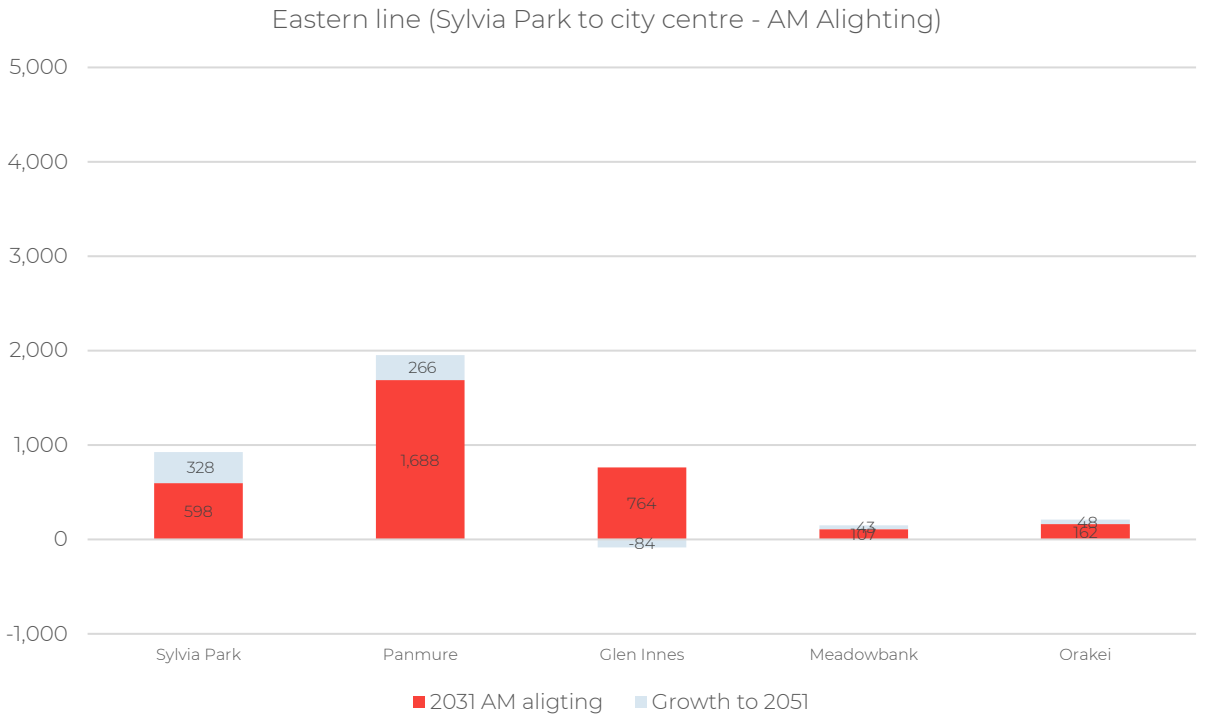


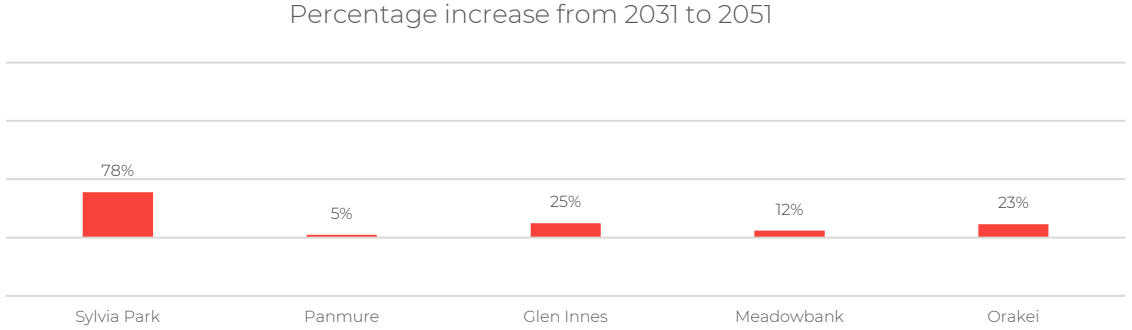


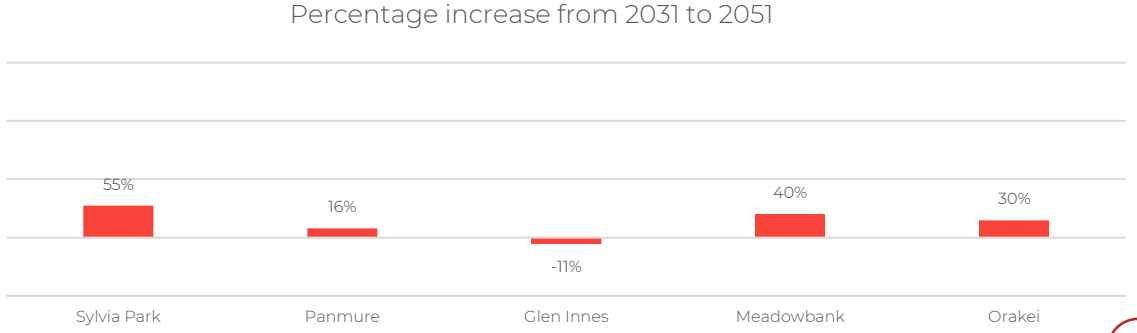
Reference case - morning peak (2hr) station boarding and alighting

(Eastern line: Sylvia Park to city centre boundary)



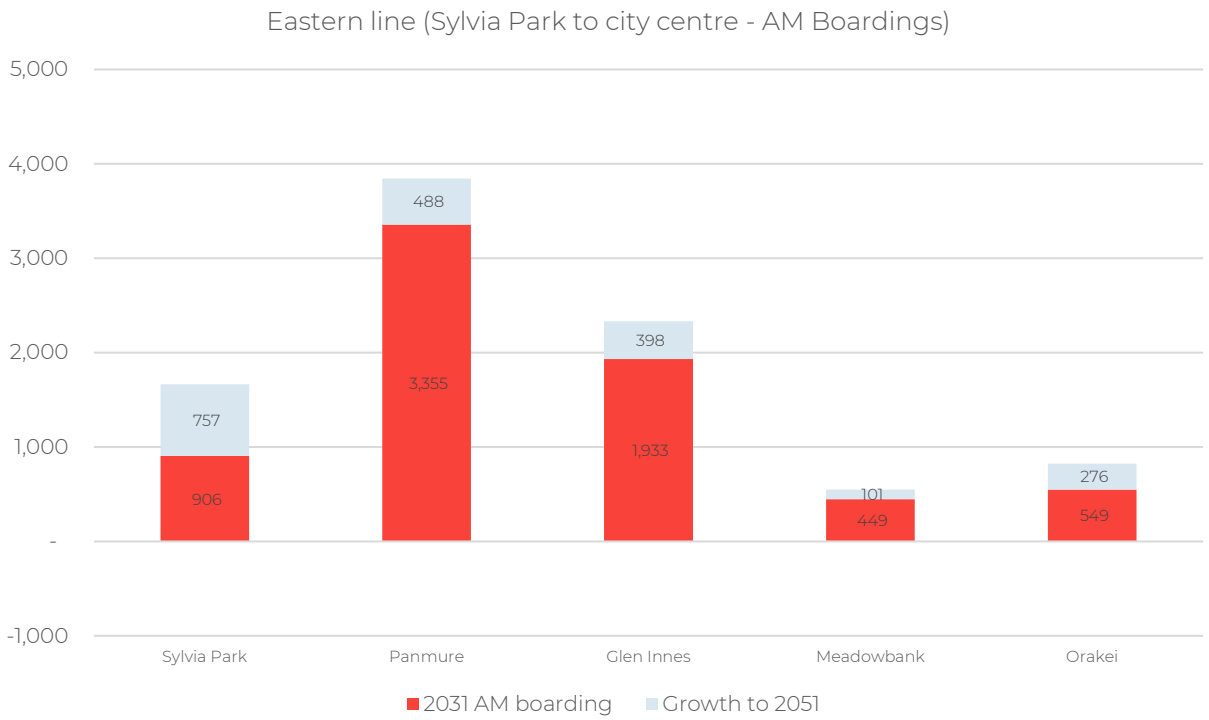


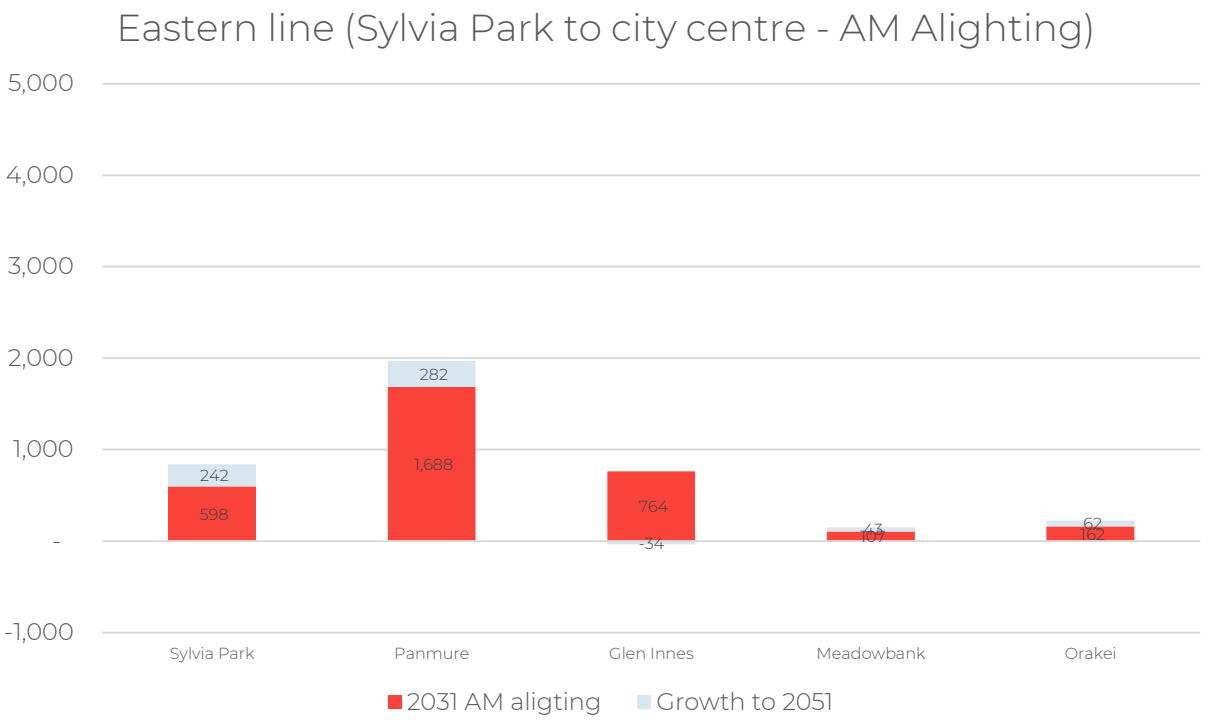


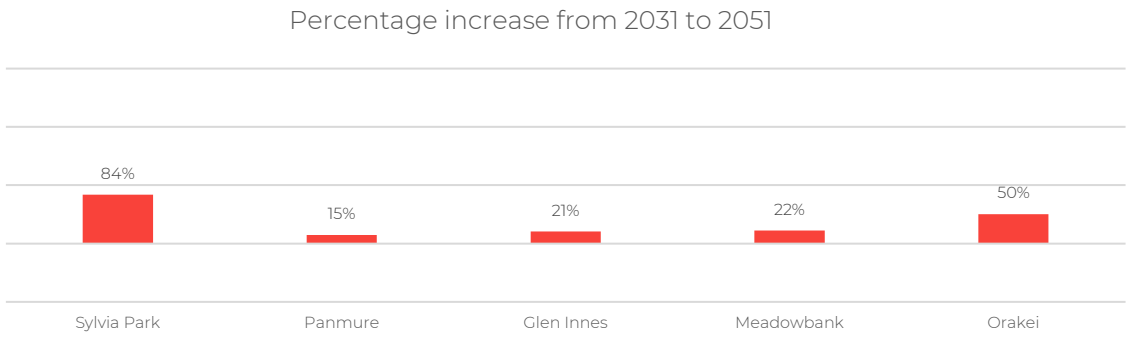


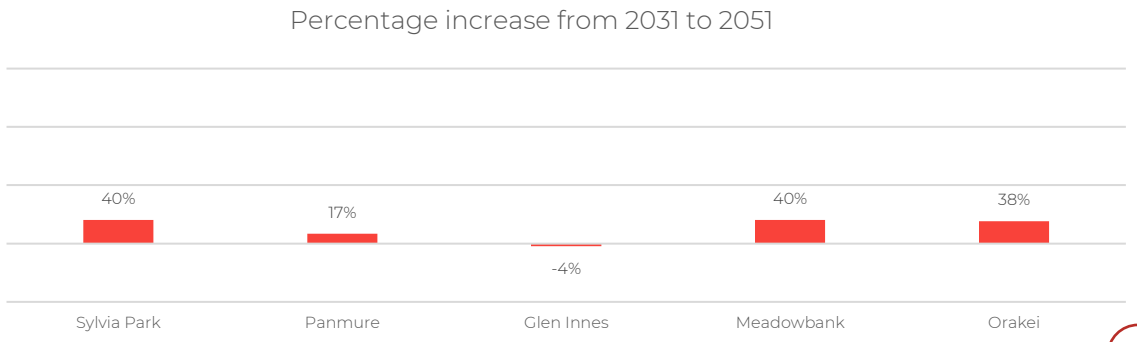
Base case - morning peak (2hr) station boarding and alighting

(Eastern line: Sylvia Park to city centre boundary)



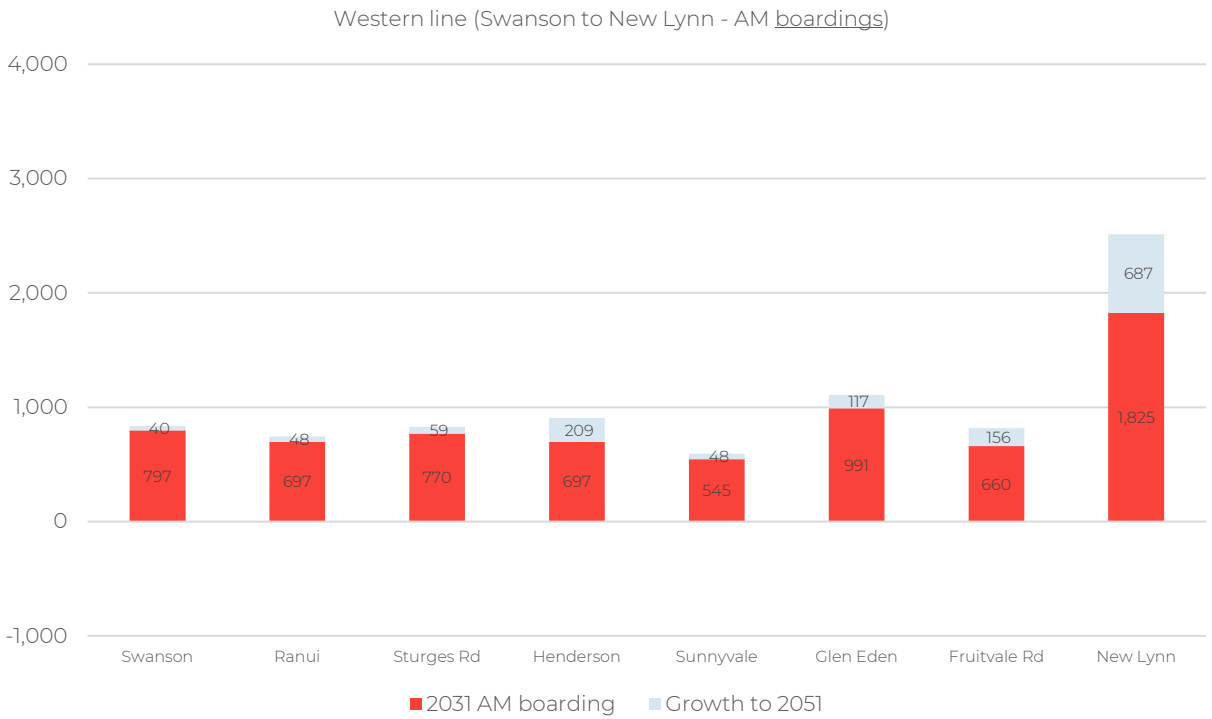


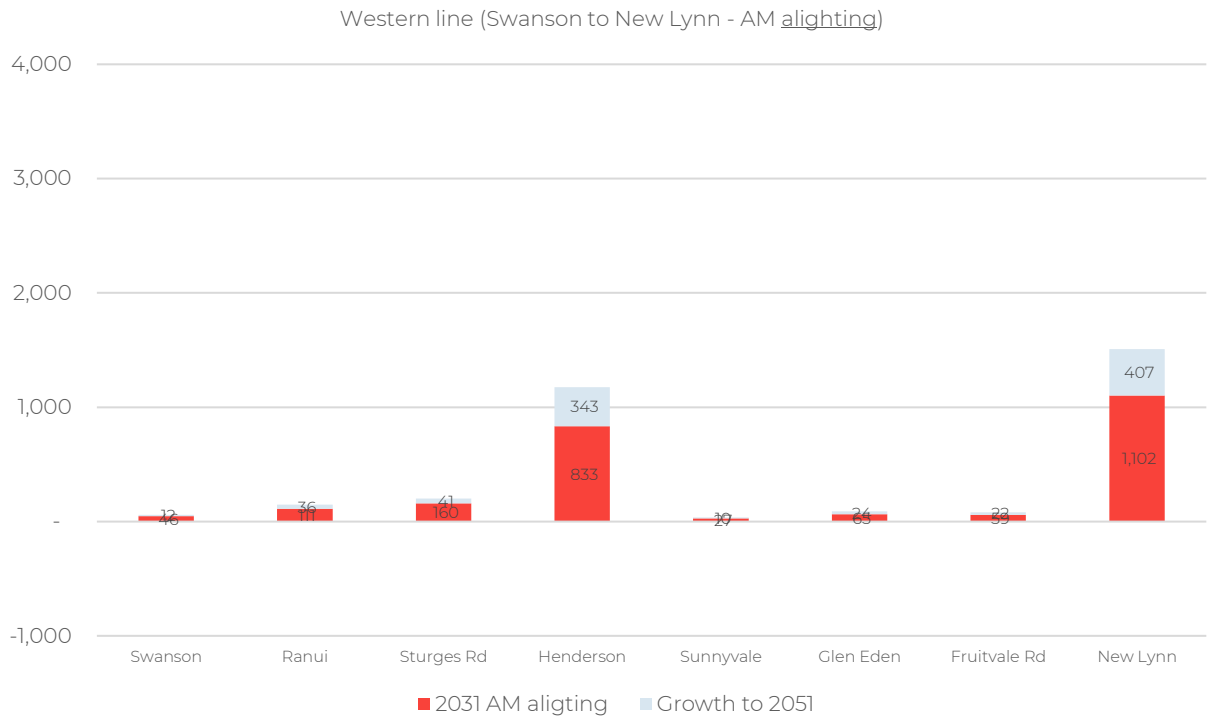


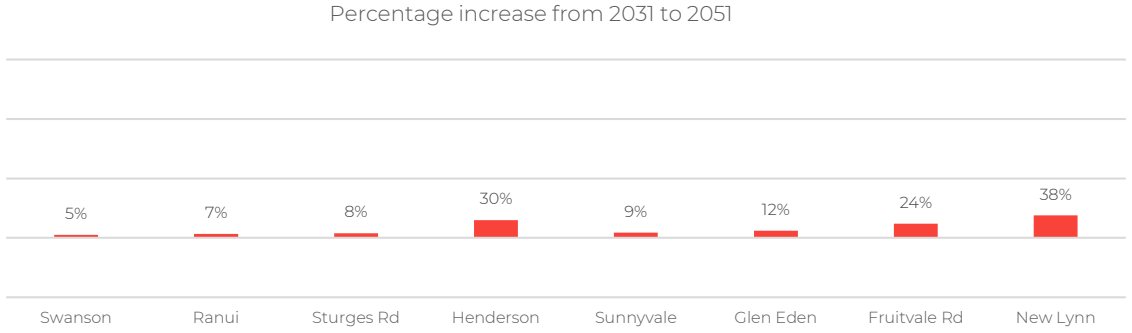


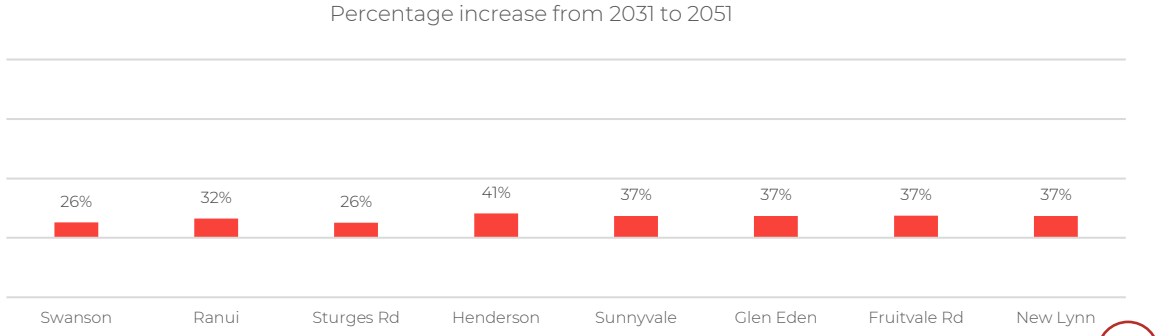
Lean DM - morning peak (2hr) station boarding and alighting

