



Property Asset Management Plan

Fire and Emergency NZ



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Executive Summary

Portfolio Overview

The Property Directorate is responsible for the planning, development, and maintenance of Fire and Emergency New Zealand's buildings and facilities. We ensure that all property assets are safe, functional, and aligned with operational needs—supporting service delivery by meeting the expectations of our users. In addition, we manage all property transactions and provide strategic property advice across the organisation.

Fire and Emergency's property portfolio includes over 640 sites nationwide, encompassing fire stations, training facilities, towers, storage units, accommodation, offices, and standalone water systems. With an asset value exceeding \$1 billion, this portfolio forms the backbone of our infrastructure. The portfolio is integrated with other key asset portfolios – Fleet, Equipment and Logistics, and ICT – all of which work closely with property to enable an effective emergency response service.

About this Plan

This Property Asset Management Plan (AMP) is Fire and Emergency New Zealand's first comprehensive framework for managing its property portfolio. It represents a foundational step in formalising asset management practices across the organisation.

Currently, property asset data is fragmented, in some cases incomplete and lacks consistency. As a result, decision-making is constrained by limited confidence in the available information. This AMP initiates a discovery phase focused on identifying and addressing these data gaps to build capability to support informed strategic, tactical, and operational decisions that lay the groundwork for long-term asset management improvements.

Given the scale and complexity of the portfolio, the initial focus is on fire stations, which are the most critical and well-understood asset group. Other property classes – such as training facilities, offices, and accommodation – will be incorporated into future AMPs as data quality improves and asset management practices are embedded. This plan sets the direction for the next 10 years, with a particular emphasis on the first 3-5 years of improvement actions.

Strategic Challenges

The key strategic challenges in managing the property portfolio are summarised in the table below:

Table 1 Key challenges – property

Focus Area	Challenge Area	Description of Challenge
People and Capability	Staff / Resourcing 	Limited resourcing within the Property team, means work has to be prioritised.
Asset Risk and Compliance	Seismic Resilience 	A sizeable number of buildings have been identified as being earthquake prone – falling below 34% of the New Building Standard (NBS) – requiring prioritised seismic strengthening.
	Asbestos Management 	Presence of Asbestos Containing Materials (ACM) across multiple sites requires ongoing risk management and removal where practical.

	Vehicle Fume Extraction 	Inconsistent or inadequate fume management systems in appliance bays pose health and safety risks.
	Building Warrant of Fitness (BWOFF) 	Increasing number of faults identified during BWOFF inspections due to evolving compliance standards.
Financial Pressures	Leasing Costs 	Rising lease costs as councils seek market rates, increasing operational expenditure.
Process and Governance	Contractor Management 	Inconsistent and paper-based contractor induction and site access processes across regions.
Data & Systems	Asset Data Quality 	Fragmented and incomplete asset data sets; no single source of truth, limiting confidence in decision-making.
	Asset Management Systems 	Absence of a dedicated Asset Management Information System (AMIS) for property assets.

Current State

Fire and Emergency New Zealand's property portfolio is the organisation's largest asset group by value, representing approximately 80% of the organisation's total asset value. The portfolio includes over 640 sites nationwide, with fire stations being the largest and most critical component.

Table 2 Current state

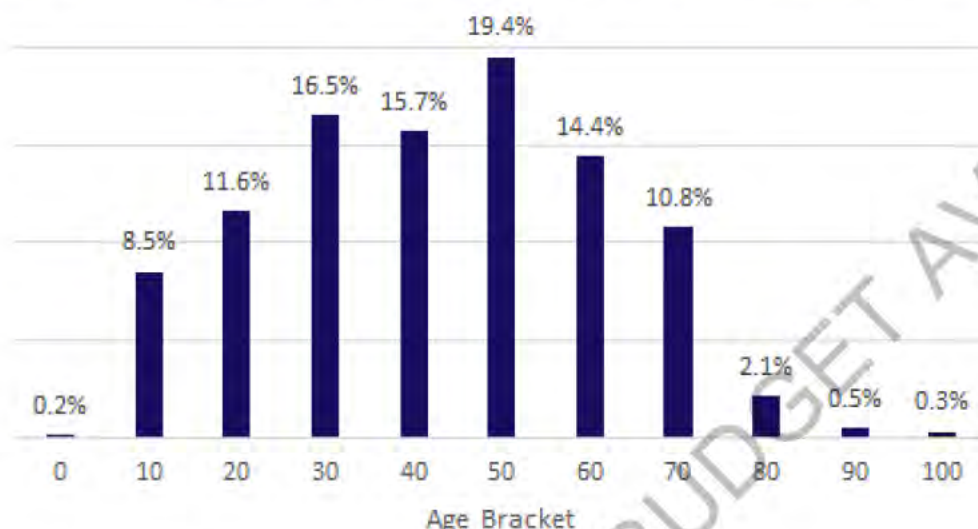
Asset Group		Description
	Fire Stations	Includes career, composite, volunteer stations.
	Tower and Masts	Tower and masts
	Offices	National, regional offices and offices at larger stations.
	Residential Accommodation	Accommodation for firefighters.
	Other Buildings	Training facilities, sheds, storage areas.

Asset Value and Age Profile

The total value of property-related assets (land, buildings, appliances, and equipment) exceeds \$1.36 billion. The age distribution of fire stations is as follows:

- 20% are less than 20 years old
- 52% are between 21–50 years old
- 28% are over 50 years old

Figure 1 Fire station age profile (by percentage) Source: Fire & Emergency Prioritisation Tool 20221107



Asset Condition

Condition assessments have been inconsistent over time:

- A full survey was completed in 2012/13.
- Recent assessments have focused on stations with data collected manually and requiring cleansing.
- Regular inspections are now used to guide maintenance planning.

A shift toward continuous condition assessment is proposed to improve data quality and support proactive asset management.

Asset Performance

Fire and Emergency is building its understanding of how assets perform across key areas:

- Exhaust Fume Management – 72% of stations meet best or good practice standards.
- Ablution Facilities – 79% of stations meet all five baseline requirements.
- Seismic Resilience – 24% of stations have been identified as being earthquake prone.

Critical Assets

The following are considered mission-critical and must remain operational:

- Fire stations
- Appliance bay doors
- Exhaust fume systems
- Ablution and decontamination facilities
- Communication infrastructure

Facilities and Lifecycle Management

The Facilities and Lifecycle Management (FM) approach supports the long-term sustainability and performance of our property assets. It aligns with our broader Asset Management objectives by ensuring that assets are maintained effectively, renewed proactively, and replaced strategically. This approach maximises asset lifespan, minimises lifecycle costs, and supports service delivery continuity.

The strategic objectives of this approach are:

- Maintain asset condition to meet operational requirements and safety standards through planned and preventative maintenance (PPM).
- Increase investment focus in renewals/ replacements to reduce reactive maintenance and extend asset life.
- Ensure assets reach their full design life before requiring major rebuilds or replacements.
- Improve data-driven decision-making through enhanced asset condition monitoring and lifecycle planning.

Future State and Strategic Direction

Strategic Vision

The future direction of Fire and Emergency New Zealand's property portfolio will be shaped by National Service Delivery requirements. It is intended to develop an overarching Property Strategy to guide long-term investment and ensure facilities are aligned with operational needs across the country. This strategy will:

- Define the future footprint and functionality of property assets.
- Align property planning with evolving service delivery models.
- Support resilience, sustainability, and inclusivity goals.

Decision-Making Framework

To address current asset challenges and guide future investment, Fire and Emergency has implemented a Prioritisation Framework. This framework evaluates each fire station against multiple criteria, grouped under two key objectives:

- Fitness for Purpose: including seismic resilience, asbestos risk, ablution and fume management, condition, age, and functionality.
- Network Criticality: including incident volume, station type, proximity to other stations, and catchment population growth.

The resulting scores enable evidence-based prioritisation of capital and operational investments.

Financial Summary

Investment for the first 3 years of the AMP has been matched to funding availability, based on the hierarchy of asset needs. The total amount of expenditure for operational and capital for the property portfolio over the next ten years will depend on mid-term investment and funding options.

How quickly funding levels are lifted to meet the desired state needs to be weighed up and aligned against Fire and Emergency strategic objectives and available funding.

Table 3 Financial summary – uninflated, cumulative. Source: FENZ Property AMP Reforecast v5 – 14 May 2025

Description	Projected Expenditure				
	Year 1	Year 2	Year 3	Year 4-10	Ten-year
	2025/26	2026/27	2027/28	2028-2034	Total
Operational Investment Levels					
Meet Health, Safety & Security	\$12,331,461	\$12,331,461	\$12,331,461	\$86,320,227	\$123,314,610
Minimum Viable Product (MVP)	\$4,958,313	\$4,958,313	\$4,958,313	\$42,476,504	\$57,351,444
Meet KPIs				\$23,951,540	\$23,951,540
Total OPEX	\$17,289,774	\$17,289,774	\$17,289,774	\$152,748,271	\$204,617,594
Capital Investment Levels					
Meet Health, Safety & Security	\$17,642,243	\$17,642,243	\$17,642,243	\$156,037,364	\$208,964,093
Minimum Viable Product (MVP)	\$17,757,757	\$20,857,757	\$31,657,757	\$371,377,636	\$441,650,907
Meet KPIs				\$66,640,000	\$66,640,000
Total CAPEX	\$35,400,000	\$38,500,000	\$49,300,000	\$594,055,000	\$717,255,000

Assumptions in the budget forecasts are:

- All options assume 2% annual inflation and stable station numbers.
- Investment Levels range from maintaining compliance to achieving full-service performance.
- No allowance is made for major unforeseen events (e.g. large-scale earthquakes).
- Continuous condition assessments are preferred over periodic portfolio-wide surveys.

Key Achievements

Since 2021, we have built 9 new stations in:

- Parnell Fire Station
- Kaikoura Fire Station
- Kaiapoi Fire Station
- Dunstan Fire Station
- Sumner Fire Station
- Christchurch City Station
- Rangitata Gorge Fire Station
- Makarora Fire Station
- Taihape Volunteer Fire Station.

In addition, there has been a consistent programme of refurbishments and substantial renewals throughout the portfolio during this time.

Key Improvement Actions

The key high priority actions for improving the asset management practices for the property portfolio in the next three years are summarised in the following table. These are focused on:

- Setting a cohesive framework to drive asset management planning long term.
- Strengthening asset data quality and performance measurement systems.
- Embedding continuous condition assessments and risk-based planning.
- Aligning capital programmes with prioritisation outcomes.

Table 4 Key high priority actions – property

Asset Management Element	Proposed actions
Levels of Service and Performance Management	Finalise and implement a performance measurement system using AMP-defined service levels. Undertake the data cleansing for the identified service critical performance measures. The measurement system will be used for disclosing on the performance of service critical assets for Annual Report and AMP purposes.
Asset Management Information Systems	Transition to a centralised asset management information system to consolidate property asset data in conjunction with establishing framework for ensuring data accuracy is maintained.
Asset Performance and Condition	Develop and implement a risk-based asset condition survey strategy so the current state of critical buildings is understood.
Investment Prioritisation	Prioritise investment, including for seismic and critical amenity upgrades, across our property asset portfolio using a refreshed prioritisation framework which considers the organisation's future operating capability needs and user requirements.
Capital Works Planning	Use AMP and prioritisation outputs to drive capital planning. Align with multi-year delivery forecasts and early business case development to ensure timely and strategic investment. Integrate the refreshed prioritisation and scalable design guidelines to ensure consistent and targeted delivery.
Property Compliance	Develop and maintain Compliance Registers. Update and implement compliance policies to support safe and legally compliant facilities.

1. Introduction

1.1. Portfolio Overview

The Property Directorate is responsible for the planning, development, and maintenance of Fire and Emergency New Zealand's buildings and facilities. We ensure that all property assets are safe, functional, and aligned with operational needs—supporting service delivery by meeting the expectations of our users. In addition, we manage all property transactions and provide strategic property advice across the organisation.

Fire and Emergency's property portfolio includes over 640 sites nationwide, encompassing fire stations, training facilities, towers, storage units, accommodation, offices, and standalone water systems. With an asset value exceeding \$1 billion, this portfolio forms the backbone of our infrastructure. The portfolio is integrated with other key asset portfolios – Fleet, Equipment and Logistics, and ICT – all of which work closely with property to enable an effective emergency response service.

1.2. History of Managing Property Assets

Fire and Emergency New Zealand operates within a dynamic and complex environment, requiring a diverse and geographically dispersed property portfolio. The Property Team oversees the full lifecycle of these assets – land and buildings – through planning, acquisition, construction, operation, maintenance, renewal, and disposal.

Following the amalgamation of over 40 firefighting organisations into a single unified entity, Fire and Emergency inherited a wide variety of property assets. These assets vary significantly in specification, age, and condition, and are spread across the country. This diversity presents both challenges and opportunities in ensuring assets are fit for purpose.

To date, a range of building assessments have been undertaken, providing valuable insights into the current state of the portfolio. These assessments have laid the foundation for more informed decision-making and strategic planning.

1.3. Purpose of the Plan

This Property Asset Management Plan (AMP) outlines how Fire and Emergency New Zealand (FENZ) will manage its property assets – now and into the future. It serves as a tactical infrastructure plan that supports broader organisational strategies and operational planning documents. Through this AMP, FENZ demonstrates its commitment to responsible stewardship of its stations, housing, offices, towers, and other facilities.

As the first formal Property AMP for FENZ, this plan captures current asset management practices and acknowledges the limitations of existing property data, which is fragmented, incomplete, and inconsistent. A key priority is to improve the quality and reliability of these data sets to enable confident, evidence-based decision-making.

This AMP focuses initially on high-priority fire stations, with other property asset classes to be addressed as data is cleansed and asset management practices mature. Covering the period from 1 July 2024 to 30 June 2034, the plan emphasises the next three to five years of work programmes and aims to strike a balance between service levels, cost, and risk.

The AMP aligns with recognised best practices, including:

- Āpōpō / International Infrastructure Management Manual (IIMM)
- ISO 55000 – International Standard for Asset Management
- New Zealand Treasury guidance

Fire stations are more than operational hubs—they are homes away from home for firefighters. Well-designed, safe, and modern facilities enable personnel to focus on FENZ's core purpose: **Protecting and preserving lives, property, and the environment.**

For our property portfolio, there are four property pillars that we follow:



Figure 1 Property pillars Source: Our 2021-2024 Property Handbook

This means facilities will be in the right locations and capable of doing the job they need to do so that required fire and emergency operational outcomes can be consistently achieved. The property pillars (as defined in the Property Handbook) will be reviewed / reset as part of the strategy development.

1.4. Assets Overview

Fire and Emergency New Zealand's property portfolio is the organisation's largest asset group by value, representing approximately 80% of the organisation's total asset value. The portfolio includes over 640 sites nationwide, with fire stations being the largest and most critical component.

Table 5 Asset groupings

Asset Group		Description
	Fire Stations	Includes career, composite, volunteer stations.
	Tower and Masts	Tower and masts
	Offices	National, regional offices and offices at larger stations.
	Residential Accommodation	Accommodation for firefighters.
	Other Buildings	Training facilities, sheds, storage areas.

The breakdown by region is shown in the map below. Te Ihu / Region 4 is the largest region at 25.6% followed by Te Ūpoko / Region 3 at 25.1%.

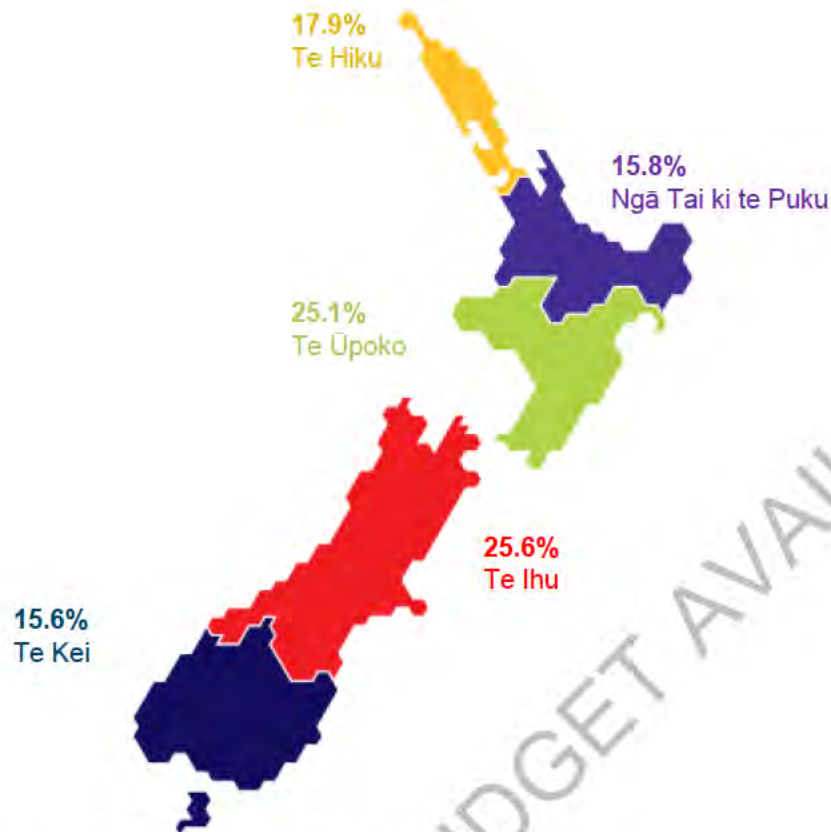


Figure 2 Fire station site distribution by region. Source: Fire & Emergency Annual Report 2022/23

The design philosophy of a fire station can be broadly summarised as follows:

- To control the entry of carcinogen-contaminated personnel and equipment back into the building.
- To provide direct and un-obstructed paths of travel into the appliance bay under emergency response conditions.

The strategy of managing the contamination is achieved by designing the flow through fire stations and categorising them into the three contamination zones as summarised in the table below.

Table 6 Station contamination zone

Zone	Hazard level	Types of spaces	Examples
Hot Zone (Red)	High	All spaces exposed to carcinogens that house vehicles, apparatus, tools, equipment, decontamination wash procedures (BA Mask), and Level 2 PPE laundry pickup.	Appliance Bay, Sprinkler room, Workshop, Hose Store, BA Wash, BA Filling, Level 2 Bag & Tag, Level 2 PPE Courier Pickup
Transition Zone (Yellow)	Moderate	All spaces used in the washing of firefighters and laundering of Level 1 gear upon return from an incident. This is the zone that transitions between HOT and COLD zones.	Laundry, Dirty Wash Cubicles, Level 2 PPE Lockers, Level 2 Drying Cupboard
Cold Zone (Green)	Low	All living spaces intended for extended occupancy.	Entry, Meeting & Quiet Spaces, Operations Room, Public Toilet, Turnout, Lounge, Dining, Bedrooms, Gym

The two concept drawings below are examples of general arrangements for career and volunteer fire stations.



Figure 3 General arrangements of a career and volunteer fire station flow and contamination zones

Source: Fire station design guidelines part 1 Overview – February 2015

1.5. Strategic Context and Linkages

1.5.1. Strategic Focus

We operate as an essential service that all New Zealanders rely on. Every day we work to:

- Respond to fires and emergencies.
- Provide capability and collaborate with other agencies during other emergency responses.
- Work across Aotearoa to promote fire safety and reduce unwanted fires.

While the types of emergencies we respond to have changed over time, our work remains critically important to protecting and preserving lives, property, and our environment. We are committed to the following medium term key strategic areas as set out in our Statement of Intent (2023/27).

Table 7 Three key strategic areas

Delivering for Aotearoa	By working closely with tangata whenua Māori and other partners to reduce the risk of unwanted fire and prepare for emergencies. When these happen, we will be ready to respond in communities.
Developing our people	By building a safe, positive, and inclusive workplace for them. We will care for our people, so they are there for our communities.
Building our business	By having the resources and processes to meet the needs of communities into the future.

1.5.2. Strategic Linkages

The linkages and relationship between our National Strategy, Statement of Intent and AM system is shown in the following framework diagram along with the hierarchical integration of information. Best practice

investment decision making uses a hierarchy of asset information and the overarching strategic direction to make decisions. Asset information, knowledge and evidence are the foundations for effective AM functions.

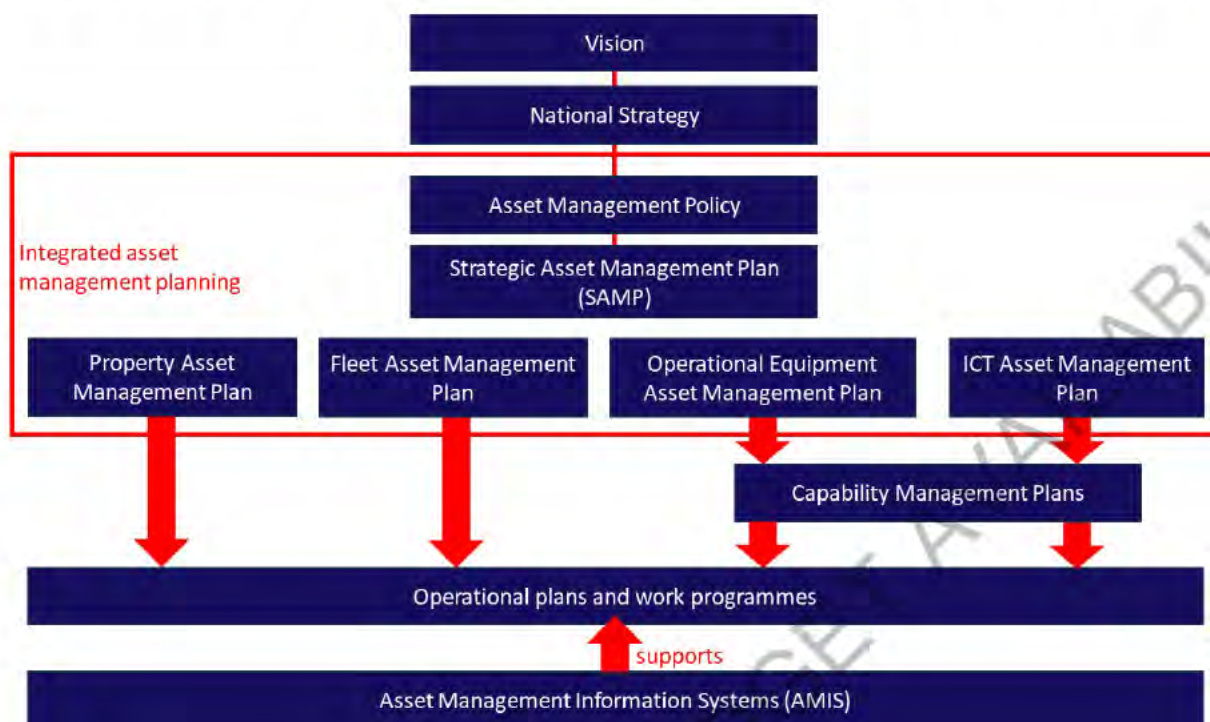


Figure 4 Asset management framework

The future direction of Fire and Emergency New Zealand's property portfolio will be shaped by National Service Delivery requirements. It is intended to develop an overarching Property Strategy to guide long-term investment and ensure facilities are aligned with operational needs across the country. In the absence of an Asset Management Plan, the Property Handbook has been the proxy for this but now requires review.

1.5.3. Strategic Property Priorities

The property portfolio delivers on our strategic priorities through:

Table 8 Property focus. Source: Fire & Emergency Statement of Intent 2023-27.

Priority	Description
1	Ensure properties keep operating during severe natural events and after disasters
2	Bring properties in high-risk areas up to an appropriate seismic resilience standard
3	Implement a property asset management system and integrated asset management information system
4	Advance and complete natural and built amalgamation projects
5	Review building projects with input from firefighters so we can continue to improve
6	Refresh portfolio building condition assessments and complete building surveys and investigations
7	Develop tools to improve how we prioritise investment in sites and identify needs

1.6. Incorporating Mātauranga Māori and Tikanga into Asset Management

Fire and Emergency New Zealand recognises the importance of integrating Mātauranga Māori (Māori knowledge systems) and Tikanga (customary practices and protocols) into its property asset management practices.

This approach supports the organisation's commitment to building strong relationships with iwi and Māori communities and ensures that property assets are managed in a way that respects cultural values, enhances community wellbeing, and aligns with Te Tiriti o Waitangi obligations.

1.6.1. Principles

The following principles guide the use of Mātauranga Māori and Tikanga in our asset management

Table 9 Mātauranga Māori and Tikanga Principles

Principle	Description
Kaitiakitanga	Stewardship of land and resources, ensuring sustainability and intergenerational wellbeing.
Whanaungatanga	Building and maintaining strong relationships with iwi, hapū, and Māori communities.
Manaakitanga	Providing safe, welcoming, and inclusive spaces for all users, including Māori personnel and communities.
Rangatiratanga	Supporting Māori self-determination through co-design and co-governance opportunities.
Tikanga	Observing appropriate cultural protocols in engagement, design, and operations (i.e., karakia, pōwhiri, tapu/noa considerations).

