

# Business Report – April 2021

## Introduction

This business report summarises activities undertaken in this reporting period by Auckland Transport (AT) which contribute to the six outcome areas of the Auckland Plan. The six outcome areas of the Auckland Plan are:

Auckland Plan Outcome	Description
<b>Belonging and participation</b>	Focussed on Aucklanders being able to contribute to their city and its direction for the future. It aims to improve accessibility to the resources and opportunities that Aucklanders need to grow and reach their full potential and is about working towards an inclusive and equitable region, focused on improving the health and wellbeing of all Aucklanders. This outcome also covers wellbeing and health, a thriving and prosperous Auckland is a safe and healthy Auckland.
<b>Māori identity and wellbeing</b>	Seeks to advance Māori wellbeing at all levels from whānau, hapū and iwi and across all areas of life: housing, employment, education and health.
<b>Homes and places</b>	Focussed on accessibility to healthy and affordable homes as well as inclusive public places.
<b>Transport and access</b>	Providing easy, safe and sustainable transport modes across an integrated network, in alignment with the Auckland Transport Alignment Project (ATAP).
<b>Environment and cultural heritage</b>	Preserving and protecting the natural environment and significant land marks and cultural heritage unique to Auckland.
<b>Opportunity and prosperity</b>	Ensuring adaptability in the face of a rapidly changing economy and taking advantage of technological developments through collaboration and participation.

## Recommendation

- i. That the Chief Executive's report be received; and
- ii. That the board approves release of a public facing version of this document to elected members and selected members of the general public.

### Prepared by:

Shane Ellison, Chief Executive

## Belonging and participation

*For AT, this outcome area is focussed on improving accessibility, inclusivity and the well-being and safety of Aucklanders.*

### Safer Communities Update

The Mangere Bridge Safer Communities project has been completed. The project includes an area-wide safety upgrade which improves safety and active mode access within and around the Mangere Bridge town centre.

### Rainbow Crossing

In association with the Karangahape Road Business Association, a small blessing/opening was held for the new Rainbow Crossing – a first for New Zealand.

### Great North Road upgrade

AT is seeking feedback on a series of proposals for Great North Road (Karangahape Road to Grey Lynn). The proposal aims to improve safety for people walking and cycling, whilst also improving bus travel times. This is part of the Connected Communities programme, and supported by the Waitemata Local Board. Staff have held a number of face to face meetings with nearby businesses in particular, and a community open day was attended by around 20 people. The project responds to a large growth in residential apartments in the area – expected to grow by some 24% over the next ten years. Feedback closes on 7 May 2021.



### Draft Regional Land Transport Plan 2021 – 2031 (RLTP)

Consultation opened on the RLTP, a programme of activities and investments that will help address Auckland's transport challenges.

Public submissions on the RLTP opened on 29 March 2021. Within 48 hours, and before region-wide communications and engagement programmes had begun, some 700 submissions had been received. Executive Leadership Team members led briefings for all 21 Local Boards. Submissions close on 2 May.

## **Accessibility**

AT has been nominated in the 2021 People's Choice Accessible Business Awards, hosted by the Access Alliance. AT has been nominated in the 'Built environment including public transport' category. The Access Alliance is comprised of ten founding-member organisations from the disability sector, alongside campaign partners, supporting organisations, business champions and individuals representing people with access needs. The improvements AT made to its AT Mobile App ensured support for larger text sizes and screen readers is included in every new initiative.

Using app analytics, AT learned that the majority of customers who use larger text sizes are using up to 135 per cent of the default, so AT has made changes to text design sizes in response.

## **AT and Women's Refuge**

AT is standing up against domestic violence and has now adopted a tool to help protect its staff and customers. A shield icon now sits on the AT website and means anyone in a domestic violence situation can access resources to help without fear of this appearing in their browser's history. The Shielded Site Project is an initiative by Women's Refuge to make it safer to ask for help. Once clicked, the shield icon launches a resource to help victims of domestic violence. The browser history will simply show that the visitor used the AT site for transport information.

## **Investment Development**

### *Cycling Programme Business Case review*

The triennial review of the Auckland Cycling Programme Business Case (PBC, dated August 2017) has started and is anticipated to be completed October/November 2021. The initial work has focused on engagement with Mana Whenua partners and setting up technical and political reference groups as conduits for key stakeholder input. Along with ensuring the PBC remains up-to-date and relevant, a crucial goal of the review is to provide an effective investment framework focused on raising the efficiency and speed of delivering cycling infrastructure for Auckland.

### *Auckland Housing Programme*

The ATAP process identified support for brownfields development as the highest priority for growth investment. To support the Auckland Housing Programme in brownfield areas AT will need to develop ways of working with Kāinga Ora. The Business Case for this investment is progressing and is investigating the public transport and walking and cycling infrastructure to encourage sustainable transport behaviour, along with intersection upgrades to minimise impact on the operation of the surrounding road network.

## Māori identity and well-being

For AT, this outcome area is focussed on improving the well-being of Māori at all levels across all areas of life.

### Road Safety

In this reporting period, the Māori Road Safety team held the following workshop with 169 participants:

- Three workshops for the Raihana Akonga (Learner Licence)
- Three workshops for the Raihana Whītiki (Restricted Licence)
- Three workshops for the Raihana Tuturu (Full Licence) workshops

The AT Marae Safety Programme is on track.

Project Delivery Plan FY 20/21	Status	Q1	Q2	Q3	Q4
Makaurau Marae carpark	Construction completed				
Te Aroha Pa carpark	The contract for Te Aroha Pa carpark has been awarded. Construction has commenced.				
Motairehe Stage 2 road	The resource consent has been approved by Auckland Council. The contract for construction has been awarded. The construction is due to commence by the end of April 2022.				
Hoani Waititi Mare road detailed design	The detailed design is underway.				

AT contributes to mana whenua engagement through forums for operations and governance matters. Project fora are held across various rohe on a fortnightly basis, focussing primarily on Resource Management matters.

There were four mana whenua hui held in the south, central and north/west regions. There were two alliance hui that the Māori Policy and Engagement team support; the Downtown Project and Tupu Ngātahi (Supporting Growth).

AT engaged with mana whenua on the following projects:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• 2021 Cycling Programme update</li> <li>• AMETI, Eastern Busway EB 1/2/3</li> <li>• Climate Change</li> <li>• Ferry Programme Business Case Introduction</li> </ul> | <ul style="list-style-type: none"> <li>• Future Connect Cycle Strategy</li> <li>• Glen Innes to Tamaki Drive shared path - Te Ara Ki Uta Ki Tai (the path of land and sea)</li> <li>• Howick Village Centre Plan - Concept Design</li> </ul> |
|---|--|

- Inga Road Bridge, Milford
- North western dual path
- Regional Fuel Tax (RFT), RLTP
- Section 2: St Johns to Ōrākei basin
- Section 4: Ōrākei Rail Station to Tamaki Drive
- Southwest Gateway Programme Early Deliverables update: Māngere Cycling Improvements – project update
- Southwest Gateway Programme Early Deliverables update: Puhinui Interchange Cultural Design – Artists update
- Southwest Gateway Programme update: Airport to Botany and 20Connect – Project update
- Speed Management (Tranche 02)- Rural Marae Package
- Victoria Street Cycleway project
- Walking Programme Business Case
- West Auckland Bridge Maintenance Consent

### **Te reo Māori across the transport network**

Te reo Māori is being progressively implemented across the public transport network and on signage relating to infrastructure projects. Bilingual signage for the Downtown Ferry terminal is confirmed and currently being installed. The recordings for bilingual announcements for the Downtown Ferry terminal are currently underway. Bilingual signage has been confirmed for Puhinui Station. The project to complete approximately 6,000 bilingual announcements across the regional bus network has begun (Citylink, Innerlink, Outerlink and the Tamaki Link have already been completed). AT has provided te reo Māori translation support for City Rail Link (CRL) signage

Internally, the final Ngā Kete Kīwai Māori learning and development workshops were held in March 2021.

- Te Tiriti o Waitangi ki Tāmaki Makaurau - The Treaty of Waitangi in Auckland
- Tuia ka mana Māori - Māori Responsiveness
- Hononga ā-tinana ā-wairua - Māori Engagement
- Te Reo Māori & Tikanga - The Māori Language and Customs

Recommendation 52 from the independent review of Council Controlled Organisations (CCOs) “job descriptions refer to the need to contribute to Māori outcomes” has been completed.

AT appointed two Māori graduates for the 2021 Ngā Kaihoe Graduate Programme and supported a Māori intern from December through to February 2021.

## Homes and places

*For AT, this outcome is focussed on improving accessibility to homes and inclusive public places.*

### Community improvement projects

Construction has started on minor improvement projects across the Auckland region, including new signals at the intersection of Wellesley Street and Sale Street, a new roundabout in New Windsor at the intersection of Methuen Road and Bollard Avenue and raised zebra crossings on Vine Street in Mangere East and Kolmar Road in Papatoetoe.

The upgrade of the Coronation Road and Archers Road intersection in Glenfield will be completed with the construction of the roundabout over the April school holidays. The new layout has been trialled with a temporary roundabout allowing drivers to get use to the changes before the permanent roundabout is installed. In addition, raised speed tables have been installed to reduce speed as part of the safe systems approach to address crashes resulting from a failure to stop at the intersection.

### Parking improvement projects

Location	Status
Takapuna Residential Parking Zone	The Devonport-Takapuna Local Board have approved the proposal and AT Media team is currently preparing a media release.
Vincent Street	'No Stopping Off Roadway' signs were installed 8 April 2021, to prevent vehicles from driving on the footpath and parking on the grass berm.
CBD Paid Parking (at all times)	Parking occupancy is being surveyed as part of a review into pricing and length of time for paid parking.
New Lynn Town Centre	Time restrictions are proposed in five streets (P60 and P120 respectively). The Whau Local Board met on 31 March and four streets will proceed. Implementation is targeted at June 2021.
Eden Terrace Paid Parking	Consultation has closed and a report is being drafted with implementation targeted at June 2021.
Papakura Town Centre P90 restriction	Consultation is scheduled to close on 3 May 2021.
Matiatia Carpark, Waiheke	The project to convert spaces, add cameras and amend parking restrictions went live in February 2021.
Double Stack Bike Rack, Aotea Square and Queen Street	Aotea bike rack is being installed mid-April 2021.