(Western line: Swanson to New Lynn)



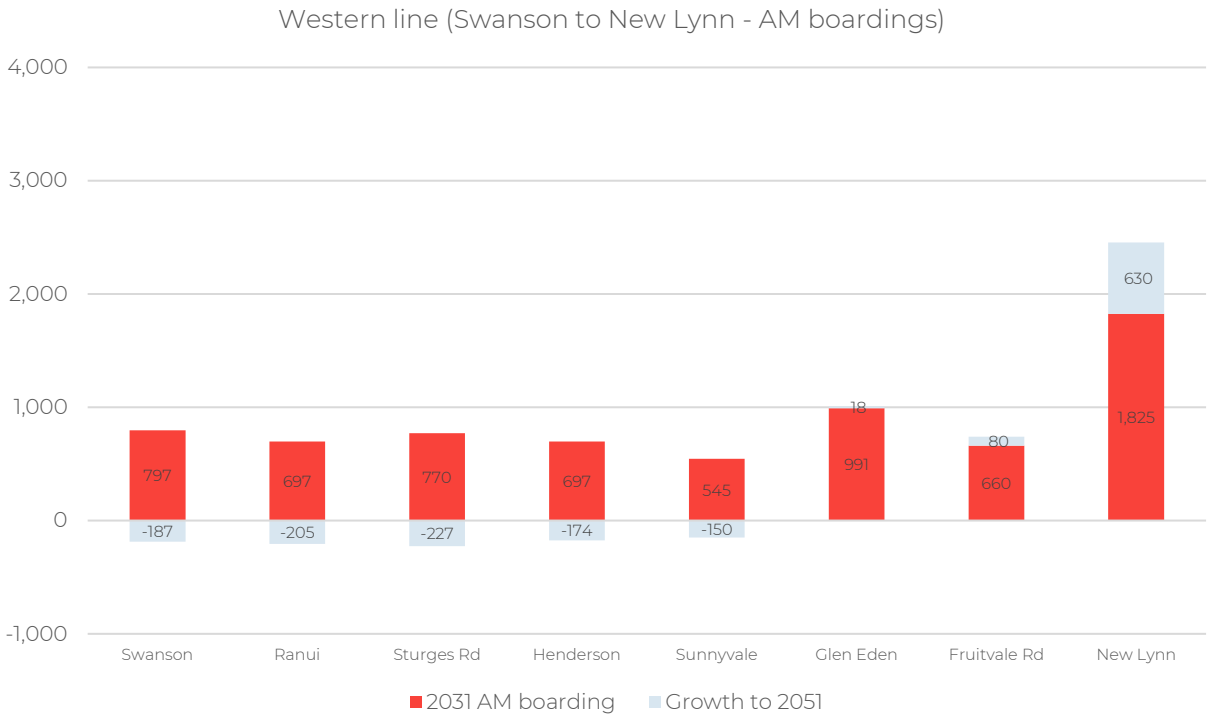


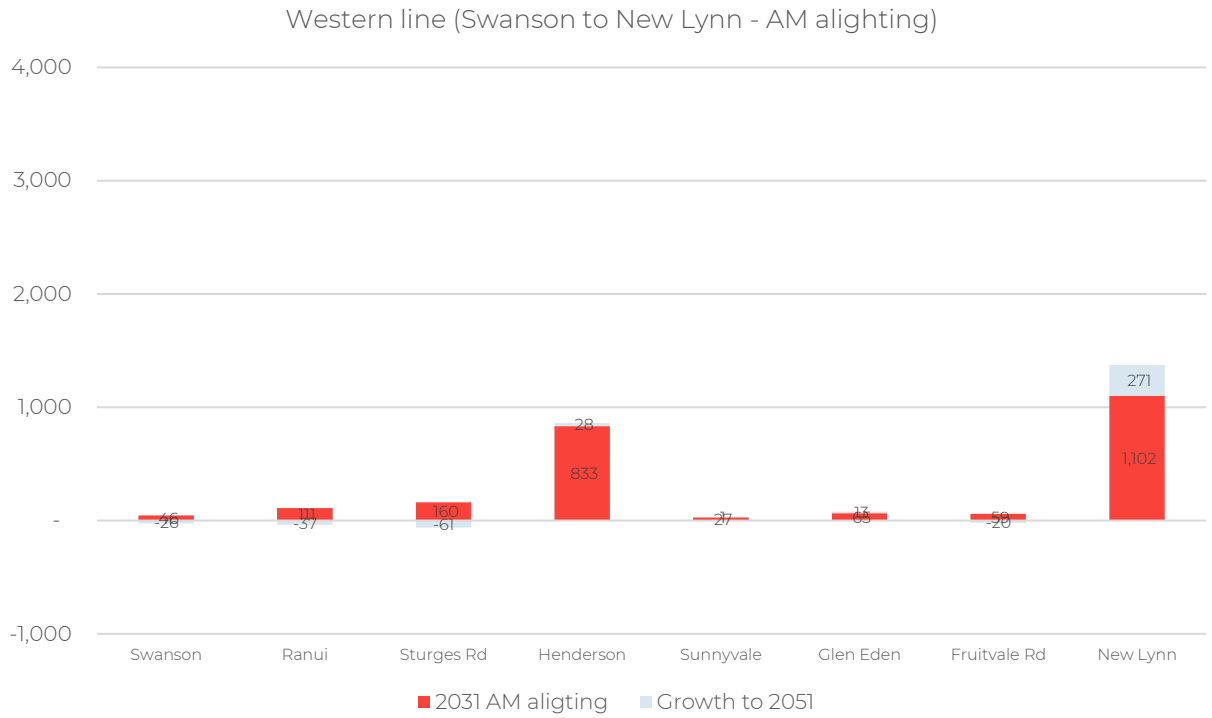


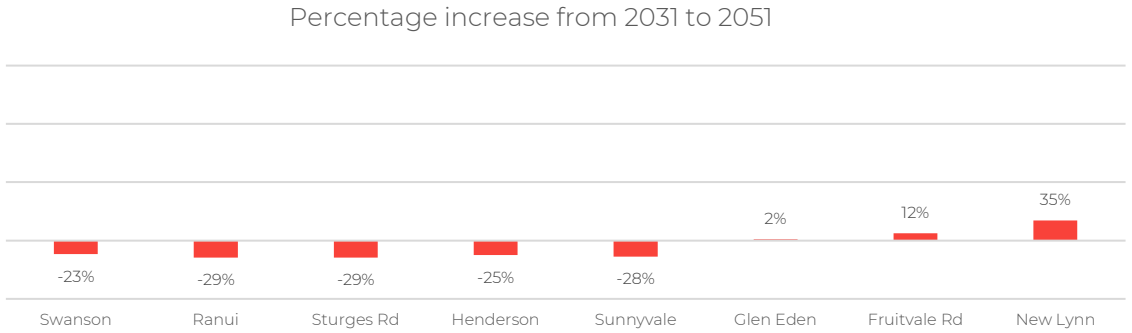


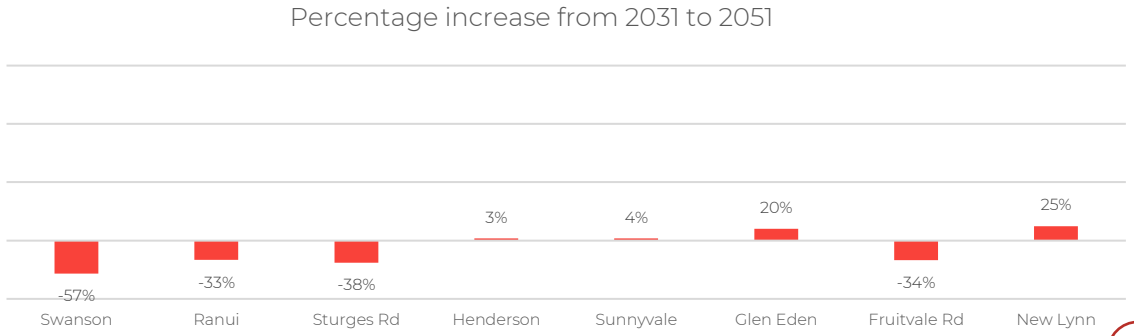
Reference case- morning peak (2hr) station boarding and alighting

(Western line: Swanson to New Lynn)



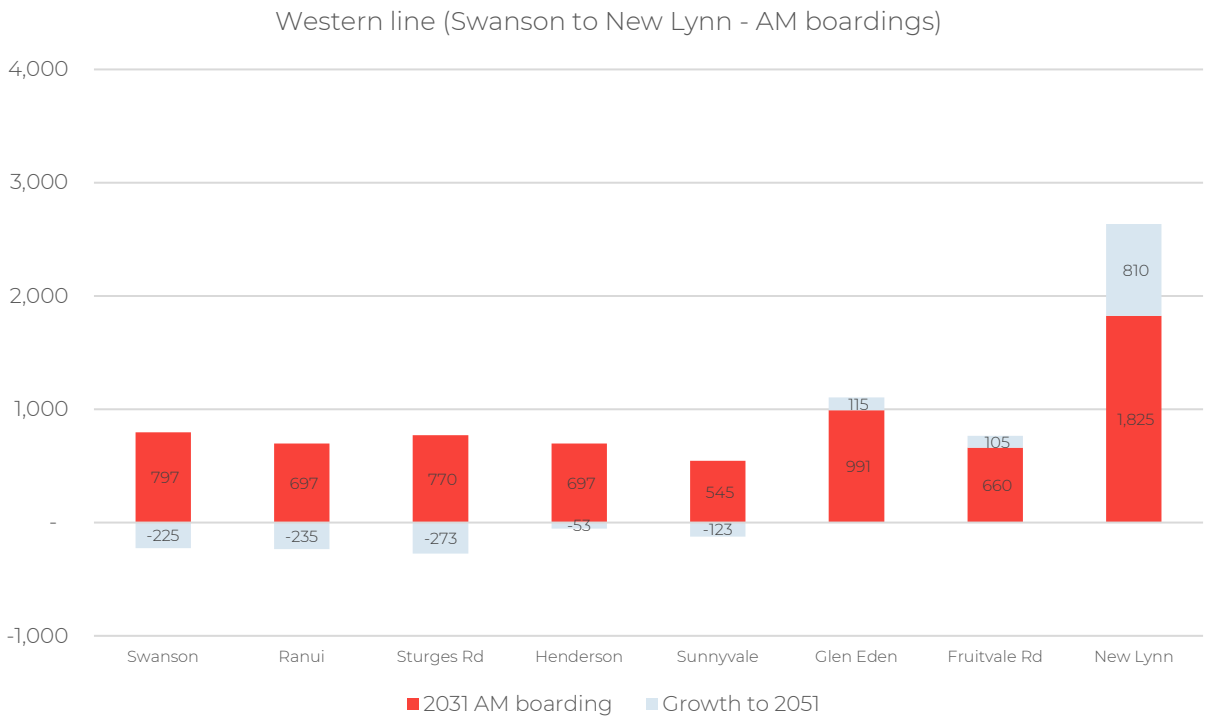


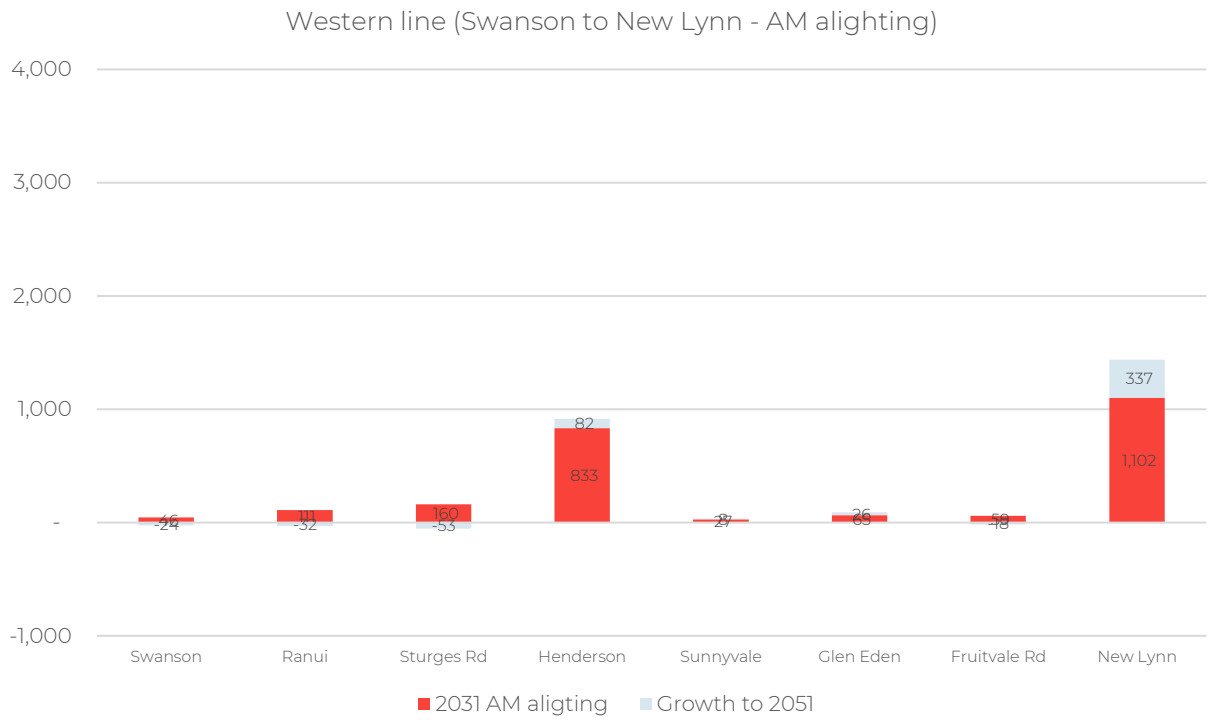


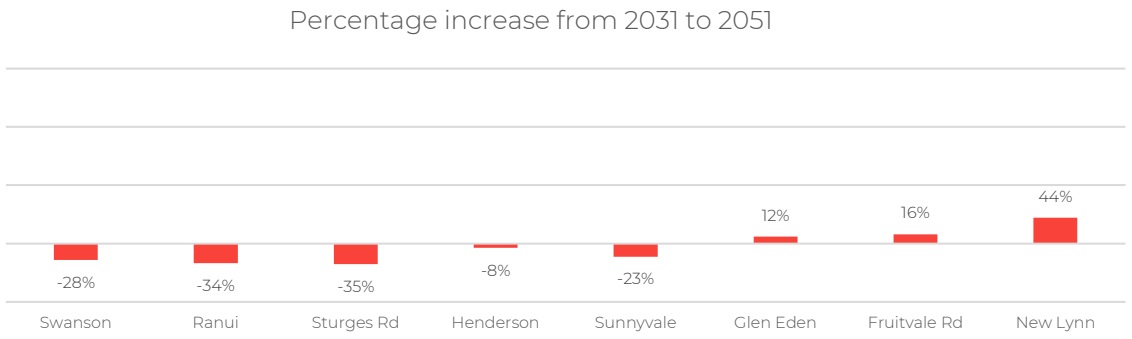


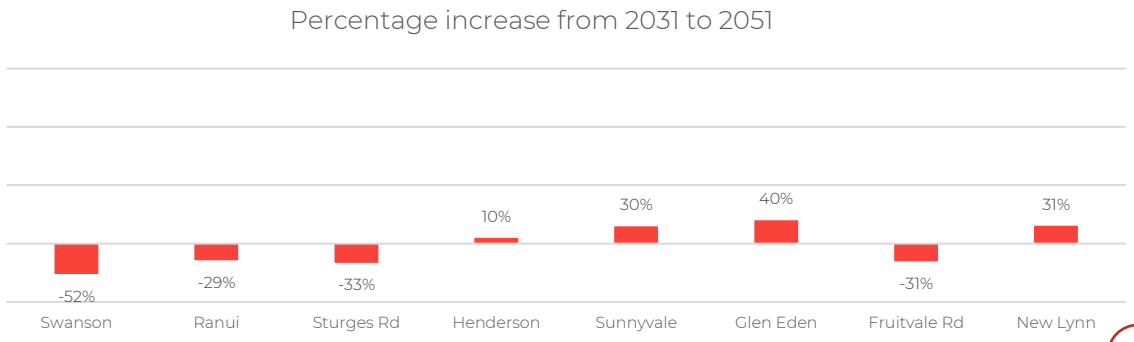
Base case- morning peak (2hr) station boarding and alighting

(Western line: Swanson to New Lynn)



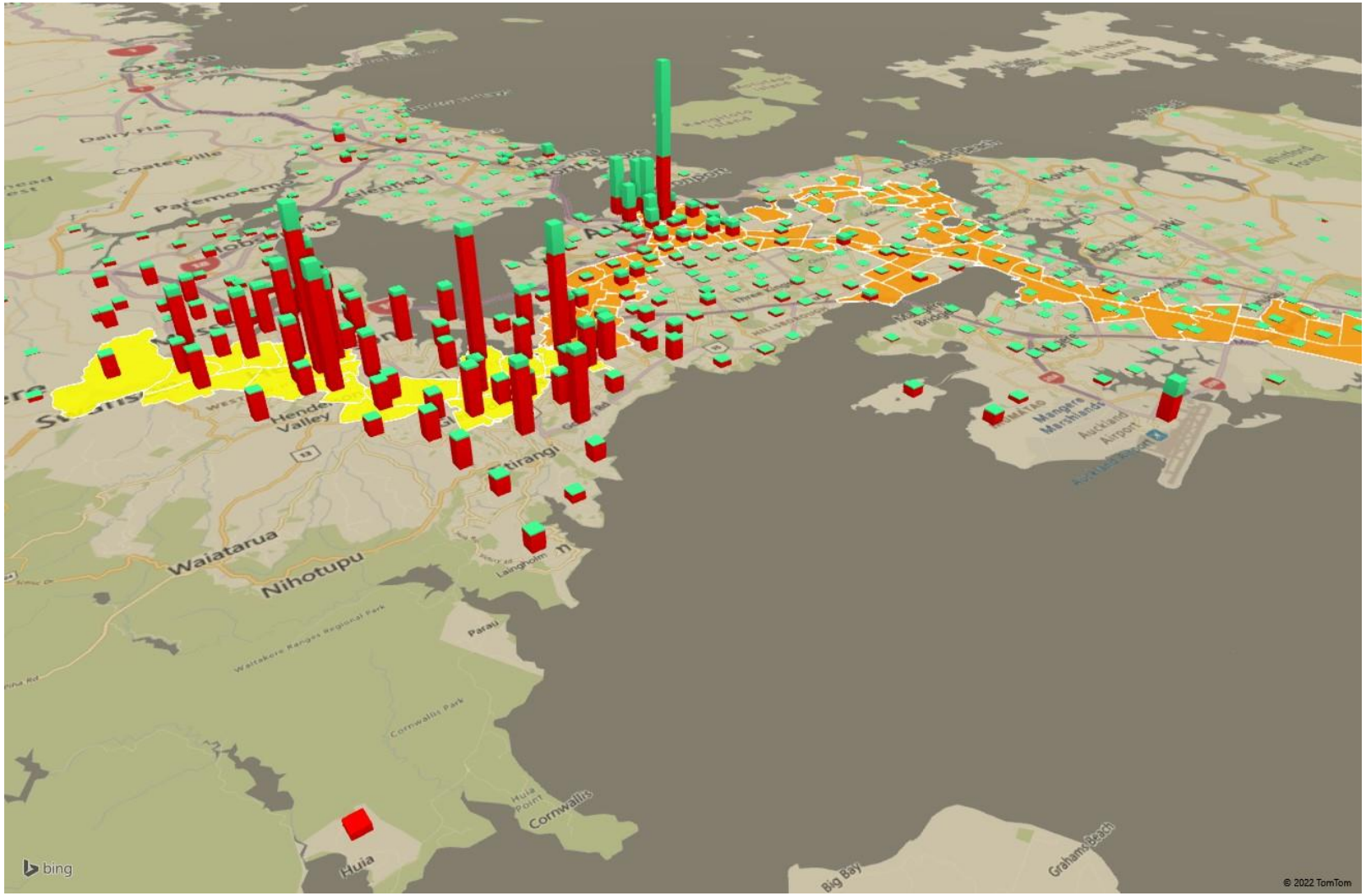






Base case- morning peak (2hr) station boarding and alighting

(Western line: Swanson to New Lynn)