1.6.2. Application in Asset Management

- Design and Planning: Incorporate Māori design elements, narratives, and consultation into new builds and major upgrades.
- Engagement: Partner with local iwi and hapū during site selection, development, and refurbishment projects.
- Cultural Assessments: Undertake cultural impact assessments where appropriate, especially for sites with known significance.
- Naming and Storytelling: Use Te Reo Māori place names and signage to reflect local history and identity.
- Protocols: Ensure staff and contractors are aware of and follow appropriate tikanga when working on culturally sensitive sites.

1.6.3. Alignment with Strategic Goals

This approach supports FENZ's strategic priority of Delivering for Aotearoa by:

- Strengthening partnerships with tangata whenua.
- Enhancing cultural safety and inclusivity.
- Supporting resilience and sustainability through indigenous knowledge systems.

1.7. Strategic Challenges

The key strategic challenges in managing the property portfolio are summarised in the table below.

Table 10 Summary of key challenges – property

Focus Area	Challenge Area	Description of Challenge	Refer to AMP Section
People and Capability	Staff / Resourcing 	Limited resourcing within the Property team, means work requirements have to be prioritised..	Section 9.5.4 People capability
Asset Risk and Compliance	Seismic Resilience 	A sizeable number of buildings have been identified as being earthquake prone – falling below 34% of the New Building Standard (NBS) – requiring prioritised seismic strengthening.	Section 2.2.4 Seismic performance
	Asbestos Management 	Presence of Asbestos Containing Materials (ACM) across multiple sites requires ongoing risk management and removal where practical.	Section 2.2.3 Asbestos
	Vehicle Fume Extraction 	Inconsistent or inadequate fume management systems in appliance bays pose health and safety risks.	Section 2.2.1 Vehicle fume management
	Building Warrant of Fitness (BWOF) 	Increasing number of faults identified during BWOF inspections due to evolving compliance standards.	Section 3.3 Legislative framework
Financial Pressures	Leasing Costs 	Rising lease costs as councils seek market rates, increasing operational expenditure.	Section 5.2 Offices lifecycle management plan
Process and Governance	Contractor Management 	Inconsistent and paper-based contractor induction and site access processes across regions.	Section 9.5.3 Processes
Data & Systems	Asset Data Quality 	Fragmented and incomplete asset data sets; no single source of truth, limiting confidence in decision-making.	Section 9.5.1 Data
	Asset Management Systems 	Absence of a dedicated Asset Management Information System (AMIS) for property assets.	Section 9.5.2 Systems

2. Current Asset State

2.1. Asset Information

2.1.1. Asset Summary

Fire and Emergency New Zealand (FENZ) manages a diverse property portfolio, with fire stations representing the largest asset group in terms of both quantity and value. As of June 2023, there are 641 buildings across the country, most of which are fire stations, distributed across five regions:

Table 11 Summary of buildings by region

Te Hiku / Region 1	Ngā Tai ki te Puku / Region 2	Te Ūpoko / Region 3	Te Ihu / Region 4	Te Kei / Region 5	Totals
115	101	161	164	100	641
17.9%	15.8%	25.1%	25.6%	15.6%	100.0%

Source: Fire & Emergency Annual Report 2022/23

The fire station types, and quantum, include:

- Career stations (46)
- Composite stations (34)
- Volunteer stations and fire depots, further classified as:
 - Built – primarily responding to structural fires in urban areas (357)
 - Natural – responding to vegetation fires in rural areas (184)

In addition to fire stations, the portfolio includes circa 20 other buildings such as Regional and District Offices.

FENZ also owns and manages standalone drinking water systems that are not connected to the public urban systems managed by the local authorities. The extent of the standalone drinking water systems is still being assessed and strategies to be developed. There are new rules and standards for drinking water suppliers as set by the water regulator Taumata Arowai (refer to Sections 3.3 and 3.6).

2.1.2. Critical Assets

Critical assets must be kept operational to support a critical function. The property assets identified are:

Table 12 Critical assets

Critical Assets	Reason / Justification
Fire Stations	All fire stations are considered critical and must be operational to enable Fire & Emergency to respond to the variety of calls and incidents.
Appliance Bay Doors	Our bay doors are essential to allow our appliance to respond.
Exhaust Fume Systems	Provide safe areas and fresh air for the firefighters and other users.
Ablution and Decontamination facilities	Key areas in the fire stations for personal hygiene, laundry, and wash down after an incident (i.e. transitional and hot zones).
Communication Systems	Our communications are a vital tool for us to be able to respond to incidents with the right resources. Refer to ICT AMP (infrastructure sits with property).

The property assets are managed on a three-level service criticality as shown in the figure below. This service criticality is fundamental to decision making at strategic and tactical levels.



Figure 5 Service criticality levels

2.1.3. Asset Age – Renewal Needs and Implications

The aging profile of Fire and Emergency New Zealand's property portfolio is shown in the figures below. Over 80% of fire stations are more than 20 years old and 28% exceed 50 years. This necessitates an increased and targeted renewal programme to manage the higher maintenance needs of an aging portfolio. It is also noted that age (older stations) does not necessarily link to poor functionality, with some much newer ones scoring low on functionality.



Figure 6 Fire station age profile (by count and percentage) Source: Fire & Emergency Prioritisation Tool 20221107

The following asset components have been identified as priorities for renewal due to age, condition, compliance risk, or performance limitations:

- Building envelope and structure: Roofs, cladding, windows, and doors.
- Heating, ventilation, and air conditioning (HVAC) systems.
- Electrical switchboards and lighting systems.
- Gas boilers, still in use at several sites, are targeted for replacement with low-emission alternatives.
- Exhaust fume management systems.
- Ablution and decontamination facilities.
- Interior fitouts and functional layouts: Inclusive and functional layouts that support operational efficiency and wellbeing.

Addressing these renewal needs through a prioritised, risk-based approach will provide maintenance savings and operational benefits, including:

- Energy efficiency and utility cost reduction.
- Reduced reactive maintenance through replacing aging components to reduce unplanned repairs.
- Improved reliability of critical systems (e.g., HVAC, plumbing, electrical).
- Lifecycle extension and asset reliability.

2.1.4. Donated Assets

Donated building assets have historically been for natural stations (i.e., vegetation fires) and transferred to Fire & Emergency from the council as part of the NZFS and rural fire authority amalgamation. The land is leased from the council. There is no list of the donated building assets, and this process is now considered complete.

Self-help projects are where station staff, brigade members, and / or the community pay for and can undertake work themselves. Building a shed using local resources is classified as a self-help project.

2.1.5. Heritage Buildings

The Wellington and Dunedin Fire Stations are listed as heritage buildings, both Category 2.



Figure 7 Images of Wellington and Dunedin Fire Stations

The asset performance of these two heritage buildings is summarised in the table below.

Table 13 Asset performance of heritage buildings

List No.	Station	Type	Seismic	Asbestos	Exhaust	Ablution	Condition	Functionality
7270	Dunedin City	Historic Place Category 2						
3654	Wellington Central	Historic Place Category 2						

Source: Fire & Emergency Prioritisation Tool 20221107 and [New Zealand Heritage List](#)

Note there are five other former fire stations on the heritage list, but these are no longer part of the Fire and Emergency portfolio. The impacts of having a heritage listed building means that:

- No alterations to building fabric / structure without heritage approval / signoff.
- Higher expectation of building upkeep on listed buildings.
- Additional complexity of works and costs.

2.1.6. Appliance Bays

The estimated quantity of appliance bays based on the station type is shown in the figure below. This shows that two appliance bays are the most common arrangement at fire stations followed by single bay.

Station Type: Career (Red), Composite (Orange), Volunteer (Yellow), Volunteer Rural (Green)

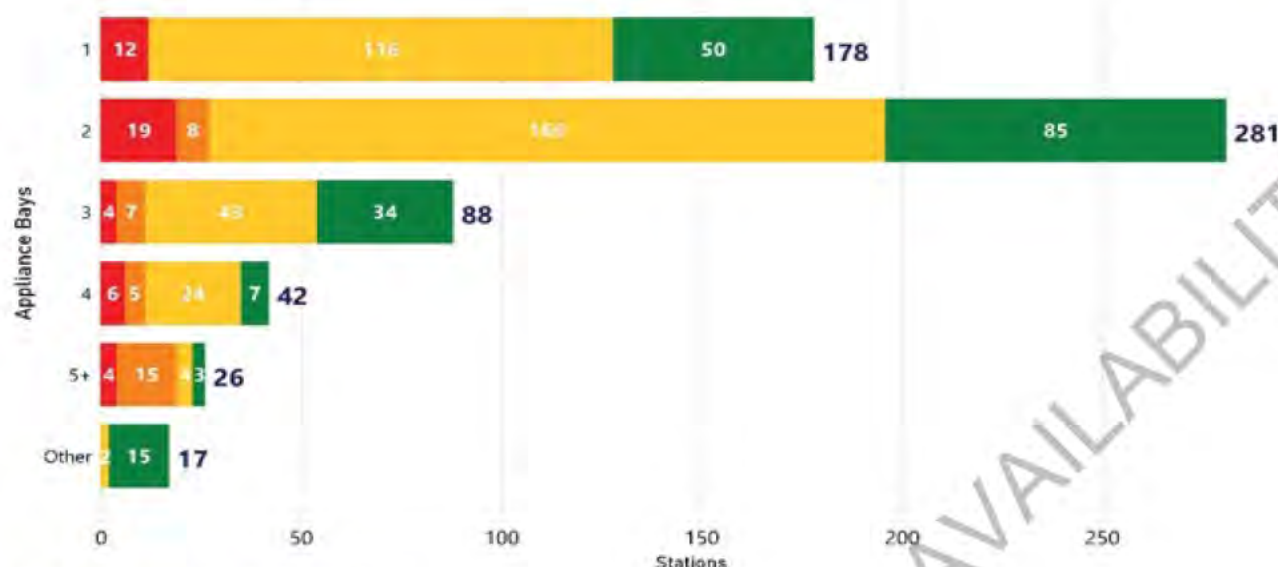


Figure 8 Appliance bays by station type

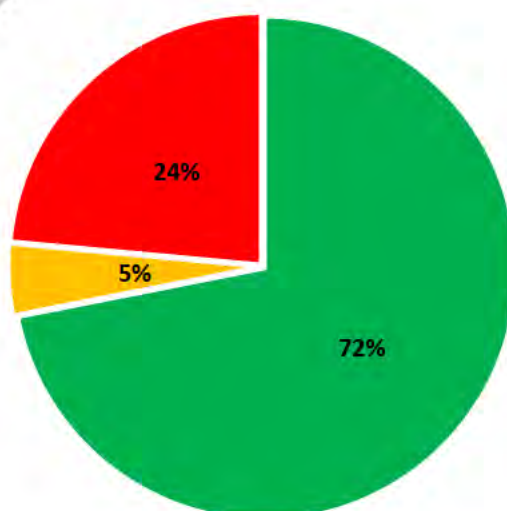
2.2. Asset Performance

This section set out the asset performance of the different elements of the fire station buildings such as fume management, ablution provision, and seismic performance. The inspections required for the various compliance certifications are summarised in Section 9.5.3 Processes.

2.2.1. Exhaust Fume Management

The exhaust fume systems in the appliance bays are crucial for providing safe areas and fresh air for the firefighters and other users. The Appliance Bay Ventilation Guideline seeks to safeguard operational personnel from illness or loss of amenity due to lack of fresh air in the appliance bays. It details a consistent process to determine appropriate exhaust fume solutions based on station occupancy and intended use.

Most of the sites (72%) either follow best or good practices around exhaust fume management at a national level, as shown in the figure below.



■ Best practice ■ Good practice ■ Not meeting good or best practice

Figure 9 Exhaust management practices. Source: Fire & Emergency Prioritisation Tool 20221107

2.2.2. Ablution Provision

The purpose of Fire & Emergency's Basic Station Amenities Programme is to ensure all stations meet self-imposed minimum standards for ablution and decontamination facilities. All stations should have toilet, hand-basin, hot running water, shower and breathing apparatus wash facilities.

Over half of our stations (79%) meet all Fire & Emergency minimum standards as shown in the figure below. Of the stations that either meet 1 or none of the baseline requirements, most of them are within the Hawke's Bay district (33%) then Mid-South Canterbury (12%) then Canterbury and Wellington (both with 11%).

The Auckland, Taranaki, Waikato, Tairāwhiti, Waitemata districts meet all the baseline requirements.

2.2.3. Asbestos Management

The purpose of Fire & Emergency's Asbestos Management Programme was to identify and manage ACM at our sites. Each individual item of ACM identified at a site is given an overall asbestos risk score based on its material and priority risk. A site may have none or just one instance of ACM or could have multiple items.

Table14 Asbestos containing material results. Source: Fire & Emergency Prioritisation Tool 20221107

District	No Asbestos Identified or built after 2000 (0)	Lower Risk (1-33)	Medium Risk (34-66)	Higher ACM Risk (67-100)
Auckland	7	3	1	1
Bay of Plenty	16	19	5	1
Canterbury	33	20	0	0
Counties Manukau	15	13	0	0
Hawke's Bay	34	12	1	0
Manawatu-Wanganui	16	21	2	0
Mid-South Canterbury	21	13	0	0
Nelson Marlborough	27	11	0	0
Northland	30	9	0	1
Otago	25	33	1	1
Southland	17	20	0	0
Taranaki	9	11	0	0
Tairāwhiti	8	6	1	0
Waikato	26	19	1	0
Waitemata	21	11	0	0
Wellington	14	22	3	3
West Coast	13	15	0	0
Total	332	258	15	7
%	54%	42%	2%	1%

2.2.4. Seismic Performance

The Building Amendment Act (Earthquake-prone Buildings) 2016 is part of the Building Act 2004. It sets out the legal rules for finding and managing earthquake-prone buildings (EPBs) across New Zealand.

New Zealand is divided into three seismic hazard zones: high, medium, and low. These zones determine how much time building owners must fix their earthquake-prone buildings (EPBs). Emergency response facilities have shorter timeframes than buildings used for everyday purposes such as offices.

An Earthquake-Prone Building is a building that is assessed to be less than 34% NBS for seismic performance. These buildings are considered to have reduced resilience in the event of a moderate earthquake, meaning they are more likely to suffer considerable damage that could stop them from working properly and would need major repairs.

Importantly, this does not mean the building is currently unsafe to occupy.

As FENZ provides critical services to the community after an earthquake, it must design and assess station buildings to withstand stronger earthquake shaking than what is required for regular buildings like offices; this is because our stations need to stay operational after a significant earthquake, and our approach goes beyond the life safety requirements for general buildings.

Seismic Approach

FENZ is completing seismic improvement work and / or are developing plans to do so in the time limits required under the EPB notices and is completing seismic assessments on all its fire stations.

Through this proactive work to seismically assess buildings 150 buildings have been identified with low ratings of less than 34%NBS under the current system (of which 32 have received formal EPB notices (June 2025). Refer to Appendix 10.2 for an overview of the Station Earthquake Prone Building Assessment.

A seismic prioritisation tool has been implemented to support property decision making on our buildings with low seismic ratings. This approach considers:

- The building type.
- Which of the seismic risk zones our potentially earthquake prone buildings are in.
- The rating score of the building.
- The nature of the structural vulnerabilities identified by the seismic assessment

The results from this seismic prioritisation are then used in the broader Property Prioritisation process to help make well-informed decisions.

Strengthening to Date

Alongside the assessment work FENZ has continued to remediate its earthquake-prone buildings.

Since December 2023, 6 fire stations have been strengthened, with another 13 fire stations under construction throughout 2025/26 – some being strengthened through retrofitting, and others being completely rebuilt to address several other issues at the same time. The other buildings that currently have low ratings will be addressed in the future.

2.2.5. Functionality

Building functionality is shaped by three factors (based on the prioritisation framework):

1. Buildings must be healthy to work in.
2. Buildings must work and be effective.
3. Buildings must last 50 years and be maintainable.

The figure below shows the functionality scores of the portfolio. A high proportion of our stations (36%) are classified have poor or very poor functionality.

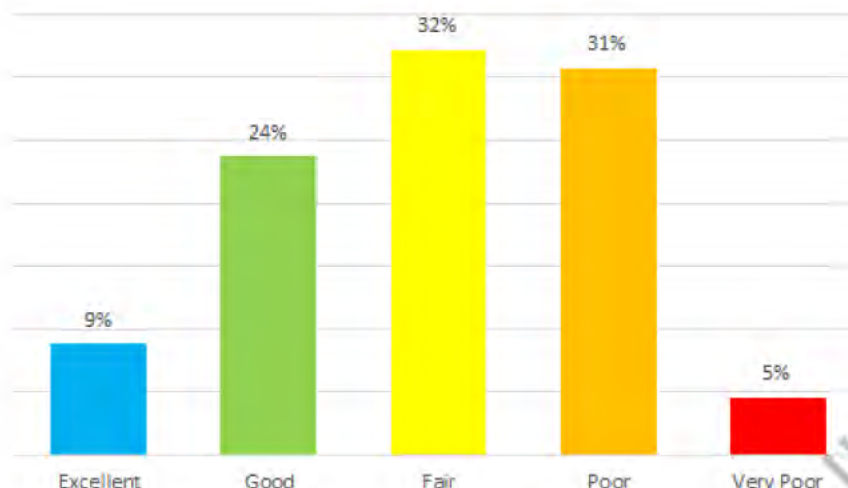


Figure 11 Station functionality. Source: Fire & Emergency Prioritisation Tool 20221107

2.3. Asset Condition

2.3.1. Condition Surveys

Historically, Fire and Emergency has conducted a range of condition assessments across its property portfolio, using both internal and external resources. These assessments have varied in methodology, frequency, and format, resulting in inconsistent data that is not easily consolidated or usable for strategic decision-making.

Visual inspections have often been ad hoc and lacked standardised rating systems, such as the commonly accepted 1-to-5 scale used in asset management. Additionally, there has been no dedicated budget allocated for regular condition surveys, which has limited the ability to maintain a comprehensive and current understanding of asset health.

To improve confidence in asset condition data and support timely maintenance and investment decisions, Fire and Emergency propose transitioning to a continuous condition assessment model. This approach will replace the previous practice of conducting portfolio-wide surveys every three years, enabling more agile and responsive asset management.

2.3.2. Condition Results

Recent condition assessments have primarily focused on rural fire stations, with data collected via individual inspection sheets. However, this data still requires cleansing before it can be reliably used for planning and decision-making. A full condition survey of all fire stations was last completed in 2012/13 by Ignite, with subsequent assessments carried out sporadically at the regional level.

To supplement formal surveys, Fire and Emergency has leveraged local knowledge to populate condition scores within its prioritisation tool. This desktop exercise focused on identifying poorly performing assets and provided a preliminary view of the portfolio's condition.

Overall, fire stations are performing well when compared to a standard deviation curve. However, stations rated as Condition 4 or 5 require attention to ensure compliance with relevant standards and regulations. These assets must be brought up to Fire and Emergency's required condition levels.

A key performance target will be to maintain at least 85% of stations in satisfactory condition – defined as grades 1, 2, or 3. The below figure provide an overview of the current condition state.

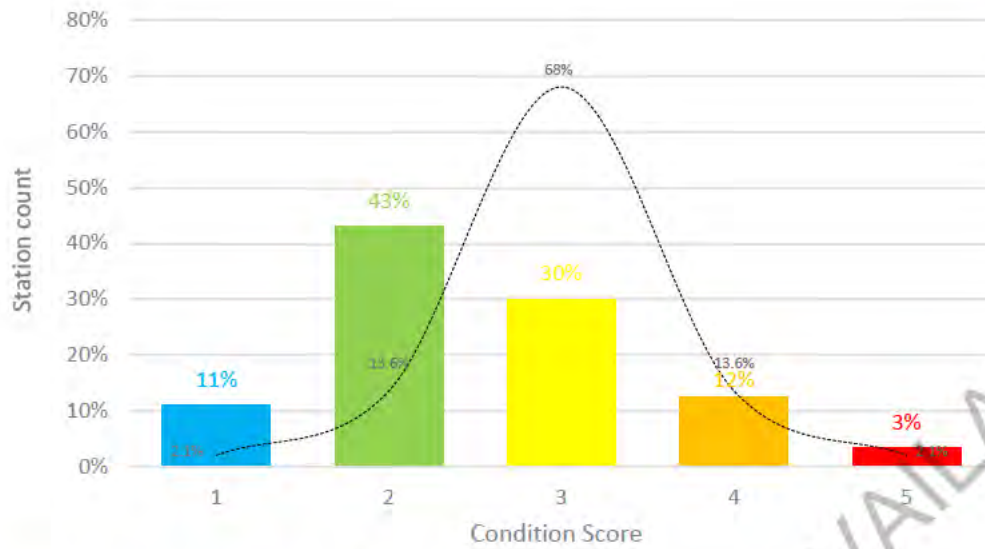


Figure 12 Station condition summary vs Standard Deviation Curve
Source: Fire & Emergency Prioritisation Tool 20221107

3. Levels of service

3.1. Levels of Service Overview

Fire and Emergency New Zealand (FENZ) is committed to delivering property assets and services that meet defined levels of service in a sustainable and consistent manner. This section outlines the expected service qualities provided through the property portfolio and the metrics used to monitor performance.

The levels of service are aligned with FENZ's National Strategy and Statement of Intent, and are informed by legislative requirements, national standards, and user expectations. These levels of service pertain specifically to the outputs of the property portfolio, while operational service levels are addressed separately in FENZ's Statement of Performance Expectations (2023/24).

As formal service level documentation is a new initiative for FENZ, this Asset Management Plan introduces proposed performance measures for property assets. These measures are intended to support future reporting in Annual Reports and ongoing asset management planning.

3.2. Key Users and Stakeholders

Effective property asset management relies on a deep understanding of the diverse users and stakeholders who interact with Fire and Emergency New Zealand's facilities. These groups influence asset planning decisions and are directly impacted by the quality, functionality, and resilience of the property portfolio.

The table in Appendix 10.3 provides a more detailed and structured view of both internal and external stakeholders. Broadly stakeholders are split as follows:

- Internal stakeholders including firefighters (both paid and volunteer), regional teams, and corporate staff prioritise safe, functional, and inclusive facilities. Their feedback directly shapes investment in ablution upgrades, fume extraction systems, and improved station layouts that support contamination control and wellbeing.
- External stakeholders such as iwi, local councils, and other regulatory bodies bring critical perspectives on community engagement, environmental sustainability, and statutory compliance. Their input guides decisions on seismic strengthening, asbestos management, and water system upgrades.

By embedding stakeholder values into the asset management framework, Fire and Emergency ensures that property investments are not only technically sound but also socially responsive. This approach supports the prioritisation framework and strengthens alignment with service delivery outcomes, resilience goals, and broader strategic objectives.

3.3. Legislative Framework

Fire and Emergency New Zealand's property portfolio is governed by a wide range of legislation that directly influences asset planning, renewal, and compliance activities.

Key legislative frameworks such as the Building Act 2004, Health and Safety at Work Act 2015, and the Earthquake-Prone Buildings Amendment Act 2016 drive mandatory upgrades to ensure facilities are safe, resilient, and legally compliant. These requirements underpin investment in seismic strengthening, asbestos management, and building warrant of fitness (BWOF) systems.

Additionally, emerging mandates around climate change and water quality, including the Zero Carbon Act and Water Services Act 2021, are shaping sustainability initiatives and infrastructure upgrades. A full summary of applicable legislation and its implications is provided in Appendix 10.4.

3.4. Policies, Standards, and Guidelines

Fire and Emergency New Zealand's property asset management is supported by a wide array of policies, standards, and guidelines that shape how facilities are planned, operated, and maintained.

These documents provide the framework for ensuring consistency, safety, and strategic alignment across the portfolio. Key policies such as the Fire Station Design Guidelines inform decisions on station layout, contamination control, and lifecycle planning. Standards relating to emissions reduction, asbestos management, and resilience further guide compliance and sustainability efforts.

While the current suite of documents is extensive, a rationalisation and update process are underway to ensure they remain relevant, accessible, and aligned with future service delivery needs. A full list of current policies and guidelines is provided in Appendix 10.5.

3.5. User Satisfaction Trends

Zendesk is used to manage property / defects. However, there is low confidence with the data in Zendesk for understanding trends. There is a corporate project underway to review and replace Zendesk.