## Parking technology improvements

Location	Status
ATPark app integration into License Plate Recognition (LPR) software	With the ATPark app being integrated into the LPR vehicles' software, the LPR vehicles will be able to monitor Paid Parking areas in addition to P120 time restriction in Residential Parking Zones. The benefit will be an increase in compliance over time. On-road testing is currently underway with implementation scheduled from July 2021.
Hand-held Officer Licence Plate Recognition Devices	With the implementation of the handheld LPR software, Parking Officers will be able to register license plate information more efficiently and accurately. Full implementation of LPR software onto the handheld devices is scheduled for end of June 2021.

## Waiheke and Gulf Islands improvement projects

Location	Status
Fencing, Great Barrier Island	To keep wild animals off the runway at the airport, a decision has been made to install a fence around the perimeter of the Claris airfield. Funding has been allocated and works will commence in May 2021.
Pedestrian Crossing, Donald Bruce Road, Waiheke	A new pedestrian crossing near the Te Huruhi Primary School is in the design phase with consultation to follow.

## Growth, Development and Spatial Planning

### *North/West*

Auckland Council recently reconvened the hearing for the Council plan change to rezone Whenuapai's Future Urban areas to a live zoning to enable urban development. The Panel has directed a further adjournment to allow Council to prepare a variation based on a draft timetable which proposed notification of a variation in late May. The Council planner indicated that there was now sufficient information about noise contours associated with the Whenuapai Airbase but that the Council funding for the transport infrastructure required to support the plan change remaining a concern. Once the Council's Long-Term Plan is completed in July, it will be clearer to the Council which parts of the plan change can be supported by appropriate funding and whether any parts should be withdrawn. Auckland Transport provided corporate evidence addressing funding processes, and relevant work done by the Supporting Growth Alliance in the North West Growth Area. Key developers represented at the reconvened hearing did not think that funding concerns warranted any delay in rezoning the land for development but generally accepted a further adjournment to prepare a variation to address the new noise information.

There is a growing understanding of the complex challenges faced for out of sequence development with the misalignment of funding and delivery of strategic transport infrastructure. Developers are identifying, however, that addressing such matters do not align with the timeframes of their development plans. A recent example of note is Future Urban zoned land purchased in Riverhead by a large-scale developer – this will need to go through a plan change process and will require an assessment of the transport system requirements and subsequent investment requirements for the area.

### *South*

Council and AT are continuing to work with the Drury private plan change developers to determine if an infrastructure funding solution can be developed and agreed prior to the hearings. A hearing panel has been appointed and a decision is expected soon to identify the evidence preparation and hearing timeframes.

Auckland Unlimited and the Ministry of Housing and Urban Development has recently presented initial findings on the 'Drury Vision Study', an analysis identifying Drury's future economic and urban development potential. This study is to identify what types of industries and jobs are best suited for Drury, especially looking at its sub-regional context. It considered Drury's future economic opportunities looking out over 30 years and beyond, including trends, drivers and conditions of success. Four potential key moves have been identified – health and wellbeing precinct, circular economy district, food and beverage hub, and advanced industrial park. Auckland Transport representatives attended the workshop held with Central Government agencies, Council, and representatives of the development industry. The final report is being prepared for release and will include an initiatives implementation plan. Council will need to consider how the findings of this study aligns with the Drury-Opaheke Structure Plan (adopted in 2019) that sets out a pattern of land uses and the supporting infrastructure network for the future urban growth of the area.

### *'Better Consents Journey'*

The 'Better, faster, cost effective consenting' project is an Auckland Council led work programme in response to the CCO Review Recommendations for resolving consenting delays across the Council family and to agree clear, measurable performance standards. The project established a Working Group and a Sponsor Group. The Working Group had several workshops throughout late 2020 and early 2021 and the final sponsor group meeting for the first stage was held in March. Nine initiatives have been put forward for further investigation and the first step is to consider the alignment of them with existing work programmes underway across the relevant organisations. The focus of the initiatives is improving the quality of applications, clarifying roles and processes and culture based workstreams around being one Council family team. Some quick-win initiatives have been identified and are underway such as AT having better access to some Auckland Council GIS information and the Council SAP system which will assist in improving information flows.



## Transport and access

For AT, this is a key outcome area and is focussed on providing easy, safe and sustainable transport modes across an integrated network.

### Public Transport

#### Passenger boarding's – March 2021 and 12 months to March 2021

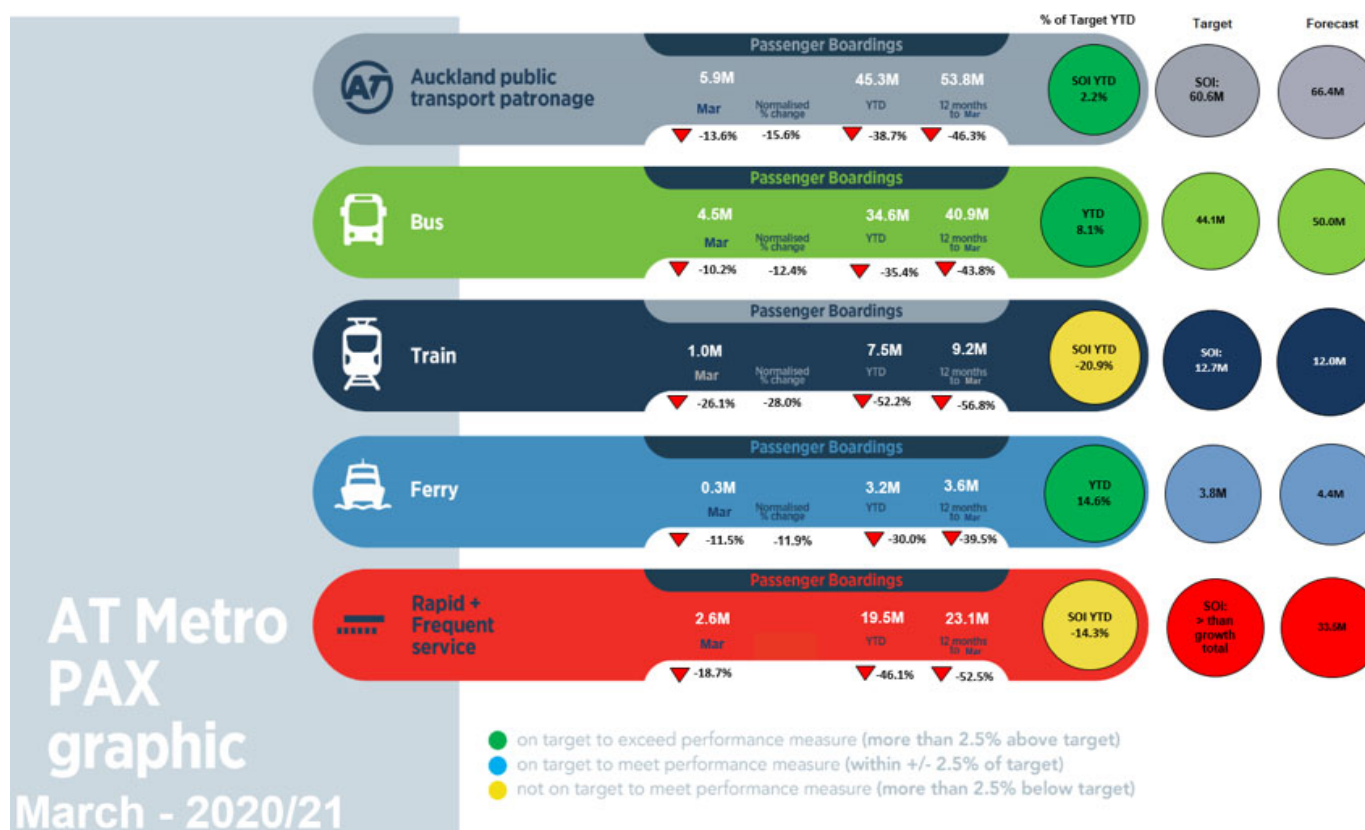
**Overall**, for the 12 months to March 2021 passenger boarding's totalled 53.8 million, -46.3% on the previous year. March 2021 monthly patronage was 5.9 million, -13.6% on March 2020.

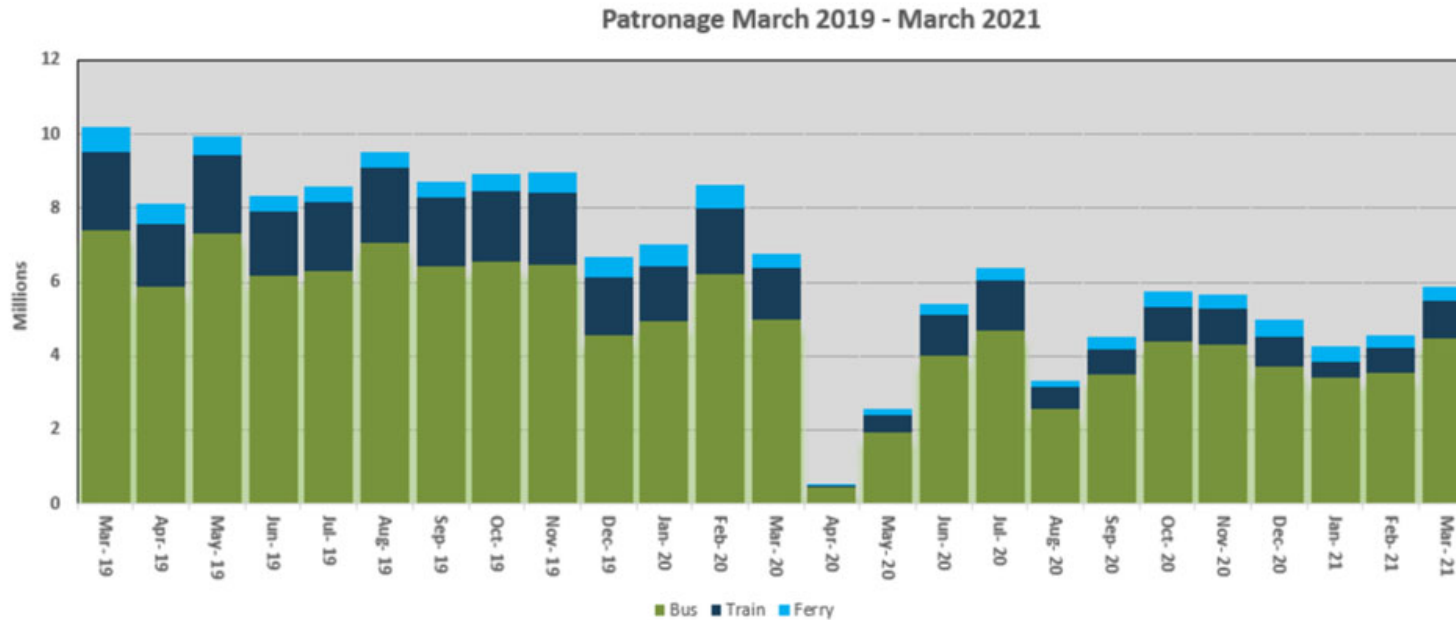
**Bus services** totalled 40.9 million passenger boarding's for the 12-months to March 2021, -43.8% on the previous year. Patronage for March 2021 was 4.5 million, -10.2% on March 2020.