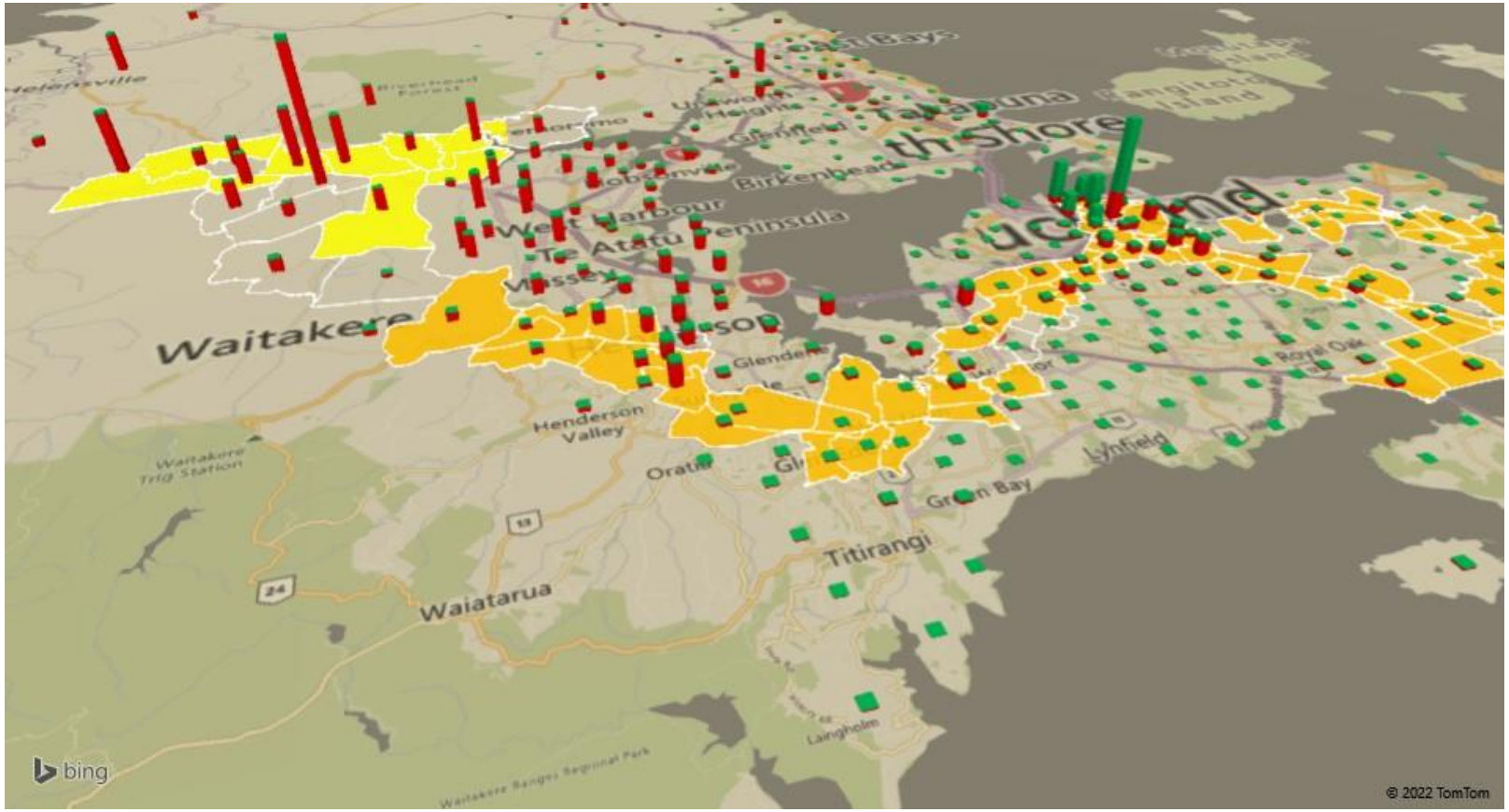


The 2051 AM origin/demand patterns for car and PT trips from the rail adjacent zones for the Swanson to New Lynn section of the western line shows the following:

1. The city centre is a key destination for trips from these zones. It has a very high public transport mode share already.
2. The airport is a destination of note, noting this is not directly serviced from this are via the rail network and will rely on some transfers to bus / light rail services.
3. A large part of internal trips (trips starting and ending within the yellow zones) are made by private car. This suggest rail not attractive for shorter trips – likely due to headway limitations and station access).
4. **A key focus should be to shift trips from the yellow zones to Manuka and the airport onto PT.**
5. Zones in yellow: Rail adjacent zones for the Swanson to New Lynn section.
6. Zones in orange: Rail adjacent zones across the rail network.
7. Red bars = car trips; green bars = PT trips

Base case- morning peak (2hr) station boarding and alighting

(Western line: Swanson to New Lynn)

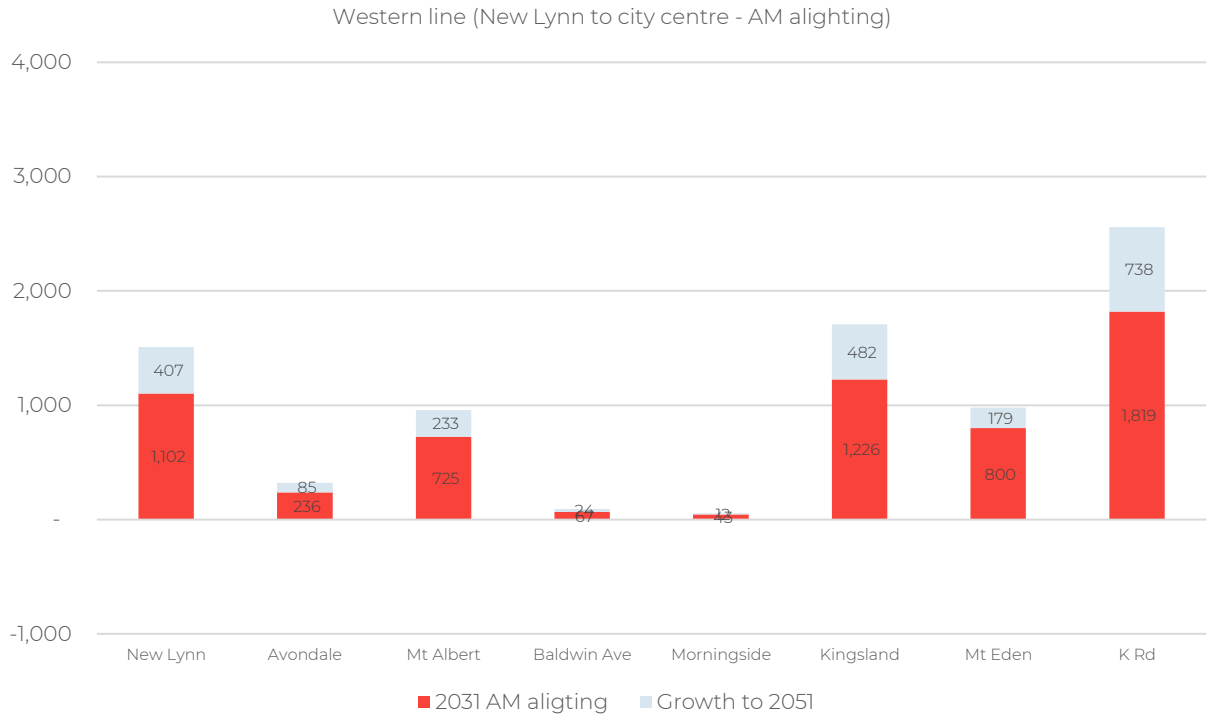


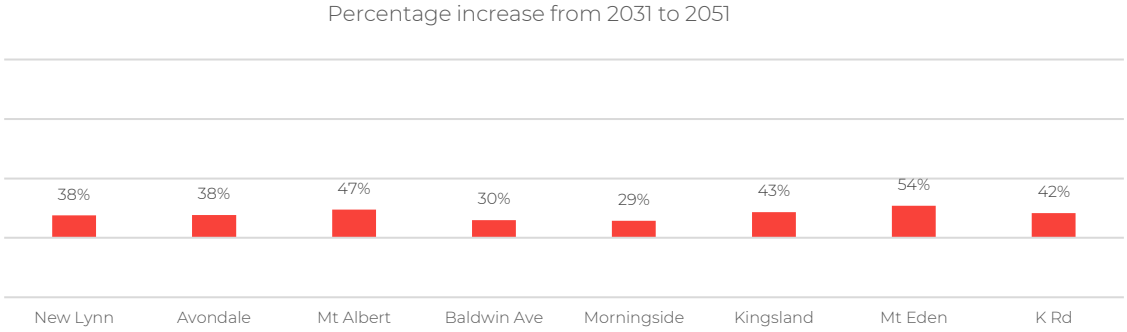
The 2051 AM origin/demand patterns for car and PT trips from the Kumeu/Huapai area:

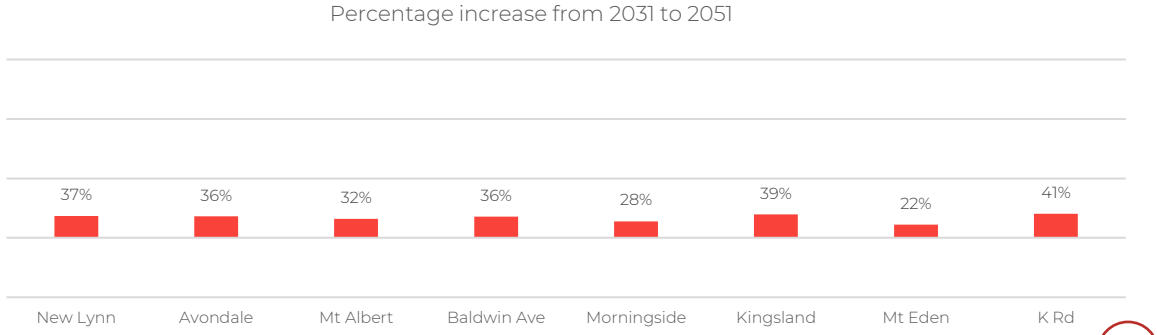
1. A large number of the trips will remain internal to the area,
2. the city centre and Newmarket are key destinations for trips from these zones.
3. Zones in yellow: Rail adjacent zones for the Swanson to New Lynn section.
4. Zones in orange: Rail adjacent zones across the rail network.
5. Red bars = car trips; green bars = PT trips

Lean DM - morning peak (2hr) station boarding and alighting

(Western line: New Lynn to city centre)

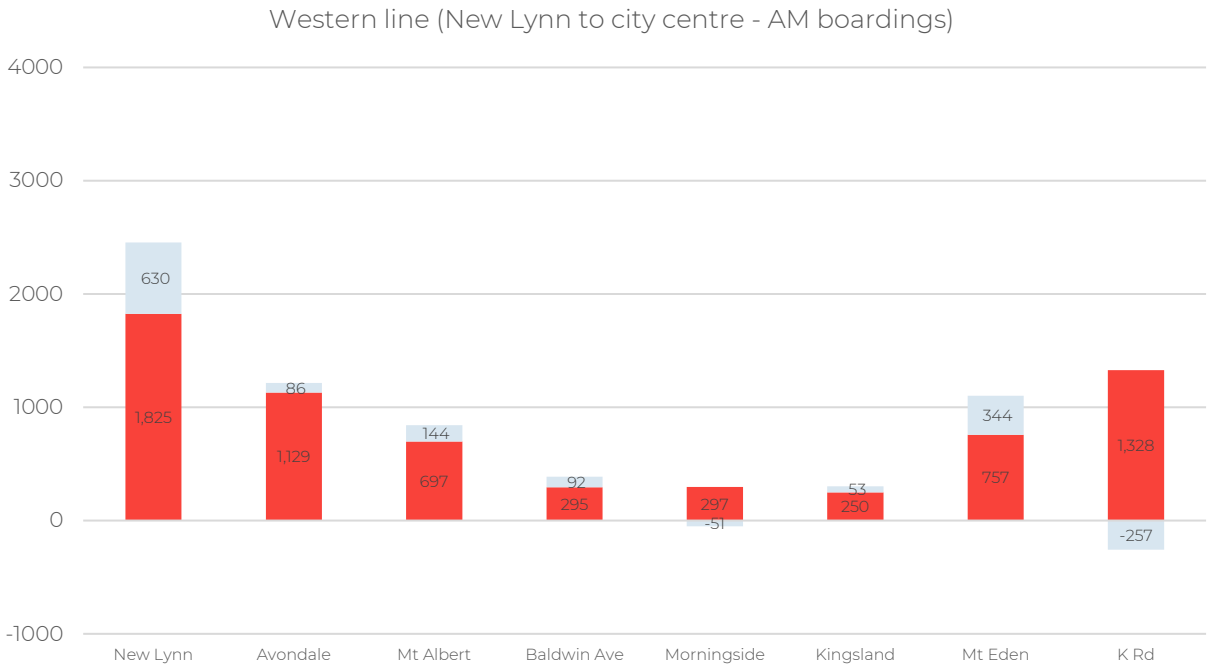


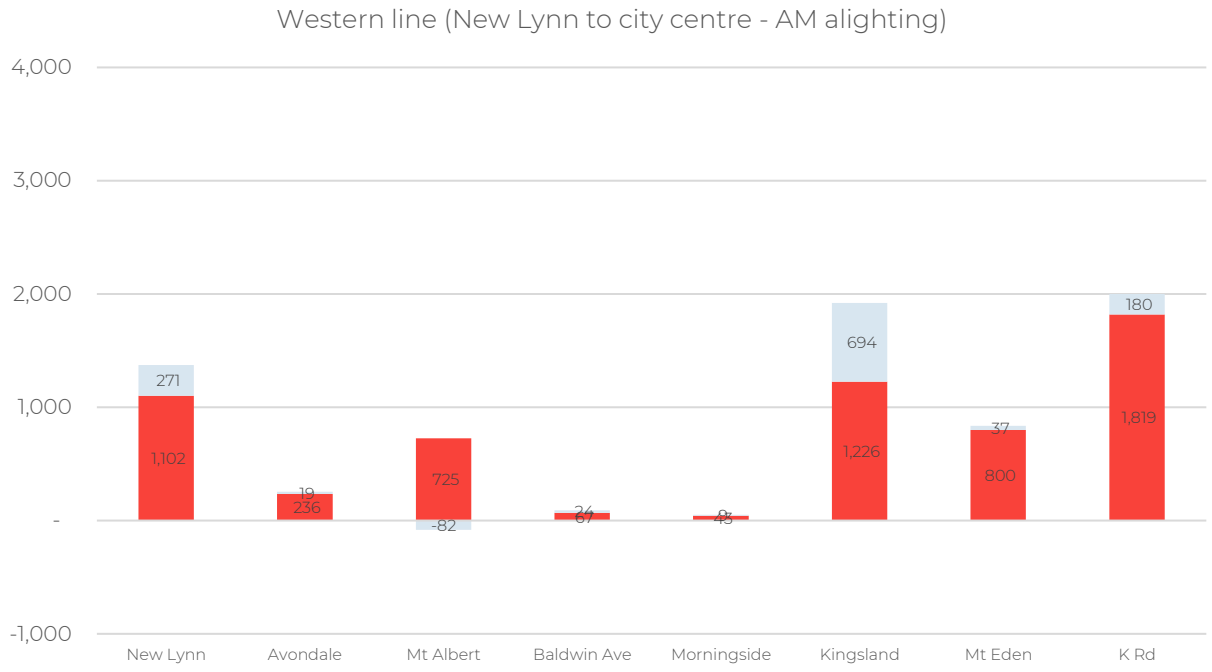


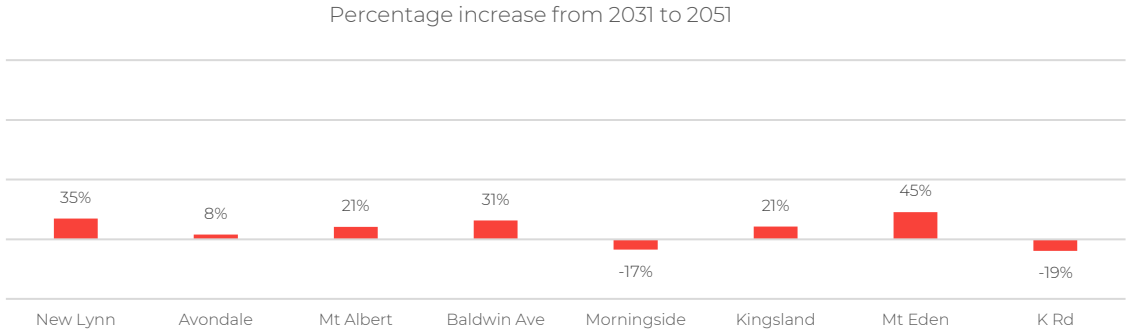


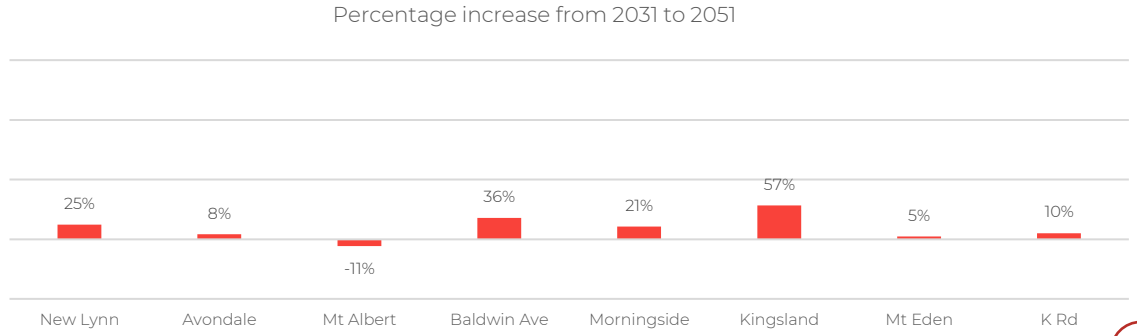
Reference case - morning peak (2hr) station boarding and alighting

(Western line: New Lynn to city centre)



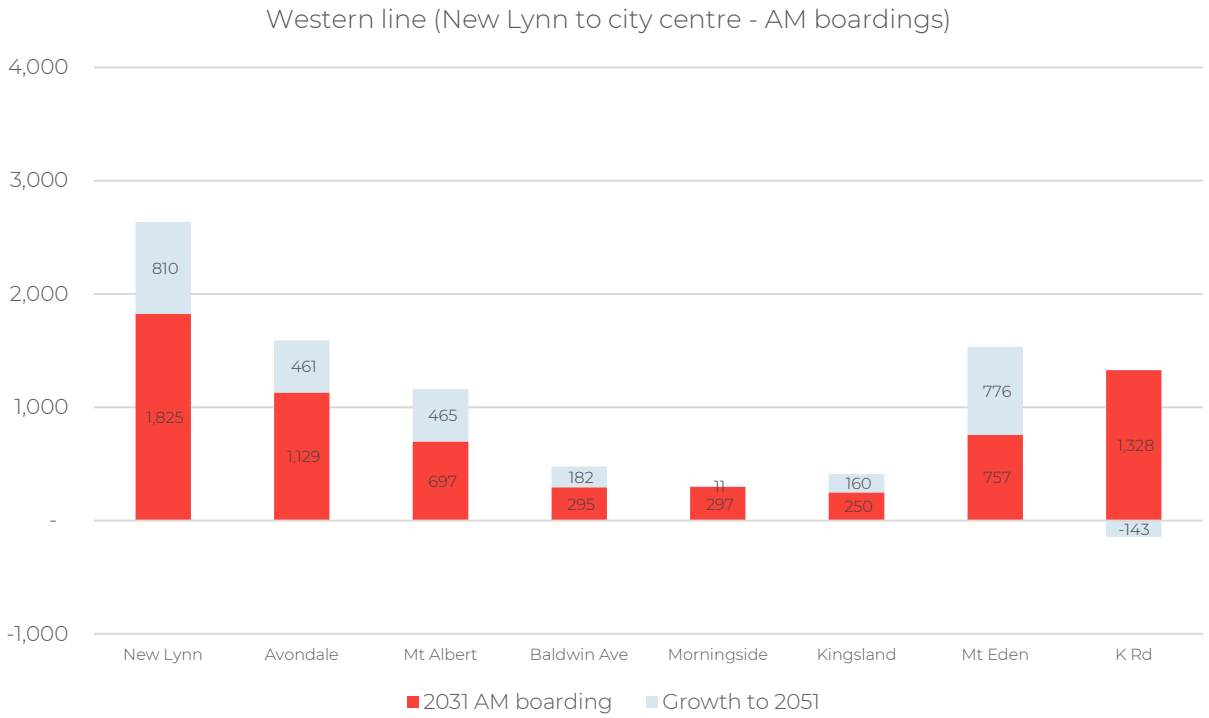


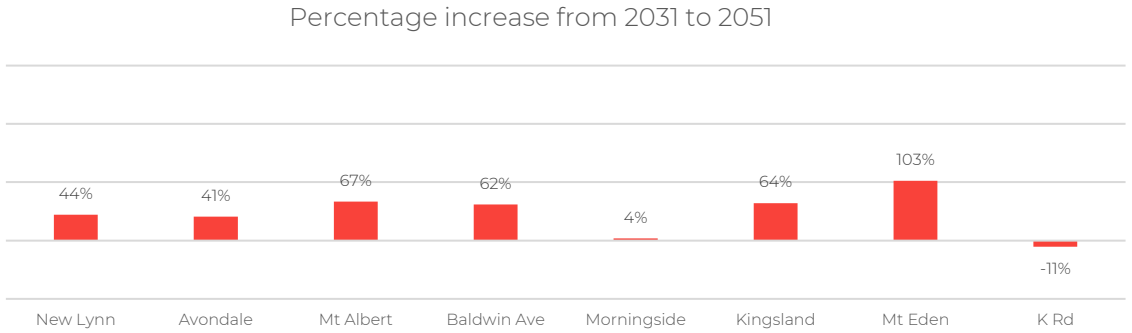


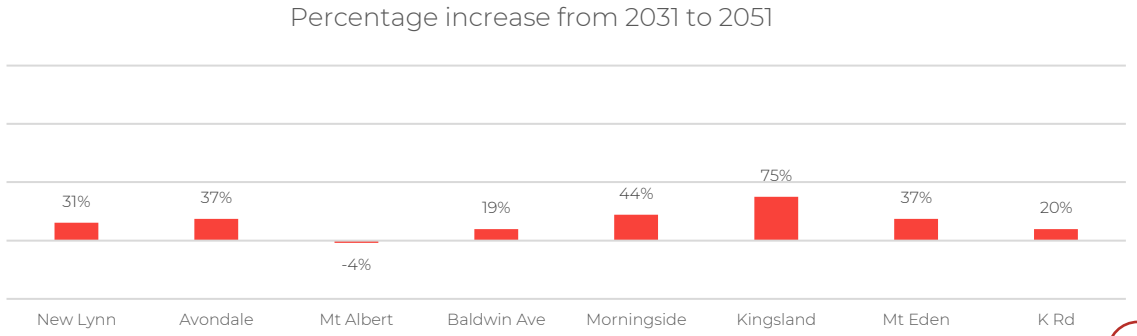


Base case - morning peak (2hr) station boarding and alighting

(Western line: New Lynn to city centre)