3.6. Service Level Summary

3.6.1. Current Service Level Practices

To date, Fire and Emergency New Zealand (FENZ) has not formally reported on the performance of its property assets in Annual Reports. However, this is set to change. FENZ is committed to aligning with the expectations outlined in Cabinet Office Circular CO (23)9, which emphasises the importance of managing and reporting on service-critical assets.

CO (23)9 replaces the previous Investor Confidence Rating (ICR) framework and introduces a stronger focus on accountability, particularly for Chief Executives, in ensuring that critical assets are performing as required.

One of the key challenges in establishing meaningful performance measures has been the limited availability and low confidence in existing asset data. As a result, FENZ has prioritized the development of performance measures for fire stations first, given their critical role in emergency response.

Once these measures are embedded and data quality improves, similar performance frameworks will be extended to other asset classes, including offices, residential properties, and standalone water systems.

3.6.2. Proposed Levels of Service

The proposed critical property performance measures are summarised in the following table for fire stations only with the full table in Appendix 10.6 including indicative targets over 10 years. They have been based on:

- Sound measurement system is set up.
- Important for property portfolio.
- Reflects critical business elements.

Table 15 Service level summary – fire stations (initial set)

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance	2024/25 Target (Year 1) – preliminary	2025/26 Target (Year 2) (preliminary)
Fire stations	Safety	 	To provide safe stations / buildings for our staff	All buildings meet statutory legislative requirements (BWOF)	85%	90%
				Percentage of stations that meet all five baseline ablution standards	60%	65%

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance	2024/25 Target (Year 1) – preliminary	2025/26 Target (Year 2) (preliminary)
				Percentage of stations that meet 'best' or 'good practice' for exhaust fume management standards	75% - to be confirmed	75% - to be confirmed
	Reliability		Provide reliable and well-maintained assets	Full achievement for annual inspection of appliance bay doors at stations	90%	90%

3.6.3. Future Levels of Service

This section presents future property performance measures that may be considered but further work and / or data cleansing needs to be completed so too early to measure and monitor.

Table 16 Future service levels – fire stations

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance
Fire stations	Responsiveness		Provide prompt responses for service	% of issues / faults responded within agreed timeframes: Priority 1 - 12 hours
				Priority 2 - two days
				Priority 3 – seven working days
	Quality		To provide assets that are well maintained	% of stations in satisfactory condition (grades 1, 2 or 3, based on asset value not quantity)
	Effectiveness		Effective management of facilities	Maintenance spend (\$/m ²) is within good practice
	Sustainability		Effects on the natural environment are minimised	Energy consumption for stations is <\$15/m ² /year
				LED upgrade is implemented
				Number of gas boilers are reduced / eliminated

Note that there are currently no formal documented response times. Faults are triaged at regional level and an appropriate response time assigned based on priority.

Table 17 Future service levels – offices and residential

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance
Offices	Quality		To provide assets that are well maintained	% of offices in satisfactory condition (grades 1, 2 or 3, based on asset value not quantity)
	Sustainability		Effects on the natural	Energy consumption for offices is <\$15/m ² /year

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance
			environment are minimised	LED upgrade is implemented
	Effectiveness		Effective management of facilities	Maintenance spend (\$/m ²) is within good practice
	Responsiveness		Provide prompt responses for service	% of issues / faults responded within agreed timeframes: Priority 1 - 12 hours
				Priority 2 - two days
				Priority 3 – seven working days
Residential	Quality		To provide assets that are well maintained	% of residential property in satisfactory condition (grades 1, 2 or 3, based on asset value not quantity)
	Safety		To provide safe housing for our staff	% of residential properties that meet the Healthy Homes Standard
	Sustainability		Effects on the natural environment are minimised	LED upgrade is implemented
				Energy consumption for offices is <\$15/m ² /year
	Effectiveness		Effective management of facilities	Maintenance spend (\$/m ²) is within good practice
	Responsiveness		Provide prompt responses for service	% of issues / faults responded within agreed timeframes: Priority 1 - 12 hours
				Priority 2 - two days
				Priority 3 – seven working days

The property portfolio includes the specialist asset group of standalone water treatment systems. The water sector is going through major changes including the establishment of the water regulator Taumata Arowai. The new rules and standards for drinking water suppliers came into effect on 14 November 2022:

- Drinking Water Standards.
- Drinking Water Quality Assurance Rules.
- Aesthetic Values.

Future levels of service for the standalone water treatment systems are shown in the table below. These levels of service including suitable performance measures and targets are indicative and need to be further developed and agreed upon, then implemented.

Table 18 Future levels of service – water – indicative

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance
Water	Safety		To provide safe drinking water	Compliance days per year achieving Drinking Water Quality Assurance Rules (new measure added in; required by Taumata Arowai)
				Compliance days per year drinking water that complies with the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 (new measure added in; required by Taumata Arowai)
	Responsiveness		Provide prompt responses for service	% of treatment plant related urgent requests for service responded to within 2 hours
				% of treatment plant related non-urgent requests for service responded to within 3 working days
	Environmentally Sustainable		Water resources are used efficiently and sustainably	Total number of water supply consent enforcement actions (abatement, infringement, enforcement, and convictions)

3.7. Service Gaps

Service gaps within Fire and Emergency New Zealand's property portfolio represent areas where current facilities do not meet the required standards for safety, functionality, or operational readiness. These gaps pose tangible risks to both asset integrity and service delivery capability.

Identified key service gaps include:

- **Seismic Vulnerability:** A sizeable number of buildings fall below the minimum seismic performance threshold, with 150 stations identified as being under 34% NBS. This compromises post-disaster operability and increases the risk of service disruption following an earthquake.
- **Inadequate Ablutions and Decontamination Facilities:** Approximately 21% of stations fail to meet all five baseline standards. This affects firefighter wellbeing and increases exposure to contamination risks.
- **Exhaust Fume Management Deficiencies:** Approximately 28% of stations do not meet best or good practice standards for fume extraction, posing ongoing health risks to personnel.
- **Aging and Poor-Condition Assets:** Stations rated Condition 4 or 5 require urgent attention to avoid asset failure and escalating maintenance costs. These assets are more likely to experience unplanned outages and reduced functionality.
- **Compliance Shortfalls:** Increasing faults identified during BWOF inspections reflect evolving standards and highlight the need for proactive compliance management.
- **Functional Limitations:** A high proportion of stations (36%) are rated as having poor or very poor functionality, limiting their ability to support modern operational requirements and inclusive workplace standards.

Addressing these service gaps is critical to maintaining a resilient, safe, and fit-for-purpose property portfolio. The prioritisation framework and capital investment programme are designed to systematically close these gaps, reduce risk exposure, and support sustainable service delivery across the network.

4. Future Demand

4.1. Demand Overview

This section describes how the scale and type of demand is changing for providing fire services and the impact on the fire stations – what and where. The type of emergencies that we deal with is changing.

4.2. Growth and Demand Trends

4.2.1. Changing Emergency Trends

A snapshot of the incident numbers and major events in 2022/23 is shown below.

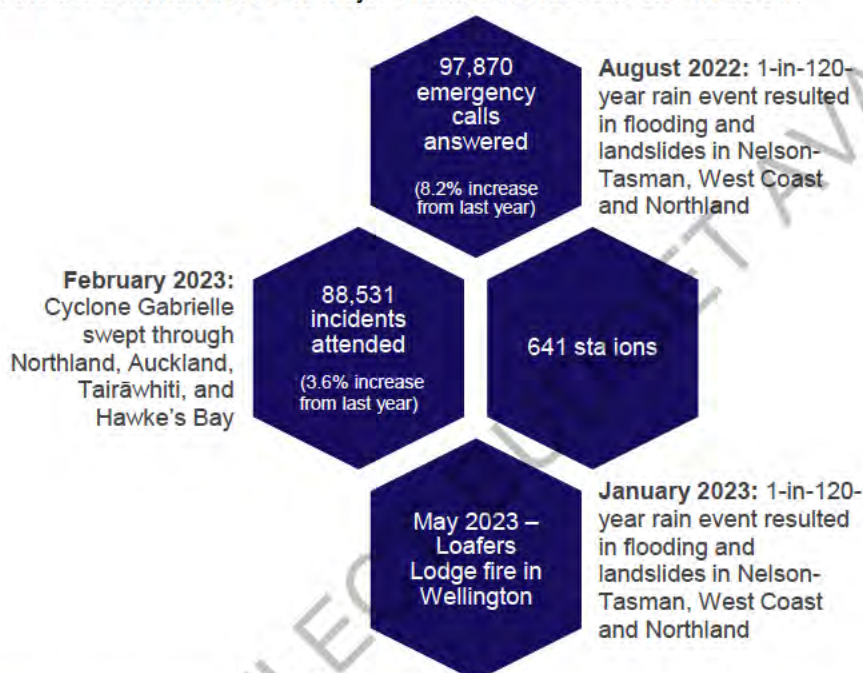


Figure 13 Snapshot of incident numbers and major events in 2022/23. Source: Fire & Emergency Annual Report 2022/23

Fire and Emergency's main emergency management functions include responding to fires, promoting fire safety, providing for the safety of persons and property endangered by incidents involving hazardous substances, rescuing people trapped because of transport accidents or other incidents, and providing urban search and rescue services. Additional functions Fire and Emergency assist with include medical emergencies, maritime incidents, weather events, natural hazard events, disasters, and non-hazardous substance incidents.

4.2.2. Drivers Impacting Operational Demand

Operational demand on fire stations is primarily driven by the number and nature of emergency callouts. These can influence several key aspects of station design and functionality:

- **Crew Capacity:** The number of crews housed within a station is related to the frequency and type of incidents responded to.
- **Station Type:** Whether a station is career, volunteer, or composite affects its operational requirements and staffing levels.
- **Response Type:** Stations may be configured differently depending on whether they respond to urban structural fires or rural vegetation fires.
- **Vehicle Accommodation:** The number of fire appliances a station must house determines the size and layout of the building.

4.3. Current Demand for Services

Demand for fire stations is measured in terms of incident counts, proximity and building utilisation.

4.3.1. Incident Count

It is important to understand the demand / utilisation of our stations, and we measure this by the number of incidents our station responds to. This is not to say that the stations that respond to a lower number of incidents are not important but that there may be a higher wear and tear of assets in the higher incident stations. Some stations are in rural areas and are needed to ensure adequate coverage.

The breakdown of the number of incidents based on three-year average is detailed in the table and figure below. This shows that over half of our stations (54.5%) respond to a range of 26 to 250 incidents per year.

The three stations that respond to the largest number of incidents (over 3,000 incidents per year) are:

- Papatoetoe, 15a Lambie Dr, Counties Manukau
- Christchurch City, 200 Kilmore Dt, Canterbury
- Auckland City, 50-60 Pitt St, Auckland.

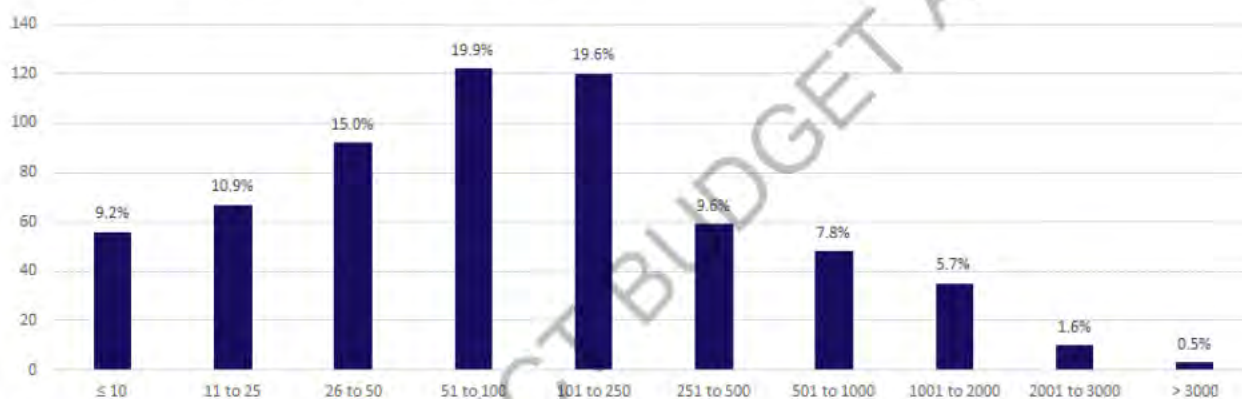


Figure 14 Station incident rates. Source: Fire & Emergency Prioritisation Tool 20221107

*Note: incident numbers are based off 2019, 2020 & 2021 data sets.

4.3.2. Proximity

In the case of a major event or for any other reason a station becomes non-operational, the proximity to another station for appropriate back-up gives resilience for providing services. The further away from a back-up station the more critical the terms of response.

Most (90%) of our stations are within 30km of another station. The five most isolated stations are (noting three are islands so are physically remote):

- Matakana Island - 114 Waihirere Rd, Bay of Plenty
- Milford Sounds - 156 Milford Sound Highway, Southland
- Chatham Island - 115-117 Waitangi Wharf Owenga Rd, Wellington
- Stewart Island, Oban - 6 Argyle St, Southland
- Murchison - 124 Fairfax St, Nelson / Marlborough

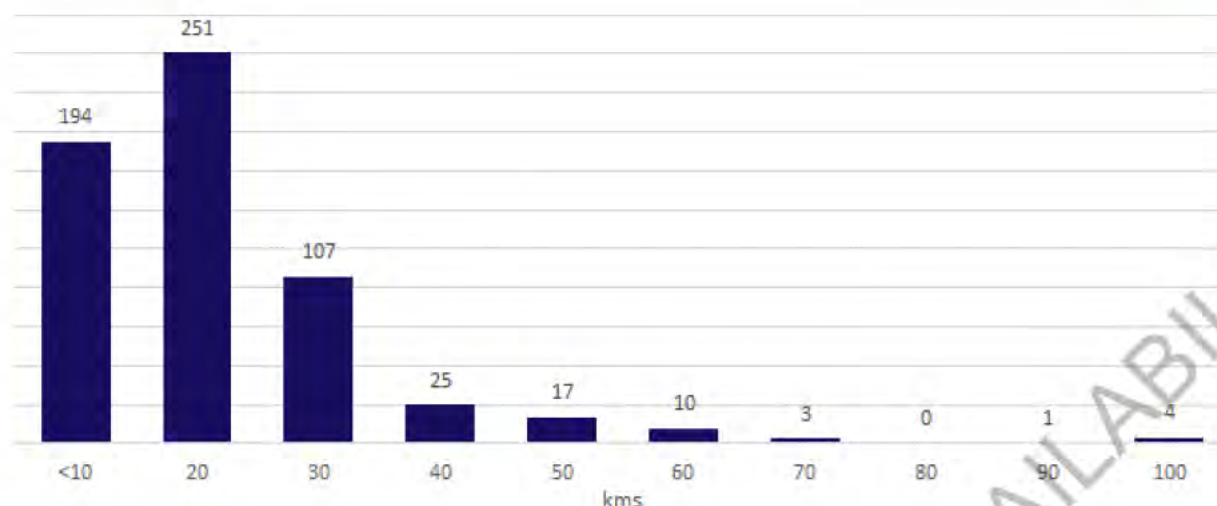


Figure 15 Station proximity

Source: Fire & Emergency Prioritisation Tool 20221107

4.3.3. Office Building Utilisation

The number of incidents a station responds to is used as a proxy for building utilisation (refer to section above). The utilisation of other property asset classes is not currently captured. The lease agreements have the floor area sizes. Some are mixed use buildings, for example head quarter staff working from regional offices, so it is difficult to calculate occupancy rates (based on head count per m² known as Net Lettable Area).

The Carbon Neutral Programme requires the mandated agencies (including Fire & Emergency) to implement an energy efficiency building rating system of office buildings, National Australasian Built Environment Rating System New Zealand (NABERSNZ). This will be implemented over five years from January 2021 for all mandated property agencies who occupy single tenanted, co-tenanted or co-located Government office accommodation over 2,000m².

4.4. Catchment Population Growth

Through the prioritisation tool process, territorial local authority population projections were used as a proxy for population growth in the fire station catchments. The population growth over the 2018 to 2048 period is projected to range from 12% for Buller District to 68% for Selwyn District, as shown conceptually below.



Figure 16 Station in projected growth

Source: Fire & Emergency Prioritisation Tool 20221107

4.5. Future Service Requirements

4.5.1. Building Design Requirements

Fire stations are functional buildings and need to support the firefighting capabilities. The broad design philosophies of a fire station are:

- To control the entry of carcinogen-contaminated personnel and equipment back into the building.
- To provide direct and un-obstructed paths of travel into the appliance bay under emergency response conditions.

Spaces within the station buildings are categorised based on three contamination zones based on hazard level as summarised in the table below:

Table 19 Spaces by zone

Zone	Hazard level	Type of spaces
Hot	High	Appliance bay, breathing apparatus wash, Level 2 PPE courier pickup
Transition	Moderate	Laundry, dirty wash cubicles
Cold	Low	Entry, meeting and quiet spaces, operations room

Source: Fire Station Design Guidelines Part 1 Overview (2015)

The fire stations are designed to meet the Building Code with spaces / layout to meet Fire & Emergency's requirements. The following documents are used for guiding the building designs to ensure consistency:

- Fire Station Design Guidelines Part 1 Overview (2015).
- Fire Station Design Manual (2016)

However, in practice the internal fits are managed by the various project managers resulting in various levels of service. The design manual and guidelines are based on a traditional fire station approach resulting in large footprints that need to be maintained. The existing design manual and guidelines need to be updated to meet Fire & Emergency's future requirements and reflect latest industry thinking such as environmental sustainability features (refer to Section 10.4 Improvement Programme).

4.5.2. Strategic Land Holdings

Strategic land is identified to allow for future development and acquired in accordance with the Acquisition Policy. Strategic land and new buildings are evaluated through the budget process.

4.5.3. Diversity, Equity, and Inclusion

Facilities Management (FM) and Asset Management (AM) play a vital role in shaping inclusive and accessible environments. Fire and Emergency NZ recognises that investing in the physical workspace can foster a culture of belonging and support for all personnel, regardless of background or ability.

To embed DEI principles into property planning and design, the following considerations are proposed particularly for new builds and major upgrades:

Table 20 DEI elements – indicative

DEI element	Consideration
Workplace design and accessibility	Physical: - Flexible workstations with ergonomical furniture. - Wheel access - Personal workspace and good flow
	Sensory: Lighting: natural vs artificial vs dimly lit areas and adjustable Adjustable heating & cooling at more areas as the one temperature for a whole floor will not suit everyone.
	Selecting materials and finishes that reflect the diversity of the workforce. This can include the use of artwork, décor, and design elements that represent various cultures, backgrounds, and identities. These efforts not only enhance the aesthetic appeal of the workplace but also contributes to a sense of belonging among employees, which is crucial for their engagement and productivity.
	Non-traditional - quiet rooms, communal areas prayer rooms, lactation rooms for new mothers, and gender-neutral bathrooms.
	Digital also plays a key role in by installing screen reader software for visually impaired employees, large monitors screens and providing hearing loop systems for those who are hard of hearing.
Employee engagement	Employee engagement is also critical in this process. By involving employees in the decision-making process regarding workplace design and accessibility, organisations can ensure that the solutions implemented are truly reflective of the diverse needs of their workforce. This approach not only improves the effectiveness of FM initiatives but also fosters a sense of ownership and belonging of staff. Engagement may be conducted through surveys, feedback sessions, and collaborate with any DEI committees. Fire & Emergency cannot develop a strategy without knowing what is first needed.
Design standards	Undertake a review of Fire and Emergency's design standards / guidelines to ensure new builds and major renovations consider key DEI elements. Fire station designs need to consider gender neutral toilets and decontamination zones for a safe and inclusive work environment.
Office spaces	Assessment of Fire and Emergency's current office spaces to see how they align to DEI requirements (to be defined). Also, the review Fire and Emergency's procurement strategy when it looks at leasing new commercial properties to ensure they consider DEI elements.

4.6. Demand Management Planning

To effectively manage future service demands, Fire and Emergency is implementing a range of proactive strategies. These aim to balance asset capacity with evolving operational needs, environmental risks, and population growth.

Table21 Current demand management programme – property

Programme	Description
Prioritisation Framework	A long-term planning tool that uses key data and proxies to assess demand patterns and guide capital investment decisions.
Collaboration with Service Delivery	Ensures property assets remain responsive to evolving firefighting strategies and operational requirements.
Transport Infrastructure Monitoring	Tracks changes like Auckland's light rail developments that may impact station accessibility, prompting potential relocations.
Urban Growth Monitoring	Uses population data to anticipate where new or upgraded facilities may be needed.
Natural Hazard Mapping Tool	A prototype tool (developed with NIWA) to identify flood prone and tsunami-risk areas near stations, supporting resilient site planning.
Flexible Working	Adapts office space needs to hybrid work models, reducing workspace demand but increasing the need for meeting and video conferencing facilities.

4.7. Growth and Demand Assumptions

The following assumptions underpin FENZ's planning for future growth and demand:

- Ownership Model: FENZ will continue to own fire stations and lease office spaces.
- Incident Trends Over Population Growth: The frequency and type of emergency incidents will have a greater impact on asset demand than population growth alone.
- Complex Operating Environment: Increasingly diverse and complex emergencies will shape future asset needs.
- Climate Change Mandates: Government expectations around sustainability will drive investment in greener, more resilient infrastructure.
- Evolving Work Practices: Flexible and hybrid work models will influence how office and support facilities are designed and used.

5. How we will Manage our Property Assets

5.1. Lifecycle Management Overview

5.1.1. Lifecycle Management Approach

Fire and Emergency is committed to providing good quality properties and facilities that serve the needs of the community. This section outlines how Fire and Emergency plans to manage and operate its property assets throughout their lifecycle whilst balancing meeting levels of service, minimising risk, and cost.

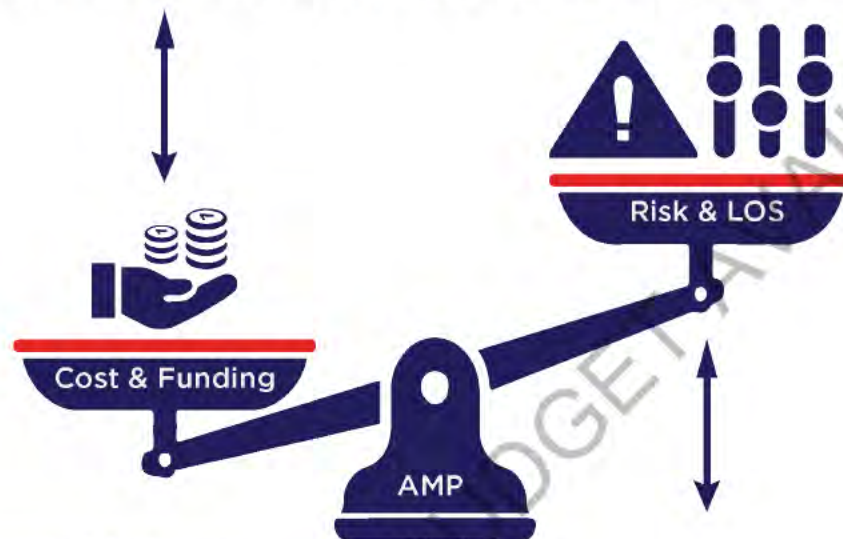


Figure 17 Asset management balancing concept

With a varied asset portfolio within the property activity, it requires a whole of life approach to their management. There is a common approach to the operation, renewal, creation, and disposal strategy / plan for each asset group. This includes Planning, Acquisition, Operate, Maintenance and Disposal as shown in the figure below.

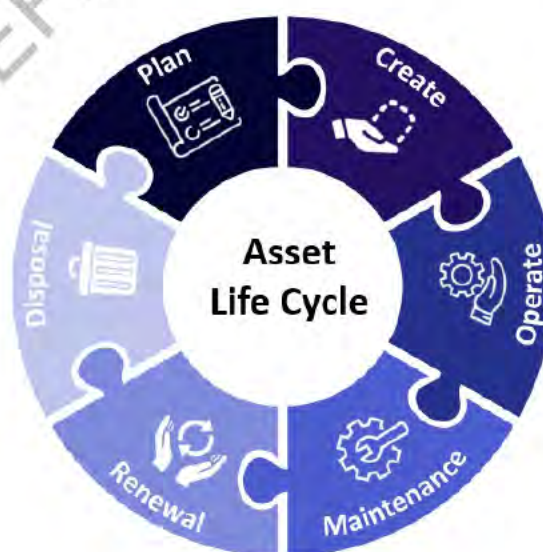


Figure 18 Asset lifecycle elements

5.1.2. Section Structure

This section has been structured with common sections upfront followed by separate lifecycle management plans for each asset group. The lifecycle management plans outline the operational and maintenance activities, renewal and creation plans for each asset class. Current asset state including asset information, performance and condition is detailed in Section 2.