**Train services** totalled 9.2 million passenger boarding's for the 12-months to March 2021, -56.8% on the previous year. Patronage for March 2021 was 1.0 million, -26.1% on March 2020.

**Ferry services** totalled 3.6 million passenger boarding's for the 12-months to March 2021, -39.5% on the previous year. Patronage for March 2021 was 0.3 million, -11.5% on March 2020.

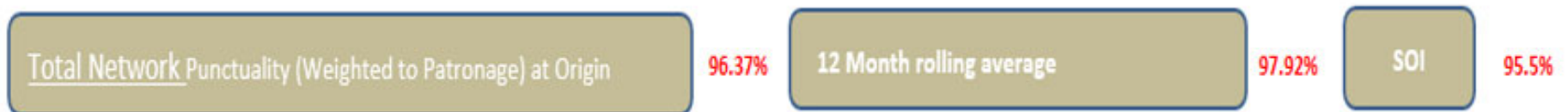
**Rapid and Frequent services** totalled 23.1 million passenger boarding's for the 12-months to March 2021, -52.5% on the previous year. Patronage for March 2021 was 2.6 million, -18.7% on March 2020.





The downturn in passenger boarding’s compared to the previous year is a direct result and consequence of restrictions put in place due to COVID-19 pandemic (COVID-19) Alert Levels resulting in less travel demand, balanced through less capacity due to physical distancing requirements. Passenger boarding’s in March 2021 is 5.9 million compared to 4.6 million in February 2021.

**Service Punctuality and Reliability – March 2021**



The weighted (to patronage), punctuality improved on strong performance on prior month. General traffic following the re-emergence of COVID-19 had some impact on reliability however service delivery improved compared to previous months. The rolling average remains well above the Statement of Intent (SOI) target. Performance by mode at destination is provided below:

	Punctuality at Destination		Reliability at Destination	
	Mar-21	12 Month Average	Mar-21	12 Month Average
<b>Train</b>	73.53%	81.36%	98.12%	97.14%
<b>Bus</b>	97.37%	98.69%	98.46%	99.34%
<b>Ferry</b>	92.28%	94.44%	96.78%	98.13%

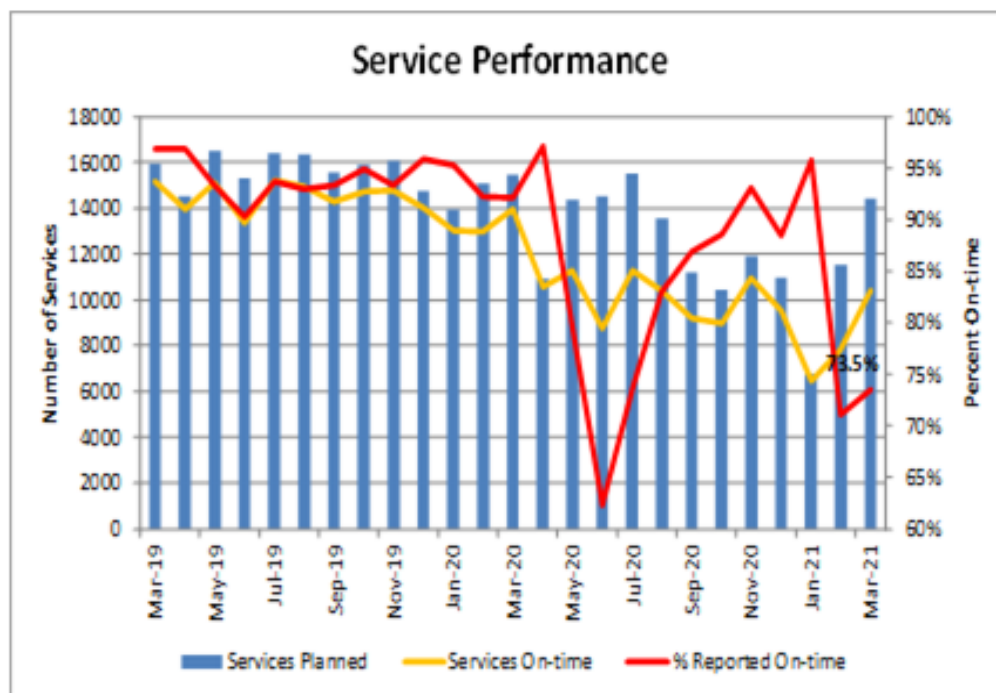


Figure 1 Metro Rail Service Performance

Accelerated rail track infrastructure deterioration was identified on the Auckland rail network by the infrastructure provider KiwiRail, resulting in speed restrictions on the network including a blanket 40kph restriction from early August 2020.

Train lines were blocked for large parts of August 2020 to January 2021. The majority of re-railing, re-sleepering and de-stress work as part of the Auckland Metro Recovery (AMR) programme was completed by the end of March 2021 with Pukekohe to Papakura being the final section of track that was re-railed. The heat speed restrictions will cease to exist from early April 2021 as the colder temperatures do not require these speed restrictions. KiwiRail will catch up on any outstanding de-stress work during April to prevent heat restrictions having an impact next heat season. Legacy Temporary Speed Restrictions (TSRs) and TSRs on turnouts continue to have an impact on punctuality performance with services being delayed and services conflicting coming into key junctions such as Quay Park and Newmarket junctions.

## Key Construction Project Updates

Project Progress	Current Phase	% Phase Completed
Eastern Busway 1 (Panmure to Pakuranga) – The public commitment project end date of October 2021 is unchanged but the team are working through a number of risks which could impact finishing earlier than this. March 2021 has seen the first bridge deck pours take place. Current targeted date for operation of the Busway remains as August 2021.	Construction	87%
Eastern Busway 2/3/4 (Pakuranga to Botany) – In March 2021 an Independent Challenge Team conducted a review of the Alliance methodology and readiness to consult. In April 2021 the Eastern Busway Alliance will be seeking approval to consultant on the preferred option.	Investigation/ Design	35%
Puhinui Interchange - Easter rail Block of Line was successfully utilised to remove the remaining parts of the original pedestrian bridge that crossed the railway. Construction works are progressing under extended hours of operation to help maintain the programme.	Construction	77%
Downtown Programme; Te Wānanga - Downtown Public Space - The works on site are progressing well. While procurement of key materials for the Kupenga and Balustrade has caused a slight delay the impact is unlikely to be of significance. The formal blessing will be combined with the Quay Street Enhancement project and is currently scheduled to take place on 18 June 2021 with a public event planned for 19 June 2021.	Construction	85%
Downtown Programme; Quay Street Enhancement (inclusive of Quay St Interface, i.e. "Public Realm") - The team are on track to have the paving areas completed as scheduled. Careful stakeholder management is being undertaken to manage public / stakeholder expectations for the works commencing on the Eastern and Western Kiosks.	Construction	90%
Downtown Programme; Ferry Basin Redevelopment - Berths 3 and 4 are now operational through AT Metro for vessel layovers. Construction main works will be completed during April 2021 with all works complete by early June 2021. A formal blessing is scheduled to occur 2 July 2021 with 5 July 2021 targeted for full operational use.	Construction	91%
Wolverton Street Culverts 1 and 2 Replacement - Culvert 1: North-side stream retaining wall is complete and removal of the piling platform in the stream bed is in progress and will be completed by mid-April 2021. Platform for remaining piling is under construction and piling will be started from mid-April 2021. Culvert 2: Southside bridge construction is in progress.	Construction	48%
Northern Busway Extension Stations (Rosedale and Constellation)- Alexandra Underpass replacement construction is complete and now open to the public. Construction works for Constellation Busway Station, SH1 bridge replacement, and Rosedale Busway bridge are progressing well. Rosedale Bus Station design is	Construction	28%

Project Progress	Current Phase	% Phase Completed
complete however a review is being undertaken to investigate potential savings to consequential OPEX. Completion of the detailed design for Rosedale Road four-laning is expected by the end of April 2021.		
K Road Enhancements and Cycleway - Good progress has been made between Pitt Street intersection and Ponsonby Road intersections. Resurfacing is planned to commence from mid April 2021. The mid-block rainbow crossing outside St Kevin's Arcade was officially opened on 26 March 2021. This has been highly appreciated by the Karangahape Business Association and local community. The planned project completion is mid May 2021 and the official opening is planned for 10 June 2021.	Construction	90%
Tamaki Drive Cycle Route (The Strand to Ngapipi) - The construction work is progressing well on the south side of Tamaki Drive between the Port entrance and Point Resolution Bridge. The section of Tamaki Drive between The Strand and Solent Street works has been awarded. The completion date for the corridor is late August 2021.	Construction	96%
New Lynn to Avondale Cycleway - The physical works for Stage 1 (Blockhouse Bay Road to Chalmers Street) is continuing near Avondale Station. The St Jude Bridge is in place and the path leading to Chalmers Street is now complete. Physical works (retaining walls and stormwater drainage) are complete in the Kāinga Ora site. Works on the Rosebank Road/Blockhouse Bay Road intersection are progressing well.	Construction	70%
Matakana Link Road - Earthworks are progressing on programme. Bridge piling work well underway although slightly behind programme due to issues with the piling rig. Stormwater infrastructure and utility services are being installed. The team is working with adjacent developers / on development tie-ins. Discussions are underway regarding future-proofing for the positioning of bus stops that are to be installed by the developers.	Construction	40%
Medallion Drive Extension - The project is progressing well with construction of Lucas Creek bridge complete with the exception of the concrete barriers. The following are now completed on Fairview Avenue; services relocation, twin stormwater box culverts, pavement reconstruction and asphalt sealing and construction of Swedish Tables.	Construction	55%

## Transport Infrastructure Asset Design and Management

Key activities through to the end of March 2021.