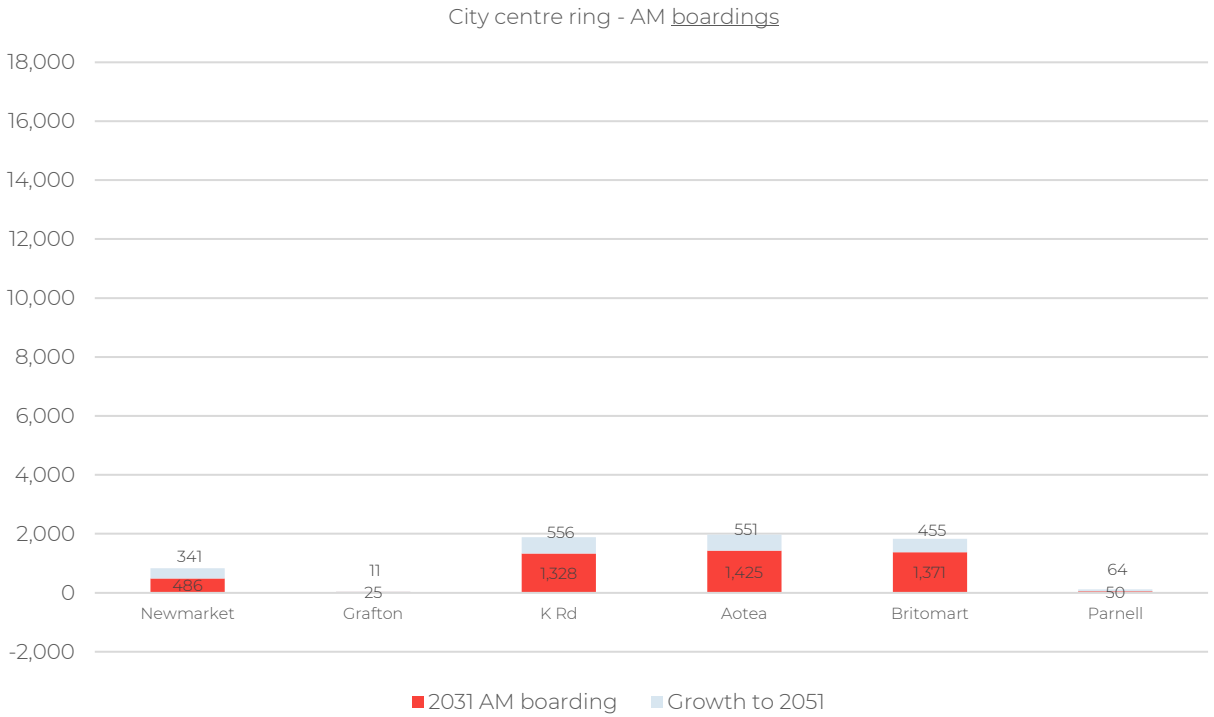


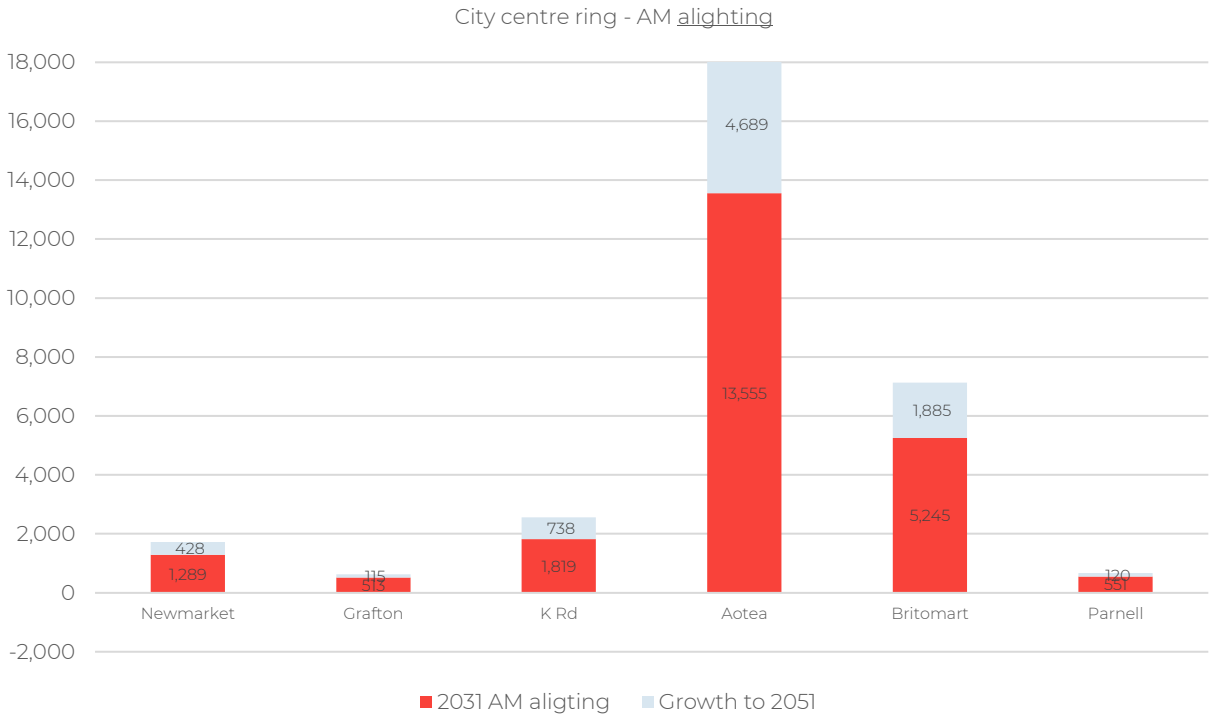


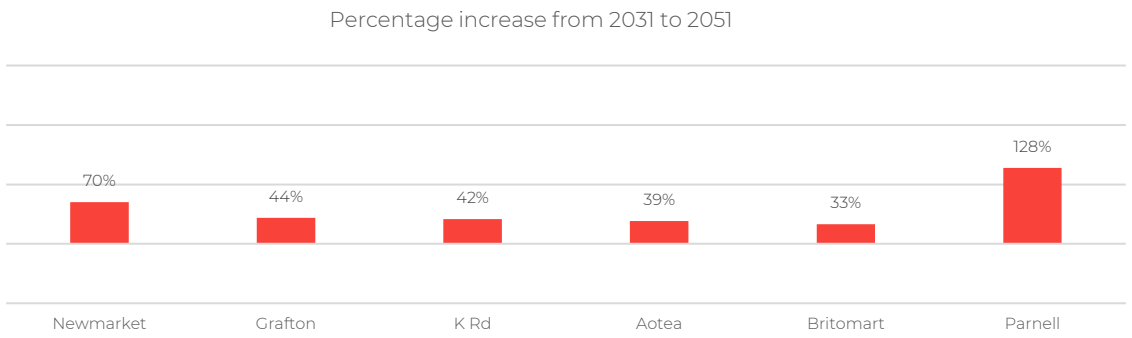


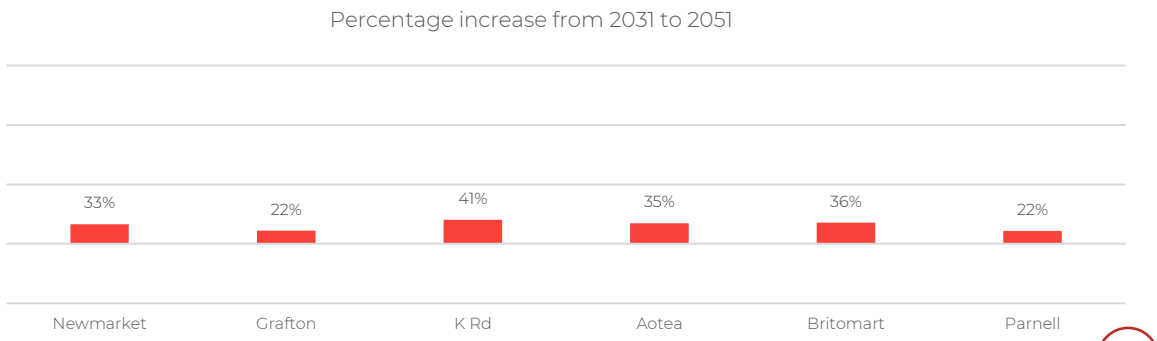
Lean DM - morning peak (2hr) station boarding and alighting

(City centre ring)



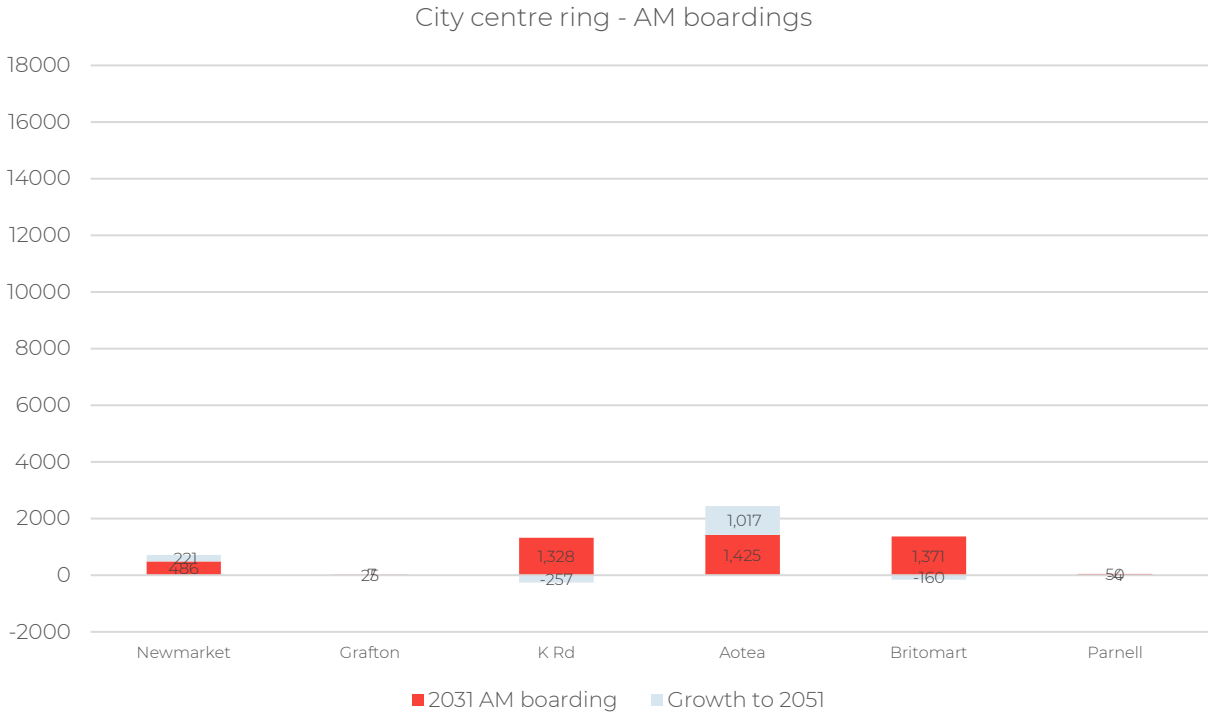


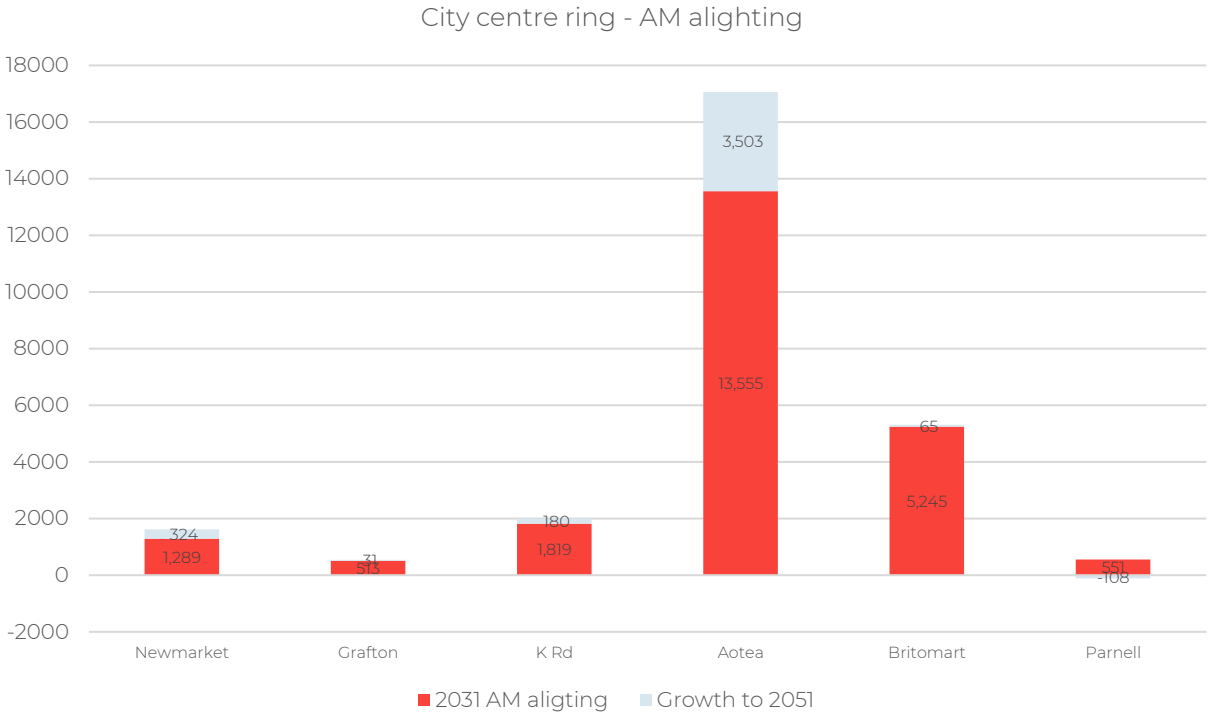


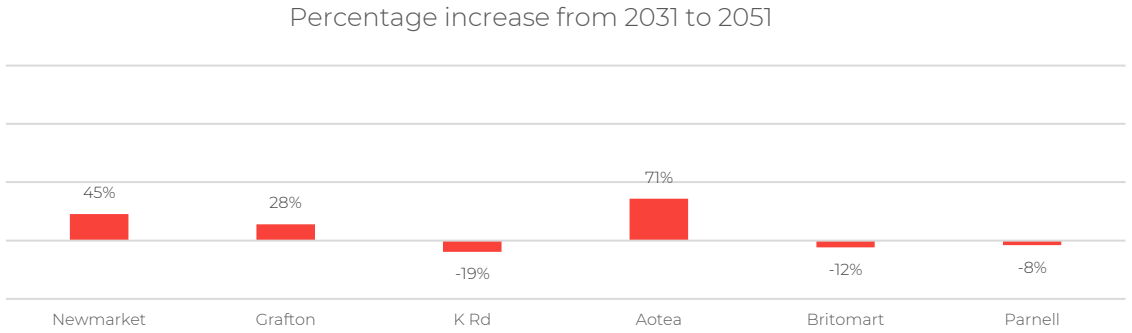


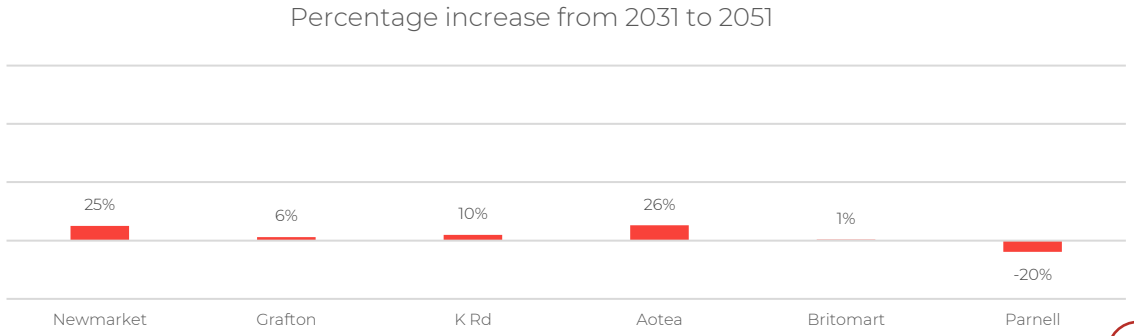
Reference case - morning peak (2hr) station boarding and alighting

(City centre ring)