A lifecycle management plan has been developed for fire stations only as this asset class is higher priority. It is also due to the limited data and knowledge with the other property asset classes. It is intended that lifecycle management plans will be developed for the other property asset classes as part of the discovery phase and will inform future AMPs.

5.1.3. Strategic Approach to Prioritisation Using Multi-Criteria Analysis

To support robust, transparent, and evidence-based investment decisions across the property portfolio, Fire and Emergency NZ will refresh and enhance its existing multi-criteria prioritisation tool. This strategic update will ensure the tool remains fit for purpose and aligned with evolving organisational needs

The refreshed tool will:

- Reflect updated asset data and performance insights.
- Incorporate lessons learned from previous prioritisation cycles.
- Align with Fire and Emergency's strategic priorities, including safety, resilience, and service delivery.

Strategic Objectives:

- Improve decision-making consistency across asset groups and regions.
- Enable long-term planning by identifying and ranking investment needs over a 10-year horizon.
- Support collaboration between Property and Service Delivery teams to ensure operational needs are embedded in prioritisation.

Key Enhancements:

- Updated criteria and weightings to reflect current asset challenges (e.g. seismic risk, functionality, compliance).
- Integration with lifecycle planning and budget-setting processes.
- Scalability to include other property asset classes as data confidence improves.

Next Steps:

- Undertake a review of the current prioritisation framework.
- Engage stakeholders to validate criteria and scoring methodology.
- Embed the refreshed tool into annual planning and capital programme development.



Figure 19 Property decision making practices – current and proposed

5.1.4. Investment Decision Making Process

Ten-year operational and capital programmes have been developed for each property portfolio, informed by the latest asset condition data, legislative and regulatory requirements, and evolving user needs. These programmes provide a forward-looking view of investment needs and service delivery priorities across the asset base. The programmes were then prioritised based on:

- Asset criticality – using three level asset criticality rating which is consistent with the industry – Life Critical, Mission Critical, Mission Enhancement (refer to Section 2.1.2 for description).
- AMP priority – using the four levels – Meet HSS (Health, Safety and Security), MVP (Minimum Viable Product), Meet KPIs, Grow / Increase (refer to description below). New initiatives and capability projects are unfunded and assessed on a case by cases basis.

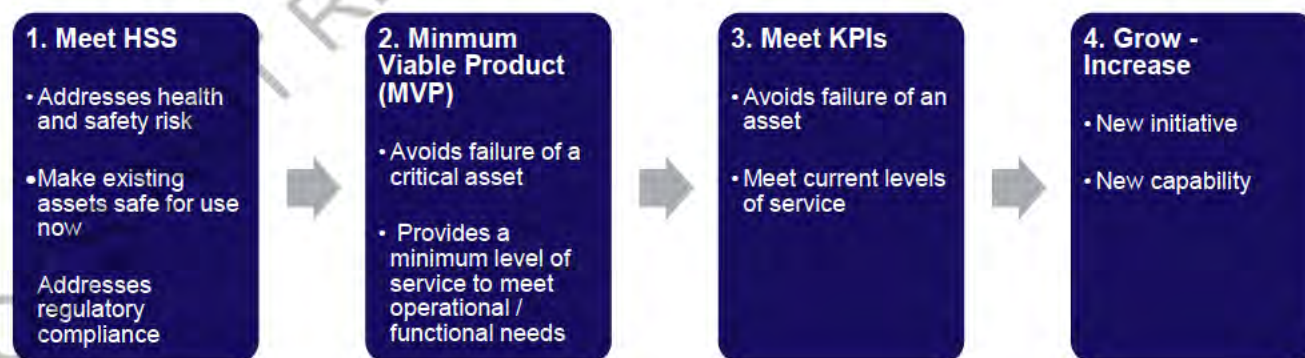


Figure 20 AMP priority – property

New initiatives and capability-building projects are unfunded at the outset and are assessed on a case-by-case basis, considering strategic alignment, value for money, and available funding pathways.

5.2. Property Facilities and Lifecycle Management Plan

The Facilities Management (FM) strategy supports the long-term sustainability and performance of our property assets. It aligns with our broader Asset Management objectives by ensuring that assets are maintained effectively, renewed proactively, and replaced strategically. This approach maximises asset lifespan, minimises lifecycle costs, and supports service delivery continuity.

The strategic objectives of this approach are:

- Maintain asset condition to meet operational requirements and safety standards.
- Increase investment in renewals/ replacements to reduce reactive maintenance and extend asset life.
- Ensure assets reach their full design life before requiring major rebuilds or replacements
- Improve data-driven decision-making through enhanced asset condition monitoring and lifecycle planning.

The facilities and lifecycle management plan are summarised in the table below:

Table 22 Facilities and Lifecycle Management strategies

Strategy	Description
Planned and Preventative Maintenance Strategy	Planned and preventative maintenance (PPM) is a cornerstone of our Facilities Management Strategy. By systematically maintaining assets before failure occurs, we reduce the frequency and severity of reactive maintenance, lower operational risk, and extend asset life. This approach ensures the portfolio stays safe, functional, and cost-effective over the long term. • Risk Reduction: PPM identifies and addresses issues before they escalate into failures, reducing safety risks and service disruptions. • Cost Control: Reactive maintenance is typically 2–5 times more expensive than planned interventions due to emergency callouts, downtime, and flow-on damage. • Asset Longevity: Regular servicing and upkeep slow the rate of deterioration, helping assets reach their full design life. • Operational Efficiency: Planned works can be scheduled during low-impact periods, minimising disruption to users and services. By investing in planned and preventative maintenance, we shift from a reactive to a proactive asset management model. This reduces risk, improves reliability, and ensures that assets stay in serviceable condition throughout their intended lifespan. Over time, this strategy delivers significant cost savings and enhances the resilience of our property portfolio.
Renewal Strategy	A core component of our Facilities Management Strategy is the deliberate increase in funding and activity around asset renewals. This shift is based on the principle that prompt renewal of key components can significantly extend the overall lifespan of an asset, often by decades, without the need for full-scale rebuilds. • Prevent Premature Failure: Many assets fail not because of structural issues, but due to the degradation of critical subsystems. Renewing these systems at the right time prevents cascading failures. • Cost Efficiency: Renewals are typically far less expensive than full replacements or rebuilds. For example, replacing a roof or HVAC system may cost 10–20% of a full building replacement, yet can extend the building's life by 15–25 years. • Service Continuity: Proactive renewals reduce the risk of disruptive failures, ensuring facilities stay operational and safe.

Strategy	Description
	Deferred Rebuilds: By maintaining core infrastructure and renewing aging components, we defer the need for capital-intensive rebuilds, freeing up budget for other priorities. By increasing our level of spending on renewals, we are investing in the longevity and reliability of our assets. This approach ensures that buildings and infrastructure reach their full usable life, supports sustainable asset management, and delivers better value for money over time.
Leasing Strategy	As part of our evolving property strategy, we will always consider leasing land as a practical alternative to outright purchase. This approach introduces greater flexibility in asset planning, reduces upfront capital expenditure, and allows us to respond more dynamically to changing service needs and growth patterns. - Capital Efficiency: Leasing reduces the need for large upfront capital investment, freeing up funds for asset renewals, upgrades, or other investment. - Flexibility: Leased land allows for shorter-term or transitional facilities, ideal for responding to population shifts, temporary service needs, or pilot programmes. - Risk Management: Leasing can mitigate long-term risk in areas where future demand, environmental conditions, or strategic priorities are uncertain. - Speed to Market: Leased sites can often be occupied or developed more quickly than purchased land, especially where acquisition processes are complex or contested. Leasing land will not replace purchasing as our preferred methodology of securing land, but it will become a strategic tool in our property planning toolkit. By applying a balanced approach where we choose to lease where it delivers better value, flexibility, or responsiveness, we can optimise our property portfolio and ensure our investments are aligned with long-term service outcomes.
Asset Creation and Rebuild Strategy	While maintenance and renewal are typically the preferred approaches for extending asset life and managing costs, there are specific scenarios where rebuilding an asset becomes the most practical and strategic option. Rebuilds are considered when the existing asset no longer meets operational, safety, or strategic requirements, and when continued investment in maintenance or renewal would not deliver sufficient value. Key scenarios for rebuild consideration: - End-of-Life with Diminishing Returns: The asset has reached the end of its useful life, and further maintenance or renewal would be uneconomical or ineffective. - Non-Compliance with Updated Standards: The asset cannot be feasibly upgraded to meet current building codes, accessibility standards, or health and safety regulations. Rebuilding ensures compliance and reduces liability. - Misalignment with Service Needs: The asset's layout, capacity, or functionality no longer supports operational requirements. - Strategic Location or Portfolio Optimisation: The asset is in a high-value or strategically important location where a rebuild can unlock greater value such as co-location with other emergency services.

Strategy	Description
	5. Disaster or Major Damage: The asset has suffered considerable damage (e.g., fire, flood, earthquake) and restoration is not practical. Rebuilding ensures safety and service continuity. As part of our long-term property strategy, we are committed to ensuring that all new asset developments and major rebuild are aligned with refreshed design guidelines. These guidelines will reflect modern standards for functionality, sustainability, accessibility, and operational efficiency, ensuring that our built environment supports service delivery. - Consistency Across the Portfolio: Standardised design principles ensure a consistent user experience, simplify maintenance, and ongoing functionality. - Futureproofing: Incorporating flexibility, modularity, and technology-readiness into design helps assets adapt to changing needs over time. - Sustainability and Efficiency: Updated guidelines will embed energy efficiency, low-carbon materials, and climate resilience into all new builds and rebuilds. - Cost and Lifecycle Optimization: Design standards will promote efficient layouts, durable materials, and maintainable systems that reduce total cost of ownership. By aligning new asset creation and rebuilds with refreshed design guidelines, we ensure that our property investments are fit for purpose, future-ready, and cost-effective. This strategic approach supports consistent service delivery, enhances user experience, and strengthens the long-term performance of our asset base.
Disposal Strategy	Disposing of property assets is a critical part of our asset lifecycle strategy. While the focus is often on maintaining, renewing, or rebuilding assets, there are scenarios where disposal is the most prudent and strategic option. Disposals help optimize the portfolio, reduce holding costs, and redirect resources to higher-value assets that better support service delivery. - Portfolio Optimisation: Removing underutilised or obsolete assets. - Financial Efficiency: Disposals eliminate ongoing maintenance, compliance, and insurance costs, and may generate capital for reinvestment. - Strategic Alignment: Assets that no longer align with service needs, location strategy, or long-term planning can be divested to support more relevant investments. - Risk Reduction: Disposing of assets in poor condition or with high liability risk reduces exposure and frees up management capacity. Strategic disposals allow us to streamline our property portfolio, reduce costs, and focus investment on assets that deliver the greatest value. This ensures our property footprint stays aligned with service needs, financial sustainability, and long-term planning objectives.

6. Risk Management

6.1. Risk Management Approach

Fire and Emergency's risk management framework aligns with ISO 31000:2018 Risk management – Guidelines. To support our risk management approach, we use the COSO Framework, written by the Committee of Sponsoring Organisations of the Treadway Commission (COSO). This framework sets out five components of a strong internal control system that is integrated into business processes. This is important to risk management as an effective system of internal controls reduces the risk of not achieving objectives to an acceptable level.

Fire and Emergency also use alongside risk (and assurance) the (Four) Lines of Defence model. This looks at the various levels of controls and assurance we have across the organisation and how comfortable we are based on these. Our risk framework consists of three broad levels as shown below.



Figure 21 Fire & Emergency risk levels

A further explanation of our risk levels is detailed below:

- **Strategic risks** – Risks that affect our organisational strategy and ability to operate into the future.
- **Enterprise risks** – Risks that affect the achievement of cross-organisational corporate objectives.
- **Operational risks** – Risks that affect day-to-day operations.
- **Portfolio / project risks** – Risks that affect our programmes, projects and are a subset of our operational risks.
- **Safety, health, and wellbeing risks** – A subset of operational risks, including the critical risks identified.

6.2. Enterprise Risk Placemat

Enterprise risks are risks that affect the achievement of cross organisational objectives. Fire and Emergency manage these risks through Enterprise Risk Placemats, using it as a tool to understand the status of a specific enterprise risk. Sustainable Assets was identified as an enterprise risk that affects and is owned by Property. The risk is described as:

The risk our property assets are not fit for purpose or being adequately and sustainably managed and maintained to meet our needs and support effective and efficient service delivery.

The Sustainable Assets Enterprise Risk Placemat identifies what is included in the risk (risk taxonomy), the drivers of these risks, and the consequences. These are summarised in the table below:

Risk Taxonomy	Risk Drivers	Risk Consequences
Renewal, Maintenance, and Repair Costs	Aging asset portfolio, deterioration, unexpected damage	Increased operational costs, works being delayed, asset failures
Compliance and Legislative Requirements	Changes in regulatory requirements	Fines, reputational damage, operational disruptions
Operational Requirements	Changing operational requirements	Assets not meeting needs of users, operational disruption
Environmental Changes	Natural disasters and environmental hazards	Property damage, health and safety risks, costly remediation
Strategic Direction and Prioritisation	Changes in strategic direction and scope	Prioritisation issues, inconsistent approach/ outcomes
Asset Management Practices	Inadequate asset and condition data	Prioritisation issues, asset failures, increased costs

Table 23 Sustainable Assets Enterprise Risk Placemat

6.3. Mitigations and Effectiveness

The Placemat also focuses on monitoring the current mitigations and their effectiveness. The focus is on monitoring the current mitigations and their effectiveness. The mitigation activities are summarised in the table below:

Mitigation/ Control Type	Mitigation Activity	Effectiveness
People / Resourcing	Establishment of Asset and Strategic Planning Function within Directorate	Working Effectively
	Safeguard future capability and resilience of Property Directorate	Not yet started
Process	Improved capital delivery programme cadence	Working – requires improvements
	Centralised approach to managing property compliance	Working – requires improvements
	Consistent Facilities Management Approach	Working – requires improvements
	Prioritisation of portfolio for capital investment	Working – requires improvements

Financial	Realignment of National Programme Budget to key programmes of work to ensure budget allocation	Working Effectively
	Three-year rolling capital budget approaching implemented	Working – requires improvements
Policies / Frameworks	Asset Management Roadmap established	Working Effectively
	Design Guidelines in place for stations and minimum H&S standards	Working – requires improvements
Technology	Contractor management/ induction system in place	Not yet started
	Asset Management Information System (AMIS) in place	Working – requires improvements

Table 24 Sustainable Assets Enterprise Risk Placemat – Q4 2024/25

6.4. Property Operational Risk Register

Fire and Emergency New Zealand has developed a dedicated operational risk register for its property portfolio as part of a broader initiative to enhance risk management across the organisation. This register identifies and assesses risks that could affect the day-to-day operation and integrity of property assets.

The initial assessment found 19 distinct risk events. The focus of the register is on implementing and monitoring mitigation strategies – both current and proposed – to reduce these risks to acceptable residual levels. This proactive approach ensures that property-related risks are systematically managed and aligned with Fire and Emergency's broader risk governance framework.

6.5. Strategic Challenges Risk Table

The strategic challenges identified in managing Fire and Emergency New Zealand's property portfolio represent key areas of risk that could affect asset performance, compliance, and service delivery. These challenges have been translated into a formal risk framework to support management and decision-making.

The table below outlines the associated risks:

Challenge Area	Description	Likelihood	Consequence	Mitigation Actions	Residual Risk
Staff / Resourcing	Limited resourcing within the Property team.	High	Medium	Review and restructure Property Team; utilise EPMO resourcing.	Medium
Seismic Resilience	Earthquake prone buildings require prioritised strengthening.	High	High	Implement seismic prioritisation tool and strengthening programme.	Medium
Asbestos Management	Presence of ACM across multiple sites	Medium	High	Develop asbestos register and	Medium

	requiring ongoing risk management.			implement management plans.	
Vehicle Fume Extraction	Inadequate fume management systems in appliance bays pose health risks.	Medium	Medium	Roll out exhaust fume management programme.	Low
BWOF Compliance	Increasing faults found during inspections.	High	Medium	Centralise compliance management and update policies.	Medium
Leasing Costs	Rising lease costs being experienced.	High	Medium	Review leasing strategy and renegotiate terms.	Medium
Contractor Management	Inconsistent and paper-based contractor induction and processes.	Medium	Medium	Implement national contractor management system.	Low
Asset Data Quality	Fragmented and incomplete asset data sets limit confidence in decision-making.	High	High	Cleanse data and implement centralised AMIS.	Medium
AM Systems	Absence of property Asset Management Information System.	High	High	Develop business case and implement AMIS.	Medium

Table 25 Risks of Strategic Challenges

6.6. Building Resilience

Resilience refers to the ability of an organisation to recover quickly from adverse events and adapt to changes in its operating environment. This includes responding to natural disasters, population growth, evolving service demands, and technological advancements. The Property Resilience Policy (2020) guides how buildings are planned, designed, constructed, and renovated to ensure they are safe, fit for purpose, and sustainable.

All Fire and Emergency buildings with designated post-disaster functions such as fire stations are classified as Importance Level 4 (IL4) under the Building Code. This classification ensures they are designed to remain operational after major events. Key asset risks addressed through resilience planning include:

- Asbestos.
- Seismic.
- Building condition.
- Functional suitability to meet changing service demands.
- Climate change impacts.

A prioritised Seismic Improvement Programme is to be approved by the Executive Leadership Team (ELT) to address earthquake-prone buildings and enhance the resilience of critical infrastructure.

6.7. Emergency Risk Planning

Emergency Risk Planning focuses on ensuring that Fire and Emergency can continue delivering essential services following a significant event that compromises property functionality.

Each fire station has a Business Continuity Plan (BCP) in place. These plans are designed to maintain operational readiness and service delivery in the aftermath of emergencies such as earthquakes, floods, or other disasters. The BCPs address:

- Temporary relocation or alternative service delivery arrangements.
- Communication protocols.
- Access to critical equipment and infrastructure.
- Coordination with regional and national emergency management agencies.

By embedding BCPs at the station level, Fire and Emergency ensures that its frontline facilities can respond effectively during crises, safeguarding both personnel and the communities they serve.

7. Infrastructure Sustainability

7.1. Commitment to Sustainability

Fire and Emergency New Zealand is committed to reducing its environmental footprint and enhancing the sustainability of its property portfolio in alignment with national climate goals and its own strategic priorities. The following outcomes guide property-related sustainability efforts:

- **Energy Efficiency:** FENZ aims to reduce energy consumption across its stations, offices, and residential properties. This is supported by initiatives such as LED lighting upgrades, solar hot water systems, and improved HVAC systems.
- **Decarbonisation of Heating Systems:** The organisation is actively replacing gas boilers with low-emission alternatives, contributing to reduced greenhouse gas emissions, and aligning with the Zero Carbon Act and the Carbon Neutral Government Programme.
- **Sustainable Design and Construction:** All new builds over \$9 million are required to meet Green Star 5 Star accreditation, ensuring high environmental performance. Design guidelines are being updated to embed sustainability features into station layouts and materials selection.
- **Water Conservation and Compliance:** Rainwater harvesting systems are being trialled, and standalone water systems are being upgraded to meet Taumata Arowai's drinking water standards, ensuring safe and sustainable water use.
- **Emission Monitoring and Reporting:** FENZ tracks both mandatory and total emissions, with property contributing significantly through energy use and construction activities. Annual emissions reporting is being developed to support transparency and continuous improvement.
- **Support for EV Infrastructure:** Property is enabling the transition to electric vehicles by developing EV charging infrastructure for the white fleet, supporting broader fleet decarbonisation goals.
- **Resilience to Climate Risk:** Property assets are being assessed and upgraded to withstand climate-related hazards such as flooding and seismic events, ensuring continuity of service and alignment with the National Adaptation Plan.

These outcomes directly support FENZ's strategic priorities of building a resilient business, delivering for Aotearoa, and developing its people, as outlined in the Statement of Intent 2023–2027. Sustainability is embedded not only as a compliance requirement but as a core principle of responsible asset stewardship.

7.2. Government Mandates

The Government is driving notable change to become more sustainable and build a zero carbon New Zealand. The Carbon Neutral Programme was announced with the climate emergency declaration in 2020. The Carbon Neutral Programme has been set up to accelerate the reduction of emissions within the public sector. To achieve emission reductions in line with the 1.5°C pathway, total gross emissions need to decrease by 21% by 2025 and 42% by 2030, compared to our baseline year (2018/19).

The Government also requires any new builds over \$9 million to be Green Star 5 Star accredited (from 1 April 2023).

7.3. Current State

Emissions are reported in two forms:

- **Mandatory sources** - covers items such as fuel, electricity, gas, flights, diesel that Fire & Emergency consumes.
- **Total sources** - includes our supply chain emissions to get plant / products / materials to us.

From a property perspective at a mandatory emissions source, we can influence electricity, gas, refrigerants, and some water consumption. This equates to about 17% of Fire & Emergency's emissions as shown in the figure below. The identified initiatives noted in Section 7.1 will help reduce our emissions.

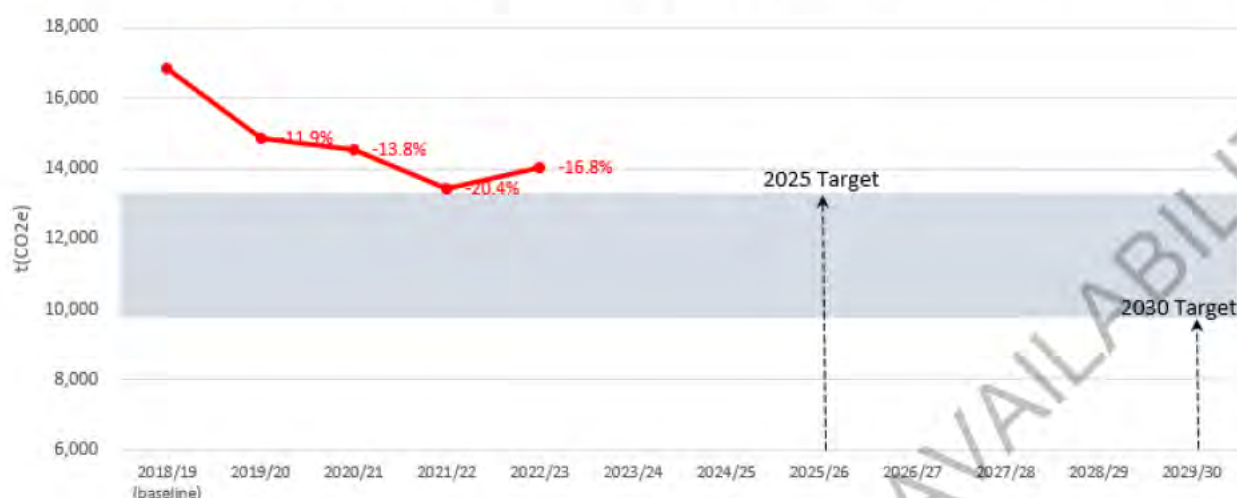


Figure 22 Mandatory emission sources. Source: Sustainability teams' emissions spreadsheet

At a Total emissions source, property accounts for 28% of Fire and Emergency's emissions and this is through the construction activity, as shown in the figure below.