- **Design and Standards:** EPA and Resource Consents are continuing to increase. CRL design review requirements and Eastern Busway design and engineering advice during design optioneering is increasing and the team are playing a pivotal role in advising the larger AT projects on design and engineering standards. The Transport Design Manual (TDM) continues to receive planned improvements. The replacement to AT

Code of Practice with the TDM for Council regulatory use has passed AC Regulatory Engineering review with only minor comments, these are being incorporated now. A new design review assurance process including a Design Review Panel has been implemented.

- **Asset Acceptance and Information:** Major projects managed by Waka Kotahi New Zealand Transport Agency (Waka Kotahi), which have an impact on the local roads, are close to the completion stage – Northern Corridor Improvements, Southern Corridor Improvements, Northern Express 2 Puhoi to Warkworth - and the vesting process has been initiated. Migration to AT’s new Enterprise Asset Management System (EAM) tool continues with target migration of all assets by Q3 2021.
- **Asset Management:** Work continues embedding the EAM System for bridges with a second generation of the forward works programme analysis planned to be completed in April 2021. Work continues to amend legacy business processes and embed the supporting elements of asset management into the new system, across bridges, public transport and road networks. The annual review of the maturity of AT’s asset management practices has determined a step improvement (+14) across all asset classes. AT’s asset management is now graded 59 against a target maturity grade of 89 out of 100 on the Asset Management Maturity Index (AMMI).

## Road Maintenance and Renewals

MARCH 2021					
Asset Renewal Activities	March YTD Actual (km)	March YTD Forecast (km)	Full Year Target (km)	Completion v. YTD Target (%)	Completion v. Full Year Target (%)
Pavement Rehabilitation	3.9	7.5	7.5	52%	52%
Resurfacing	295.9	297.5	305.0	99%	97%
Footpath Renewals	53.7	47.0	60.0	114%	90%
Kerb and Channel replacement	31.5	28.5	35.0	111%	90%
<b>TOTAL</b>	<b>385.0</b>	<b>380.5</b>	<b>407.5</b>	<b>101%</b>	<b>94%</b>

Achievement against forecast is 101% of the YTD target with 94% completion to date against the full year targets.

As of March 2021, 3.9km of road rehabilitation work was completed. Last month pavement rehabilitation work was completed on Parkhurst Road, with work continuing on Brookby Road.

To date there has been 295.9 km of resurfacing completed (58.4 km of asphalt and 237.5 km of chip sealing) which is 97% of the resurfacing programme. The SOI target for the 2020/21 year is that we will resurface/rehabilitate 4.6% of the sealed road network (6,774 km as at 30 June 2020) which is a combined length of 312 km. At the end of March we had resurfaced/rehabilitated 4.4% or 299.8 km of sealed road.

In March 2021, 97% of customer requests for service were responded to within the specified response times. There were 2,592 requests for service received in March 2021. 31.5km of kerb and channel replacement, together with 53.7km of footpath renewals work was completed as of March 2021.

Due to budgetary constraints, funding provided for Seal Extension works in 2020/21 was to meet remaining contract commitments from the 2019/20 year for physical works on Ahuroa Road Stage 1, which has now been completed.

### **Property Acquisition and Consents**

There were two acquisitions completed in March 2021: An easement at 3/22 Church Crescent, this was the last of the EB1 acquisitions and 8 Township Road, a car park purchased at Waitakere Train Station from the Crown.

The resource consent application for the St Heliers Town Centre Safety Improvements Project was lodged with Auckland Council. There was widespread community opposition to the original scheme but following consultation, AT withdrew the proposal and formed a working group consisting of the St Heliers/Glendowie Residents Association, St Helier's Business Association, Ōrākei Local Board and local Councillors. The lodged application is the result of this collaboration.

A large tranche of slip remediation works on Great Barrier Island has been approved which allow works to be completed in the next summer season.

The Council hearing for Crown Infrastructure Partners Highgate Bridge closed on 3 March 2021 and the application was approved by Independent Commissioners on 1 April 2021. The Council hearing for the Crown Infrastructure Partners Argent Lane Notice of Requirement will be held on 19 April 2021.

### **Property Optimisation**

In Britomart Station, Starbucks opened on 6 April 2021 and catered the VIP event and blessing of the newly restored and opened station entrance. All other tenants are due to open their tenancies by 20 April 2021. These openings were delayed due to COVID-19 Alert Level 3, base build defects and the handover of the building to AT only occurring on 8 March 2021.

March 2021 saw the opening of Cosy Markets outside of the Victoria Street Carpark. This has been a great success and is good use of the vacant space whilst AT complete seismic assessments and determines the future of the vacant tenancies and building.

Expression of Interests (EOIs) were released for tenants at Manukau Bus Station units 1 and 2 and Devonport Wharf units 5 and 7. An EOI has been released to market for Agents to be appointed to procure tenants for the upper levels of the Britomart Station Building once City Rail Link Ltd (CRL) departs in October 2021.

AT has resolved a dispute with Auckland Council and recovered \$130k worth of outstanding rent for a carpark at 4-10 Mayoral Drive.

### **Data Science: Bus Red Light Running solution**

Buses running through red lights are a serious health and safety issue on the transport network, however monitoring and identifying individual busses and their drivers in the past has been challenging. AT has specialised Closed Circuit Television cameras for red light running bus analytics,

but these cameras are not available at all intersections and traffic lights. AT staff are sent out to some intersections to monitor driver behaviour, however this is resource intensive.

The Bus Red Light Running report has been developed to enable the Metro Service Performance team to see clear and actionable Customer Relationship Management (CRM) insights around busses running red-light lights. The report quantifies how many red-light running bus incidents have been reported in CRM over time, measuring the frequency and trend.

“Text mining” has also been used on the CRM cases to automatically extract route numbers, bus registration numbers, and bus vehicle numbers. With this information, the Metro team can identify which bus operators they can raise identified issues with. The other details extracted provide enough information to pinpoint which bus driver schedules have the highest red light running record. This information has allowed the AT Metro Operations team to engage with bus operators to target behaviour change and improvement with these drivers.

This solution is now fully automated and productionised for the Metro team to use as part of their daily reporting and monitoring processes.

### **Data Science: Failed Journey Transfer Hotspots**

Missing a transfer between services during a public transport journey can be a very annoying experience for customers. To reduce failed transfers, the ‘Things That Move’ project was implemented for ferry-to-bus transfers in Half Moon Bay. The Metro Service Optimisation team are now looking to roll this system out to other journey transfers but want to prioritise the most problematic spots.

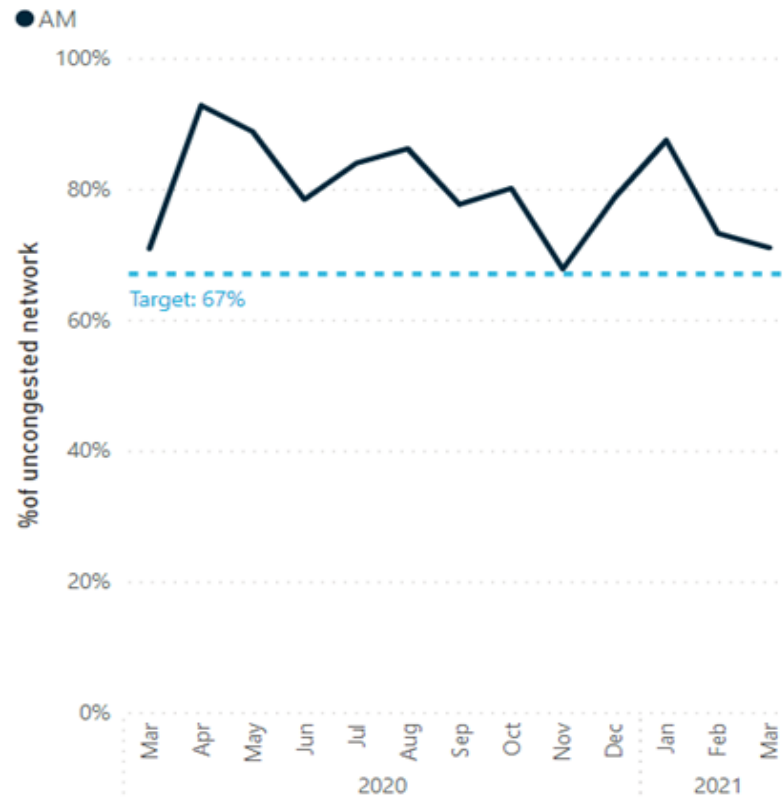
Part of this prioritisation uses timetable information, AT HOP data, and vehicle location data, however they wanted to include an element of customer feedback. The Data Science team has collaborated with the Metro Service Optimisation team to apply text mining to CRM cases to extract desired customer transfer insights. This proof of concept supports the team to consider customer feedback as they strategically identify the next roll out spots for ‘Things That Move’.

### **Stationary Vehicles on Railway Crossings**

Computer vision builds for stationary vehicle detection at the Metcalfe Road railway level crossing has been completed. There have been many complaints of vehicles stopped in the yellow hatching area. The data captured will quantify the scale of the issue. Categorisation of the stationary vehicles depending on the length of their stay has also been built. The data is to be visualised and presented in PowerBI format.