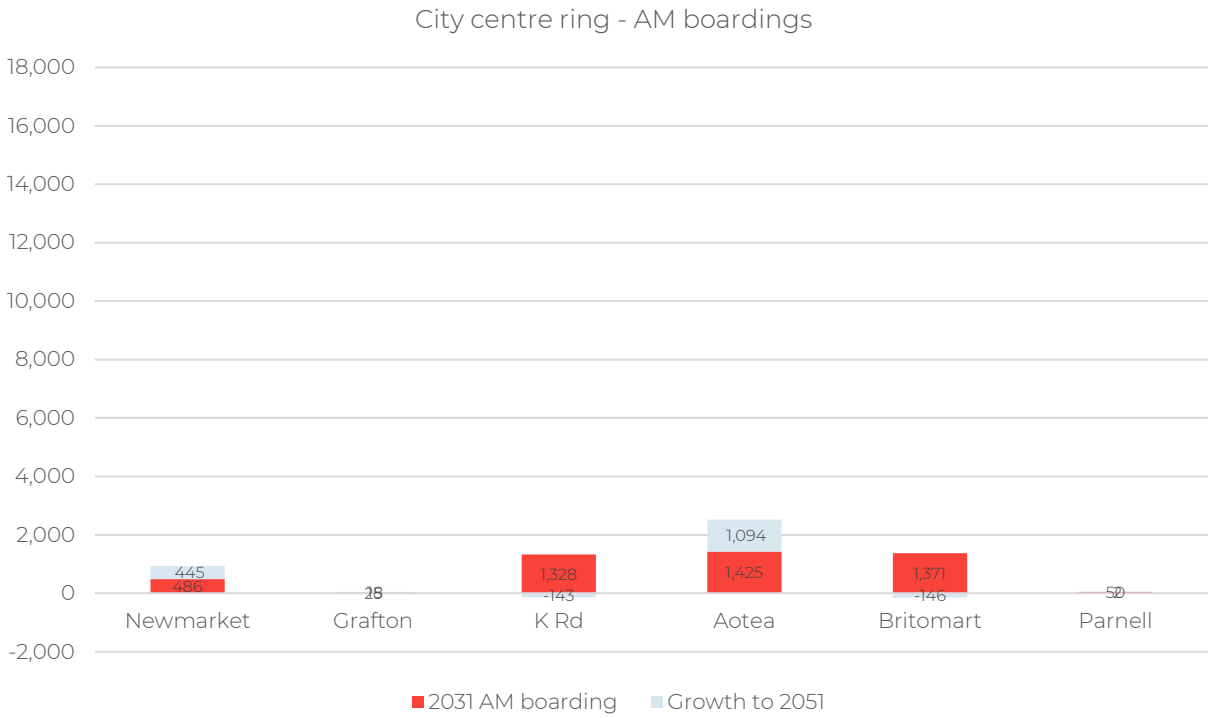


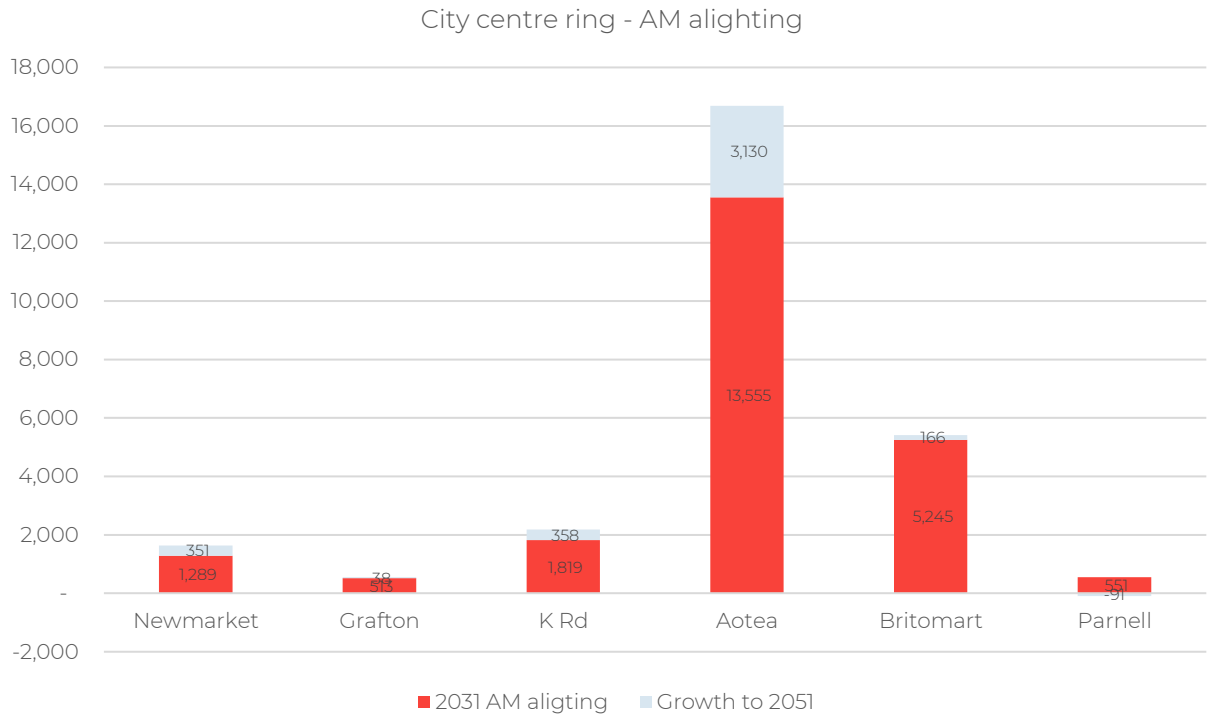


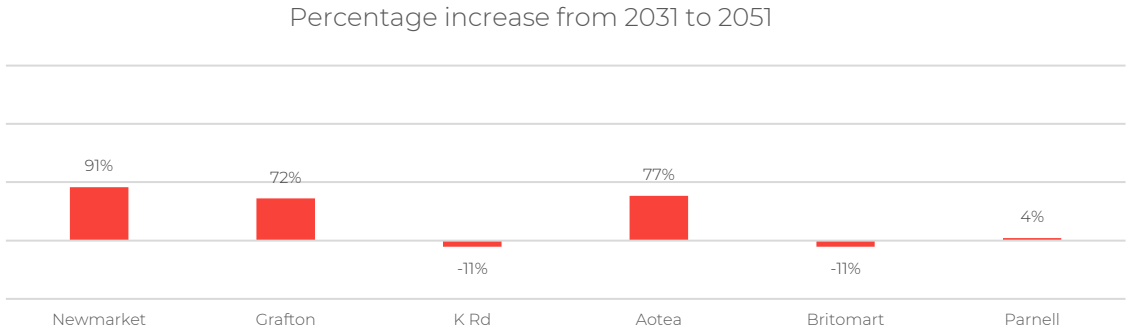


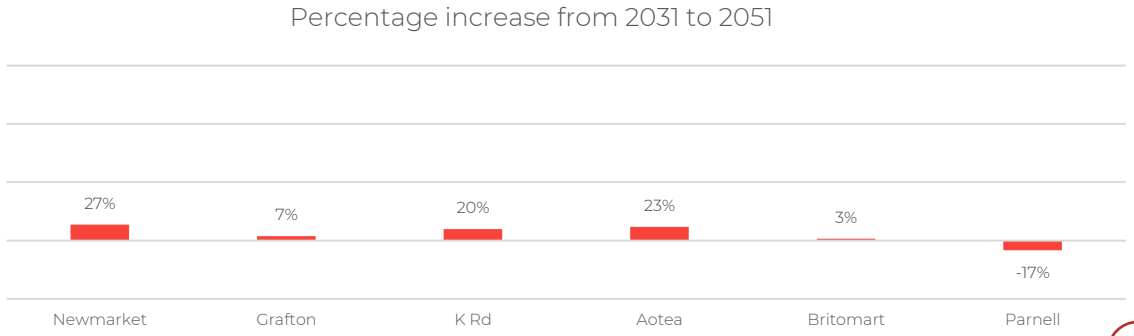
Base case - morning peak (2hr) station boarding and alighting

(City centre ring)









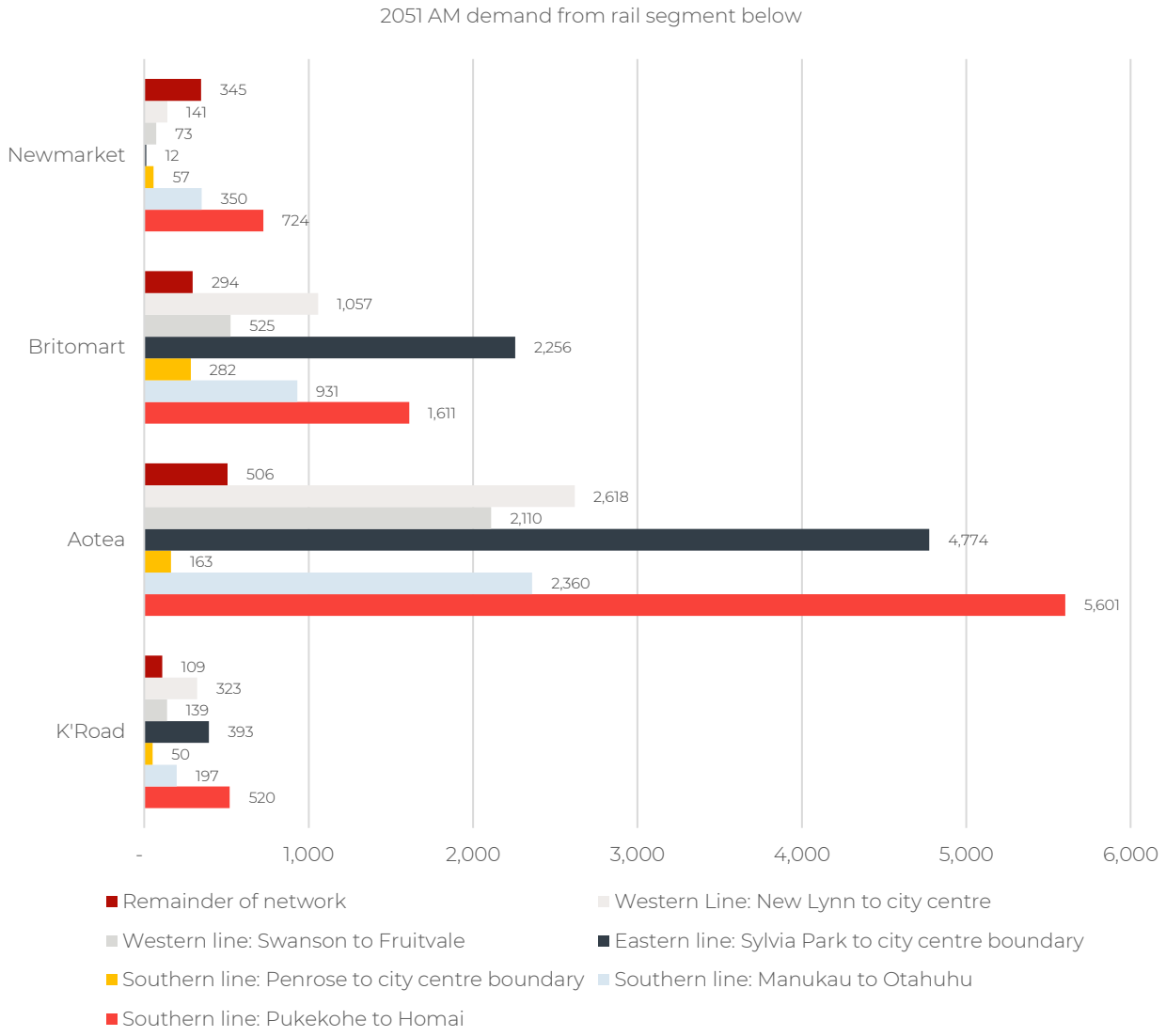
Lean DM - morning peak (2hr) station boarding and alighting

(City centre ring)

- By 2051 the southern line (Pukekohe to Homai) as well as the Eastern Line (Sylvia Park to Orakei) are forecast to deliver the highest number of passengers aligting at any of the 3 city centre stations.
- The southern line (Pukekohe to Homai) is also delivering the highest number of passengers to Newmarket.

	2051 AM demands for network sections to central city				
2051 AM demand from rail segment below	K'Road	Aotea	Britomart	Newmarket	All 4 city centre stops
Southern line: Pukekohe to Homai	520	5,601	1,611	724	8,457
Southern line: Manukau to Otahuhu	197	2,360	931	350	3,837
Southern line: Penrose to city centre boundary	50	163	282	57	553
Eastern line: Sylvia Park to city centre boundary	393	4,774	2,256	12	7,436
Western line: Swanson to Fruitvale	139	2,110	525	73	2,847
Western Line: New Lynn to city centre	323	2,618	1,057	141	4,139
Remainder of network	109	506	294	345	1,254
Total	1,731	18,132	6,957	1,703	28,523

2051 AM demand from rail segment below	K'Road	Aotea	Britomart	Newmarket	All 4 city centre stops
Southern line: Pukekohe to Homai	30%	31%	23%	43%	30%
Southern line: Manukau to Otahuhu	11%	13%	13%	21%	13%
Southern line: Penrose to city centre boundary	3%	1%	4%	3%	2%
Eastern line: Sylvia Park to city centre boundary	23%	26%	32%	1%	26%
Western line: Swanson to Fruitvale	8%	12%	8%	4%	10%
Western Line: New Lynn to city centre	19%	14%	15%	8%	15%
Remainder of network	6%	3%	4%	20%	4%



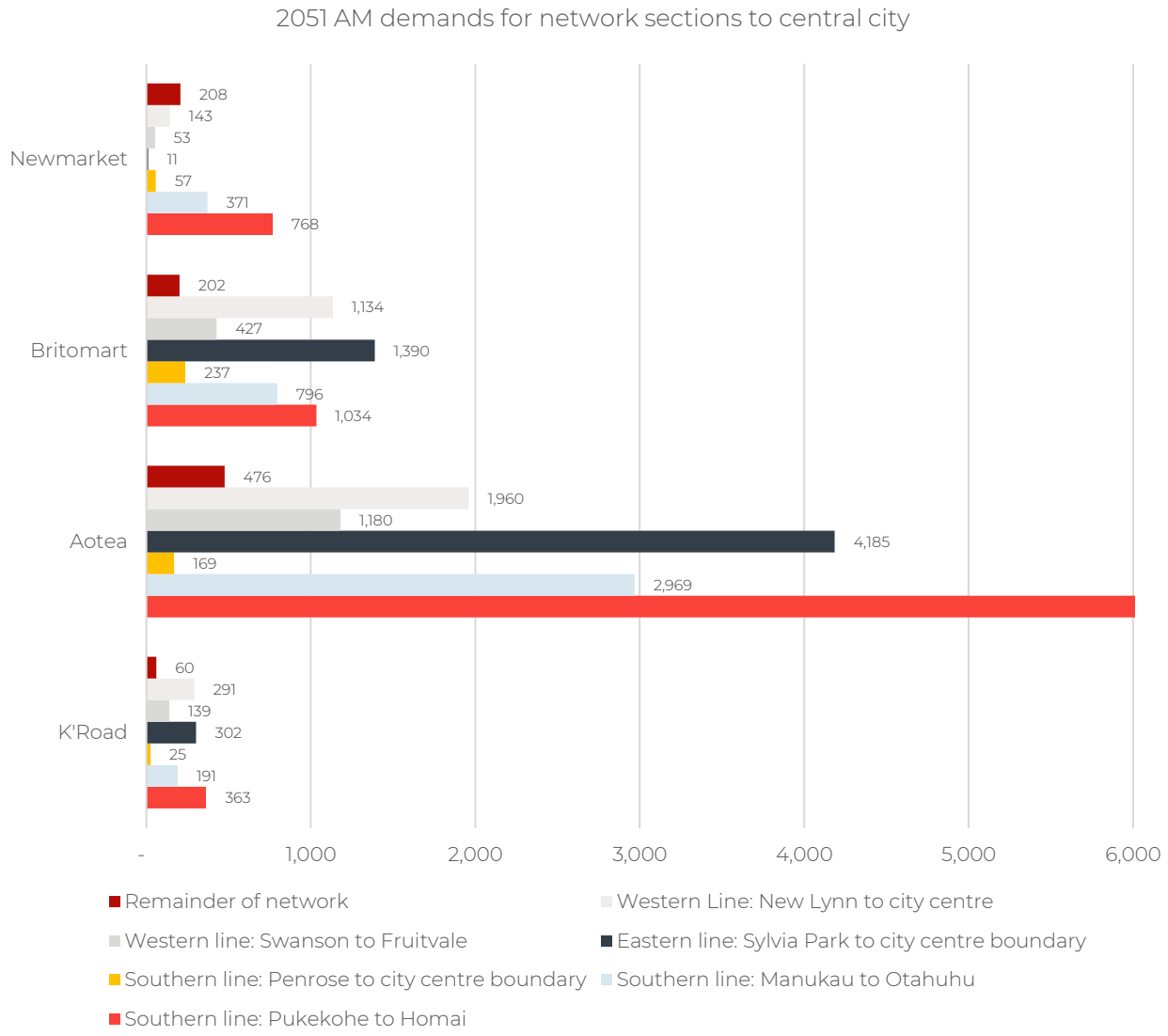
Reference case - morning peak (2hr) station boarding and alighting

(City centre ring)

- Long distance trips remain a key market for rail demand with Pukekohe to Homai section making up large portions of aligtings at the city centre stations.
- The section between Penrose and Remuera contributes the least to aligtings at central city stations.

	2051 AM demands for network sections to central city				
2051 AM demand from rail segment below	K'Road	Aotea	Britomart	Newmarket	All 4 city centre stops
Southern line: Pukekohe to Homai	363	6,025	1,034	768	8,190
Southern line: Manukau to Otahuhu	191	2,969	796	371	4,326
Southern line: Penrose to city centre boundary	25	169	237	57	489
Eastern line: Sylvia Park to city centre boundary	302	4,185	1,390	11	5,887
Western line: Swanson to Fruitvale	139	1,180	427	53	1,799
Western Line: New Lynn to city centre	291	1,960	1,134	143	3,528
Remainder of network	60	476	202	208	944
Total	1,370	16,963	5,219	1,611	25,163

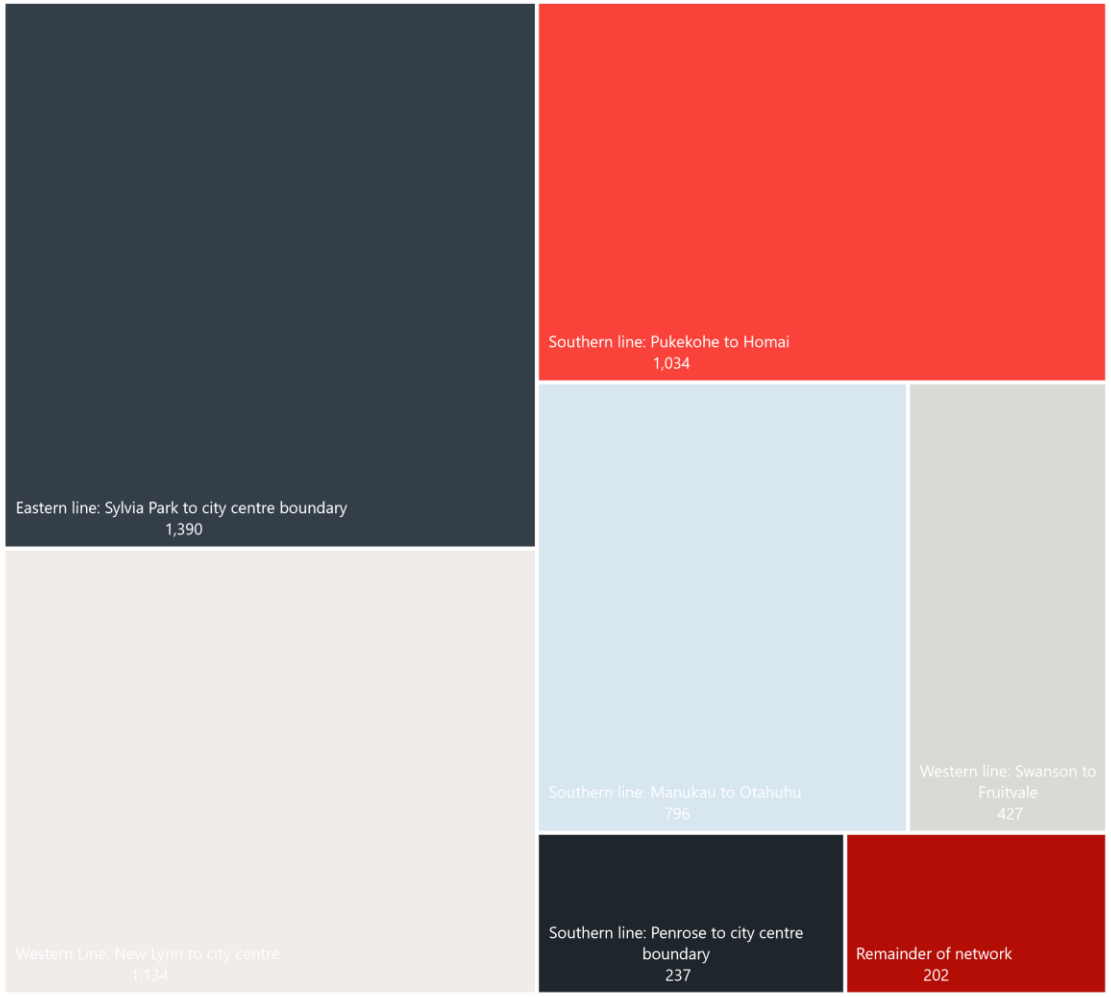
2051 AM demand from rail segment below	K'Road	Aotea	Britomart	Newmarket	All 4 city centre stops
Southern line: Pukekohe to Homai	26%	36%	20%	48%	33%
Southern line: Manukau to Otahuhu	14%	17%	15%	23%	17%
Southern line: Penrose to city centre boundary	2%	1%	5%	4%	2%
Eastern line: Sylvia Park to city centre boundary	22%	25%	27%	1%	23%
Western line: Swanson to Fruitvale	10%	7%	8%	3%	7%
Western Line: New Lynn to city centre	21%	12%	22%	9%	14%
Remainder of network	4%	3%	4%	13%	4%



Reference case - morning peak (2hr) station boarding and alighting

(City centre ring)

2051 AM demands for network sections to Britomart station



2051 AM demands for network sections to Aotea station

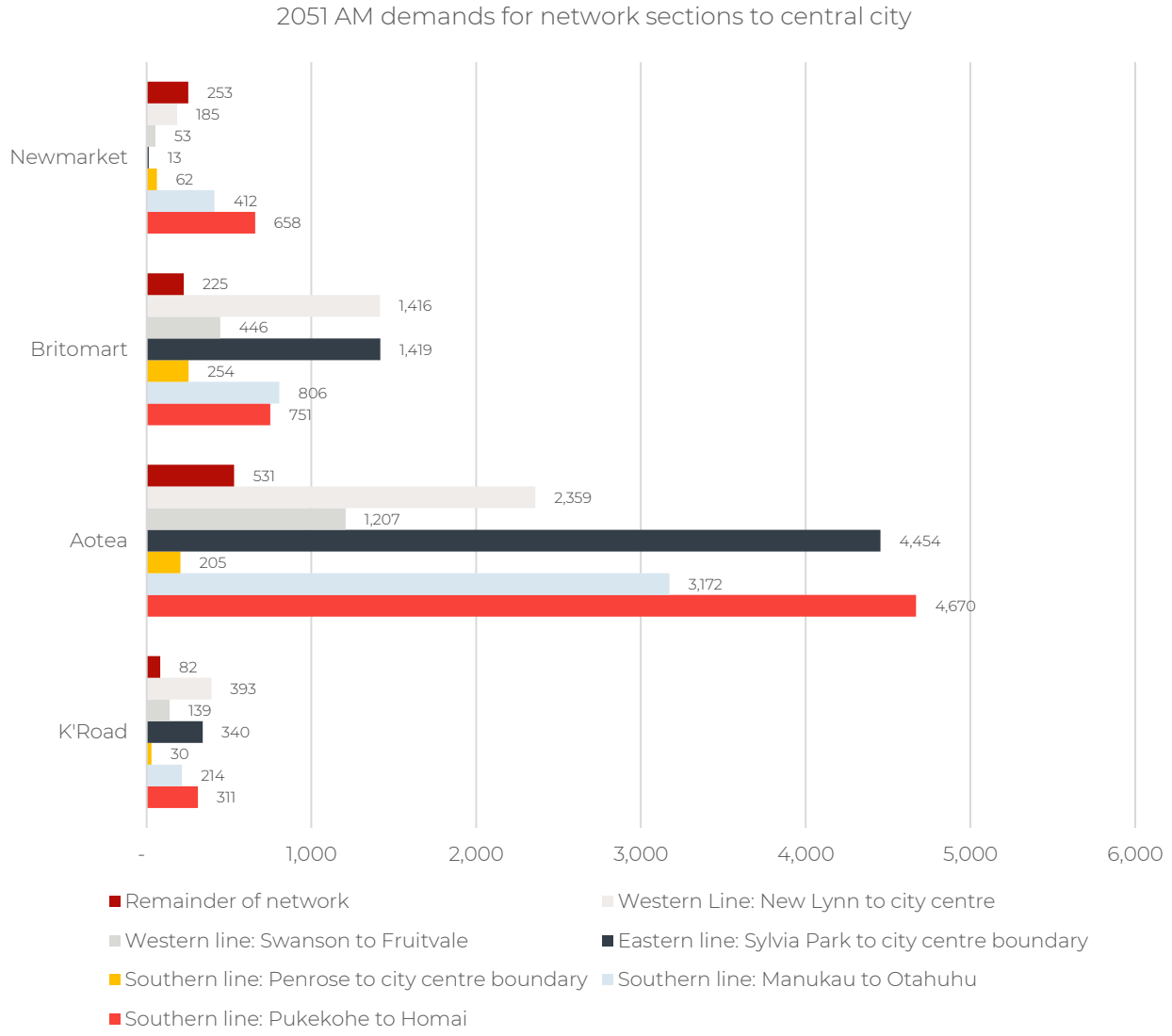
Base case - morning peak (2hr) station boarding and alighting

(City centre ring)

- The change in land use (especially the removal of housing growth in the south) does impact the number of aligtings at city centre stations originating along the Pukekohe – Homai section on the southern line.
- More growth in the central area has not significantly improved city centre rail demands from the Penrose to city area along the southern line.