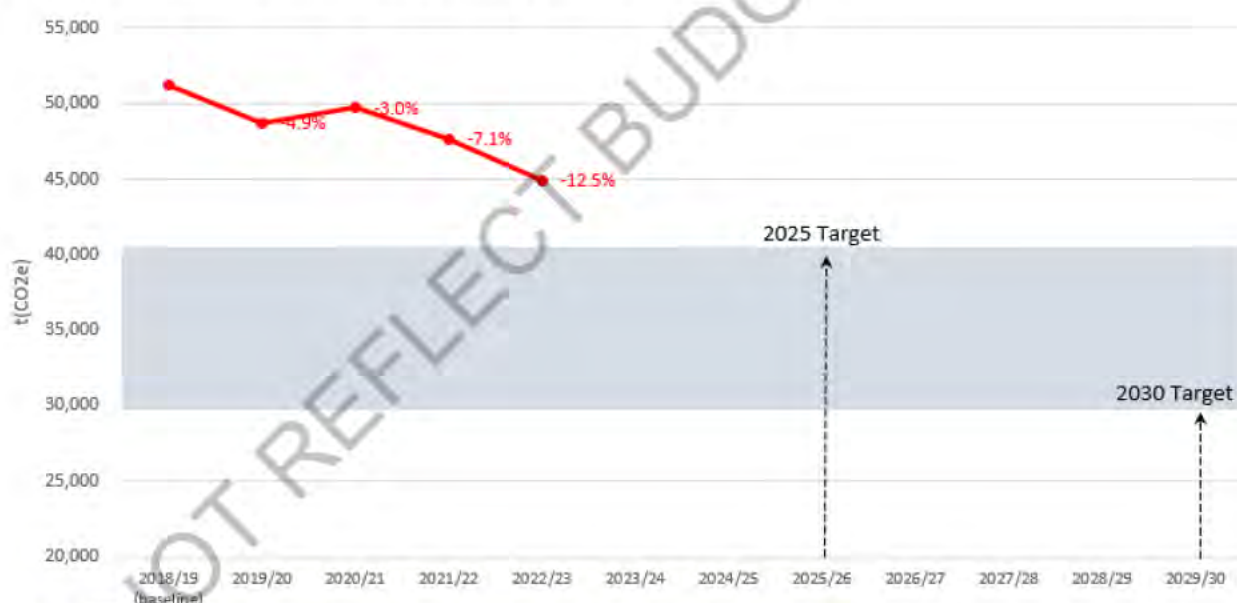


Figure 23 Total emission sources. Source: Sustainability teams' emissions spreadsheet

Fire & Emergency's main sources of energy come from electricity, reticulated gas, LPG, and propane. We are in the process of trying to reduce the reliance on gas and move to being more efficient appliances with our electricity consumption. The table below highlights the costs by source. Fire & Emergency is spending on average \$2.9 million per year on electricity and gas to light and heat our fire stations.

Type	2018/19	2019/20	2020/21	2022/23
Electricity	\$2,685,576	\$2,719,174	\$2,716,212	\$2,763,417
Reticulated Gas	\$90,454	\$82,062	\$86,660	\$81,104
LPG	\$36,397	\$19,340	\$33,436	\$32,873
Total*	\$2,812,426	\$2,820,576	\$2,836,308	\$2,877,394

Table 26 Property energy costs Source: Energy usage spreadsheet 1/3/24 *Excludes propane cost

Property understands the usage and costs at a high level and can monitor annual trends as illustrated in the graph below. The next step is to gain a better understanding at regional and site levels with more real time data.

With the identified initiatives (items listed in Section 7.1), we wish to make our fire stations as energy efficient as practically possible. We wish to target the Energy Usage Intensity (EUI) for our fire stations to be less than \$14/m²/year. However, to achieve this we first need to start capturing data consistently and accurately across the portfolio to be able report and action high usage intensive stations. This also applies to our offices and residential housing.



Figure 24 Electricity consumption and costs trends. Source: Energy usage spreadsheet (1 March 2024)

7.4. Management Response to Climate Uncertainty

Fire and Emergency recognise climate change is a risk. It poses significant risks to the community through environmental impacts (climatic, geographic, public health, social, economic, and financial); and significant risk through transition challenges for Fire and Emergency (compliance, governance, legal, financial and policy).

The overarching management response to the climate uncertainty and meeting the Government's mandates are defined in the Climate Response Strategy (2022 to 2030). The strategy outlines how we will focus our emissions reduction efforts on the following key areas:

- Reducing our fleet's diesel consumption.
- Increasing the energy efficiency of our buildings.
- Promoting efficient travel.
- Exploring options to reduce training-related travel.
- Increasing awareness and promoting behaviour change.
- Establishing routine emissions monitoring and reporting.

The management response to the climate uncertainty and meeting the Government's mandates for the property portfolio are outlined below:

- **Baseline Report** – Development of annual emissions reports against baseline.
- **Fleet emissions** – Support fleet strategy by providing EV charging infrastructure.
- **Develop Sustainability LOS measures** – start to measure and report on power consumption, water conservation projects, decarbonisation.
- **External funding:**

- Continue to apply for EECA funding.
 - Roll out its Energy Sustainability Programme including, LED system upgrade, replace gas boilers with more efficient models.
- **Policy** – Implemented a design policy with sustainable elements for the built environment to guide development so meets best environmental practises.

Future sustainable practices for offices that Fire & Emergency may consider are:

- Setting Occupancy Density Ratio:
- Net office space / headcount.
- Good practice is 12-16m²/headcount.
- Workstation Ratio:
 - Number of workstations / head count.
- Good practice is 7:10, traditional setup 10:10.

DOES NOT REFLECT BUDGET AVAILABILITY

8. Financial Summary

8.1. Financial Overview

Investment for the first 3 years of the AMP has been matched to funding availability, based on the hierarchy of asset needs. The total amount of expenditure for operational and capital for the property portfolio over the next ten years will depend on mid-term investment and funding options.

How quickly funding levels are lifted to meet the desired state needs to be weighed up and aligned against Fire and Emergency strategic objectives and available funding.

Description	Projected Expenditure				
	Year 1	Year 2	Year 3	Year 4-10	Ten-year
	2025/26	2026/27	2027/28	2028 2034	Total
Operational Investment Levels					
Meet Health, Safety & Security	\$12,331,461	\$12,331,461	\$12,331,461	\$86,320,227	\$123,314,610
Minimum Viable Product (MVP)	\$4,958,313	\$4,958,313	\$4,958,313	\$42,476,504	\$57,351,444
Meet KPIs				\$23,951,540	\$23,951,540
Total OPEX	\$17,289,774	\$17,289,774	\$17,289,774	\$152,748,271	\$204,617,594
Capital Investment Levels					
Meet Health, Safety & Security	\$17,642,243	\$17,642,243	\$17,642,243	\$156,037,364	\$208,964,093
Minimum Viable Product (MVP)	\$17,757,757	\$20,857,757	\$31,657,757	\$371,377,636	\$441,650,907
Meet KPIs				\$66,640,000	\$66,640,000
Total CAPEX	\$35,400,000	\$38,500,000	\$49,300,000	\$594,055,000	\$717,255,000

Table 28 Financial summary – uninflated, cumulative. Source: FENZ Property AMP Reforecast v5 - 14 May 2025

Assumptions in the budget forecasts are:

- All options assume 2% annual inflation and stable station numbers.
- Investment Levels range from maintaining compliance to achieving full-service performance.
- No allowance is made for major unforeseen events (e.g. large-scale earthquakes).
- Continuous condition assessments are preferred over periodic portfolio-wide surveys.

8.2. Expenditure Categories

Fire and Emergency classify its property-related spending into two main categories: operating expenditure (OPEX) and capital expenditure (CAPEX). These categories help ensure clarity in financial planning, reporting, and decision-making.

Operating Expenditure (OPEX)

Operating expenditure covers the day-to-day costs required to keep property assets functioning and compliant. These are not capitalised and are essential for maintaining service delivery.

- Direct Costs: Include professional services, lease payments, maintenance and operations, energy usage, compliance activities, and utilities.
- Indirect Costs: Include depreciation and rates.

Capital Expenditure (CAPEX)

Capital expenditure is used to renew or create assets, extending their useful life or enhancing their service capacity. FENZ categorises CAPEX into two subtypes:

1. Renewals: Investments that restore the condition or extend the life of existing assets without increasing their service level. Examples include replacing deteriorated components or refurbishing buildings to maintain functionality.
2. New Capital Works: Improve service levels (e.g. upgrading facilities), or support growth.

8.3. CAPEX–OPEX Linkage

Capital expenditure (CAPEX) and operational (OPEX) expenditure are closely interrelated in the management of Fire and Emergency New Zealand's property portfolio. Strategic CAPEX investments such as asset renewals, seismic strengthening, and infrastructure upgrades can significantly influence ongoing OPEX requirements.

Investing in modern, energy-efficient systems utility costs and maintenance frequency, thereby lowering OPEX over time. Similarly, replacing aging components and addressing compliance risks reduces the need for reactive maintenance and mitigates the risk of costly emergency repairs or regulatory penalties.

Conversely, deferring CAPEX can lead to escalating OPEX, as older assets require more frequent servicing, are less energy efficient, and may fail to meet evolving health, safety, and compliance standards. This can result in higher lifecycle costs and reduced asset reliability.

Therefore, CAPEX decisions will be made with a clear understanding of their long-term impact on operational budgets. A balanced investment strategy ensures that property assets remain safe, functional, and cost-effective throughout their lifecycle.

8.4. Operational Expenditure Summary

Operational expenditure covers the essential day-to-day costs required to maintain property assets and ensure service continuity. This includes planned and reactive maintenance, compliance activities, and utility costs. Refer to [Appendix 10.7](#) for the detailed financial tables.

8.5. Capex Expenditure Summary

The capital investment programme outlined in this section reflects prioritised funding across health and safety, minimum viable product, and strategic performance categories. Refer to [Appendix 10.7](#) for the detailed financial tables.

8.6. Budget Prioritisation

The budget prioritisation approach was structured around a clear hierarchy of asset needs, ensuring that the most critical issues were addressed first. Budget was aligned and prioritised to:

1. Health, Safety & Security (HSS) – This category includes investments that are mandatory and urgent, focusing on compliance and immediate risk mitigation. These are:
 - Asbestos removal and management.

- Vehicle exhaust fume extraction systems.
 - Building Warrant of Fitness (BWOF) compliance.
 - Basic ablution and decontamination facilities.
2. Minimum Viable Product (MVP) – This category includes investments that ensure basic functionality and operational continuity. These are:
- Seismic strengthening for earthquake-prone buildings.
 - Essential upgrades to meet minimum service levels.
 - Repairs or replacements to avoid failure of critical systems.
 - Improvements that support operations but are not life-threatening or non-compliant.
3. Meet KPIs – This category includes investments aimed at enhancing performance and meeting strategic targets. These are:
- Upgrades to meet defined service levels (e.g., energy efficiency, sustainability).
 - Improvements aligned with long-term strategic goals.
 - Enhancements that improve user experience, asset longevity, and resilience.

While the budget prioritisation framework enables a structured approach to allocating resources across Health, Safety & Security (HSS), Minimum Viable Product (MVP), and the Meets KPI investment levels, there are risks associated with maintaining lower investment levels. These include:

- **Increased Maintenance Costs:** Deferring capital investment often leads to higher reactive maintenance and operational expenditure, particularly for aging assets in poor condition.
- **Non-Compliance Risks:** Lower investment may result in failure to meet statutory obligations such as Building Warrant of Fitness (BWOF), seismic resilience, and asbestos management, exposing Fire and Emergency to legal, reputational, and operational risks.
- **Reduced Asset Life and Performance:** Without timely renewal, assets may deteriorate faster, reducing their effective lifespan and increasing lifecycle costs.
- **Inability to Meet Strategic Objectives:** Lower investment levels may hinder progress toward sustainability targets, inclusive design standards, and resilience goals.
- **Equity and Accessibility Gaps:** Delayed upgrades may perpetuate disparities in facility quality across regions, affecting staff wellbeing and community trust.

These risks reinforce the importance of aligning investment decisions with long-term performance objectives and strategic priorities. A balanced approach is needed to ensure financial sustainability while safeguarding service delivery and compliance. Appendix 10.7.4 shows the ongoing gaps between these investment levels to the confirmed budgets.

8.7. Asset Valuation Summary

Asset valuations play a critical role in Fire and Emergency New Zealand's financial planning and investment decision-making processes. The valuation of property assets such as land, buildings, and improvements provide a baseline for understanding the financial worth of the portfolio and informs depreciation schedules, insurance coverage, and long-term capital planning.

Accurate valuations help ensure that funding allocations are proportionate to asset value and risk exposure, supporting prioritised investment in high-value or high-risk assets. They also underpin Treasury reporting and compliance with accounting standards, enabling transparent disclosure of asset performance and stewardship. As asset data quality improves, future valuations will provide more granular insights, allowing for better forecasting of lifecycle costs and more targeted renewal strategies.

It is recognised that asset value will change once there is a cleansed data set and accuracy of fire stations. Future valuations should also provide annual depreciation numbers as good practice; however, value of Fire & Emergency property assets (as of 30 June 2023) is shown in the following table:

Components	Value
Land	\$462,772,700
Improvements	\$583,712,200
Aggregate of Fair Values	\$1,046,743,900

Table 29 Asset valuation – property. Source: Telfer Young Asset Valuation Report (on 30 June 2023)

8.8. Funding Strategy

Fire & Emergency's Accounting Policies are detailed in the 2022/23 Annual Report. There are various financial accounting policies and procedures including Asset Capitalisation Guideline and Capital Expenditure and Donated Assets Policy.

The following useful lives have been assumed as part of the current Accounting Policy:

- Buildings up to 70 years.
- Leasehold improvements up to 30 years.

The Fire Levy is the main source of revenue for the property portfolio which is managed corporately.

8.9. Financial Performance

Fire and Emergency New Zealand's financial performance in delivering property capital programmes is a key indicator of its ability to meet defined levels of service (LOS). Consistent delivery within planned budgets reflects effective stewardship of resources and supports the organisation's strategic objectives, particularly in maintaining safe, functional, and compliant facilities.

Achieving financial targets enables timely investment in critical infrastructure such as ablution upgrades, seismic strengthening, and fume extraction systems which directly contributes to meeting LOS benchmarks for safety, reliability, and operational readiness. Conversely, underperformance or delays in capital delivery can result in deferred renewals, increased reactive maintenance, and reduced compliance, all of which negatively impact service levels.

The alignment between financial performance and LOS is reinforced through the AMP prioritisation framework, which ensures that funding is directed toward the most critical needs. By maintaining disciplined financial management and aligning expenditure with asset condition and performance data, Fire and Emergency can continue to improve service delivery outcomes while managing cost and risk effectively.

The capital delivery performance for the last two financial years is shown in the figure below:

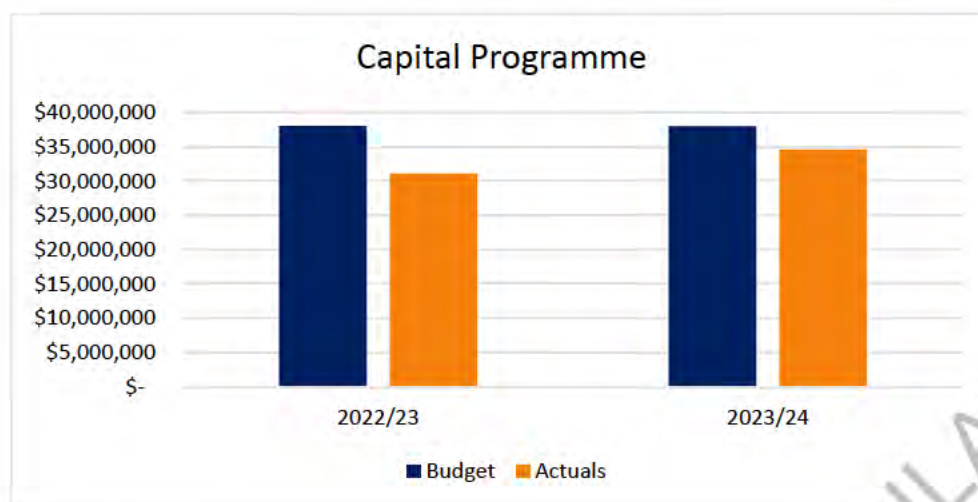


Figure 25 Capital performance

8.10. Assumptions and Confidence Levels

8.10.1. Financial Assumptions

The assumptions upon which the financial needs are based on the following:

- Forecasts are uninflated.
- Best information available recognising that the existing data sets need cleansing.
- Existing legislation and service levels.
- Capital forecasts are based on:
 - Draft 10 Year Property Budgets (October 2024)
 - Any potential property divestments are excluded.
- Opex forecasts are based on:
 - Building costs expectations (noting there are significant construction cost fluctuations)
 - Staff costs are included

8.10.2. Confidence of Financial Forecasts

Considering the assumptions made in deriving the future financial needs of the service, asset needs, and the historical levels of expenditure for the property portfolio, the reliability of the financial forecasts is assessed as follows:

Information type	Degree of confidence	Comments
Expenditure projections	Medium to low	- The operational projections are based on historical operational budgets, asset assessment, and condition surveys where this is available. - Renewals are based on preliminary analysis of completed assessments to date and average replacement costs where data was not readily available (i.e. derived costs). Further asset analysis is required to develop a risk-based renewal programme as identified in the Improvement Programme. - The projections are based on appropriate budgeting and approval processes and represents the existing available information. It is recognised that the existing data sets need cleansing.

Information type	Degree of confidence	Comments
Asset values	Medium to low	- Asset values are based on the asset valuation as of June 2023. These are revalued every three years. - The breakdown of the data set needs cleansing and actions to improve this are in the programme. This will provide better asset data as the basis for the valuation. - Annual depreciation needs to be determined with next valuation as good industry practice.
Depreciation	Medium to low	The assessment of useful lives and the calculation of depreciation expense are not undertaken on an annual basis as good practice.
Funding sources	Medium to high	Capital and operational expenditure will be funded by the Fire Levy.

Table30 Summary of confidence in financial forecasts

9. AM Practices

9.1. AM Commitment

Fire and Emergency is continuing to improve practices, processes, and tools. This is essential to ensure the asset system and services are effectively managed. Fire & Emergency is committed to appropriate AM practices. This practice is being developed to align with the principles of ISO 55000 and being consistent with IIMM / Āpōpō. Fire and Emergency is committed to delivering the most appropriate levels of service balanced with affordability and good industry practice.

9.2. AM Policy

The AM Policy (2018) sets out the expected behaviours and rules for managing Fire & Emergency's assets. Apply these when making investment decisions around asset:

- Planning.
- Acquisition and financing.
- Maintenance and renewal.
- Replacement and disposal.

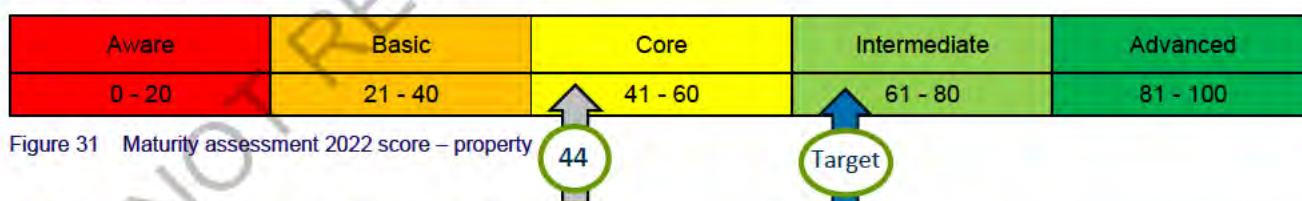
The aim of this policy is to:

- Allows Fire & Emergency to manage assets, so we can deliver our strategic objectives.
- Provides an overarching framework for our AM system (also known as AM framework).
- Supports how we develop and implement our Strategic Asset Management Plan (SAMP) and sets our objectives for managing assets.

The 2018 AM Policy is overdue for update with the normal review cycle.

9.3. AM Maturity

A maturity assessment was undertaken in 2022 to align with the 16 subject areas defined in the AM Maturity Assessment Model. The grading scale and score are illustrated in the figure below. The current property maturity scored 44 or at low end of core level.



9.4. Government's Expectations

The Cabinet Office Circular CO (23)9 sets out the Government's new requirements for improving investment decision-making and AM. The new requirements create some new obligations and opportunities for Departments and Entities. The new circular cuts down on aspects of the language around the system, and clarifies the expectations of key players, particularly the roles of Ministers, Chief Executives, and the Treasury on the quality of investment cases, and the prioritisation of investment choices.

A Chief Executive's Annual Attestation Statement is a mandatory requirement to the Treasury. For each element, Departments are required to state their achievement in terms of:

- Compliant.
- Non-compliant.

Fire and Emergency is not mandated to comply with CO (23)9 as a Crown Entity, although it is encouraged by Treasury. Fire and Emergency need to consider its preferred approach to CO (23)9 for disclosing AM practices. As a first step, the service critical asset performance measures to be disclosed in future Annual Reports will align with CO (23)9.

9.5. AM Practices

9.5.1. Data

Asset data is integral to how Fire and Emergency make decisions for maintenance, renewal programmes, and long-term investment planning. However, the current state of property asset data is fragmented, incomplete, and inconsistently maintained. This has resulted in varying levels of confidence across key data sets, including condition, functionality, compliance, and performance metrics.

The current prioritisation tool has enabled the various data sets to be summarised in one place. However, finding One Source of the Truth is at time difficult without good practices and consolidated data sets, stored in an AM system. As a result, various spreadsheets are utilised and not consistently nationally.

The below table provides an overview of this varying data confidence:

Table32 Data confidence – fire stations only

Asset group	Asset area / data set	Completeness	Accuracy	Confidence	Overall
 Station	BWOF	2	2	2	3
	Asbestos	3	3	3	
	Seismic	2	2	2	
	Electrical	2	2	2	
	Ablution	3	3	3	
	Condition	4	4	4	
	Structural (Masts/towers)	4	3	4	
	Utilisation	2	2	2	
	Functionality	3	3	3	
	Asset inventory	4	4	4	

Key

- Highly reliable (1): the data is accurate ($\pm 5\%$) and based on reliable documentation
- Reliable (2): data is based on some supporting documentation but is less certain ($\pm 15\%$)
- Uncertain (3): uncertain data, fair number of assumptions and local knowledge used to reach the conclusions ($\pm 30\%$)
- Very uncertain (4): very uncertain data where there is no formal documentation to base an assessment on ($\pm 40\%$)
- Unknown (5): no data

This limited data confidence directly impacts the accuracy of CAPEX budgets and OPEX forecasts in several ways:

CAPEX Forecasting Impacts:

- Renewal and upgrade projections are based on preliminary assessments and derived costs rather than verified asset-level data.

- Seismic strengthening and critical amenity upgrades may be under- or over-estimated due to gaps in structural and condition data.
- Prioritisation of capital works is constrained by incomplete asset performance insights, risking misallocation of funds.

OPEX Forecasting Impacts:

- Operational budgets rely heavily on historical expenditure patterns rather than predictive modelling informed by asset condition and usage.
- Maintenance schedules may not reflect actual asset needs, leading to reactive rather than planned interventions.
- Compliance-related costs (e.g., BWO, asbestos management) are difficult to forecast accurately without consolidated and current data.

To improve data confidence, Fire and Emergency must:

- Prioritise data cleansing and consolidation for fire stations and other asset classes.
- Transition to a centralised Asset Management Information System (AMIS) to establish a single source of truth.
- Embed continuous condition assessments to improve data accuracy and support proactive planning.
- Align financial forecasts with improved asset intelligence to enable evidence-based decision-making.

Improving data confidence is essential for ensuring that financial planning is robust, transparent, and aligned with Fire and Emergency's strategic objectives. Future AMPs will discover and cleanse the data sets for the other property asset classes as sound AM practices are bedded in, recognising this will take time.

9.5.2. Systems

Information systems are essential for storing and analysing asset information to make good AM decisions. The key AM information systems used for the property portfolio are summarised in the table below. It is recognised that the various data sets are not stored centrally or in a consistent manner. This is important so data can be accessed readily for decision making. This will be addressed as part of the discovery phase.

Table 33 Asset systems – property

System	Function / purpose	Status / enhancements
JDE	The financial system used throughout Fire & Emergency.	A new Financial Management Information System has been proposed and is being prioritised with other corporate initiatives.
Risk registers	Manage risks across the organisation at the three levels in corporate portal.	Implement and proactively monitor the property operational risk register.
SharePoint	Document management system used throughout Fire & Emergency.	It is not well used across the organisation as not easy to use or to pull data from.
Spreadsheet - leasing	Holds the general information on lease agreements.	None identified at this stage. Review as part of the wider AMIS scope.
Master spreadsheet	Holds property asset component and performance information including asbestos.	It is intended to move to an enterprise AMIS in the medium term. This will ensure there is a modern, fit for purpose system to hold and manage property asset data including the performance information.

System	Function / purpose	Status / enhancements
Asbestos Register (to be set up)	This is to record asbestos survey information.	An Asbestos Register will be developed in 2024/25, in accordance with HSWA (Asbestos) Regulations 2016.
Spreadsheets and reports – asset condition data	The rural condition asset data (2023) is held in separate inspection sheets and is not consolidated. The urban condition asset data collected with the 2012/23 survey (by Ignite) is in separate inspection sheets and is not consolidated.	The rural condition asset data sets need to be cleansed and consolidated so can be used for analysis and decision making.
Property Drives	BWOF and other compliance records including bay door inspections	Reasonable records are held regionally. It is unclear if this is undertaken consistently. It is intended for these compliance / inspection records to be held in a central location.
FAR (in JDE)	Fixed Asset Register.	No changes proposed at this stage.
GIS	Map location of assets with asset information in tables that links to the asset register in the financial system	No changes proposed at this stage.
Natural hazard mapping tool	Identifies natural hazards near fire stations such as flood prone areas and tsunamis. To help with decision making on existing stations and siting new stations.	Prototype developed by NIWA in March 2024 being tested before decision to implement further.