### Arterial congestion



### Arterial Network Congestion

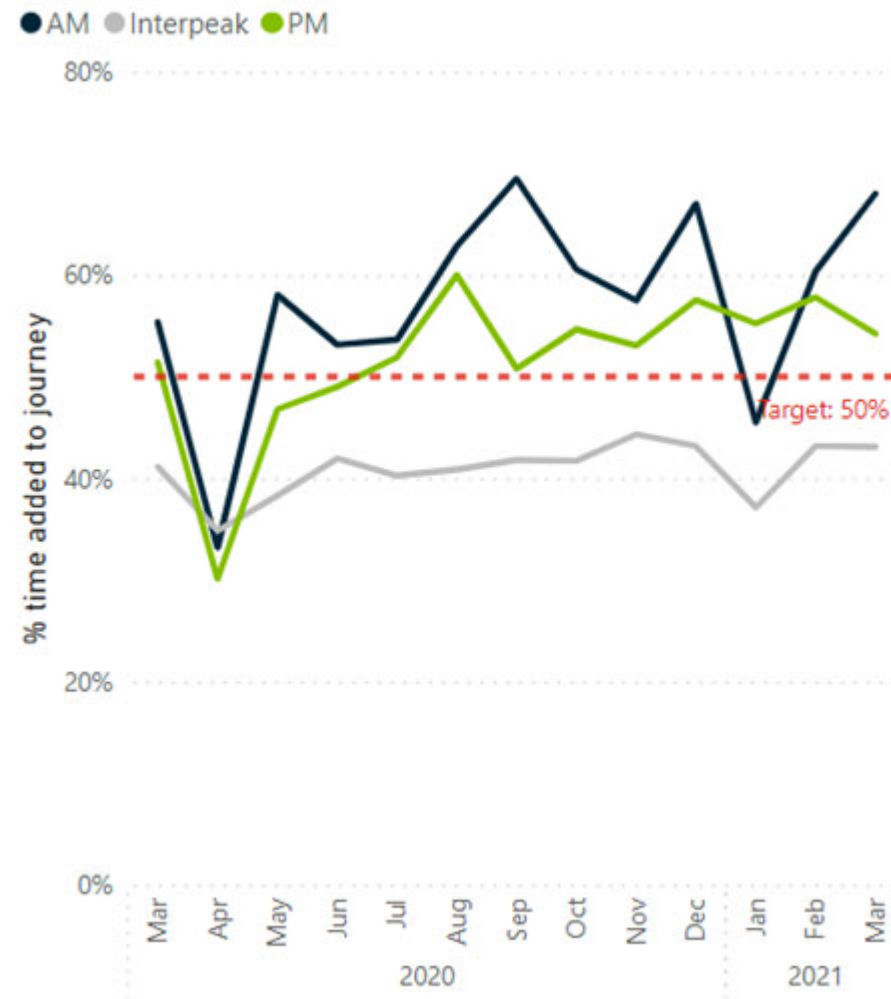
In February 2021, 72% of the arterial network operated at good levels of service, 15% lower than January. This was attributable to higher demand levels during the month.

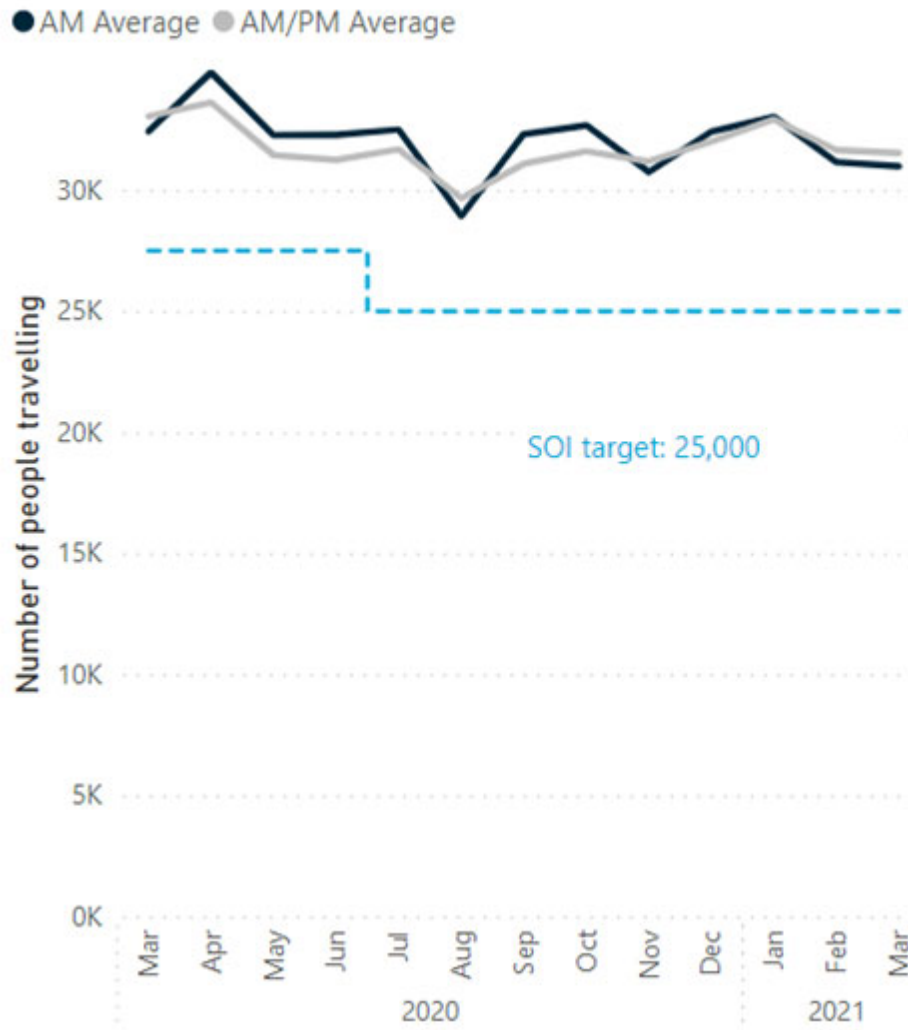
COVID-19 related travel restrictions were in place for both March 2020 and March 2021, with six days of Alert Level 4 lockdown in March 2020 and seven days of Alert Level 3 lockdown in March 2021. In March 2021, 71% of the arterial network operated at good levels of service, similar to March 2020 and above the 67% threshold. In March 2021, the average AM peak vehicular travel speed on Auckland arterial network was 34 km/h, similar to February 2021 and 1 km/h higher than March 2020.

### Arterial Network Reliability

In February, AM peak travel time reliability increased to 60%.. This is mainly due to the higher congestion levels in the month.

In March, AM peak travel time reliability measure (the percentage of time to be added to the normal trip) was 68% which is higher than the 50% maximum threshold. This is mainly due to different alert level situations during the month which resulted in more diverse travel times over the period.





### Arterial Road: Productivity

In February 2021, the average road productivity measure was 31,647 people travelling, exceeding the target of 25,000. This indicates that the network operated relatively efficiently in terms of people movement.

In March 2021, the average arterial road productivity was 31,530 which exceeds the target of 25,000 and indicates that the network continued to operate relatively efficiently in terms of people movement. This was similar to February 2021 and 5% lower than March 2020 mainly due to lower travel demand and public transport share.

## People movement into city centre

In February 2021, 49,277 people per day travelled into the city centre, 4% lower than January and 35% lower than the same time last year. This decrease is related to increased working from home practices and COVID-19 impacts. The vehicle volume into the city centre during the AM peak period was 3000 vehicles less than February 2020. The percentage of those travelling by car increased by 12% compared to last year, while those travelling by public transport decreased by 14%.

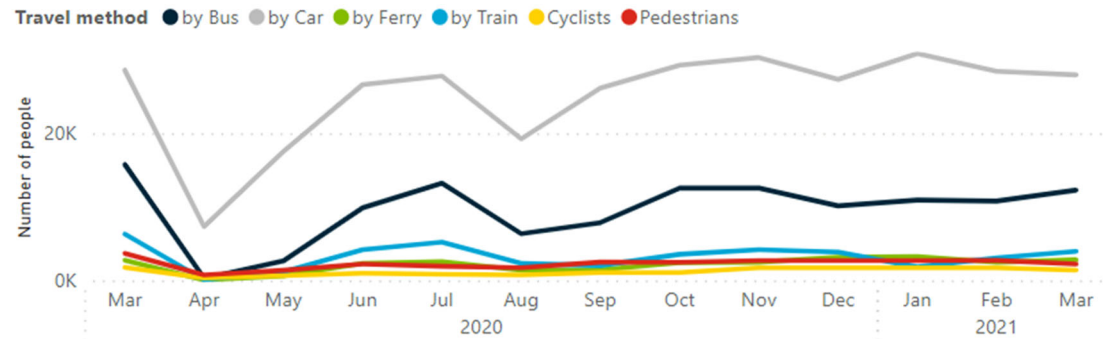
In March 2021, the vehicle volume into the city centre during the AM peak period was 8,000 less than March 2020. The total number of people entering the city centre by all modes was 50,680 per day, 14% lower than March 2020. The reduced number of people travelling into the city centre is mainly related to increased working from home since the Alert Level 4 lockdown in March 2020. There was however, a 4% increase in total number of people into the city centre compared to February 2021.

The percentage by car increased by 7% while that by PT decreased by 5% compared to March 2020 highlighting the effects of COVID-19 on travel by public transport.

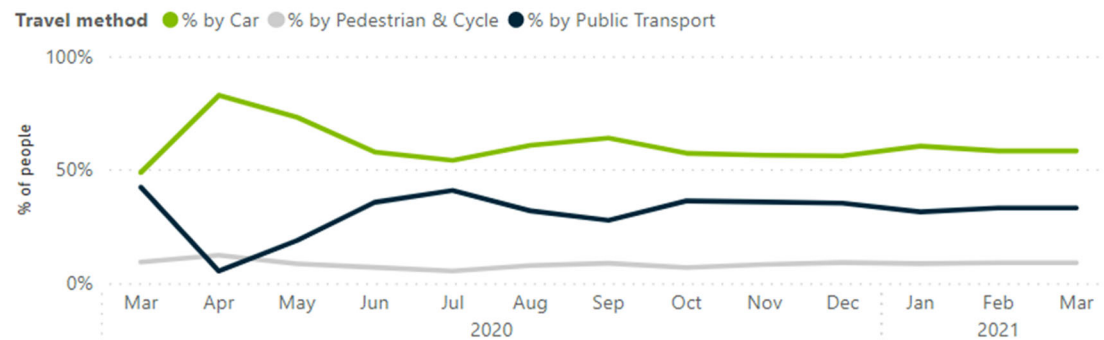
## Network optimisation: Mount Wellington Highway

This project has moved into construction phase and is expected to be completed in July 2021. The project aims at improving the key freight route by providing an additional right turn for trucks to get onto the southbound onramp on State Highway 1. Pedestrian access and safety is also being improved with a new signalised pedestrian crossing.