	2051 AM demands for network sections to central city				
2051 AM demand from rail segment below	K'Road	Aotea	Britomart	Newmarket	All 4 city centre stops
Southern line: Pukekohe to Homai	311	4,670	751	658	6,391
Southern line: Manukau to Otahuhu	214	3,172	806	412	4,604
Southern line: Penrose to city centre boundary	30	205	254	62	551
Eastern line: Sylvia Park to city centre boundary	340	4,454	1,419	13	6,227
Western line: Swanson to Fruitvale	139	1,207	446	53	1,846
Western Line: New Lynn to city centre	393	2,359	1,416	185	4,353
Remainder of network	82	531	225	253	1,092
Total	1,509	16,599	5,317	1,637	25,063

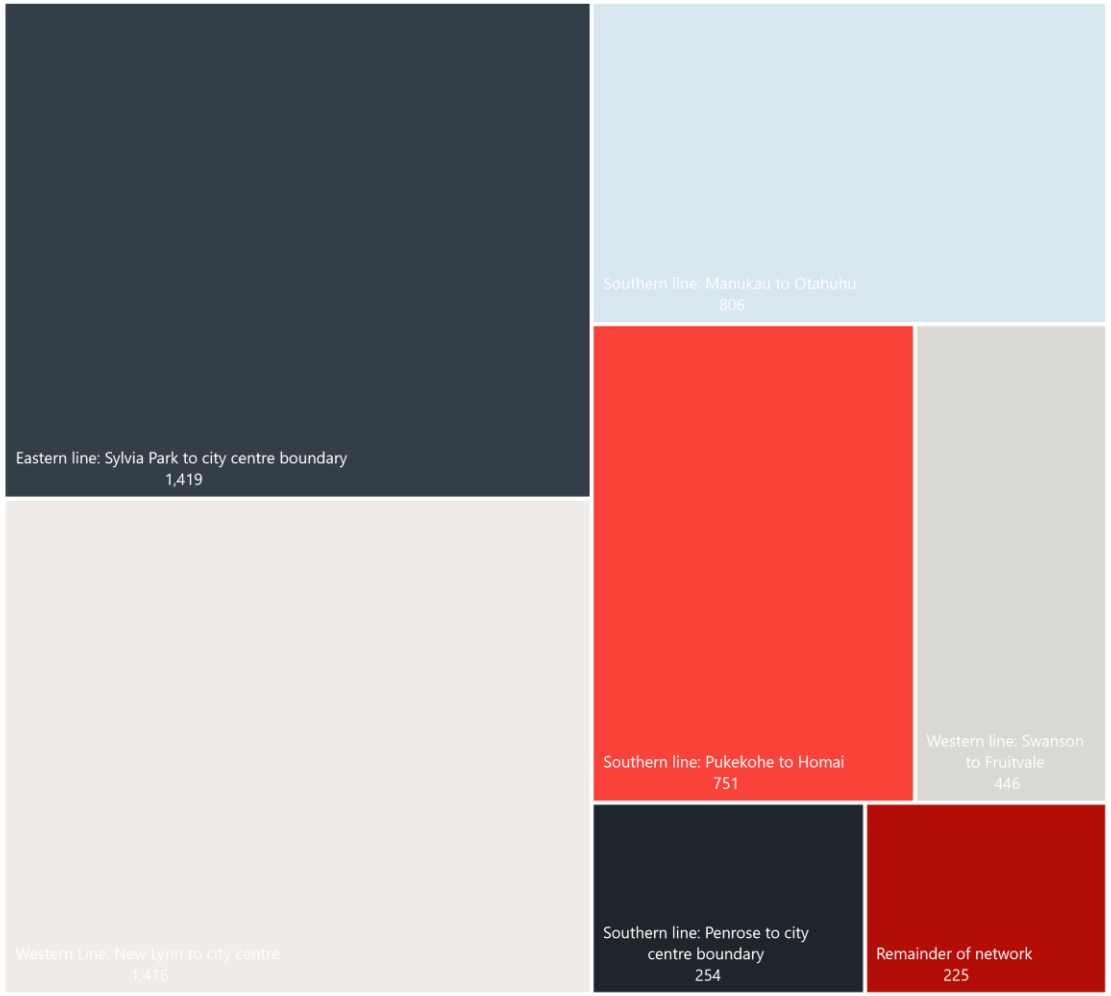
2051 AM demand from rail segment below	K'Road	Aotea	Britomart	Newmarket	All 4 city centre stops
Southern line: Pukekohe to Homai	21%	28%	14%	40%	25%
Southern line: Manukau to Otahuhu	14%	19%	15%	25%	18%
Southern line: Penrose to city centre boundary	2%	1%	5%	4%	2%
Eastern line: Sylvia Park to city centre boundary	23%	27%	27%	1%	25%
Western line: Swanson to Fruitvale	9%	7%	8%	3%	7%
Western Line: New Lynn to city centre	26%	14%	27%	11%	17%
Remainder of network	5%	3%	4%	15%	4%



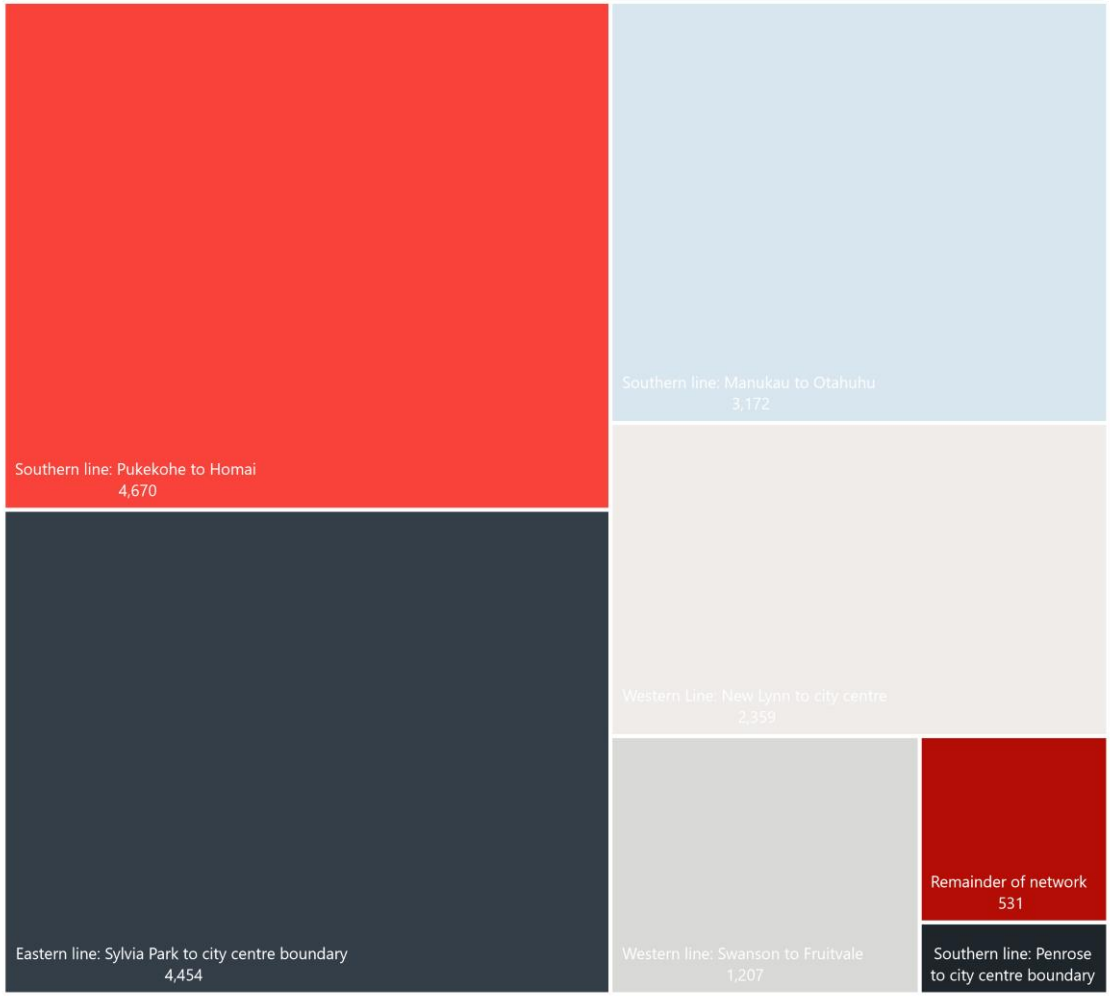
Base case - morning peak (2hr) station boarding and alighting

(City centre ring)

2051 AM demands for network sections to Britomart station



2051 AM demands for network sections to Aotea station



5 | Origin destination summary

Origin destination summary

The tables on the next few pages indicate the destination stations for people boarding the train service along stations indicated on the left hand side of the matrix.

- Cells highlighted in green show key destination stations from this entire segment of the line.
- Cells highlighted in red show key destination stations for each of the boarding stations listed in this section.

From these tables we observe:

- Passengers boarding along the Pukekohe to Homai section largely head towards central city stations, with Puhinui also a key alighting station along this section. The station is used for transfer to airport and Manukau destinations.
- Passenger boardings along the Manukau to Otahuhu section largely head towards the city centre. Rail demands through the central city to the western line forecast low with New Lynn the Key destination on the western line at 167 trips.
- Low passengers numbers boarding along the Penrose to city centre boundary with very few numbers travelling through to the western line.
- Passengers boarding along the Sylvia Park to city centre boundary has strong city centre demand, with some counter flow to Otahuhu and Manukau. New Lynn is also a key destination station from this area.
- The Swanson to New Lynn: Strong city centre demand with aligting patterns to the Morningside station. Weak demand to the southern or eastern lines.
- Boardings from the New Lynn to city centre section have the city centre and Kingsland station as its top destinations. :
- Passengers boarding at the city centre stations has Panmure, Ellerslie, Otahuhu and New Lynn as key alighting stations.

Southern line: Pukekohe to Homai
morning peak (2hr) station boarding and alighting

Alighting station

Boarding station

2025 AM

Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
S11-Homai	29	43	443	61	7	1	1	4	21	5	65	7	17	20	23	46	19	16	15			0	1	2	14	2	1	1	1	10	2	3	0	0	9	3	11	0	0	0	4	2	1	0	0	4	914
S12-Manurewa	40	56	583	63	10	2	1	6	32	7	91	11	25	29	32	65	23	24	22	2	6	1	0	2	15	4	2	2	2	16	2	3	0	0	8	2	9	0	0	0	4	2	0	0	1	4	1210
S13-Te Mahia	11	16	163	27	3	1	1	3	17	4	25	3	6	8	9	20	7	12	12		6			0	5	1	1	1	1	6	1	1	0	0	4	1	5	0	0	0	2	1	0	0	0	1	383
S14-Takanini	21	30	305	54	5	2	1	6	32	7	47	5	12	14	16	39	14	31	31	5	11	7	1	0	2	2	2	1	1	13	1	2	0	0	7	2	8	0	0	0	3	2	0	0	0	2	747
S15-Papakura	48	64	605	256	11	5	3	12	93	14	90	10	24	28	34	100	34	75	90	69	41	33	7	5	2	2	3	4	4	32	4	6	0	1	18	5	20	1	1	0	8	5	1	0	1	5	1870
S16-Drury	11	20	204	146	6	1	1	5	34	3	25	3	9	13	17	25	10	14	31	19	13	10	3	6	15	6	2	2	2	22	2	2	0	0	1	1	3	0	0	0	1	0	0	0	1	2	691
S17-Drury South/Karaka	10	14	146	79	3	1	1	3	24	3	20	3	6	8	10	22	8	14	23	17	10	9	2	5	13	3	2	2	2	22	1	1	0	0	3	1	4	0	0	0	2	1	0	0	0	1	497
S18-Paerata	21	27	345	152	5	3	2	6	52	4	38	7	13	16	19	44	13	29	39	32	19	16	3	8	22	8	5	4	19	2	3	0	0	9	3	9	0	0	0	4	2	0	0	1	2	1004
S19-Pukekohe	20	28	285	163	6	2	1	6	45	4	39	6	12	15	20	43	14	27	45	30	20	16	4	9	24	8	5	7	96	3	3	0	0	7	2	8	0	0	0	3	1	0	0	1	3	1032
Grand Total	**209**	**297**	**3079**	**1001**	**56**	**18**	**12**	**50**	**350**	**51**	**438**	**54**	**124**	**151**	**180**	**405**	**142**	**242**	**308**	**174**	**126**	**92**	**21**	**37**	**112**	**35**	**24**	**24**	**236**	**18**	**23**	**2**	**2**	**68**	**21**	**78**	**3**	**2**	**1**	**31**	**16**	**4**	**1**	**4**	**25**	**8348**

2031 AM

Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
S11-Homai	27	47	500	62	8	1	1	7	20	5	76	7	17	22	25	52	24	19	27				1	2	14	3	2	2	2	9	2	2	0	0	5	3	9	0	0	0	4	2	1	0	1	6	1016
S12-Manurewa	33	52	566	62	9	2	1	11	29	8	90	9	21	28	31	65	26	23	44	1	4	1	0	3	17	6	3	3	3	15	2	2	0	0	4	2	8	0	0	0	3	1	1	0	2	7	1197
S13-Te Mahia	10	18	190	28	3	1	1	6	17	5	29	3	7	9	10	22	10	10	25		6			1	6	2	1	1	1	6	1	1	0	0	2	1	5	0	0	0	2	1	0	0	1	2	442
S14-Takanini	24	41	450	64	7	2	1	12	17	8	67	6	15	19	22	53	22	31	81	13	8	9	2		3	4	3	2	12	2	3	0	0	6	4	12	1	0	0	5	2	1	0	1	5	1039
S15-Papakura	51	78	820	187	13	6	4	19	142	17	117	11	26	32	38	118	45	71	225	57	38	42	9	8	4	6	5	5	31	4	4	0	1	12	7	24	1	0	0	10	5	2	0	2	9	2307
S16-Drury	10	22	321	169	5	1	0	5	54	6	26	5	11	16	22	31	11	9	70	17	9	11	2	9	20	9	4	4	29	1	2	0	0	1	1	4	0	0	0	2	0	0	0	1	5	929
S17-Drury South/Karaka	16	26	311	119	5	2	1	7	50	7	38	5	11	14	17	42	15	19	79	22	13	17	3	10	27	6	3	6	32	1	2	0	0	4	2	8	0	0	0	3	1	0	0	1	4	951
S18-Paerata	24	36	491	159	6	3	2	10	72	8	52	9	16	19	23	58	19	28	102	28	18	21	4	12	33	12	9	7	37	1	2	0	0	6	4	12	0	0	0	4	2	1	0	1	5	1358
S19-Pukekohe	23	37	444	182	8	3	2	9	67	8	54	7	15	20	25	58	20	26	111	28	19	21	5	15	35	15	9	13	112	1	2	0	0	5	3	11	0	0	0	4	2	1	0	1	5	1426
Grand Total	**218**	**356**	**4094**	**1032**	**64**	**20**	**13**	**87**	**467**	**72**	**550**	**62**	**138**	**179**	**213**	**498**	**190**	**236**	**766**	**168**	**116**	**123**	**26**	**60**	**159**	**64**	**38**	**42**	**282**	**14**	**21**	**2**	**3**	**45**	**27**	**92**	**4**	**1**	**1**	**36**	**17**	**6**	**1**	**12**	**48**	**10665**

2051 AM Lean DM

Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
S11-Homai	27	57	578	92	8	2	1	12	32	10	76	7	19	25	29	63	28	24	50				1	4	20	10	6	2	10	2	2	0	0	9	3	10	0	0	0	4	2	1	0	2	8	1238
S12-Manurewa	31	60	611	88	9	2	1	10	26	10	84	9	22	28	32	75	30	28	67	2	5	1	0	7	26	19	12	4	18	2	2	0	0	7	3	9	0	0	0	4	2	0	0	2	9	1356
S13-Te Mahia	13	26	271	41	4	2	1	9	23	8	35	3	9	12	13	32	14	19	44		8			8	9	8	5	1	7	1	2	0	0	6	2	7	0	0	0	3	1	0	0	1	4	654
S14-Takanini	26	52	549	78	7	3	2	17	37	13	70	7	18	23	26	67	27	44	126	10	12	10	3	1	5	14	10	3	16	3	3	0	0	13	4	15	1	0	0	5	3	1	0	1	7	1331
S15-Papakura	50	95	967	212	14	6	4	21	163	23	134	12	29	36	42	133	50	85	333	75	47	48	11	14	9	26	16	8	41	6	5	1	1	21	8	27	1	1	0	11	5	1	0	2	11	2804
S16-Drury	23	52	617	292	9	2	1	11	107	15	72	8	21	29	35	72	29	33	188	42	25	31	7	27	30	21	14	11	69	1	2	0	1	4	3	11	0	0	0	5	1	1	0	2	10	1937
S17-Drury South/Karaka	34	69	756	315	12	4	2	16	119	21	99	12	26	34	40	97	37	46	235	57	35	43	10	40	50	3	2	2	80	2	3	0	1	8	5	18	1	0	0	7	2	1	0	2	11	2358
S18-Paerata	29	54	647	239	9	3	2	12	94	14	76	10	20	26	30	75	27	37	174	41	26	29	7	31	67	28	59	7	10	1	3	0	1	7	4	15	1	0	0	6	2	1	0	2	8	1936
S19-Pukekohe	28	55	605	254	9	3	2	12	89	13	77	9	19	25	31	74	28	34	181	39	27	29	7	35	67	30	70	13	186	1	3	0	1	6	4	14	1	0	0	5	2	1	0	2	8	2100
Grand Total	**261**	**520**	**5601**	**1611**	**79**	**27**	**17**	**120**	**690**	**126**	**724**	**77**	**182**	**238**	**278**	**689**	**270**	**350**	**1398**	**266**	**185**	**190**	**46**	**167**	**283**	**160**	**194**	**51**	**437**	**20**	**26**	**3**	**4**	**81**	**37**	**128**	**6**	**2**	**2**	**49**	**21**	**6**	**1**	**17**	**76**	**15714**

2051 AM Base Case

Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
S11-Homai	28	34	517	55	5	0	0	1	10	2	87	6	15	25	43	45	23	11	33			1	2	2	19	7	9	2	14		1	0	0	1	1	5	0	0	0	2	0	0	0	2	6	1016
S12-Manurewa	50	60	808	72	9	2	2	9	34	13	146	12	27	44	73	83	42	35	109	1	7	1	1	1	23	13	16	5	29		3	0	0	3	4	13	0	0	0	5	1	0	0	3	10	1770
S13-Te Mahia	16	18	283	32	3	1	0	3	11	3	45	4	8	13	23	25	13	9	38		9			2	10	4	4	1	9		1	0	0	0	1	1	4	0	0	0	1	0	0	0	1	3	598
S14-Takanini	19	22	338	36	3	2	1	6	28	7	55	4	10	16	28	35	18	26	85		7					5	6	2	15		2	0	0	2	2	8	0	0	0	3	0	0	0	1	4	797
S15-Papakura	47	59	825	139	8	5	3	14	93	17	118	10	21	33	56	99	43	65	239	4	38	23	5	4	6	10	10	6	42	1	4	1	1	7	7	23	1	1	0	8	1	1	0	2	8	2105
S16-Drury	16	27	455	121	5	1	1	5	61	8	45	5	12	21	36	44	19	21	127	13	19	16	4	4	21	18	14	8	63	1	1	0	0	2	2	7	0	0	0	3	0	0	0	2	5	1233
S17-Drury South/Karaka	26	36	566	119	7	3	2	8	65	10	66	8	15	24	42	65	25	34	164	23	30	28	6	7	17	6	7	2	69	1	2	0	0	3	4	13	0	0	0	5	1	0	0	2	6	1517
S18-Paerata	19	25	420	80	4	2	1	5	45	6	45	6	10	16	29	45	16	24	128	17	19	20	5	4	56	28	17	4	24	1	1	0	0	2	3	9	0	0	0	3	0	0	0	1	4	1149
S19-Pukekohe	21	29	457	97	5	2	1	6	52	8	52	6	12	19	34	54	20	28	161	20	25	25	6	6	72	44	37	9	138	1	2	0	0	2	3	10	0	0	0	4	1	0	0	2	4	1477
Grand Total	**242**	**311**	**4670**	**751**	**49**	**18**	**12**	**56**	**398**	**73**	**658**	**60**	**129**	**211**	**365**	**495**	**220**	**253**	**1085**	**78**	**154**	**114**	**28**	**31**	**223**	**134**	**120**	**40**	**403**	**6**	**16**	**2**	**3**	**24**	**26**	**93**	**2**	**2**	**1**	**33**	**5**	**2**	**0**	**16**	**50**	**11662**

Southern line: Manukau to Otahuhu
morning peak (2hr) station boarding and alighting