9.5.3. Processes

The AM processes for a consistent approach to the management of the property portfolio are below:

Table34 AM processes – property

Process area	Frequency	Purpose	Status / enhancement
Budgets	Annual	Sets the budgets aligned to the portfolio to manage the asset and services.	Working towards data driven, evidence-based budgets based on asset need.
Capital decision making	Annual	Identifies projects based on asset need and Service Delivery requirements and priorities.	Property AMP identifies projects based on asset needs over a 10-year period. Projects are prioritised through the tool incl. input from Service Delivery.
Risk management	Quarterly	Organisation-wide approach to ensure comprehensive risk management.	FENZ has launched a new risk management framework and placemats.

Process area	Frequency	Purpose	Status / enhancement
Asset valuation	3 yearly	Asset valuations are coordinated by FENZ Finance Team.	The property asset data set needs cleansing and actions to improve this are in the programme.
Seismic assessment	As set by legislation	Assessment of a building seismic performance.	None identified at this stage.
Asbestos re-inspections	3 yearly	Assess the state of asbestos containing material, type, and location, and documented in Asbestos Management Plans.	Developing a way forward to monitoring sites based on risk.
Asset condition data collection	Continuous	Asset data including inventory measure, material type and condition is collected to ensure completeness and accuracy for AM decision making.	Implement the proposed continuous condition assessment for all buildings.
BWOF	Yearly	A compliance requirement as set out in the Building Act.	BWOF certification is completed annually by external service providers.
Electrical testing	Yearly	A compliance requirement as set out in the NZ Standards.	None identified at this stage.
Bay door servicing	Continuous	To ensure critical building elements are fully functional.	Appliance bay doors are inspected annually, or twice annually, by external service providers.
Tower / mast certification	Continuous	Structural assessment to ensure functional and integrity for core purpose.	Assessments approach is inconsistent and ad hoc. More structured approach to be implemented.
Contract, project, and H&S management	Continuous	Sound processes established so contractors can deliver projects safely, on time and to budget and to specified quality.	There is a corporate initiative underway to improve internal capability in contract management / project management / health and safety management

9.5.4. People Capability

The Property Team currently has constrained staff / resourcing levels. This makes it difficult to manage the property portfolio effectively and efficiently. It is intended to lift the team's capacity and capability. The Property Team structure and capacity is under review and subject to approval of a separate business case.

9.6. Improvement Plan

9.6.1. High Priority Actions

The key high priority actions for improving the asset management practices for the property portfolio in the next three years are summarised in the following table. These are focused on:

- Setting a cohesive framework to drive asset management planning long term.
- Strengthening asset data quality and performance measurement systems.
- Embedding continuous condition assessments and risk-based planning.
- Aligning capital programmes with prioritisation outcomes.

Table 35 Key high priority actions – property

Asset Management Element	Proposed actions
Levels of Service and Performance Management	Finalise and implement a performance measurement system using AMP-defined service levels. Undertake the data cleansing for the identified service critical performance measures. The measurement system will be used for disclosing on the performance of service critical assets for Annual Report and AMP purposes.
Asset Management Information Systems	Transition to a centralised asset management information system to consolidate property asset data in conjunction with establishing framework for ensuring data accuracy is maintained.
Asset Performance and Condition	Develop and implement a risk-based asset condition survey strategy so the current state of critical buildings is understood.
Investment Prioritisation	Prioritise investment, including for seismic and critical amenity upgrades, across our property asset portfolio using a refreshed prioritisation framework which considers the organisation's future operating capability needs and user requirements.
Capital Works Planning	Use AMP and prioritisation outputs to drive capital planning. Align with multi-year delivery forecasts and early business case development to ensure timely and strategic investment. Integrate the refreshed prioritisation and scalable design guidelines to ensure consistent and targeted delivery.
Property Compliance	Develop and maintain Compliance Registers. Update and implement compliance policies to support safe and legally compliant facilities.

9.6.2. Improvement Monitoring

It is recognised that our AMP is a living document that needs to be kept current and relevant as priorities for Fire & Emergency may change. The regular review of the improvement programme is important for the asset portfolios as we wish to improve our AM practices to support Fire & Emergency strategic direction.

The following review activities will be undertaken.

Table36 Improvement monitoring

Frequency	Review Task	KPI	Action	Audience
Three yearly	AMP	100% Achievement	Formal adoption of the plan by the ELT and endorsement by the Board	ELT, the Board, The Treasury
Quarterly	Improvement plan	100% Achievement	Monitor and update the improvement plan list of tasks	Asset Managers
Annually	Monitoring and reporting	100% Achievement	KPIs identified in this table will be monitored and reported on annually.	DCE Organisational Strategy and Capability Development, Asset Managers

10. Appendices

10.1. Acronym List

Table37 Summary of acronyms

Acronym	Description	Acronym	Description
ACM	Asbestos Containing Material	O&M	Operations and Maintenance
AM	Asset Management	PTM	Pump Training Module
AMIS	Asset Management Information System	SAMP	Strategic Asset Management Plan
AMP	Activity / Asset Management Plan	SD	Service Delivery
AMS	Asset Management System	SOP	Standard Operating Procedure
BA	Breathing Apparatus	SHW	Safety, health, and wellbeing
BCP	Business Continuity Plan	USAR	New Zealand Urban Search and Rescue
BWOF	Building Warrant of Fitness		
EP	Earthquake prone		
ER	Earthquake risk		
EECA	Energy Efficiency and Conservation Authority		
ESIP	Existing Site Investment Prioritisation tool		
EUI	Energy Usage Intensity		
EV	Electric vehicle		
COSO	Committee of Sponsoring Organisations of the Treadway Commission		
Fire & Emergency	Fire & Emergency New Zealand		
HVAC	Heating, Ventilation, And Air Conditioning		
IIMM	International Infrastructure Management Manual		
LoS	Level of Service		
MCA	Multi Criteria Analysis		
NABERSNZ	National Australasian Built Environment Rating System New Zealand		
NBS	New Building Standards		
NHQ	National office / head quarters		

10.2. Station Earthquake Prone Building Assessment

Table 38 Station Earthquake Prone Building Assessment

Higher Risk Construction Typology (Unreinforced Masonry / Concrete Block)				
	Seismic Risk Zone			
Region	Low	Medium	High	Total
Te Hiku	5			5
Ngā Tai ki te Puku	5	8	6	19
Te Ūpoko			4	4
Te Ihu		2	13	15
Te Kei	9	12	4	25
Total	14	10	44	68
Lower Risk Construction Typology				
	Seismic Risk Zone			
Region	Low	Medium	High	Total
Te Hiku	5			5
Ngā Tai ki te Puku		6	9	15
Te Ūpoko		2	20	22
Te Ihu		10	20	30
Te Kei	1	8	1	10
Total	6	26	50	82
Combined Total of EPBs	20	36	94	150

10.3. Key Users and Stakeholders

Table 39 Key users and stakeholders – property portfolio

Segment	Area of interest
Users – external	
The community	Interested in a trusted and responsive first responder to fires and emergencies in their community.
	Promote fire safety and reduce unwanted fires.
Tenants	Interested in safe and adequate quality accommodation.
External stakeholders	
Iwi and Māori	Building strong relationships of trust and confidence with iwi, Māori urban authorities, providers, communities, and emergency management sector partners. We are focused on building strong partnerships with iwi through our local brigades and Pou Takawaenga Māori (Māori Liaison Officers).
Emergency management sector	Respond to civil emergencies and natural disasters with National Emergency Management Agency, New Zealand Police and other emergency services requires being mobile throughout the country and coordination.
Climate change sector	The Climate Change Commission is interested in Police becoming more sustainable and building a zero carbon New Zealand, and meeting its obligations as set out in the Carbon Neutral Programme. Ministry for the Environment, Energy Efficiency and Conservation Authority (EECA), and Ministry for Business, Innovation and Employment (MBIE) are managing the programme.
The Treasury	Interested in the prudent management of the Fire & Emergency's assets as an asset intensive agency. Monitored and evaluated through the Cabinet Office Circular (23) 9 process (strategic planning and AM element).
Taumata Arowai	Taumata Arowai is New Zealand's water regulator and interested in safe drinking water provided.
Users – internal	
Firefighters	They want assurance that they have modern and fit-for-purpose fire stations provided 24/7.
Internal stakeholders	
Executive Team	Interested in sound asset stewardship to support the delivery of Fire & Emergency core services and to deliver against the Statement of Intent and the New Zealand Government's priorities. Providing a responsive first responder in the community. There are no financial or asset risk surprises.
Regional teams	Interested in meeting their operational and services delivery needs in their regions.
Corporate and Finance teams	Ensuring the property assets are meeting the expectations and the agreed levels of service. The property portfolio is being managed financially and environmentally sustainable. The property related asset risks are being proactively managed with no surprises.
Fire & Emergency staff	Interested in well designed, functional and fit for purpose stations, office spaces, and parking.
Volunteers	Interested in well designed, functional and fit for purpose stations.

10.4. Legislative Framework

Table 40 Key legislation – property portfolio

Legislation	Asset class	Requirements
Fire and Emergency New Zealand Act 2017	All	The Fire and Emergency New Zealand Act 2017 combined urban and rural fire services into a single, integrated fire and emergency services organisation, Fire and Emergency NZ, with a mandate to provide a wide range of services for communities. It sets out Fire & Emergency's principal objectives, functions, and operating principles.
Building Act 2004	All	The Building Act sets minimum standards for buildings and facilities. The Building Act 2004 introduced some significant changes to the way the building industry in New Zealand is regulated, with the intent of providing greater assurance to consumers. A Building Warrant of Fitness (BWOFF) is a statement supplied by a building owner, confirming that the systems specified in the compliance schedule for their building have been maintained and checked in accordance with the compliance schedule for the previous 12 months, and that they will continue to perform as required. The BWOFF standards are under review nationally in response to the Loafers Lodge incident in May 2023 involving vulnerable people. It is expected that the compliance schedules will be impacted.
Building (Earthquake-prone Buildings) Amendment Act 2016	Fire stations, offices	The Building (Earthquake-prone Buildings) Amendment Act 2016 is the new system for managing earthquake-prone buildings (EPB) and came into effect from 1 July 2017. This new legislation addresses recommendations from the Canterbury Earthquakes Royal Commission and the findings of a comprehensive review by the Government. It standardises the rules and processes that apply to earthquake-prone buildings nationally, considering seismicity around New Zealand. The new system is a single national policy framework. The objective is to protect people from harm in an earthquake balanced with the costs of strengthening or removing buildings and the impact on the built heritage.
Health and Safety at Work Act 2015	All	The Health and Safety at Work Act 2015 (HSWA) is New Zealand's workplace health and safety law. The Act sets out the principles, duties, and rights in relation to workplace health and safety. Under HSWA, a person conducting a business or undertaking (PCBU) must look after the health and safety of its workers and any other workers it influences or directs. The business or undertaking is also responsible for the health and safety of other people at risk from its work including customers, visitors, or the public. This is called the 'primary duty of care.'
Health and Safety at Work (Asbestos) Regulations 2016	All	The Health and Safety at Work (Asbestos) Regulations 2016 set requirements regarding asbestos contamination and managing the risk. Under the regulations the PCBU must identify the presence of asbestos if they know there is a risk of exposure. Where asbestos is identified or likely to be present an asbestos management plan must be developed, and exposure to airborne asbestos eliminated or minimised, as far as reasonably practicable. Containment may be a valid response.
Climate Change Response (Zero Carbon) Amendment Act	All	Climate Change Response (Zero Carbon) Amendment Act includes a target of reducing methane emissions by 24 to 74% below 2017 levels by 2050, and an interim target of 10% by 2030. It also has a target of reducing net emissions of all other greenhouse gases to zero by 2050. The Government's first National Adaptation Plan to build resilient infrastructure was released in 2022 and focuses on getting the foundations right.

Legislation	Asset class	Requirements
Residential Tenancies Act Amendment Act 2020	Residential property	The Residential Tenancies Amendment Act 2020 (Amendment Act) modernises the laws governing tenancies in New Zealand, striking a balance between protecting a landlord's interest in their property, and making sure tenants get fair rights for the rent they pay.
Residential Tenancies (Healthy Homes Standards) Regulations 2019	Residential property	The healthy homes standards introduce specific and minimum standards for heating, insulation, ventilation, moisture ingress and drainage, and draught stopping in rental properties.
Resource Management Act 1991 and amendments	Water supply and wastewater treatment systems	The RMA 1991 is New Zealand's primary legislation dealing with the management of natural and physical resources. It provides a national framework to manage land, air, water and soil resources, the coast, subdivision and the control of pollution, contaminants, and hazardous substances. This Act ensures compliance with resource consents issued for water taken from natural water resources, discharge of treated wastewater to waterway, capacity of air, water, soil, and ecosystems. The new Government intends to repeal the Resource management system reforms. The Natural and Built Environment Act 2023 is being repealed, and the Government is now working on fast-track consenting.
Water Services Act 2021	Water supply systems	Taumata Arowai administers the Water Services Act 2021 for ensuring safe drinking water. The following new rules and standards for drinking water suppliers came into effect on 14 November 2022: • Drinking Water Standards. • Drinking Water Quality Assurance Rules. • Aesthetic Values. The new Government is implementing its Local Water Done Well policies. This will be achieved through legislative amendments in a staged approach. A framework and transitional arrangements for the new water services system will be established.

10.5. Key Property Policies, Standards and Guidelines

Table 41 Key property policies, standards, and guidelines

Policy / standards / guidelines	Year	Type	Portfolio
Emissions Reduction Plan (2023)	2023	Plan	All / corporate
Budget Management Reference Guide	2021	Guide	
Strategic Asset Management Plan 2019-2045	2019	Plan	
Fire and Emergency National Strategy 2019-2045	2019	Strategy	
Fire and Emergency Risk Management Standard	2023	Standard	
Asset Management Policy	2018	Policy	
Appliance Bay Ventilation Guidelines		Guideline	Property
Rural Building Condition Assessment Guidelines		Guideline	
Asset Capitalisation Guide -Property		Guideline	
Property Handbook 2021-2024	2021	Handbook	
Property consultations	2020	Standard	
Property resilience	2021	Standard	
Fire and Emergency accommodation	2020	Policy	
Fire station tower and pole inspections	2019	Policy	
Property acquisition	2022	Policy	
Property disposal	2022	Policy	
Asbestos management and control	2019	Policy	
Property maintenance	2021	Policy	
Fire Station Design Manual	2016	Manual	
Fire Station Design Guidelines – Part 1 Overview	2015	Guide	

10.6. Full Levels of Service Summary

Table 42 Full proposed levels of service summary – fire stations only

Asset Group	Service Area	Property Pillars	Levels of Service Statement	How we will measure our performance	2024/25 Target (Year 1) preliminary	2025/26 Target (Year 2) preliminary	2026/27 Target (Year 3)	2027/28 to 2033/34 (Years 4 to 10)
Fire stations	Safety		To provide safe stations / buildings for our staff	All buildings meet statutory legislative requirements (BWOFF)	85%	90%	90% - to be confirmed	95% - to be confirmed
				Percentage of stations that meet all five baseline ablution standards	60%	65%	70% - to be confirmed	75% - to be confirmed
				Percentage of stations that meet 'best' or 'good practice for exhaust fume management standards	75% - to be confirmed	75% - to be confirmed	80% - to be confirmed	55% - to be confirmed
	Reliability		Provide reliable and well-maintained assets	Full achievement for annual inspection of appliance bay doors at stations	90%	90%	90%	95% - to be confirmed

10.7. Detailed Financial Tables

10.7.1. Operational Expenditure

Table 43 Operational Expenditure

Proposed 10-Year AMP Budget	Levy Cycle 1			Levy Cycle 2			Levy Cycle 3				
OPEX	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	Total
Building wash	\$978,786	\$978,786	\$978,786	\$998,362	\$998,362	\$998,362	\$1,018,329	\$1,018,329	\$1,018,329	\$1,018,329	\$10,004,759
Appliance bay door servicing	\$450,840	\$450,840	\$450,840	\$459,857	\$459,857	\$459,857	\$469,054	\$469,054	\$469,054	\$469,054	\$4,608,306
HVAC maintenance	\$216,107	\$216,107	\$216,107	\$220,429	\$220,429	\$220,429	\$224,838	\$224,838	\$224,838	\$224,838	\$2,208,959
Exhaust extraction maintenance	\$136,418	\$136,418	\$136,418	\$146,281	\$146,281	\$146,281	\$168,631	\$168,631	\$168,631	\$168,631	\$1,522,618
Station backup generator maintenance	\$156,495	\$156,495	\$156,495	\$284,241	\$284,241	\$284,241	\$357,641	\$357,641	\$357,641	\$357,641	\$2,752,774
Pest control	\$247,212	\$247,212	\$247,212	\$252,156	\$252,156	\$252,156	\$257,199	\$257,199	\$257,199	\$257,199	\$2,526,902
Electrical testing	\$202,899	\$202,899	\$202,899	\$206,957	\$206,957	\$206,957	\$211,096	\$211,096	\$211,096	\$211,096	\$2,073,952
Building compliance costs (Incl. tower and pole inspection)	\$986,814	\$986,814	\$986,814	\$1,006,550	\$1,006,550	\$1,006,550	\$1,026,681	\$1,026,681	\$1,026,681	\$1,026,681	\$10,086,818
Planned and reactive maintenance (general)	\$6,879,240	\$6,879,240	\$6,879,240	\$7,382,268	\$7,382,268	\$7,382,268	\$12,123,893	\$12,123,893	\$12,123,893	\$12,123,893	\$91,280,096
Planned exterior maintenance (i.e., painting)	\$918,762	\$918,762	\$918,762	\$1,090,785	\$1,090,785	\$1,090,785	\$2,144,060	\$2,144,060	\$2,144,060	\$2,144,060	\$14,604,881
Planned maintenance (drinking water)	\$242,245	\$242,245	\$242,245	\$242,245	\$242,245	\$242,245	\$247,090	\$247,090	\$247,090	\$247,090	\$2,441,830
Professional services	\$1,174,054	\$1,174,054	\$1,174,054	\$1,225,000	\$1,225,000	\$1,225,000	\$1,225,000	\$1,225,000	\$1,225,000	\$1,225,000	\$12,097,163
Training facilities maintenance	\$705,075	\$705,075	\$705,075	\$889,575	\$889,575	\$889,575	\$907,367	\$907,367	\$907,367	\$907,367	\$8,413,416
Non-operational buildings maintenance	\$585,627	\$585,627	\$585,627	\$585,627	\$585,627	\$585,627	\$597,340	\$597,340	\$597,340	\$597,340	\$5,903,120
Total Controllable OPEX	\$13,880,574	\$13,880,574	\$13,880,574	\$14,990,333	\$14,990,333	\$14,990,333	\$20,978,218	\$20,978,218	\$20,978,218	\$20,978,218	\$170,525,595
Property Operating Costs	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$3,409,200	\$34,092,000
Total OPEX	\$17,289,774	\$17,289,774	\$17,289,774	\$18,399,533	\$18,399,533	\$18,399,533	\$24,387,418	\$24,387,418	\$24,387,418	\$24,387,418	\$204,617,595

10.7.2. Capital Expenditure

Table 44 Capital Expenditure

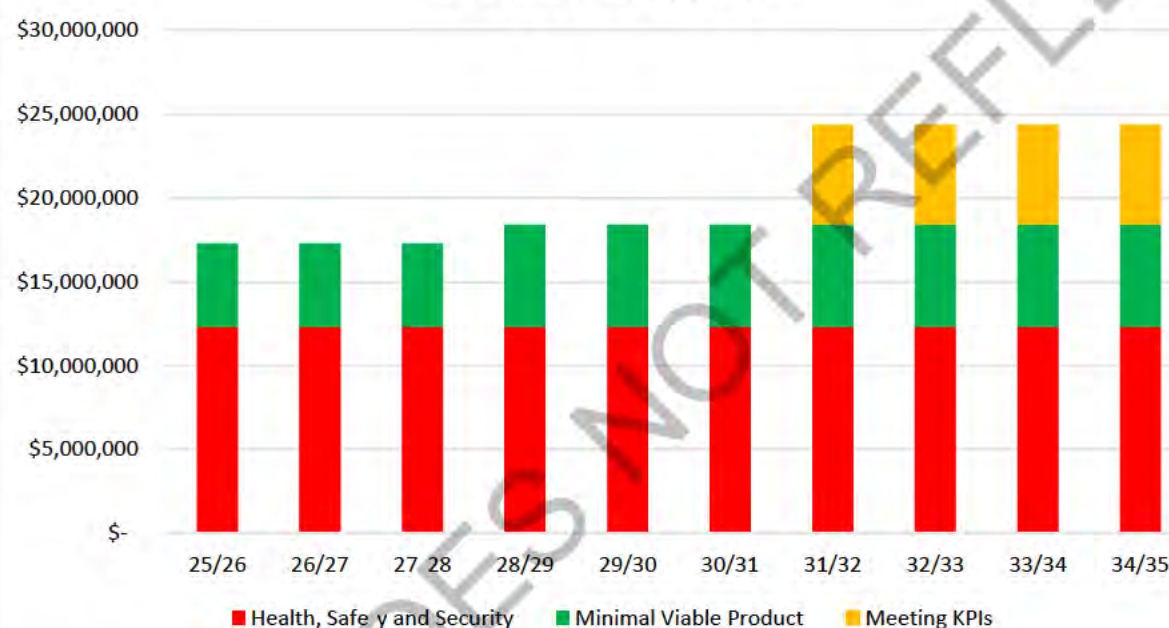
Proposed 10-Year AMP Budget	Levy Cycle 1			Levy Cycle 2			Levy Cycle 3				
CAPEX	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	Total
Basic Station Amenities Programme	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$-	\$-	\$28,000,000
Emergency Power Resilience	\$840,000	\$840,000	\$840,000	\$850,000	\$850,000	\$850,000	\$850,000	\$850,000	\$850,000	\$850,000	\$8,470,000
Drinking Water Standards Improvements	\$180,000	\$180,000	\$180,000	\$500,000	\$500,000	\$500,000	\$850,000	\$850,000	\$850,000	\$850,000	\$5,440,000
Capital Renewals, Replacements, and Minor Seismic Strengthening	\$7,500,000	\$8,500,000	\$8,500,000	\$9,500,000	\$9,500,000	\$9,500,000	\$19,000,000	\$19,000,000	\$19,000,000	\$19,000,000	\$129,000,000
Exhaust Fume Management Programme	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$-	\$-	\$12,800,000
Training Facilities	\$1,900,000	\$500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$14,400,000
Non-Station Facilities			\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	
Minor Capex Total	\$15,520,000	\$15,120,000	\$17,120,000	\$18,850,000	\$18,850,000	\$18,850,000	\$26,700,000	\$26,700,000	\$21,600,000	\$21,600,000	\$200,910,000
Significant refurbishment, End-of-life replacement, seismic remediation (Major Capex) includes 20% contingency provision	\$19,880,000	\$23,380,000	\$32,180,000	\$56,495,000	\$56,495,000	\$56,495,000	\$67,855,000	\$67,855,000	\$67,855,000	\$67,855,000	\$516,345,000
Total CAPEX	\$35,400,000	\$38,500,000	\$49,300,000	\$75,345,000	\$75,345,000	\$75,345,000	\$94,555,000	\$94,555,000	\$89,455,000	\$89,455,000	\$717,255,000