People by mode into city centre

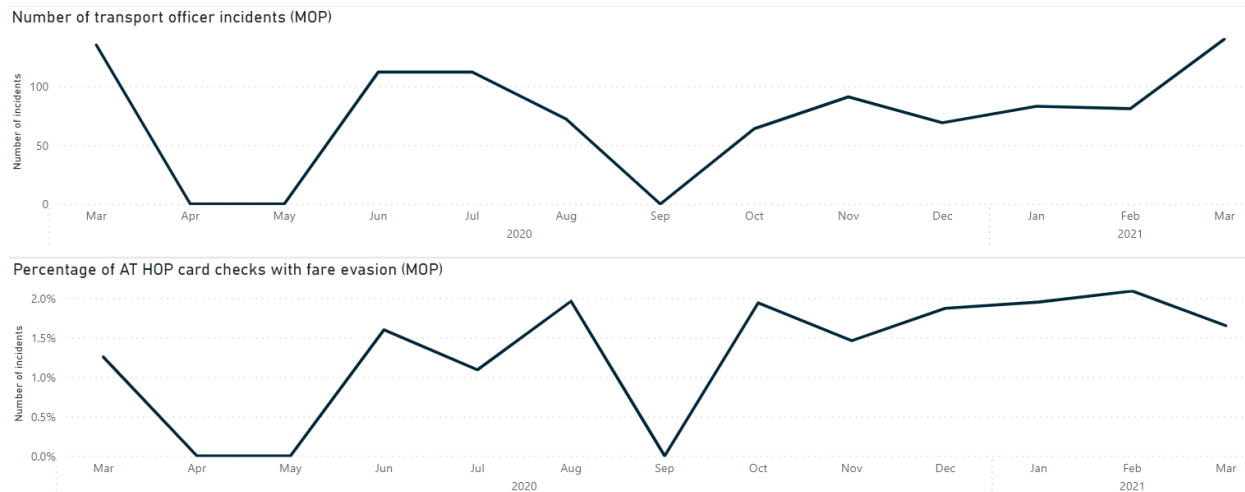
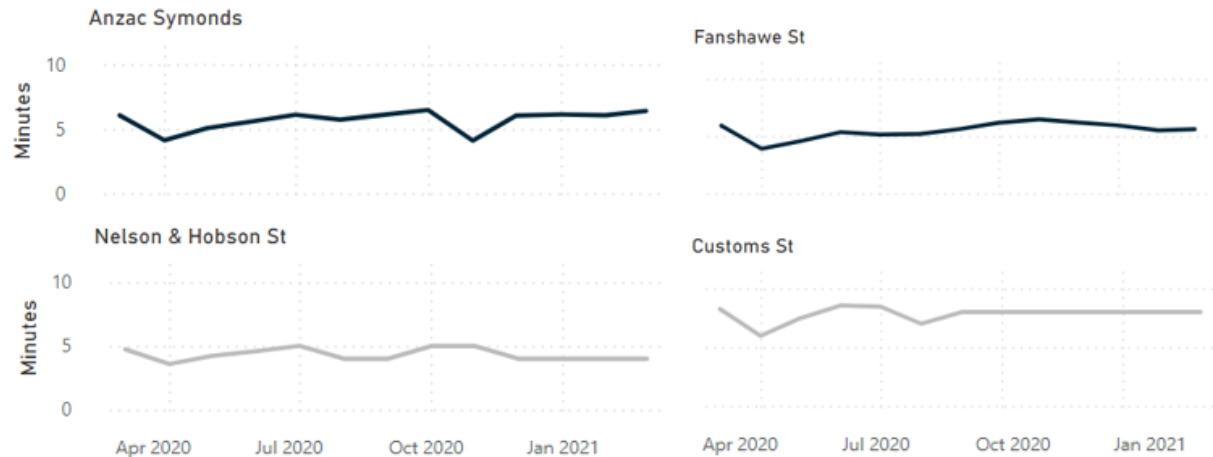


Mode share into city centre



### Travel times into city centre

In February and March 2021 general traffic and public transport continued to operate within acceptable thresholds. Most key routes experienced minor delays during peak periods. General vehicle travel times remained similar to the same time last year.



### Transport Officer (TO) Update

In February 2021, AT- HOP card checks were down compared to the previous year due to continuing Kiwi Rail maintenance. Additionally, changes in COVID-19 Alert Levels impacted ticket checks which ceased for 11 days. Fare evasion remained low at 2.09%. There were 81 reported incidents (mask-wearing compliance is included as a confrontational outcome). TOs are now deployed to limited bus routes where anti-social behaviour has been an issue. Routes such as City Link and Northern Express require continued deployment to mitigate against fare evasion and anti-social behaviour.

In March 2021, with the move back to COVID-19 Alert Level 1, HOP card checks and the issuance of infringement notices for those found travelling without a valid ticket resumed. Fare evasion continued to remain low at 1.65%. TOs continued to be deployed to bus and ferry on selected routes. Issues in Browns Bay have decreased with the deployment of TOs which has been met with positive feedback. The core group of offenders were identified as high school students; AT will be engaging with the local school to inform them of the findings. Reported incidents increased in March 2021 to 140 which is consistent with March 2020, attributed to increased patronage and 'March Madness'.

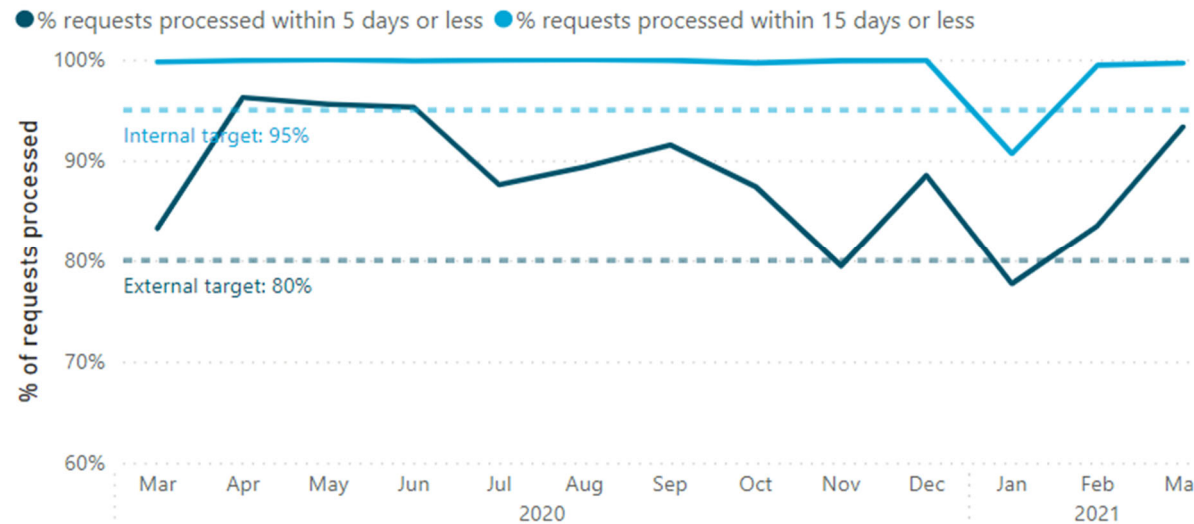
## Road Corridor Access Requests

Number of CARs received



In March 2021, Corridor Access Requests (CARs) were processed in excess of expectations and targets again with nearly 95% of all CARs being approved within five working days and 100% within the 15 working days' time frame. Overall CAR application numbers have shown an upturn since February and processing times have also rebounded.

CAR process times



## Special events

Auckland Transport Operation Centre (ATOC) processed 109 activations in February and 182 in March 2021. The Planned Events team were activated for the following operations:

- 36<sup>th</sup> America's Cup (AC36) including Prada Cup semi-finals and finals in January/February and Match Race in March.
- Round the Bays, 28 February (cancelled due to COVID-19 Alert Level change).
- Blues v Highlanders (Eden Park).
- Blues v Crusaders (Eden Park).
- L.A.B (Mount Smart Stadium).

COVID-19 impacts resulted in 35 events being postponed from February. The team worked with event organisers to support rescheduling of events outside of approval timeframes to enable the activities to take place. The below table indicates which events took place in March and which were postponed due to the impact of COVID-19.

March Events		
March Dates	Event	Venue
6-15	Seven America's Cup Regattas	Regional
13	Ponsonby Street Festival	Ponsonby
14 & 21	Super Rugby - Blues vs Highlanders	Eden Park
20	St Patricks Day Parade	City Centre
27	L.A.B	Mt Smart Stadium

Postponed Events		
March Dates	Event	Venue
4 - 7	Auckland Lantern Festival	Captain Cook & Marsden Wharves
5	T20: Blackcaps vs Australia	Eden Park
6	Outerfields	Western Springs Reserve
13 - 14	Pasifika Festival 2021	Western Springs Reserve and Stadium (Rescheduled 10-11 April, Mt Smart Stadium)

Operational plans to support real-time monitoring and response to impacts on customer journeys were developed for the following key activities during February and March:

- Waitangi Weekend
- Hells Angels Nomads Dice Run
- Ormiston Town Centre Opening
- Stop Asian Hate Protest/Support March
- Easter Holiday Plan
- North Island Invades Auckland Drag Train
- COVID-19 Resurgence Recovery Plan (ATOC Incident Management Team)
- COVID-19 Response Plan (ATOC Incident Management Team)
- COVID-19 Vaccine Delivery Operations Plan

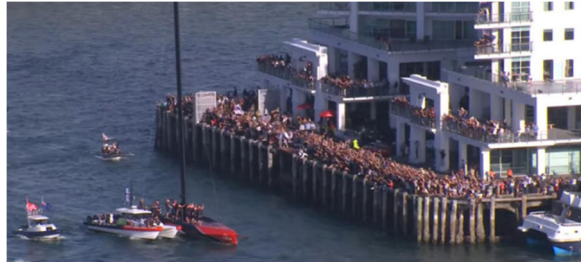


Figure 2 Emirates Team New Zealand return to base (post last race)

## AC36

AC36 concluded in March 2021. AC36 involved three distinct regattas: the Christmas Cup/America's Cup World Series in December 2020; the Prada Cup Challenger Series in January and February 2021 and the AC36 Match Race in March 2021.