Alighting station

Boarding station	Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
2025 AM	S06-Otahuhu	38	56	789	326	50	10	5	24	115	17	88	12	27	38	29		10	4	17	34	14	24	4	6	22	3	1	1	12	20	9	1	1	23	6	36	2	1	1	20	7	2	1			1904
	S07-Middlemore	11	15	130	71	4	2	1	6	22	8	31	2	6	9	9	7		4	13	15	5	7	2	2	8	1	0	0	4	5	2	0	0	3	1	6	0	0	0	3	1	0	0	0	1	419
	S08-Papatoetoe	36	53	678	280	9	10	4	22	80	25	82	8	21	27	28	24	25	2	7	13	9	17	7	8	36	4	1	2	16	19	7	0	1	18	5	26	1	1	0	15	5	1	1	0	0	1634
	S09-Puhinui	12	30	288	211	7	3	1	10	41	13	34	3	9	13	15	15	9	2		20	6	12	3	4	15	2	1	1	11	8	3	0	0	5	2	11	1	0	0	7	2	1	0	0	0	832
	S10-Manukau	26	30	595	324	11	16	7	33	112	39	15	3	6	10	7	41	25	7	2						4	1	1	1	6	39	10	1	1	32	9	40	2	1	1	19	8	2	1			1484
	Grand Total	**124**	**183**	**2480**	**1212**	**81**	**40**	**18**	**94**	**371**	**102**	**250**	**28**	**70**	**97**	**89**	**88**	**69**	**19**	**38**	**83**	**34**	**59**	**16**	**21**	**85**	**12**	**3**	**5**	**48**	**90**	**30**	**2**	**3**	**81**	**23**	**118**	**5**	**3**	**2**	**63**	**23**	**6**	**3**	**0**	**2**	**6273**
2031 AM	S06-Otahuhu	38	52	558	226	49	10	4	48	122	26	104	12	26	44	33		16	6	10	62	15	29	5	9	27	4	2	2	12	14	5	1	1	14	6	26	1	0	0	15	5	2	1			1642
	S07-Middlemore	9	15	148	64	4	2	1	11	26	11	27	2	5	8	10	9		2	6	26	3	5	1	2	6	1	0	1	3	4	2	0	0	4	2	7	0	0	0	3	1	0	0	1	0	434
	S08-Papatoetoe	29	37	334	148	6	5	2	25	56	25	77	6	15	25	26	14	12	2	3	23	8	16	5	8	31	4	2	2	11	8	3	0	1	7	3	14	1	0	0	8	3	1	0	0	0	1006
	S09-Puhinui	16	24	223	91	7	2	1	15	37	15	53	6	11	20	27	30	14	1		16	8	17	4	6	27	6	3	3	19	5	2	0	0	4	2	8	0	0	0	4	1	0	0	1		733
	S10-Manukau	16	28	717	273	10	15	7	64	109	51	13	2	3	6	9	53	40	3	2						6	2	1	1	6	28	11	1	1	31	12	43	2	1	1	20	8	3	1			1596
	Grand Total	**108**	**155**	**1980**	**802**	**76**	**35**	**16**	**164**	**350**	**129**	**274**	**27**	**60**	**103**	**105**	**107**	**82**	**14**	**21**	**127**	**34**	**67**	**17**	**25**	**96**	**16**	**8**	**9**	**50**	**59**	**22**	**2**	**3**	**60**	**23**	**97**	**4**	**2**	**2**	**51**	**18**	**7**	**2**	**2**	**1**	**5411**
2051 AM Lean DM	S06-Otahuhu	42	71	700	289	64	12	5	60	152	40	144	17	38	64	53		23	9	24	79	19	34	9	17	34	11	8	3	12	18	6	1	1	18	7	33	1	1	1	20	6	3	0			2150
	S07-Middlemore	9	19	175	80	4	2	1	13	32	17	33	2	6	9	12	14		4	13	36	5	8	2	5	8	3	2	1	3	4	2	0	0	4	2	8	0	0	0	4	1	0	0	1	1	545
	S08-Papatoetoe	27	43	370	168	6	6	2	29	67	37	90	5	14	23	25	20	16	4	6	28	11	22	9	17	39	12	8	3	13	9	3	0	1	7	3	16	1	0	0	9	3	1	0	1	0	1174
	S09-Puhinui	14	26	232	96	7	2	1	19	41	21	55	5	11	18	24	32	17	1		18	11	19	7	12	37	18	13	5	25	5	2	0	0	4	2	9	0	0	0	4	1	1	0	1		818
	S10-Manukau	19	38	883	297	11	15	6	67	109	66	28	3	6	14	16	76	44	4	4						10	5	5	2	8	31	11	1	1	35	13	50	2	1	1	23	8	3	0			1920
	Grand Total	**110**	**197**	**2360**	**931**	**91**	**38**	**17**	**188**	**402**	**182**	**350**	**32**	**75**	**129**	**131**	**143**	**100**	**22**	**46**	**161**	**46**	**84**	**28**	**51**	**127**	**48**	**35**	**13**	**61**	**68**	**22**	**3**	**4**	**68**	**28**	**115**	**5**	**3**	**2**	**60**	**19**	**8**	**1**	**3**	**1**	**6608**
2051 AM Base Case	S06-Otahuhu	61	80	1026	248	68	15	7	48	194	41	190	15	34	88	63		24	7	14	72	17	28	11	10	42	10	10	3	20	25	6	1	1	16	11	51	1	1	1	18	4	2	0			2584
	S07-S07-Middlemore	15	23	292	80	4	3	2	12	40	19	49	3	7	15	21	19		6	25	47	5	8	4	4	11	3	3	1	5	7	2	0	0	4	3	12	0	0	0	4	1	0	0	1	1	761
	S08-Papatoetoe	28	35	328	126	4	6	3	20	66	29	84	5	13	29	33	20	14	1	11	15	8	27	8	12	45	9	10	3	21	9	2	0	1	6	3	18	0	1	0	7	1	1	0	0	0	1064
	S09-Puhinui	21	34	482	113	7	3	1	12	40	20	66	4	11	26	39	36	29	1		18	11	18	7	8	40	17	18	5	34	7	2	0	0	5	2	10	0	0	0	4	1	0	0	2		1156
	S10-Manukau	16	43	1045	240	10	22	10	60	98	81	23	3	5	15	9	35	42	0	5							1	3	1	6	41	13	2	2	35	19	76	1	2	1	26	7	3	0			2000
	Grand Total	**142**	**214**	**3172**	**806**	**93**	**49**	**23**	**152**	**437**	**189**	**412**	**30**	**70**	**173**	**165**	**110**	**110**	**16**	**54**	**152**	**41**	**82**	**30**	**34**	**137**	**41**	**44**	**14**	**86**	**89**	**25**	**4**	**4**	**66**	**39**	**167**	**3**	**4**	**3**	**59**	**14**	**6**	**1**	**3**	**1**	**7565**

Southern line: Penrose to city centre boundary
morning peak (2hr) station boarding and alighting

Alighting station

Boarding station

	Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
2025 AM	S01-Newmarket	2	13	64	67		1	1	5	6			2	28	22	45	12	8	22	9	9	10	2	3	9	1	0	1	5	29	4	0	0	3	2	7	0	0	0	3	1	0	0	12	28	439
	S02-Remuera				9					0				1	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0															0		17
	S03-Greenlane		3	48	29	10				2	1			7	9	19	4	3	8	4	3	4	1	1	3	0	0	0	2	8	2		0	1	1	5	0	0	0	2	1	0	0	2	7	194
	S04-Ellerslie	6	23	157	118	28		2			21	1	3		6	26	6	4	11	4	5	6	1	2	4	1	0	0	2	14	4	0	0	5	2	9	0	0	0	4	1	0	0	3	13	493
	S05-Penrose	0	3	39	24	10	0	1	1		9	0	1	0		16	6	4	9	1	4	5	1	1	4	1	0	0	2	2	1	0	0		0	1	0	0	0	1	0	0	0	0	3	153
	Grand Total	**9**	**42**	**308**	**246**	**47**	**1**	**3**	**6**	**9**	**31**	**2**	**6**	**37**	**37**	**109**	**28**	**19**	**51**	**19**	**22**	**26**	**5**	**7**	**21**	**3**	**1**	**1**	**12**	**53**	**10**	**1**	**1**	**8**	**5**	**22**	**1**	**1**	**0**	**11**	**3**	**1**	**0**	**18**	**52**	**1296**
2031 AM	S01-Newmarket	3	16	83	64		1	2	1	8			2	36	33	46	10	6	20	12	7	10	2	3	9	1	1	1	5	26	4	1	1	2	3	15	1	0	0	7	2	1	0	9	21	475
	S02-Remuera		0		25	4				0				2	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	3																42
	S03-Greenlane		7		48	16				2	1			9	12	20	4	3	6	5	3	4	1	1	3	0	0	0	2	7	1		0	0	0	3	0	0	0	2	0	0	0	3	13	177
	S04-Ellerslie	6	19	94	102	26		2		0	25	2	4		9	24	5	3	7	4	4	5	1	2	4	1	0	0	2	12	2	0	0	2	1	6	0	0	0	3	1	0	0	4	33	419
	S05-Penrose	1	6	16	45	19	0	1	0		13	1	2	1		24	7	3	10	7	5	7	1	2	5	1	0	0	3	3	0	0	0		0	1	0	0	0	1	0	0	0	1	9	197
	Grand Total	**10**	**47**	**193**	**284**	**66**	**1**	**6**	**1**	**11**	**39**	**2**	**8**	**47**	**55**	**117**	**27**	**16**	**44**	**29**	**19**	**25**	**5**	**8**	**22**	**3**	**2**	**2**	**12**	**52**	**7**	**1**	**1**	**4**	**6**	**25**	**1**	**1**	**1**	**12**	**3**	**2**	**0**	**16**	**77**	**1310**
2051 AM Lean DM	S01-Newmarket	5	26	126	155	9	1	3	2	15			3	59	51	68	14	9	29	21	9	12	3	7	12	5	4	1	6	37	5	1	1	6	6	24	1	1	1	12	3	1	0	16	42	813
	S02-Remuera		0		30	4				1				3	2	3	1	0	1	1	0	1	0	0	1	0	0	0	0	4																52
	S03-Greenlane		8		56	19				4	1			13	16	27	6	3	8	8	3	4	1	2	4	1	1	0	2	9	1		0	0	1	4	0	0	0	2	1	0	0	4	24	235
	S04-Ellerslie	9	32	140	144	46		4		1	39	3	6		24	38	7	5	11	7	5	6	2	4	5	2	2	1	3	17	2	0	0	4	2	9	0	0	0	4	1	0	0	10	65	662
	S05-Penrose	1	10	23	52	18	0	2	1		17	1	3	2		33	9	4	15	10	6	8	2	4	7	2	2	1	3	4	0	0	0	0	1	2	0	0	0	1	0	0	0	1	16	265
	Grand Total	**15**	**77**	**289**	**438**	**97**	**1**	**8**	**3**	**20**	**57**	**4**	**12**	**77**	**93**	**169**	**37**	**22**	**65**	**47**	**24**	**31**	**8**	**18**	**29**	**11**	**9**	**3**	**14**	**71**	**8**	**1**	**2**	**11**	**9**	**39**	**2**	**1**	**1**	**19**	**5**	**2**	**0**	**32**	**148**	**2027**
2051 AM Base Case	S01-Newmarket	8	2	219	94		1			15			2	83	77	109	23	13	30	16	17	17	7	6	18	5	5	2	10	44	3	1	1	1	4	18	0	1	0	7	1	1	0	26	42	928
	S02-Remuera				32	6				0				3	2	3	0	0	1	1	0	0	0	0	0	0	0	0	0	4																53
	S03-Greenlane		3		55	9				3				16	14	29	6	4	7	6	4	5	2	2	5	1	1	0	3	12				0	1	3	0	0	0	1	0	0	0	5	15	211
	S04-Ellerslie	9	22	177	123	31		3		1	36	4	4		13	44	10	6	10	6	7	8	3	3	7	2	2	1	4	22	2	0	0	3	3	10	0	0	0	4	0	0	0	9	74	661
	S05-Penrose	3	5	28	44	18	0	1	0		26	1	5	5		37	13	6	15	2	11	10	4	3	10	3	3	1	5	5	0	0	0		0	2	0	0	0	1	0	0	0	0	17	283
	Grand Total	**20**	**32**	**424**	**348**	**63**	**1**	**4**	**0**	**19**	**62**	**5**	**10**	**106**	**105**	**221**	**52**	**28**	**63**	**30**	**40**	**39**	**17**	**14**	**40**	**12**	**11**	**3**	**21**	**86**	**5**	**1**	**1**	**4**	**8**	**33**	**1**	**1**	**1**	**14**	**1**	**1**	**0**	**41**	**148**	**2136**

Eastern line: Sylvia Park to city centre boundary
morning peak (2hr) station boarding and alighting

Alighting station

Boarding station	Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S03-Greenlane	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	Grand Total
2025 AM	E01-Orakei	9	25	262	118			2	3	25	13			1	17	4	5	7	14	1	1	0	0	2	0	0	0	1	22	5	0	1	10	3	13	1	0	0	7	2	1	0	575
	E02-Meadowbank	11	16	155	118	5	2		7	16	9	2		2	11	3	3	5	8	0	0	0	0	1	0	0	0	0	13	3	0	0	5	2	8	0	0	0	4	1	0	0	411
	E04-Panmure	24	74	851	529	22	24	11	42		39	3		3	114	42	35	66	86	7	5	2	2	19	2	1	1	9	69	22	2	2	47	15	65	3	2	1	31	11	3	1	2286
	E05-Sylvia Park	22	21	329	176	9	6	3	16	20		3	1		16	7	8	13	28	2	2	1	1	3	0	0	0	2	15	4	0	1	6	3	13	1	0	0	7	2	1	0	743
	Grand Total	**66**	**136**	**1596**	**940**	**36**	**32**	**16**	**69**	**61**	**61**	**9**	**1**	**6**	**158**	**57**	**50**	**91**	**135**	**9**	**8**	**3**	**4**	**24**	**3**	**1**	**1**	**12**	**118**	**35**	**3**	**4**	**68**	**23**	**99**	**4**	**3**	**1**	**49**	**16**	**5**	**2**	**4015**
2031 AM	E01-Orakei	8	26	257	83	0	0	2	7	29	17	0	0	0	17	5	3	1	21	0	1	0	0	2	0	0	0	1	19	6	0	1	10	5	14	1	0	0	7	2	1	0	548
	E02-Meadowbank	9	16	194	111	5	2	0	11	19	11	1	0	2	11	3	2	1	11	0	0	0	0	1	0	0	0	0	11	3	0	0	5	3	8	0	0	0	4	1	0	0	448
	E03-Glen Innes	25	70	850	324	15	9	8	0	110	55	0	0	10	90	25	14	25	90	1	3	2	2	6	1	0	0	2	52	16	1	2	31	13	46	2	1	1	22	7	3	1	1933
	E04-Panmure	21	131	1300	849	33	33	15	100	0	63	3	0	4	142	60	26	33	104	1	4	2	2	23	4	2	2	10	67	31	3	4	63	27	96	4	2	1	45	14	6	1	3331
	E05-Sylvia Park	19	24	451	174	5	6	4	26	35	0	4	1	0	16	10	6	9	42	1	2	1	1	2	0	0	0	1	16	6	0	1	8	5	16	1	0	0	8	3	1	0	905
	Grand Total	**83**	**268**	**3053**	**1540**	**58**	**51**	**28**	**144**	**192**	**146**	**9**	**1**	**16**	**276**	**102**	**50**	**70**	**269**	**3**	**10**	**6**	**5**	**33**	**5**	**3**	**3**	**15**	**165**	**62**	**5**	**8**	**117**	**52**	**180**	**7**	**3**	**3**	**85**	**27**	**10**	**2**	**7166**
2051 AM Lean DM	E01-Orakei	9	32	337	104			2	10	43	26				24	5	3	3	26	0	1	0	1	2	1	0	0	1	23	6	1	1	13	6	18	1	0	0	9	2	1	0	712
	E02-Meadowbank	9	20	220	128	5	4		17	26	15	1		3	14	4	2	2	14	0	1	0	0	1	0	0	0	0	12	3	0	1	7	3	10	0	0	0	5	1	0	0	530
	E03-Glen Innes	60	118	1522	586	26	15	17		206	107			24	134	39	19	64	138	1	5	2	3	8	3	2	1	3	83	22	2	3	47	20	68	3	1	1	33	9	3	0	3397
	E04-Panmure	24	181	1959	1151	34	47	20	135	5	107	3		6	195	82	34	94	162	1	6	2	3	39	14	9	3	14	88	34	3	5	81	34	126	5	3	2	60	17	7	1	4797
	E05-Sylvia Park	27	41	736	286	14	11	6	58	71		8	1		31	16	10	35	74	1	3	1	2	4	1	1	0	2	26	7	1	1	18	8	27	1	1	0	13	4	2	0	1552
	Grand Total	**128**	**393**	**4774**	**2256**	**79**	**77**	**45**	**220**	**351**	**255**	**12**	**1**	**33**	**398**	**146**	**67**	**197**	**416**	**4**	**15**	**5**	**9**	**54**	**20**	**12**	**4**	**20**	**232**	**72**	**7**	**11**	**166**	**72**	**248**	**10**	**5**	**4**	**121**	**34**	**13**	**1**	**10987**
2051 AM Base Case	E01-Orakei	9	39	437	104			5	9	51	20				25	6	4	2	26	0	1	0	0	2	0	0	0	1	25	5	1	1	13	6	22	0	0	0	8	2	1	0	826
	E02-Meadowbank	10	17	266	96	5	4		16	37	13			3	16	4	2	2	16	0	0	0	0	1	0	0	0	1	13	3	0	0	5	3	11	0	0	0	4	1	0	0	551
	E03-Glen Innes	15	88	1161	259	17	10	14		118	83			15	109	32	17	54	109	1	4	1	3	8	2	2	1	4	54	13	2	2	31	14	54	1	1	1	20	4	2	0	2328
	E04-Panmure	8	151	1679	753	19	44	26	84		88	4		5	184	73	29	62	91	1	5	2	3	40	11	9	3	16	95	27	4	4	65	34	136	2	3	2	48	10	4	0	3825
	E05-Sylvia Park	25	46	911	206	14	13	8	49	89		9	1		38	17	11	30	80	1	3	1	2	8	2	2	1	3	26	7	1	1	6	8	28	1	1	0	10	2	1	0	1663
	Grand Total	**66**	**340**	**4454**	**1419**	**55**	**72**	**52**	**159**	**295**	**204**	**13**	**1**	**23**	**374**	**132**	**63**	**149**	**322**	**3**	**14**	**4**	**8**	**58**	**15**	**14**	**4**	**24**	**214**	**55**	**8**	**8**	**120**	**65**	**251**	**4**	**6**	**4**	**91**	**18**	**9**	**1**	**9193**

Western line: Swanson to New Lynn
morning peak (2hr) station boarding and alighting