10.7.3. Combined Budget View – Split into Prioritisation Categories

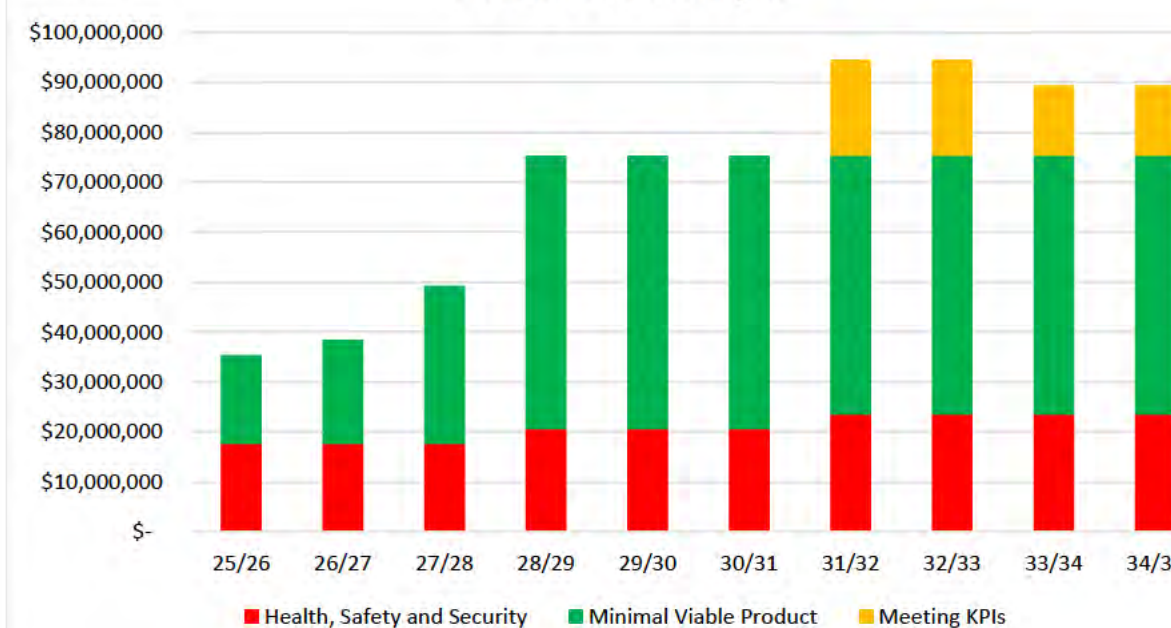
Table 45 Combined Budget View

Proposed 10-Year AMP Budget	Levy Cycle 1			Levy Cycle 2			Levy Cycle 3				
OPEX	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	Total
Health, Safety and Security	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$12,331,461	\$123,314,610
Minimal Viable Product	\$4,958,313	\$4,958,313	\$4,958,313	\$6,068,072	\$6,068,072	\$6,068,072	\$6,068,072	\$6,068,072	\$6,068,072	\$6,068,072	\$57,351,444
Meeting KPIs	\$-	\$-	\$-	\$-	\$-	\$-	\$5,987,885	\$5,987,885	\$5,987,885	\$5,987,885	\$23,951,540
Total OPEX	\$17,289,774	\$17,289,774	\$17,289,774	\$18,399,533	\$18,399,533	\$18,399,533	\$24,387,418	\$24,387,418	\$24,387,418	\$24,387,418	\$204,617,594
CAPEX	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	Total
Health, Safety and Security	\$17,642,243	\$17,642,243	\$17,642,243	\$20,600,576	\$20,600,576	\$20,600,576	\$23,558,909	\$23,558,909	\$23,558,909	\$23,558,909	\$208,964,093
Minimal Viable Product	\$17,757,757	\$20,857,757	\$31,657,757	\$54,744,424	\$54,744,424	\$54,744,424	\$51,786,091	\$51,786,091	\$51,786,091	\$51,786,091	\$441,650,907
Meeting KPIs	\$-	\$-	\$-	\$-	\$-	\$-	\$19,210,000	\$19,210,000	\$14,110,000	\$14,110,000	\$66,640,000
Total CAPEX	\$35,400,000	\$38,500,000	\$49,300,000	\$75,345,000	\$75,345,000	\$75,345,000	\$94,555,000	\$94,555,000	\$89,455,000	\$89,455,000	\$717,255,000
Total OPEX & CAPEX	\$52,689,774	\$55,789,774	\$66,589,774	\$93,744,533	\$93,744,533	\$93,744,533	\$118,942,418	\$118,942,418	\$113,842,418	\$113,842,418	\$921,872,594

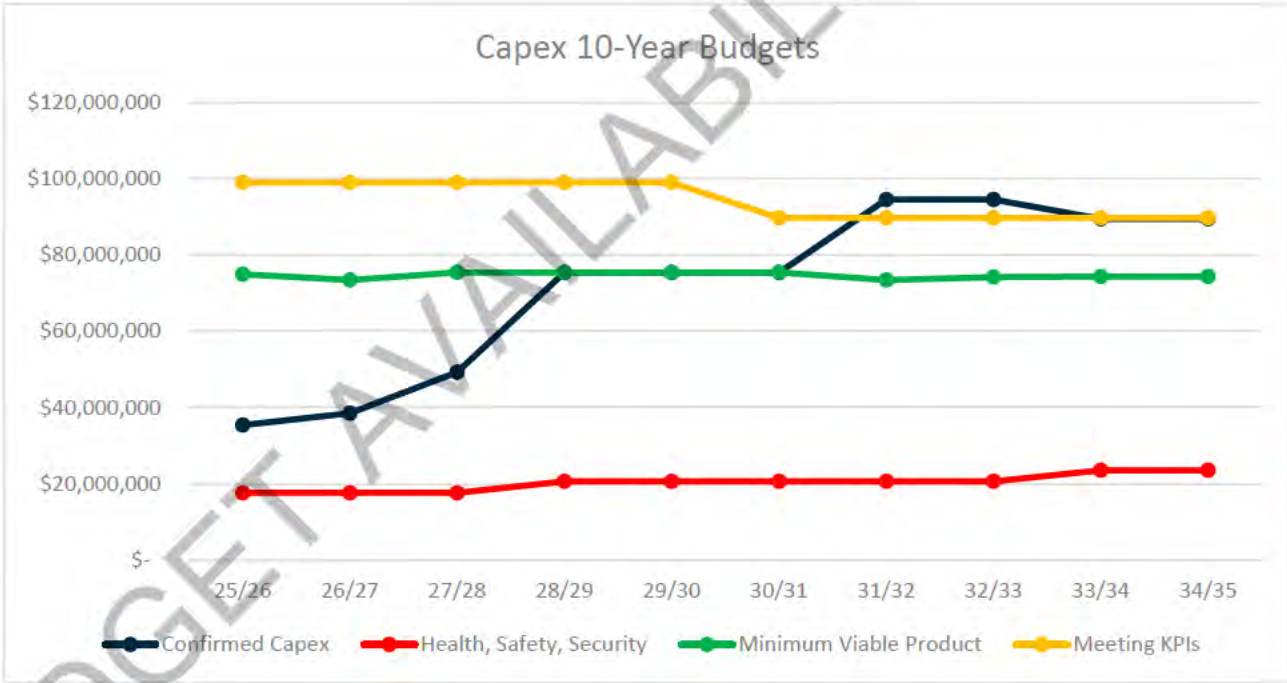
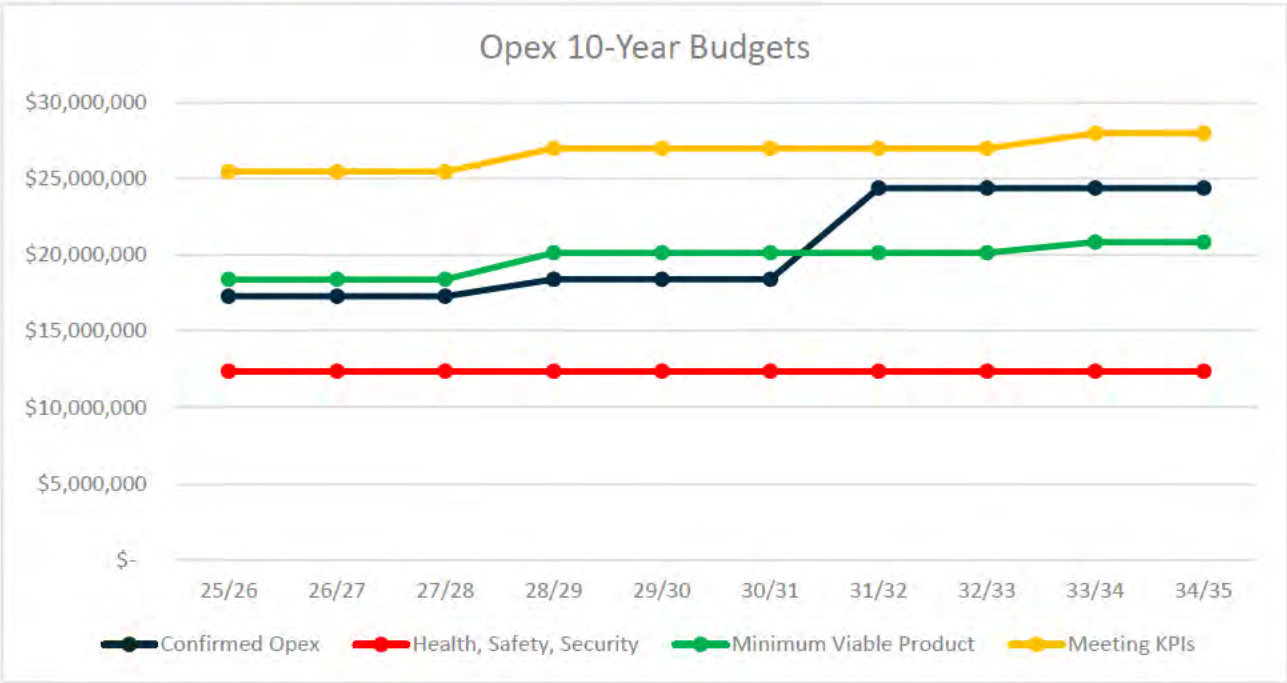
OPEX 10-Year Budgets



CAPEX 10-Year Budgets



10.7.4. Reference to Budget Hierarchies



10.8. Three-Year Improvement Plan

Table 46 AM Improvement Plan – property

No.	AM Improvement Area	Project no	Action	Responsibility	Priority (High / Medium / Low)	Indicative Timeframe		
						2025/26	2026/27	2027/28
1	AM Policy and Strategy	1.1	Update the 2018 AM Policy as part of the review cycle. Strengthen the AM Policy with the recommended additional elements to ensure complete and meeting best practice.	Chief Advisor	M			
		1.2	Strengthen the Strategic AMP with the recommended additional elements to ensure complete and meeting best practice.	Chief Advisor	M			
		1.3	Complete the refresh of the property policies and standards as planned. Review and rationalise the multiple property related policies and guidelines, so they are useful and up to date. Review and rationalise the multiple property related policies and guidelines, so they are useful and up to date.	National Manager Property	M			
		1.4	Develop an overarching Property Strategy to provide the long-term direction so the property portfolio supports the future service delivery needs. It will be informed by the organisation wide strategy on future service delivery needs. Review / reset the property pillars (defined in the Property Handbook) as part of the strategy development.	National Manager Property	M			
2	Levels of Service and Performance Management	2.1	Develop / report / status of sustainability initiatives e.g. LED roll out, energy consumption etc.	Sustainability and Property teams	M			
		2.2	Establish the performance measurement system using the proposed level of service statement for fire stations developed with this AMP. Undertake the data cleansing for the identified service critical performance measures.	National Manager Property	H			
		2.3	Once the performance measurement system has been established, start monitoring and reporting on the proposed level of service statement for fire stations. Use these results for disclosure in the Annual Report once the data confidence has increased. The measurement system will be used for disclosing on the performance if service critical assets for Annual Report and AMP purposes.	National Manager Property	H			
		2.4	Further develop and agree upon on the future levels of service for the other fire station measures, offices, residential and standalone water treatment systems. This will ensure Fire & Emergency meets its legislative compliance and reporting to the regulators - Taumata Arowai and regional councils.	National Manager Property	M			
		2.5	Start reviewing user satisfaction trends once there is a new corporate system implemented (to replace Zendesk)	National Manager Property	M			
3	Forecasting Demand	3.1	Review the facility locations and types once the overarching Property Strategy is developed based on the future service delivery needs.	National Manager Property	M			
4	Asset Register Data	4.1	Cleanse the asset data sets for fire stations as a high priority so there is confidence in using it for decision making at strategic, tactical, and operational levels.	National Manager Property	Very High			
		4.2	Develop register of existing boilers to help with sustainability works and seeking EECA funding.	Sustainability and Property teams	M			
		4.3	Ensure consistency of data captured regionally so that information can easily be rolled up nationally and there is One Source of the Truth.	National Manager Property	M			
		4.4	Cleanse the asset data sets for the other property asset classes including standalone drinking water systems (after fire stations) so there is confidence in using them for basic decision making.	National Manager Property	M			

No.	AM Improvement Area	Project no	Action	Responsibility	Priority (High / Medium / Low)	Indicative Timeframe		
						2025/26	2026/27	2027/28
5	Asset Performance and Condition	5.1	Implement the proposed continuous condition assessment for fire station buildings.	National Manager Property	H			
		5.2	Ensure the property condition data is kept up to date and accurate so no greater than 3-5 years old. Condition assessment schedule is developed to keep condition data within the timeframes.	National Manager Property	M			
		5.3	Develop a dashboard that combines all the various assessments so that asset, station, region, and national views can be easily shown (assessment and condition data, energy consumption, risks etc.) i.e. One version of the truth. Align with the corporate dashboards being developed.	National Manager Property	M			
		5.4	Complete data cleansing of the recent condition surveys of the rural fire stations so can be used in decision making.	National Manager Property	M			
		5.5	Develop a risk based structural survey for towers and masts so there is a consistent approach nationally.	National Manager Property	M			
6	Decision Making	6.1	Refine the Property Prioritisation Tool periodically to ensure it is aligned to the strategic objectives and calibrated to the service delivery and wider business needs.	National Manager Property	M			
		6.2	Update the Property Design guide to include sustainability elements and ways to reduce emissions in the construction process.	National Manager Property	M			
		6.3	Identify the candidate projects based on asset needs in the Property AMP over a ten year timeframe. Prioritise the capital projects through the tool and formally discuss with Service Delivery on their requirements to further refine the list.	National Manager Property	M			
7	Managing Risk	7.1	Complete the operational risk register for the property portfolio and embed into practices.	National Manager Property	M			
		7.2	Continue to implement the planned property sustainability initiatives. Evaluate the effectiveness of property sustainability initiatives as part of a learning culture.	National Manager Property	M			
		7.3	Assess the extent of the standalone drinking water systems. Develop strategies to manage these systems including meeting Taumata Arowai's new rules and standards for drinking water suppliers.	National Manager Property	M			
8	Operational Planning	8.1	Complete the refresh of the property operating procedures as planned.	National Manager Property	M			
		8.2	Develop separate lifecycle management plans for the other property asset classes as part of the discovery phase to inform future AMPs.	National Manager Property	M			
9	Capital Works Planning	9.1	Start using the Property AMP to drive the budget setting process based on asset needs so there is sustainable long-term investment and to be consistent with good industry practice (under way)	National Manager Property	H			
10	Financial Planning	10.1	Ensure the financial system can adequately code costs so that the Property can report by site / region / national on measures / activities e.g. utility costs, bay door maintenance, cleaning, etc.	National Manager Property	M			

No.	AM Improvement Area	Project no	Action	Responsibility	Priority (High / Medium / Low)	Indicative Timeframe		
						2025/26	2026/27	2027/28
		10.2	Prepare a new asset valuation for the property portfolio once there are a cleansed data set and accuracy of fire stations. Future valuations should also provide annual depreciation numbers as good practice.	National Manager Property	M			
11	Asset Management Leadership and Teams	11.1	Develop succession plans to ensure there is a dedicated AM resource with appropriate skills to deliver on improvement plans.	National Manager Property	M			
		11.2	Determine the suitable workforce structure and capacity for the Property Team to enable the property portfolio to be managed effectively and efficiently.	National Manager Property	M			
12	Asset Management Plans	12.1	Develop a technical AMP for the property portfolio using the work completed to date and consistent with good industry practice (underway).	National Manager Property	H			
13	Management Systems	13.1	Develop an online national / regional induction process and register for those entering stations for consistent and quality management approach.	National Manager Property	L			
		13.2	Improve internal capability in contract management / project management / health and safety management for the Property Team as part of the corporate initiative underway.	National Manager Property	M			
14	Asset Management Information Systems	14.1	Develop an Asbestos Register in 2024/25, in accordance with HSWA (Asbestos) Regulations 2016, as a high priority.	National Manager Property	H			
		14.2	Find a suitable central location to store the compliance / inspection records as part of the discovery phase so there is consistency nationally.	National Manager Property	M			
		14.3	Investigate a suitable AMIS that can hold all the asset data, assessments and so that life cycle management planning and costing forecasts can be built from the bottom up. This may be a module of the proposed Financial Information Management System. It is recommended that investigating a suitable AMIS is scheduled after the existing data sets have been cleansed i.e. discovery phase.	National Manager Property	M			
		14.4	Consider using a BI dashboard to view the asset data at regional and national levels in the interim before the enterprise AMIS is operational (subject to a successful business case and formal approval).	National Manager Property	M			
15	Service Delivery Mechanisms	15.1	Consider aggregating / rationalising the number of regional facility management providers to improve business efficiency while still retaining the good local relationships and external specialist support.	National Manager Property	M			
16	Audit and Improvement	16.1	Start formally monitoring progress on a quarterly basis on the implementation of the AM Improvement Plan. Ensure that there are adequate resources to deliver the AM Improvement Plan.	Chief Advisor / National Property Manager	M			
		16.2	Strengthen the AM oversight governance functions and capability, including establishing an AM Steering Group to bed in a good AM culture in Fire & Emergency for the asset portfolios and to support enduring change.	Chief Advisor	M			
		16.3	Consider Fire and Emergency's preferred approach to CO (23)9 for disclosing AM practices.	Chief Advisor	M			



Fleet Asset Management Plan

Fire and Emergency NZ



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Date	Name	Designation

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Introduction

1.1 About the Fleet Asset Management Plan

Fire and Emergency New Zealand's (Fire and Emergency) Fleet Asset Management Plan (AMP) will guide how we plan and manage our¹ fleet assets for the next 10 years².

We will update the AMP through:

- Stakeholder consultation.
- Using it.
- Emerging new asset management approaches, requirements, information, and thinking.
- Its scheduled reviews (refer to [Section 13.2](#) below).

The AMP covers all the fleet assets that Fire and Emergency owns including those that:

- Are fully or partially donated or gifted by volunteer fire brigades on behalf of their communities.
- Have been transferred from the New Zealand Fire Service (NZFS) or Rural Fire Authority (RFA).
- We have a right to use.

The AMP will not cover volunteer fire brigade owned fleet assets because these may not be recorded in the JDE database or on our Fixed Asset Register and in some cases Fire and Emergency are not responsible for their management including their ongoing maintenance, repairs, and running costs.³

1.2 Fleet Asset Management Plan Key Principles

The AMP will align with Fire and Emergency's [Asset management policy's](#) guiding principles. How these principles will inform the management of our fleet assets is outlined in Table 1 below.

Table 1 - Fleet asset management guiding principles

Asset management policy guiding principle	How the principle will inform fleet asset management
Lifecycle management: 'We will manage each asset through its entire lifecycle, and ensure it gives the best 'value for money' by making optimal decisions about its 'whole-of-life' cost.'	We will make optimal decisions based on the fleet asset's total ownership costs to ensure that it provides the best value for money through its entire lifecycle.
Risk based asset allocation: 'Our solutions will be fit for their purpose. We will consider how well each asset:	We will use a risk-based approach for fleet allocations based on the Service Delivery Capability Framework ⁴ , the National Risk Resourcing

¹ As per Fire and Emergency's [Writing style guide](#) our, we, us, and other personal pronouns refer to the National Fleet Directorate (Fleet team) and where appropriate Fire and Emergency.

² A 25 year age profile for fleet is used to support budget calculations

³ The acquisition and management of brigade owned fleet assets will be outlined in the volunteer fire brigade owned vehicle policy which is currently under development.

⁴ The name of the framework that will be used to operationalise a modular service delivery approach has yet to be finalised and will be updated as and when necessary, in subsequent versions of the AMP.

Asset management policy guiding principle	How the principle will inform fleet asset management
- meets our current and future requirements for delivering our services. - is consistent with our risk framework.⁵	Modelling Tool (NRRM), and Fire and Emergency's property flood assessment work.⁵ We will also consider whether and how the allocation of each fleet asset contributes to the safe, efficient, and effective delivery of our main and additional statutory functions.⁶
Accountability: 'We will clearly assign responsibilities and accountabilities for who owns and controls our assets, and who reports on them.'	We will clearly assign responsibilities and accountabilities for who owns, controls, and maintains our fleet assets. We will also collaborate with stakeholders on fleet asset reporting to ensure it meets both our needs and is fit for its intended purpose.
Good practice project management: 'We will follow 'good practice' project methodology, to ensure our projects deliver the agreed benefits and value.'	We will follow good practice project management methodologies to ensure that fleet asset projects deliver the agreed outcomes and benefits and provide value for money.
Comprehensive solutions: 'We will consider all alternatives for managing an asset, to find the optimal option. We will give evidence of the options to decision-makers, such as cost, quality and time factors.'	We will consider all practicable alternatives to ensure that we deliver the most appropriate and effective acquisition and management of our fleet assets. We will also provide Fire and Emergency's decision makers with sufficient supporting evidence (including the cost, quality, and time factors) for the fleet asset acquisition and/or management options we are asking them to consider and approve.
Sustainable practices: 'We will define appropriate and affordable levels of service from an asset perspective. They will balance performance, costs and risks over the asset's life, and will consider the environmental impact.'	We will collaborate with stakeholders to define and agree appropriate and affordable levels of service. These defined and agreed service levels will balance the performance, costs, risks, and environmental impacts over the fleet asset's target life.
Flexible and adaptable: 'We will manage our assets to ensure we can quickly change our approach if the organisation's needs change.'	We will manage fleet assets so that their procurement, allocation, and day-to-day use can quickly adjust if Fire and Emergency's requirements change.
Capability: 'Our assets contribute to our capability. When we decide about investing in assets, we will consider our current workforce, systems and processes.'	Fleet assets play a significant supporting role in the achievement and maintenance of the required levels of front-line capability. When we are planning fleet asset investment, we will consider the current workforce, our existing systems and processes, and the associated training requirements.

⁵ A risk-based allocation approach for fleet assets will not be introduced until the Service Delivery Capability Framework is in place. Refer to [Fire and Emergency's National Fleet Strategy](#) for more details.

⁶ Our principal objectives and main and additional functions are outlined in the [Fire and Emergency New Zealand Act 2017](#). These are listed for reference in [Section 7.7.1](#) below.

Asset management policy guiding principle	How the principle will inform fleet asset management
Diversity: 'When we are considering the purchase of an asset, we will consider its effect on gender, ethnic, and other types of diversity.'	When we are purchasing fleet assets, we will consider whether they can meet all employees' requirements e.g., can they cater for differing physical sizes and abilities?
Fiscal prudence: 'We will be fiscally prudent in how we manage our assets, so we can deliver an appropriate level of service within our available funding.'	We will be fiscally prudent in our management of fleet assets so we can deliver the defined and agreed levels of service within the available funding.
Focus on service outcomes: 'We will plan, design, and build assets for the services our communities need, and that support our personnel in their jobs – both now and in the future.'	We will plan, design, and build fleet assets so they can safely, efficiently, and effectively deliver their required functions. When we plan, design, and build fleet assets we will also incorporate the necessary features that best support our personnel in their jobs, both now and in the future.
Data quality: 'To make asset management decisions, we will draw our data from comprehensive, validated and up-to-date sources.'	To make fleet asset management decisions we will obtain data from the sources that we have confirmed as being the most comprehensive, validated, and up to date.
Single view of assets: 'We will use a single authoritative information source for managing each Fire and Emergency asset.'	We will use information sources that have been confirmed as being the most authoritative for managing fleet assets individually or in groups or sub-categories e.g., Type 3 fire appliances and BA tenders (refer to Section 7.1 below).
Safety: 'We will strongly reinforce a safety culture, by: - choosing assets that are fit for their purpose. - using consistent standards to test them and assess their condition'	We will strongly support and reinforce a safety culture by: - Choosing fleet assets that are fit for their intended purpose and that have all the required safety features. - Using consistent and agreed evaluation approaches for fleet assets and their safety features to ensure that they are delivering the expected benefits and providing value for money.
Performance management: 'We will measure and evaluate how our asset management system, strategy and plans perform. We will use qualitative and quantitative measures, to support the quality of our investment decisions.'	We will collaborate with relevant teams to develop appropriate evaluation approaches and performance measures. These will be used to determine if the AMP has achieved its agreed targets, goals, and objectives including whether fleet assets have met their defined and agreed levels of service and performance measures. We will also use appropriate qualitative and quantitative analytical methods to improve the quality of fleet asset investment decisions.

1.3 Incorporating Mātauranga Māori and Tikanga into Asset Management

Incorporating Mātauranga Māori and Tikanga into Asset Management Fire and Emergency New Zealand recognises the importance of integrating Mātauranga Māori (Māori knowledge systems) and Tikanga (customary practices and protocols) into its property asset management practices.

This approach supports the organisation’s commitment to building strong relationships with iwi and Māori communities and ensures that property assets are managed in a way that respects cultural values, enhances community wellbeing, and aligns with Te Tiriti o Waitangi obligations.