Even with a high degree of uncertainty due to the impacts of COVID-19, planning continued in close-consultation with Auckland Council, other CCOs, and key stakeholders. An AT Incident Management Team (IMT) was set up and co-ordinated by ATOC which included representatives from AT, Waka Kotahi, Auckland System Management, New Zealand Police and various service providers. The IMT was responsible for the real time operation of the transport network during AC36.

The IMT operated under the Co-ordinated Incident Management System (CIMS) which is a structure used throughout New Zealand to respond to planned and unplanned events and can involve multiple agencies. The IMT were activated for all race days however a smaller IMT was used for Prada Cup due to the reduced spectator numbers expected. A full IMT was used for the World Series in December 2020 and the America's Cup Match Race in March 2021.

During the four-month event, the team delivered transport operations which focused on:

- Network integrity (maintaining network performance and customer journey reliability);
- Safety of customers and workers on the transport network;
- Fast escalation and deployment of on-ground resources in response to issues; and
- Intelligence gathering to support good decision-making.



Figure 4 AC36 Village

COVID-19 impacted attendance in terms of significantly reduced international visitors to New Zealand as well as two lockdowns during the race which postponed four race days. Racing itself was impacted by boat issues and the loss of one team during the Prada Cup regatta. This further reduced the number of race days. Despite COVID-19 lockdowns, only two of the 17 reserve racing days had to be activated.

Overall, the transport plans developed to support AC36 were not required to be fully deployed due to reduced crowd numbers and race days. Transport support for AC36 was largely able to be accommodated within existing business as usual services. A full debrief and lessons learned process is currently underway to identify opportunities to enhance transport planning and delivery for future events of this scale and nature.

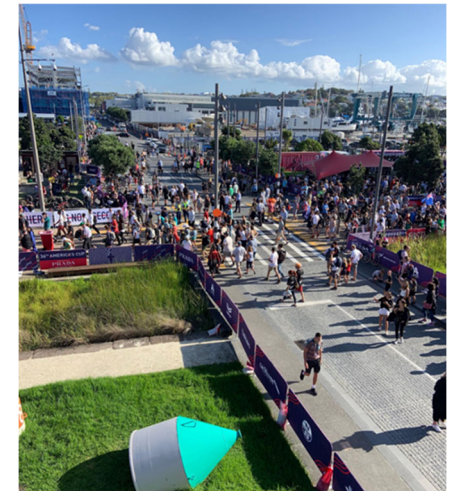


Figure 3 America's Cup Village Entry (north)

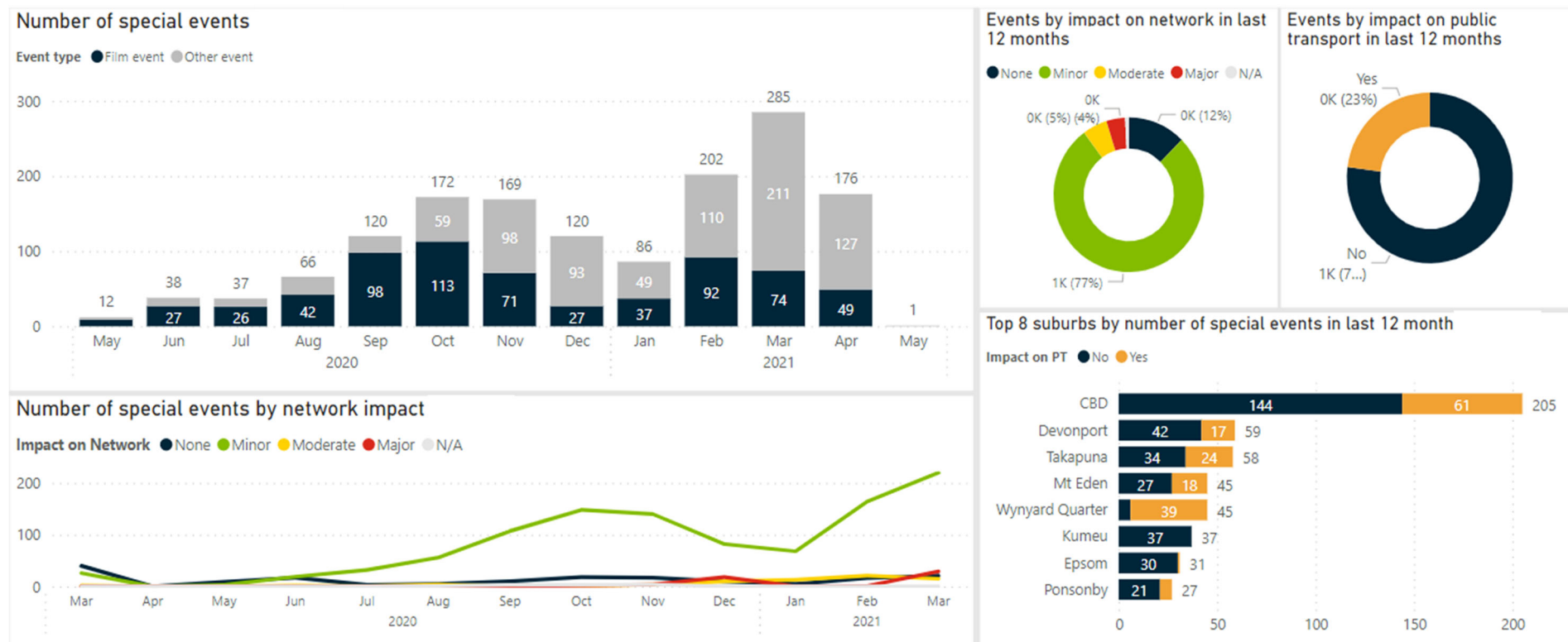


## Filming activities

There were 91 filming activities processed in February and 108 in March 2021.

## Planned Events

Despite small periods of interruption special events and filming numbers have been up significantly over the end of what is traditionally considered peak season. March in particular has been our busiest season on record, partly due to AC36 and the programme of support events delivered across the Auckland region. Filming continues to grow with increasing international interest due to the lack of restrictions required and also continues to increase in frequency.



## Eden Park

Eden Park has secured consent to host the first of six approved concerts with ‘SIX60’ on 24 April 2021. Special Events are currently planning for the delivery of integrated ticketing for the expected 50,000 attendees. This is slightly bigger than a previous sell out fixtures at the venue. There will be a rail block of line in place on the southern line. While this will not affect venue operations, it will impact customer journeys for those travelling from the south. Use of rail-replacement buses could create a risk for service providers given the demand for bus drivers to support early morning ANZAC Day celebrations the following morning.

## Financial Reporting

Audit NZ completed interim audit work with a two week review completed in April. Work is underway preparing for the financial year end and Annual Report with Audit NZ’s next visit from the start of June to conduct the final audit.

Work is in progress with Auckland Council (AC) and Aon (AC group insurance brokers) reviewing insurance policies and coverage in place to support 30 June 2021 insurance renewals. Work is progressing with AC to support and finalise the 2021/22-2031/32 Long Term Plan in line with programme timetables.

## National Land Transport Programme (NLTP)

The Funding Team has been working on submissions for the NLTP. The draft bid for Improvement Activities and an updated list of Low Cost/Low Risk bid were submitted to Waka Kotahi in late January 2021, with the final submission to the NLTP for these activities due in May 2021. The Funding Team have been in discussions with Waka Kotahi on the Continuous Programmes (for Road Safety Promotion, Local Road Maintenance and Renewals and the Public Transport Programme) which were submitted in December 2020. These are now being advanced to Waka Kotahi’s Board for consideration, however in discussions Waka Kotahi have noted that there are NLTP constraints and so they are looking at scenarios for funding, including right sized or constrained.

## RLTP Funding

The following activities were approved by Waka Kotahi between 10 February and 08 April 2021:

Activity	Approved Costs (\$M)
Brownfields Growth – Indicative Business Case	\$0.41
Transitional Rail – Additional Power Feed Single Stage Business Case (this is funded at 100% FAR through Transitional Rail)	\$1.50
Auckland Rail – Fourth Main (Regional Rail) (this is funded at 100% Funding Allocation Rate through Transitional Rail) <i>Note: this is for supplementary information to support the Rail Detailed Business Case being developed through Supporting Growth</i>	\$1.97
Supporting Growth – South – Drury Local (Post Notice of Requirement Lodgement Costs)	\$2.75

## Procurement

There were ten tenders published in the current reporting period (08 February 2021 to 04 April 2021) with an estimated value of \$18.2 million. Three tenders had an estimated value of over \$2 million.

Tender	Type
Towing Recovery and Storage Services – Seeking a partner(s) to implement an operating and commercial model for the towing, recovery and storage of vehicles to ensure effective operation of the roading and public transport network.	Request For Proposal (RFP)
Safety Portfolio Construction Projects – Proposal to shortlist up to six contractors from AT’s existing Physical Works Supplier Panel (PWSP); once selected contracts will be put in place with the successful contractors for delivery of the safety portfolio.	RFP
Taniwha Street Cycleway Link Construction (Package 1) – Link to Glen Innes Cycleway project is to complete a missing link in Auckland’s Cycle Network; providing safer, more coherent and attractive routes for new and existing cyclists, including commuters, school children and those making everyday trips forming part of the Urban Cycleway Programme (UCP).	Request For Quotation

There were 346 contracts created in the current reporting period with a total award value of \$34.1 million. Two contracts had a value of over \$2 million.