Alighting station

Boarding station	Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S03-Greenlane	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
2025 AM	W07-New Lynn	35	83	945	263	22	8	3	14	37	12	41	7	8	20	6	4	11	16	2	1	1	1	3	0	0	0	2	69	26	3	5	75	6			0	114	13	10	5	1		1871
	W08-Fruitvale Rd	12	33	312	86	7	2	1	4	10	4	13	2	2	6	2	2	3	4	1	0	0	0	1	0	0	0	0	25	9	1	1	25	4			0	24	3	4	2	1	1	605
	W09-Glen Eden	15	39	388	109	10	3	1	6	15	5	18	3	4	9	2	3	4	6	1	1	0	0	1	0	0	0	1	35	13	1	2	39	8	18		0	35	5	5	2	1	2	810
	W10-Sunnyvale	10	26	282	73	5	2	1	3	9	3	11	2	2	5	1	1	2	4	1	0	0	0	1	0	0	0	0	19	8	1	1	25	7	25	1			1	2	1	1	2	538
	W11-Henderson	11	22	293	84	7	2	1	4	11	4	13	2	3	6	2	2	4	5	1	1	0	0	1	0	0	0	1	23	12	1	2	31	7	39	2	5			5	3	1	2	613
	W12-Sturges	10	25	303	78	7	2	1	4	12	4	12	2	2	7	2	2	3	5	1	0	0	0	1	0	0	0	0	27	13	1	2	36	10	60	5	11	1		1	4	1	2	658
	W13-Ranui	11	25	283	71	5	3	1	4	9	3	11	2	2	5	1	2	2	4	1	0	0	0	1	0	0	0	0	19	8	1	1	33	7	43	4	8	2	44	1		1	1	2	619
	W14-Swanson	11	27	301	70	6	3	1	4	10	3	10	2	2	6	1	2	3	5	1	0	0	0	1	0	0	0	0	21	8	1	1	37	10	49	4	9	2	81	18	8	5	1	2	723
	Grand Total	**113**	**280**	**3106**	**832**	**70**	**24**	**8**	**44**	**113**	**37**	**128**	**21**	**24**	**64**	**17**	**17**	**33**	**49**	**7**	**5**	**2**	**3**	**9**	**1**	**0**	**0**	**4**	**239**	**96**	**8**	**14**	**302**	**59**	**235**	**16**	**34**	**5**	**298**	**41**	**35**	**23**	**7**	**12**	**6438**
2031 AM	W07-New Lynn	11	76	756	285	20	6	3	25	49	16	33	2	14	8	19	6	3	2	25	2	1	1	1	3	0	0	0	2	78	156	4	6	77	6	0	0	0	0	101	11	12	5	1825
	W08-Fruitvale Rd	3	26	312	90	7	1	1	6	12	4	11	1	4	3	5	2	1	0	7	0	0	0	0	1	0	0	0	0	24	67	1	1	23	5	0	0	0	0	27	3	5	2	659
	W09-Glen Eden	5	35	450	120	11	2	1	9	19	6	16	2	6	4	9	2	1	1	10	1	0	0	0	1	0	0	0	0	34	120	1	2	38	9	22	0	0	0	40	6	5	2	993
	W10-Sunnyvale	3	19	268	68	5	1	1	5	10	3	8	1	3	2	5	1	1	0	5	0	0	0	0	1	0	0	0	0	17	60	1	1	23	6	23	1	0	0	0	1	2	2	546
	W11-Henderson	4	22	308	91	7	2	1	7	14	5	12	1	5	3	6	2	1	0	8	1	0	0	0	1	0	0	0	1	23	72	1	2	33	8	41	3	7	0	0	0	6	4	699
	W12-Sturges	3	21	331	88	7	2	1	7	14	4	10	1	4	3	7	2	1	0	8	0	0	0	0	1	0	0	0	0	27	86	1	2	36	10	66	6	13	2	0	0	2	4	771
	W13-Ranui	4	21	297	73	5	2	1	6	11	3	8	1	4	2	5	1	1	0	6	0	0	0	0	1	0	0	0	0	18	73	1	1	32	7	46	4	8	2	50	0	0	1	696
	W14-Swanson	4	22	307	68	5	2	1	6	12	3	7	1	3	2	6	1	1	0	6	0	0	0	0	1	0	0	0	0	19	71	1	1	36	10	55	5	11	2	92	19	10	7	796
	Grand Total	**37**	**242**	**3029**	**883**	**68**	**18**	**9**	**72**	**141**	**45**	**104**	**9**	**43**	**27**	**61**	**18**	**9**	**5**	**74**	**5**	**3**	**2**	**2**	**9**	**1**	**1**	**1**	**4**	**240**	**705**	**9**	**16**	**298**	**61**	**253**	**18**	**39**	**6**	**310**	**39**	**42**	**26**	**6984**
2051 AM Lean DM	W07-New Lynn	12	105	1112	331	22	7	3	29	61	23	47	4	10	25	7	3	3	31	2	2	1	2	4	1	1	0	2	90	238	4	7	103	9					150	14	18	6	2491
	W08-Fruitvale Rd	4	36	375	104	8	2	1	7	15	6	15	2	3	7	2	1	1	8	1	0	0	1	1	0	0	0	0	28	98	1	2	28	7					0	37	4	6	3	810
	W09-Glen Eden	5	40	476	122	10	2	1	9	20	8	19	2	4	9	2	1	1	11	1	1	0	1	1	0	0	0	0	35	161	1	2	40	11	28					55	7	7	3	1098
	W10-Sunnyvale	3	22	282	68	4	1	1	4	10	4	9	1	2	5	1	1	1	5	0	0	0	0	1	0	0	0	0	17	77	1	1	23	8	27	2					2	3	2	590
	W11-Henderson	4	30	397	109	8	2	1	9	18	7	17	2	4	7	2	1	1	10	1	1	0	1	2	1	0	0	1	28	99	1	3	42	12	56	4	9					8	4	899
	W12-Sturges	3	22	342	87	6	2	1	7	15	5	11	1	3	7	2	1	1	8	0	0	0	0	1	1	0	0	0	0	25	107	1	2	38	11	76	7	17	3			2	6	822
	W13-Ranui	4	23	305	75	5	2	1	6	11	4	10	1	2	5	1	1	1	6	0	0	0	0	0	1	0	0	0	0	19	94	1	1	31	8	48	4	9	3	58			1	739
	W14-Swanson	4	22	309	66	5	2	1	5	10	3	8	1	2	5	1	1	1	6	0	0	0	0	1	0	0	0	0	18	80	1	1	33	11	59	5	13	3	112	22	14	11	833
	Grand Total	**39**	**301**	**3597**	**960**	**67**	**19**	**9**	**76**	**159**	**58**	**135**	**14**	**30**	**69**	**19**	**10**	**9**	**84**	**6**	**4**	**2**	**6**	**11**	**4**	**3**	**1**	**5**	**259**	**954**	**10**	**19**	**337**	**78**	**295**	**22**	**49**	**8**	**412**	**49**	**58**	**36**	**8283**
2051 AM Base Case	W07-New Lynn	16	117	805	427	23	9	4	26	81	24	54	2	28	12	30	10	5	2	38	2	3	1	1	6	2	2	0	3	107	572	6	7	115	12					60	8	11	4	2635
	W08-Fruitvale Rd	4	31	286	91	6	1	1	4	15	4	12	1	5	3	6	2	1	0	7	0	1	0	0	1	0	0	0	0	28	178	1	1	25	8				0	35	2	3	1	765
	W09-Glen Eden	5	47	390	130	8	2	1	7	22	7	17	1	8	5	9	3	1	1	12	1	1	0	0	2	0	0	0	1	40	236	1	2	41	10	15				65	4	6	2	1104
	W10-Sunnyvale	2	25	152	63	3	1	1	3	11	3	7	0	4	2	5	1	1	0	5	0	0	0	0	1	0	0	0	0	17	74	1	1	17	6	8	0					4	2	421
	W11-Henderson	3	35	184	89	5	2	1	6	19	6	12	1	6	4	8	2	1	1	9	1	1	0	0	1	0	0	0	1	26	91	1	2	30	12	57	4	15				5	3	643
	W12-Sturges	2	23	176	57	3	1	0	3	9	2	7	0	3	2	4	1	1	0	5	0	0	0	0	1	0	0	0	0	17	101	1	1	19	8	33	1	7	2				3	497
	W13-Ranui	3	24	155	64	4	1	1	4	11	3	6	0	4	2	4	1	1	0	5	0	0	0	0	1	0	0	0	0	19	29	1	1	23	8	41	2	8	3	32			0	463
	W14-Swanson	2	19	149	43	3	1	0	3	8	2	6	0	3	2	3	1	1	0	4	0	0	0	0	1	0	0	0	0	14	92	0	1	21	8	47	2	8	2	99	12	11	2	572
	Grand Total	**37**	**321**	**2299**	**964**	**55**	**19**	**9**	**57**	**174**	**50**	**119**	**5**	**61**	**31**	**70**	**21**	**11**	**5**	**85**	**5**	**6**	**2**	**3**	**12**	**3**	**3**	**1**	**6**	**269**	**1373**	**12**	**16**	**292**	**72**	**202**	**9**	**39**	**8**	**293**	**26**	**40**	**15**	**7100**

Western line: New Lynn to city centre
morning peak (2hr) station boarding and alighting

Alighting station

Boarding station	Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S03-Greenlane	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
2025 AM	W01-Mt Eden	4	30	230	148	10	10	4	23	47	18	50	6	13	14	6	3	10	22	1	0	0	0	1	0	0	0	0		31	3	4	15	9	47	2	2	1	36	8	3	1	6	18	839
	W02-Kingsland	9	19	157	100	9	2	1	5	10	5	13	2	3	5	2	1	3	4	1	0	0	0	1	0	0	0	0	24		1	1	14	4	16	1	1	0	14	3	1	0	1	2	434
	W03-Morningside	6	14	150	46	4	1	0	2	5	2	7	0	1	3	1	1	1	2	0	0	0	0	0	0	0	0	0	18	2		0	9	2	10	0	0	0	5	1	0	0	0	1	298
	W04-Baldwin Ave	5	16	122	38	3	1	0	2	4	2	6	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	12	4	0		2	2	10	0	0	0	6	1	0	0	0	1	248
	W05-Mt Albert	17	31	326	119	11	3	1	6	14	6	13	2		8	2	2	4	6	1	1	0	0	2	0	0	0	1	29	19	2	1		5	51	2	2	1	40	8	3	1	0	2	747
	W06-Avondale	23	42	588	220	21	8	3	16	34	13	34	6	5	17	5	4	9	14	2	1	0	1	2	0	0	0	1	60	27	3	5	42		25	2	2	1	51	9	3	1			1301
	W07-New Lynn	35	83	945	263	22	8	3	14	37	12	41	7	8	20	6	4	11	16	2	1	1	1	3	0	0	0	2	69	26	3	5	75	6				0	114	13	10	5	1		1871
	Grand Total	**99**	**235**	**2517**	**934**	**80**	**33**	**12**	**67**	**151**	**57**	**164**	**25**	**31**	**70**	**22**	**15**	**40**	**65**	**6**	**4**	**2**	**3**	**9**	**1**	**0**	**0**	**5**	**213**	**109**	**12**	**17**	**157**	**29**	**159**	**7**	**7**	**5**	**266**	**44**	**21**	**9**	**10**	**25**	**5737**
2031 AM	W01-Mt Eden	4	28	237	104	6	5	3	24	32	15	27	5	10	8	3	1	1	18	0	0	0	0	0	0	0	0	0	0	24	3	5	16	11	57	2	2	1	35	8	4	1	2	2	708
	W02-Kingsland	0	22	0	84	0	1	1	6	10	5	0	0	0	3	1	0	0	5	0	0	0	0	0	0	0	0	0	11	0	3	5	12	3	16	2	2	1	41	7	6	1	0	0	250
	W03-Morningside	2	12	110	49	5	1	0	3	6	2	6	0	2	3	1	0	0	3	0	0	0	0	0	0	0	0	0	13	43	0	1	10	4	11	0	0	0	5	1	1	0	0	0	294
	W04-Baldwin Ave	1	14	130	41	4	1	0	3	5	2	5	0	1	2	1	0	0	2	0	0	0	0	0	0	0	0	0	13	42	0	0	2	4	11	0	0	0	7	1	0	0	0	0	294
	W05-Mt Albert	0	38	235	111	7	2	1	10	17	7	2	1	0	8	2	1	1	10	1	1	0	0	2	0	0	0	1	15	100	2	2	0	6	51	2	1	1	40	7	4	1	0	0	690
	W06-Avondale	6	36	388	181	13	5	3	22	37	16	21	1	5	13	5	2	1	19	1	1	0	0	2	0	0	0	1	40	156	3	5	46	0	15	2	2	1	55	9	5	2	0	0	1120
	W07-New Lynn	11	76	756	285	20	6	3	25	49	16	33	2	8	19	6	3	2	25	2	1	1	1	3	0	0	0	2	78	156	4	6	77	6	0	0	0	0	101	11	12	5	0	0	1811
	Grand Total	**24**	**226**	**1856**	**854**	**55**	**21**	**11**	**94**	**155**	**64**	**94**	**10**	**27**	**56**	**19**	**7**	**5**	**82**	**4**	**3**	**2**	**2**	**8**	**1**	**1**	**1**	**4**	**169**	**522**	**15**	**23**	**162**	**34**	**160**	**9**	**7**	**5**	**285**	**44**	**32**	**10**	**2**	**2**	**5166**
2051 AM Lean DM	W01-Mt Eden	6	43	354	142	8	9	4	33	50	23	45	10	19	14	5	2	2	27	1	1	0	1	1	0	0	0	0		34	5	7	32	18	93	4	3	2	60	11	6	1	4	3	1082
	W02-Kingsland		28		103		2	1	8	14	7				4	2	1	1	7										14		4	9	23	5	23	3	4	2	72	11	9	1			358
	W03-Morningside	2	16	133	56	5	1	0	4	7	3	8	0	2	3	1	0	0	3	0	0	0	0	0	0	0	0	0	17	67		1	17	5	14	0	0	0	7	1	1	0			378
	W04-Baldwin Ave	2	20	160	49	4	1	0	3	6	3	7	0	2	3	1	0	0	3	0	0	0	0	0	0	0	0	0	15	64	1		3	5	14	0	0	0	10	1	1	0			380
	W05-Mt Albert		53	339	153	9	4	2	15	27	13	2	1		12	3	1	2	15	1	1	0	1	3	1	1	0	2	19	159	3	2		9	79	3	3	2	64	9	5	1			1018
	W06-Avondale	7	59	518	223	15	6	3	26	47	23	31	1	7	18	6	2	3	23	1	1	0	1	2	1	1	0	1	52	252	3	7	64		46	4	3	2	75	11	6	1			1550
	W07-New Lynn	12	105	1112	331	22	7	3	29	61	23	47	4	10	25	7	3	3	31	2	2	1	2	4	1	1	0	2	90	238	4	7	103	9					150	14	18	6			2491
	Grand Total	**29**	**323**	**2618**	**1057**	**62**	**29**	**14**	**118**	**212**	**95**	**141**	**17**	**40**	**78**	**24**	**10**	**11**	**109**	**5**	**4**	**2**	**6**	**10**	**4**	**3**	**1**	**5**	**206**	**815**	**20**	**33**	**241**	**52**	**269**	**15**	**13**	**8**	**438**	**58**	**44**	**11**	**4**	**3**	**7257**
2051 AM Base Case	W01-Mt Eden	9	63	534	274		11	4	27	53	23	75	10	13	17	6	2	1	29	0	1	0	0	1	0	0	0	1		20	7	7	33	24	118	2	4	2	64	6	3	1	6	6	1456
	W02-Kingsland		40		138		2	1	7	19	9				7	3	1	1	10										19		6	10	19	10	44	3	5	2	43	7	4	1			409
	W03-Morningside		16	89	68		1	0	4	10	3	10		3	4	1	1	0	4	0	0	0	0	1	0	0	0	0	14	34		1	8	3	18	0	0	0	8	1	0	0			303
	W04-Baldwin Ave	2	26	159	63	5	1	0	3	9	3	8	0	2	4	1	1	0	4	0	0	0	0	1	0	0	0	0	20	115	1		3	6	20	0	0	0	11	1	1	0			474
	W05-Mt Albert		65	321	172		5	2	17	38	10		1		12	6	2	1	22	1	1	0	0	2	1	1	0	1	35	202	4	2		15	102	3	5	3	84	7	4	1			1149
	W06-Avondale	11	66	451	274	20	6	3	20	53	20	39	2	8	22	7	3	2	25	1	2	1	1	3	1	1	0	1	71	269	4	6	50		25	3	4	2	86	7	4	0			1573
	W07-New Lynn	16	117	805	427	23	9	4	26	81	24	54	2	12	30	10	5	2	38	2	3	1	1	6	2	2	0	3	107	572	6	7	115	12					60	8	11	4			2607
	Grand Total	**38**	**393**	**2359**	**1416**	**48**	**36**	**15**	**105**	**262**	**93**	**185**	**16**	**38**	**95**	**33**	**14**	**8**	**132**	**5**	**7**	**2**	**3**	**13**	**4**	**4**	**1**	**7**	**267**	**1212**	**28**	**33**	**228**	**71**	**327**	**10**	**19**	**10**	**355**	**37**	**27**	**7**	**6**	**6**	**7971**

City centre ring
morning peak (2hr) station boarding and alighting

Boarding station

Alighting station

Row Labels	C00-Grafton	C01-K Rd	C02-Aotea	C03-Britomart	C04-Parnell	E01-Orakei	E02-Meadowbank	E03-Glen Innes	E04-Panmure	E05-Sylvia Park	S01-Newmarket	S02-Remuera	S03-Greenlane	S04-Ellerslie	S05-Penrose	S06-Otahuhu	S07-Middlemore	S08-Papatoetoe	S09-Puhinui	S10-Manukau	S11-Homai	S12-Manurewa	S13-Te Mahia	S14-Takanini	S15-Papakura	S16-Drury	S17-Drury South/Karaka	S18-Paerata	S19-Pukekohe	W01-Mt Eden	W02-Kingsland	W03-Morningside	W04-Baldwin Ave	W05-Mt Albert	W06-Avondale	W07-New Lynn	W08-Fruitvale Rd	W09-Glen Eden	W10-Sunnyvale	W11-Henderson	W12-Sturges	W13-Ranui	W14-Swanson	XO1-Te Papapa	XO2-Onehunga	Grand Total
2025 AM																																													
C00-Grafton			10	1					1	1	0			2	3	5	1	1	4	1	1	2	0	0	2	0	0	0	1														0	1	38
C01-K Rd	29			24	69	10	4	19	47	18	58	15	14	34	23	45	12	12	35	18	9	10	2	3	9	1	0	0	5	38	23	2	2	13	5	35	2	2	1	18	2	2	1	2	5	679
C02-Aotea	13			3	162	24	13	59	148	53	63	15	12	65	49	105	24	27	166	61	19	36	7	9	45	5	1	3	41	93	60	5	6	48	29	143	8	7	4	75	12	9	5	2	5	1741
C03-Britomart	46	10	1		133	19	10	40	111	37	121	23	16	49	37	70	16	18	160	48	10	7	2	4	13	2	1	1	8	107	39	3	4	53	23	93	5	4	2	45	8	5	2	3	9	1418
C04-Parnell		13					0	2	4	2			3	7	6	10	1	1	3	2	1	1	0	0	1	0	0	0	0	7	3	0	0	2	1	5	0	0	0	2	0	0	0		0	80
Grand Total	**87**	**23**	**11**	**28**	**365**	**52**	**27**	**119**	**312**	**111**	**243**	**53**	**45**	**158**	**118**	**235**	**55**	**58**	**368**	**130**	**40**	**55**	**12**	**16**	**69**	**8**	**3**	**5**	**55**	**246**	**126**	**10**	**13**	**116**	**59**	**276**	**15**	**13**	**8**	**140**	**23**	**16**	**8**	**7**	**21**	**3955**
2031 AM																																												
C00-Grafton	0	0	0	0	0	0	0	0	0	1	0	0	0	2	3	5	1	1	2	1	1	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	26
C01-K Rd	30	0	0	27	74	8	5	35	69	23	70	2	9	46	34	47	12	7	9	28	8	11	2	4	10	1	1	1	5	44	16	2	3	17	4	39	2	1	1	17	2	2	1	0	0	728
C02-Aotea	3	0	0	1	33	13	13	94	148	62	15	0	5	64	33	52	20	8	10	67	20	43	9	12	54	7	4	6	41	72	0	7	10	50	23	170	9	6	6	94	15	16	6	0	0	1319
C03-Britomart	0	0	1	0	78	2	14	89	190	59	108	19	9	61	52	100	25	14	11	94	5	6	2	4	23	4	2	3	13	32	26	3	4	48	12	86	5	2	2	42	6	6	2	0	0	1263
C04-Parnell	0	0	0	0	0	0	1	3	3	3	0	2	4	8	8	9	1	1	1	3	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Grand Total	**33**	**0**	**1**	**28**	**186**	**23**	**32**	**222**	**410**	**148**	**193**	**22**	**27**	**181**	**129**	**214**	**59**	**31**	**33**	**193**	**35**	**63**	**14**	**20**	**90**	**12**	**7**	**10**	**61**	**148**	**42**	**12**	**17**	**114**	**39**	**295**	**16**	**10**	**9**	**152**	**23**	**24**	**9**	**0**	**1**	**3385**
2051 AM Lean DM																																												
C00-Grafton									1	1	1		0	3	4	7	1	1	2	1	1	2	0	1	2	1	1	0	2														1	1	36
C01-K Rd	41			34	85	11	7	49	101	39	105	3	14	65	51	71	17	10	17	41	12	13	4	8	13	5	4	1	6	57	22	3	5	31	6	68	3	3	1	26	2	2	1			1058
C02-Aotea	4			1	39	21	18	142	218	109	20		11	101	45	74	25	8	18	90	25	46	13	24	59	18	22	10	41	83		9	13	65	32	234	13	9	7	142	20	21	9			1863
C03-Britomart		1	6		92	2	17	118	246	94	144	24	12	70	67	131	31	17	21	124	7	8	3	11	32	12	10	4	16	32	27	4	5	59	14	105	6	3	3	52	7	8	4	0		1651
C04-Parnell		24	0				1	5	7	5		2	6	12	10	12	1	1	1	4	1	1	0	1	1	0	0	0	1			0	1	1	1	8	0	0	0	4	0	0	0			114
Grand Total	**46**	**25**	**6**	**35**	**217**	**35**	**43**	**314**	**573**	**248**	**270**	**29**	**44**	**252**	**177**	**296**	**75**	**37**	**59**	**261**	**46**	**69**	**20**	**44**	**108**	**37**	**37**	**15**	**65**	**172**	**49**	**16**	**25**	**156**	**54**	**415**	**22**	**15**	**12**	**224**	**30**	**32**	**13**	**1**	**1**	**4721**
2051 AM Base Case																																												
C00-Grafton										1				5	6	10	2	2	2	1	2	2	1	1	3	1	1	0	1														1		41
C01-K Rd	2			38	25	4	2	15	35	17	23	3	6	35	26	34	9	5	7	13	5	7	3	2	7	2	2	1	4	37	6	4	4	16	12	63	1	3	1	33	3	2	0			517
C02-C02-Aotea	6			2	35	33	29	159	281	157	98			210	109	192	62	20	29	189	34	50	23	18	86	23	26	8	49	138		6	14	33	24	200	7	13	4	57	4	2	1			2431
C03-Britomart	5	15	26		61	2	11	50	152	60	82	14	8	61	49	70	17	10	8	75	4	5	2	2	24	6	6	2	10	63	22	4	5	29	19	102	2	4	2	39	6	4	1	0		1137
C04-Parnell												2	1	12	11	13	2	1	1	4	1	1	1	0	1	0	0	0	1																53
Grand Total	**13**	**15**	**26**	**40**	**120**	**40**	**43**	**224**	**468**	**235**	**203**	**20**	**14**	**323**	**202**	**319**	**92**	**37**	**47**	**281**	**46**	**65**	**29**	**23**	**121**	**32**	**35**	**11**	**64**	**237**	**28**	**14**	**23**	**78**	**56**	**365**	**11**	**19**	**8**	**130**	**14**	**8**	**2**	**1**	**4179**