Contract	Supplier
Electricity Supply (Streetlight Load) – Short-term contract for the supply of energy to AT’s streetlight network (1 January 2021 to 30 June 2021) to better align the Energy contract with the Retrofit Programme.	Contact Energy Ltd
Innovating Streets for People Funded Pilot Projects – AT jointly with Panuku submitted applications to Waka Kotahi to secure funding for support of pilot projects, which meet the objectives of the consolidated Streets for People Fund	Panuku Development

## Environment and cultural heritage

*For AT, this outcome area is focussed on protection of the natural environment and Auckland's cultural heritage.*

### Street Lighting

AT has a target to replace a further 25,000 streetlights with Light Emitting Diode (LED) luminaires in 2020/21 and enable us to take advantage of the 85% subsidy available up to 30 June 2021. If the 25,000 luminaires are installed evenly over the financial year then we will achieve energy and maintenance cost savings of approximately \$1.8M in the 2020/21 year and \$3.6M for the following years.

In March 2021 we replaced a further 3,013 lights with LED luminaires which brings the year to date total to 20,183. We are on track to install in excess of 25,000 LED luminaires in 2020/21. There are currently 122,330 streetlights on the network of which 86,227 (70%) have LED luminaires connected to the Central Management System (CMS).

### Data Portal and Infrastructure Sustainability

AT recently met with AC and Watercare to discuss the reporting of carbon emissions associated with construction and maintenance works. To date AT has focussed carbon emission work on operational emissions associated with buses, trains and ferries, but is aware that construction and maintenance emissions will be the next focus. To start infrastructure sustainability work, a database to record and calculate the carbon emissions associated with AT's new road construction and maintenance contracts, tailored to New Zealand design standards has been developed. The data to be collected includes waste volumes, water consumption as well as fuel, mileage, vehicles and materials consumed on site. This data will establish the base line for calculating improvements in AT infrastructure emissions and track the use of water and waste materials for environmental reporting.

### Summary of the Stormwater Treatment Devices Proposed

During March 2021 the environment team reviewed 124 projects from both AT and development planners (third party projects) that proposed stormwater treatment devices to be constructed within the road corridor. The data show approximately 49 rain gardens are proposed, 445m of swales and 1 proprietary device.



### Central Post Office (CPO) Opening

AT joined CRL and Council on 6 April 2021 to celebrate the reopening of the CPO as the main entrance to Britomart Station. This follows four years of closure while underground rail tunnels were built below and the building restored. The facility includes new customer service centres and retail units.

Figure 5 Mayor Goff cutting the ribbon to officially reopen Britomart CPO

### Launch of New Zealand's first Hydrogen Bus

Through the development of the Low Emission Bus Roadmap, we identified hydrogen as a potential fuel for Auckland's future low emission public

transport fleet. On 30 March 2021 we achieved a significant milestone in our journey to decarbonise Auckland's bus fleet when we launched New Zealand's very first hydrogen fuel cell bus. AT's involvement in purchasing this bus was to prove to the market that hydrogen buses can be developed to meet New Zealand's unique operational and design requirements, and to help in the development of hydrogen as a fuel. Our hydrogen bus's journey began in December 2018 when AT joined Ports of Auckland in the Hydrogen Demonstration Project - alongside Auckland Council and KiwiRail - under the Memorandum of Understanding.



In response to Ports of Auckland's invitation to participate in the Demonstration Project, and with the funding from Auckland Council and funding contribution from the Energy Efficiency and Conservation Authority (EECA), Metro Services commissioned the production of this first hydrogen fuel cell bus and it was built by Global Bus Ventures in Christchurch. Despite the challenges of COVID-19 and disruptions to their supply chain, they have delivered this bus enabling AT to test it on our bus network and demonstrate its capabilities. In collaboration with our operating partner Howick and Eastern Buses by Transdev the bus will be trialed on route 70 between Botany to Britomart via Panmure alongside our very first 3-axle electric bus we introduced on the same route in November 2020.

### Sustainability

#### Climate Change Mitigation

In March, AT – through the Council's submission - provided feedback on the Climate Change Commission's draft feedback. AT provided feedback primarily on the transportation policy advice and provided input into feedback on sections related to equity and the local government's role. AT's

feedback was combined with that of Council staff, Local Boards, mana whenua, and Councillors. The submission supported some of the actions but recommended stronger interventions to deliver the pace and scale of change required in Auckland to reduce transport emissions significantly. A small number of actions were not supported because of insufficient information on their impact on emissions or equity; the submission requested further analysis.

The Commission now considers all feedback in its final advice to the government, due at the end of May 2021. The government must respond to the final advice by December 2021.

The RLTP has reinforced the challenge of significantly reducing emissions from the road transport system, with a potential reduction of 12% (2016 to 2031) after accounting for population growth, RLTP spending, the Clean Car Standard (government fuel efficiency standard), proposed biofuel requirements, and potential electric vehicle incentives. The Auckland Climate Plan has a target of a 50% reduction by 2030 (on 2016 emissions) for all of Auckland, with an expectation of a 64% reduction from transport (this over-contribution reflects that emissions reductions will be more difficult in other sectors). Over the coming months, AT will model a range of scenarios to demonstrate what actions are needed to achieve the target reduction; this scenario modelling will include a wide range of actions across AT, Council, Government, and Aucklanders. The intent is for these scenarios to show the level of investment, policy change and behaviour change needed, enabling discussions with Councillors on which scenario to adopt.

#### *Climate Change Adaption*

Work is continuing on identifying, assessing, and prioritising climate change risks to AT's customers, staff, services, and assets. This work has involved input from AT and Council-family staff, Local Boards, Waka Kotahi, Kiwirail, and mana whenua. This work, which is seen as one of the most comprehensive in New Zealand, has highlighted the necessity of greater co-ordination across the Council family on climate change risks. The Council Sustainability Office has begun co-ordination.

In May, a project update will go to the Finance and Assurance Committee, with the completed work taken to the Committee in July for endorsement before going to the board. Internal discussions have begun on how to prepare AT for climate change adaption.

## Opportunity and prosperity

*For AT, this outcome area is focussed on collaborative technological development enabling resilience and adaptability.*

### Smart City Asia Pacific Awards 2021

Three AT projects have been selected as finalists in this year's Smart City Asia Pacific Awards 2021. This is a fantastic recognition for AT and our people to be finalists, and to be recognised for our accomplishments in a remarkably challenging year.

AT projects are in the same categories as smart city projects from cities in South Korea, Taiwan, and Singapore. The three internationally recognised projects are: Automated Transit Lane Enforcement, Rapid Digital Response to the Lockdown's Transport Challenges, Smart Street Pilot (in conjunction with Spark). All winners will be decided based on IDC analysts' benchmarking assessment, public / citizen votes, and rating from the IDC International Advisory Council.

### Data Science: Graph Analytics – A Cutting Edge AI Capability

AT processes many financial transactions with a wide range of vendors, and these are increasing in number. There is a need to minimise risk accompanying these transactions, including detecting fraud, but also predicting fraud before it can happen. An innovative Artificial Intelligence (AI) capability, "Graph Analytics" can solve this business problem.

In Graph Analytics, data can represent entities and relationships between entities. Machine Learning and AI are applied to this entity network to detect patterns. It has a wide range of use cases such as social network analysis, operational planning, and fraud detection. According to a recent analytics market report, by 2025, graph technologies will be used in 80% of data and analytics innovations, up from 10% in 2021, facilitating rapid decision making across the enterprise.

To solve this business problem, the Data Science team are working with the Investigations and Specialist Audit team in Risk & Assurance on a proof of concept. Using graph analytics, they will consume historical SAP data and vendor information, to identify fraud indicators. Preliminary results have shown some interesting vendor behaviour, and the audit team will be pursuing this proof of concept further.

The Data Science team are also looking to apply this capability to a new use case: bus network optimisation. They welcome any discussion as well for further use cases using this cutting-edge capability in AT.

### On Bus Connectivity

The frequency of action list updates across AT's fixed train, ferry devices and bus depots has been increased from twice daily to eight times per day. A plan is underway to further ramp-up this frequency over the coming weeks. Customers will realise the benefits of this as actions are applied to their AT HOP card more quickly, for example balance top-ups.

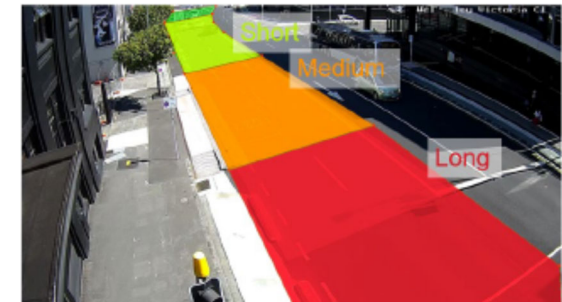
## Web and Applications

The team have now completed 90% of the migration to the new General Transit Feed Specification (GTFS) solution – used by AT Mobile and Journey Planner. This has already delivered a number of new features including the ability to publish more up-to-date scheduling data during disruptions and the ability to remove stops that are closed when planning journeys – which is critical for events and at a time of unprecedented road closures. This has also enabled better timetable search functionality and better reliability of data.

A major update to Journey Planner Web has also been delivered which aligns the look and feel with AT Mobile, thus creating a consistent experience for the customer across both platforms. Journey Planner has also been updated with the new transfers experience improvements recently added to AT Mobile to help give customers more comfort and confidence about taking trips which include transfers.

## Queue Detection

Computer vision has been built at the Wellesley Street and Victoria Street intersection to detect how often a queue is being formed and how often it reaches a certain point on the road. This will allow the engineer to get a better understanding of the scale of the issue and result in an informed decision being made on whether the traffic signal phasing should be adjusted. Three categories of queues have been developed (short, medium, and long) and will be measured accordingly.



## Digital Architecture

Business Technology continues to build AT's digital holistic architectural view of the organisation based on the All-of-Government (AoG) Enterprise Architecture framework. During the IDC 2021 Government Insights Executive Forum, the Digital Architecture team was approached by the Department of Internal Affairs to use AT's Digital Holistic view as a case study for AoG. This holistic view includes AT's Operating Model (ATOM), the ten key objectives linked to the business capabilities, and the underlying architecture. The baseline of this work has been done and will be ready to be used and distributed to the rest of the organisation.