1.3.1 Principles

The following principles guide the use of Mātauranga Māori and Tikanga in our asset management:

Table 2 Mātauranga Māori and Tikanga Principles

Principle	Description
Kaitiakitanga	Stewardship of land and resources, ensuring sustainability and intergenerational wellbeing.
Whanaungatanga	Building and maintaining strong relationships with iwi, hapū, and Māori communities.
Manaakitanga	Providing safe, welcoming, and inclusive spaces for all users, including Māori personnel and communities.
Rangatiratanga	Supporting Māori self-determination through co-design and co-governance opportunities.
Tikanga	Observing appropriate cultural protocols in engagement, design, and operations (i.e., karakia, pōwhiri, tapu/noa considerations).

1.3.2 Application in Asset Management

The inclusion of te reo Māori signage on fire service vehicles was a gradual process over several years. The vehicle signage included 'Whakaratonga Iwi', the te reo Māori translation of 'Serving our People', and the te reo branding of some Māori liaison vehicles. In 2015 a joint emergency services initiative in Gisborne, to support Māori language week, saw the Police, ambulance and fire service apply bilingual signage to their vehicles. Fire and Emergency took a leading role with bilingual signage within the Emergency Services Sector and the implementation of the updated Fire and Emergency brand provided an important opportunity to symbolise, in a very public way, Fire and Emergency NZ's commitment to institutional bilingualism by presented an opportunity to adapt the brand to promote te reo Māori as an official language and to recognise it as a taonga.

The bilingual branding of Fire and Emergency NZ appliances now includes the word 'ahi' (in addition to 'fire'), the te reo translation of the brigade's name, and a poutama symbol on the front corners of the appliance.

1.4 Diversity, Equity, and Inclusion

Asset Management (AM) plays a vital role in shaping inclusive and accessible environments in the workplace. Fire and Emergency NZ recognises that investing in the physical workspace can foster a culture of belonging and support for all personnel, regardless of background or ability.

To embed DEI principles into fleet planning and design we consider the effect on gender, ethnicity, physical characteristics, and other types of diversity. When we purchase new fleet assets, we consider whether they can meet all employees' requirements.

2 Why Fire and Emergency Developed a Fleet Asset Management Plan

This section explains how the AMP fits within Fire and Emergency's overall strategic environment. It also outlines the key strategic objectives and outcomes Fire and Emergency wants to achieve through fleet asset ownership and management.

2.1 How the Fleet Asset Management Plan Aligns with Fire and Emergency's Strategic Environment

The AMP's position within Fire and Emergency's overall strategic environment is provided in the diagram below. Note that if necessary, the AMP will be revised to align with any updated objectives and outcomes of the [Strategic Asset Management Plan](#) and/or when the other asset management plans are completed for Property, ICT, and Equipment.

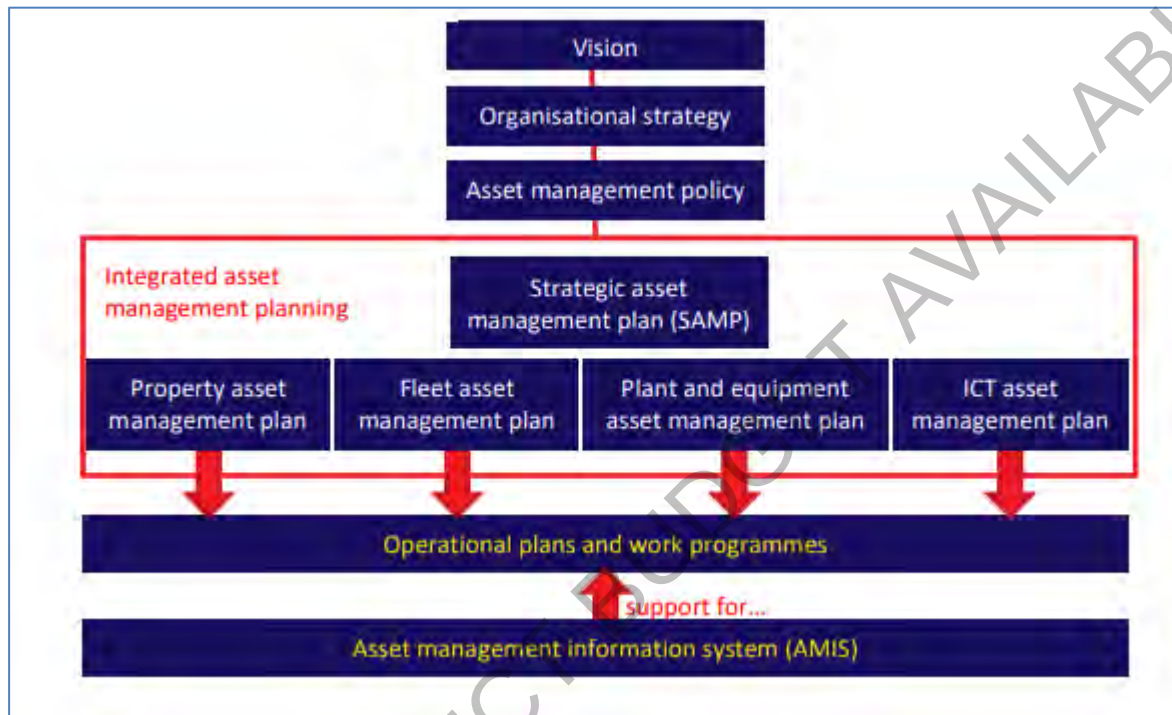
The Fire and Emergency strategies that the AMP needs to align with include:

- [Our National Strategy 2019-2045 Te rautaki matua-ā-tari 2019-2045](#)
- [Tā Mātou Rautaki Kōkiri i te Āhuarangi Hurihuri Our Climate Response Strategy 2022-2030](#)
- [10-Year Plan 2020-2030 Te Ratonga Ahi me ngā Ohotata i Aotearoa: Mahere Mahi 2020-2030](#)

- [Fire and Emergency Fleet Strategy 2024-2049](#) (currently in development).

The [Pūrongo ā-Tau Annual Report 2022/23](#) (Annual Report) notes that 'We are developing asset management plans across each asset management class, and will use them to prioritise our investments and inform business planning. We are structuring these asset management plans to prioritise legislative and health and safety requirements, so that our assets are safe and fit for purpose.' The AMP (among other things) will set out how we will address statutory and health and safety requirements so that our fleet assets are safe and fit for their intended purpose.

Figure 1 - Asset management framework within Fire and Emergency



2.2 Purpose

Fire and Emergency's purpose is provided through our statutory principal objectives which are:

- reduce the incidence of unwanted fire and the associated risk to life and property
- to protect and preserve life
- to prevent or limit injury
- to prevent or limit damage to property and land
- to prevent or limit damage to the environment.

Fleet assets provide the supporting capability for safely, effectively, and efficiently delivering our statutory principal objectives as well as our main, and additional functions. For the purposes of the AMP supporting capability refers to:

- The storage and conveyance of equipment that is used for delivering our main and additional functions safely, effectively, and efficiently.
- The transportation of suitably trained/qualified personnel to emergency events and incidents.
- More specialised fleet assets that are used to manage or respond to specific emergency incidents and events. These include aerial appliances which are used to manage fires in

larger and/or taller structures and HazMat, Command, and HazMat/Command Units that are used to respond to incidents or events involving hazardous substances.

DOES NOT REFLECT BUDGET AVAILABILITY

3 The Assets Covered by the Fleet Asset Management Plan

This section provides an overview of the fleet assets Fire and Emergency owns, their current value, and how their depreciation is calculated. It also summarises how and why we use our Fixed Asset Register as well as providing the fleet assets' supporting policies, processes, and guidelines. The policies that are recommended for review are also outlined.

3.1 Overview

Fire and Emergency's fleet assets can be subdivided into two broad, high-level categories: red fleet and white fleet. Red fleet assets are heavy vehicles⁷ that are typically used to deliver our main and additional functions such as fire appliances. However, other red fleet assets play an important operational support role e.g., water tankers and operational support vehicles (OSVs).

White fleet assets are our light vehicles (i.e., those with a GVM of less than 3,500kg). They can be used for delivering our main and additional functions such as medical responses. However, they are more generally used for operational support and/or non-operational roles e.g., transporting personnel to training events outside of a brigade's first response area. White fleet assets include utilities (utes), vans, hatchbacks, Sports Utility Vehicles (SUVs), and station wagons.

Fire and Emergency's fleet assets are widely distributed across the country, include a variety of specifications, and are in varying states of condition and fitness for their intended purpose. Our knowledge of fleet assets is good in some areas, but more limited in others.

We have established targets for the percentage of fleet assets within defined age ranges (refer to [Section 7.5.1 below](#)). In most cases these targets are not being met. If fleet assets become unreliable because of their age it could potentially lead to avoidable fatalities, serious injuries, or more severe damage to property or the environment.

While there is a standardised approach to the allocation of fleet assets there are variations between urban and rural areas which reflect the different main and additional functions they provide and how often these are delivered.

3.2 Fleet Assets Summary

As of May 2024, there was a total of 2,556 vehicles in Fire and Emergency's fleet including 571 that are leased, mainly from Orix New Zealand Limited.⁸ The remainder have various ownership arrangements (refer to [Section 1.1 above](#)).

Table 3 below provides the red and white fleet asset groups and their associated numbers. For more details on these asset groups and their sub-categories refer to [Section 7.1 below](#).

Table 3 - Fleet asset groups

Red fleet asset groups	Number	White fleet asset groups	Number
Bus	1	Caravans	5

⁷ Heavy vehicles are defined as having a gross vehicle mass (GVM) of more than 3500kg. GVM is the maximum operating weight of a vehicle as specified by the manufacturer and/or statutory requirements. The operating weight includes the fluids, accessories, vehicle occupants, and cargo the vehicle will convey.

⁸ This total and the numbers in Table 3 below exclude volunteer fire brigade owned fleet assets.

ISVs	11	Forklifts	15
Trucks and Light Response Vehicles (LRVs)	11	Hatchbacks	37
Rural fire appliances	195	Marine	5
Special Operational Vehicles	49	Motorcycles	9
Type 1 fire appliances	350	Station Wagons	11
Type 2 fire appliances	230	SUVs	137
Type 3 fire appliances	206	Trailers	436
Type 4 aerial appliances	18	Utes	566
Type 5 aerial appliances	6	Vans	56
Type 6 aerial appliances	4		
Ultralight fire appliances	16		
Water tankers	182		
Total	1,279	Total	1,277

Breakdown of acquisitions since the formation of Fire and Emergency in 2017, and the supporting asset management collateral details are provided in Appendix 1 – Asset acquisition since establishment of Fire and Emergency and Appendix 2 - Supporting collateral & policy review respectively.

3.2.1 Donated fleet assets

The acquisition and ongoing management of donated fleet assets are covered in the [Capital expenditure and donated assets policy](#) and the [Assets and Capital Expenditure Guideline](#). The relevant parts of the policies are outlined below.

A Region Manager must give approval before a volunteer fire brigade accepts a donated fleet asset or funds for the acquisition of a donated fleet asset. This approval will be based on the following:

- the strategic needs of the region
- the policy's criteria.

Donated fleet assets are generally exempt from GST and Fire and Emergency can claim this on the purchase of the fleet asset. The cost of the donated fleet asset is its fair value at the date of acquisition. Fair value is determined by comparing the market value of comparable fleet assets as well as any costs directly incurred to get it to a working condition for its intended use e.g., the installation of beacons, sirens, and Land Mobile Radio (LMR).

Donated fleet assets must meet statutory and Fire and Emergency requirements. Unless agreed otherwise volunteer fire brigades own donated fleet assets and are fully responsible for their maintenance. If Fire and Emergency are responsible, this must be agreed by both parties and appropriately documented. If Fire and Emergency own a donated fleet asset, it will be maintained to the same standard as our other fleet assets.

The Fire and Emergency logo and branding cannot be used on a donated fleet asset without the express approval of the National Manager Communications and Engagement. Only donated fleet

assets that are listed on the Fixed Asset Register are automatically covered by Fire and Emergency's [insurance policy](#).

The replacement and disposal of donated fleet assets should be agreed, in writing, before their acquisition. Before Fire and Emergency disposes of a donated fleet asset that it owns it should be offered back to the relevant volunteer fire brigade. Otherwise, it should be disposed of as per the policy and guidance outlined in [Section 7.9](#) below.

3.2.2 Policies review

It is important that the fleet asset policies remain as up to date and relevant as possible. To achieve this, we will undertake a review of all of them starting from 2025 and then at least annually thereafter. Where necessary or appropriate reviews of individual policies will occur more frequently e.g., to reflect changes to operational requirements.

3.3 Fixed Asset Register

The Finance team are responsible for updating and maintaining the Fixed Asset Register. However, before they can add a fleet asset to the Fixed Asset Register they must receive a completed [fixed asset \(fleet\) acquisition form](#) along with an estimate of its useful economic life. Brigade owned vehicles are recorded on the fixed asset register as part of the completion and submission of their statement of revenue and expenses.

The recording of donated fleet assets on the Fixed Asset Register depends on who owns them and how they were purchased as follows:

- **Owned by Fire and Emergency** are flagged as donated assets and recorded at fair value⁹ at the time we assumed ownership plus any associated costs to make them operationally ready and fit for their intended purpose.
- **Purchased using a combination of third-party donations and Fire and Emergency funding** are recorded as partly funded from donations at their full cost.
- **Brigade owned vehicles** are recorded at zero value¹⁰ to ensure that their servicing is documented, the equipment is maintained to an operational readiness standard, and that they are insured.

Other fleet assets' value must also be recorded in the Fixed Asset Register by the Assets and Insurance Accountant at cost. The cost value include those that are required to make sure the fleet asset is in the right condition for its intended use and purpose.

It is critical that all fleet assets are recorded on the Fixed Asset Register because otherwise they will not be automatically covered under Fire and Emergency's [insurance policy](#). Insurance claims for fleet assets that are not on the Fixed Asset Register are assessed on a case-by-case basis even if they result from the vehicle conducting Fire and Emergency business.

⁹ For the purposes of the AMP the fair value of new fleet assets is usually determined by the retail price of the same or similar fleet assets at the time that the fleet asset was received. For used fleet assets, fair value is usually determined by market information for those that are of a similar type, condition, and age.

¹⁰ Leased vehicles are also recorded at zero value on the Fixed Asset Register.

3.4 Fleet Assets Value

As of 30 June 2024, the value of fire appliances was \$392 million and \$9.7 million for motor vehicles. The Net Book Value (NBV) for fire appliances was \$173.3 million with an accumulated depreciation of \$240.6 million. For motor vehicles the NBV was \$2.0 million with an accumulated depreciation of \$6.8 million.

3.4.1 Fleet assets depreciation

Depreciation is defined in the [Capital expenditure and donated assets policy](#) as 'the decrease in the monetary value of an asset over its useful economic life, due to use, wear and tear or obsolescence. The depreciable amount is the cost of an asset, or other amount substituted for cost, less its residual value.' Fire and Emergency use the straight-line depreciation method to estimate a fleet asset's reduced economic benefit throughout its life.

The [Annual Report](#) states that any improvements to leased fleet assets are depreciated over the shorter of the unexpired period of its lease or its estimated remaining useful life. When determining the useful economic life of a fleet asset and its residual value a number of factors need to be considered including its physical condition, expected period of use, and anticipated proceeds from any future sale. The risk of the estimation process is minimised through physical inspection of fleet assets, fleet asset replacement programmes and analysis of previous fleet asset sales.

4 Demand for Fleet Assets

This section considers the key factors underlying the current demand for fleet assets and the drivers for projected future changes in demand.

4.1 Factors Impacting the Demand for Fleet Assets

One of the factors determining demand for fleet assets are Fire and Emergency's existing main and additional functions. Based on the incident response numbers from the [2021/22 Annual Report](#) we attended more medical emergencies than any of our other main or additional functions except false / unwanted alarms. We also attended more motor vehicle accidents than structure and vegetation fires combined.¹¹

This trend of fewer structure fires is likely to continue in the future in part because of 'smart' building design and its supporting systems and technologies. This may change fleet asset composition and overall numbers. However, as will be discussed in more detail below in [Section 7](#) the AMP is predicated on the assumption that fire appliances will continue to be a major component of the fleet and their expected life of 25-30 years needs to be accommodated.

Another critical factor determining demand for fleet assets is the high likelihood of more frequent and severe weather-related events caused by climate change. For example, in 2023, the Auckland Anniversary floods and Cyclone Gabrielle occurred within weeks of each other. Responding to these increasingly frequent and more severe climate change related events, especially if they occur in rural and/or remote areas, may require changes to the type and number of fleet assets as well as where they are located.

It may also require new fleet asset specifications and/or designs to accommodate different operational requirements and responses. For example, appliances currently being used by South Australia's Country Fire Service have additional fire protection measures including water systems to cool the tyres and cab as well as internal 'fire curtains' to protect the occupants.

However, changes in the types of incidents that we respond to could have more impact. For example, New Zealand has an increasing number of EVs, e-scooters, and e-bikes. This will lead to a larger volume of incidents involving them, which, based on New Zealand and international experience, typically involve their batteries exploding or catching fire. This will require fleet assets to have different capabilities (including the types of equipment needed) and operational approaches so they can effectively and efficiently respond to an increased number of EV related emergency incidents.

Important developments could also occur because of proposed changes in the heavy transport sector. The New Zealand Freight Users' Association is currently lobbying for changes to NZTA's axle weight limits so heavier loads can be carried. If higher axle weight limits are introduced, this would mean we could have bigger fire appliances and/or carry more equipment. Heavier axle weight limits would also mean that our appliances more closely align with those used by our key international partners which should make it easier and less expensive to acquire them.

However, if larger trucks were acquired, we would need to ensure that the existing station infrastructure could manage the extra weight. For example, if additional strengthening of stations' appliance parking bays were necessary, we would need to establish a new programme

¹¹ The 2021/22 Annual Report noted we attended 13,869 medical emergencies and 9,200 motor vehicle accidents compared to 4,463 vegetation fires and 4,703 structure fires.

to implement this. A similar approach may also be needed if the existing station doors were too narrow to accommodate larger appliances.

Technology will continue to evolve and become more prominent in the types of fleet assets we use and how they are deployed. This includes the increased use of drones in rescue efforts and using them for key wildfire support functions such as reconnaissance. We may need to consider drones as a separate fleet asset category with their own supporting acquisition, management, and disposal policies, procedures, and processes.

The impact on Fire and Emergency from Artificial Intelligence (AI) is still unclear. However, AI could potentially be used to inform a risk-based allocation approach by improving the ability to predict the types and locations of emergency incidents as well as the types of fleet assets that we need to manage them. As drones, AI, and other new and emerging technologies mature and evolve they are likely to have a direct impact on the demand for fleet assets as well changing our operational requirements and how we deliver our main and additional functions.

4.2 The Future Demand for Fleet Assets

There are no official fleet asset demand forecasts at present; however, there are two important factors that are likely to influence future demand for fleet assets. The first of these is high community expectations regarding the delivery of our main and additional functions. The second is the planned adoption of a risk-based fleet asset allocation approach.

A risk-based fleet asset allocation approach is expected to significantly impact the design, number, and location of fleet assets. It could also clash with community expectations because they may want to retain higher numbers and more types of fleet assets in their area than a risk-based allocation approach would recommend.

Recent Government announcements on proposed changes to the roading network also have the potential to increase the demand for the delivery of our main and additional functions. For example, if the planned changes increase traffic volumes and/or congestion there is likely to be a higher number of motor vehicle accidents that we need to respond to.

The Government is also proposing more 'green fields' development. Depending on where these new subdivisions are located this could lead to an increase in our response times from existing stations or alternatively we may need to deploy fleet assets from stations that are more suitably located. In either case this would represent an increase in demand for these fleet assets.

The [Strategic Asset Management Plan](#) also projected future fleet asset demand out to 2035 by broad incident categories which are outlined below.

4.2.1 Unwanted alarms

The number of unwanted alarms callouts are predicted to remain static but are likely to fall per capita. In the longer-term new alarm systems technology along with improved installation and maintenance regimes may reduce the frequency of unwanted alarm callouts.

4.2.2 Medical responses

The number of medical incidents Fire and Emergency are expected to attend is likely to increase significantly, especially in growing communities that are not well catered for by ambulance services. However, this will depend on how Hato Hone St John and Wellington Free Ambulance respond to demographic change and any future working arrangements Fire and Emergency have with them to respond to these incidents.

4.2.3 Fires

The number and proportion of fires relative to non-fire incidents is expected to reduce. However, climate change is highly likely to impact New Zealand's wildfire seasons. Based on international evidence and experience they are expected to be longer with more frequent and severe events.

These predicted changes to New Zealand's wildfire season may represent the most significant events Fire and Emergency are required to respond to from a fleet asset perspective. For example, it could impact the location and number of specialised fleet assets. It might also impact fleet asset configuration and load carrying capacity as bulkier and/or heavier equipment may be required.

4.2.4 Other¹²

The number and proportion of incidents classified as other is expected to increase over time linked with population increases and the growing impacts of climate change. Our role in other, different types of incidents (such as maritime rescue and international Urban Search and Rescue deployments) may also increase and change over time.

¹² This category includes weather related and hazardous substances events, natural disasters, and motor vehicle rescues.

5 Levels of Service for Fleet Assets

There are no currently defined and agreed levels of service for fleet assets. Accepting that levels of service are fundamental to effective asset management, we have based this iteration of the AMP on the assumption that our current fleet delivery arrangements meet the output requirements of Fire and Emergency today. We have therefore used levels of service that relate to the physical performance of fleet assets to produce this first version of the AMP.

For the purposes of this AMP, sections 5.1 and 5.2 below provide proxies of customer focused levels of service to complement the physical performance expectations of our fleet. We will also look to learn from relevant authorities in Australia on the levels of service they are using for their fleet assets, and use sources such as the Plant and Vehicle Management Manual produced by the Institute of Public Works Engineering Australasia (IPWEA) which references levels of service for fleet assets. Using such reference points, we will consult with our stakeholders and customers to produce new levels of service that are directly attributable to our fleet assets. For example, we could define levels of service based on a fleet asset's core functions including whether it starts, arrives at the incident or event without breakdown or fault, and is able to operate as intended when it arrives. Regardless of how they are derived these defined levels of service will need to be agreed with all the relevant stakeholders including ELT, the unions, and potentially the Fire and Emergency Board.

In the interim, and while defined levels of service are being developed, we will use the following proxies:

- service description statements
- relevant agreements with partner agencies and organisations
- existing fleet asset performance measures derived from our [Asset management policy](#) and [Annual Report](#).

When defined levels of service are agreed, we will need to determine whether fleet assets have the required capability to meet the e. We will also need to determine the required fleet asset capability to meet future demand as well as maintaining or exceeding current delivery of our main and additional functions and operational requirements.

Note that the levels of service for our fleet assets will be refined as new information comes to hand and/or statutory, Fire and Emergency, or vehicle manufacturer requirements change. Fleet assets' performance measures will also be adjusted when there are any updates to their levels of service.

5.1 Fire and Emergency Service Description Statements

The main and additional functions that we provide are summarised below along with commentary on how fleet assets support or enable their effective and efficient delivery:

Fire prevention, including promotion of fire safety, compliance, and enforcement. Fleet assets are a key component of fire safety promotion e.g., school visits and community-based events. This also aligns with the [Tauāki Takune 2023-2027 | Statement of Intent](#) key focus area of reducing the risk of fire through school and community-based programmes.

Fire response and suppression. Fleet assets are an essential component of an effective and efficient response to, and suppression of, fires because they provide supporting capabilities such as foam and fire hoses. There are also specialised fleet assets such as aerial appliances that are used for fire suppression in large and/or tall structures.

Render safe hazardous substances and provide for safety at incidents. We also have specialised fleet assets to coordinate and assist with hazardous substance incidents. These assets also store Personal Protective Equipment (PPE) and provide decontamination facilities for our personnel who are attending these incidents.

Rescue as a result of transport accidents and Urban Search and Rescue (USAR). USAR's fleet assets provide supporting capability to assist with their search and rescue efforts. Fleet assets play a similar role in rescues resulting from transport accidents by also conveying supporting capabilities e.g., 'jaws of life.'

Respond to other emergencies, including medical, maritime, and natural hazard events.

Fleet assets play a critical role in medical emergency responses by conveying supporting capabilities e.g., defibrillators and qualified / trained personnel. White fleet assets are also playing an increasingly important role in medical emergency responses. This is because they can more easily access incidents in densely populated urban areas.

We have dedicated fleet assets to assist with maritime emergencies. Fleet assets also convey our personnel and the necessary equipment to (among other things) assist with rescues of people and animals during natural hazard events such as Cyclone Gabrielle and the Auckland Anniversary floods. We will improve this capability by implementing the recommended changes from the review of the appliance wading depth guidelines and relevant and appropriate design specifications.

5.2 Fire and Emergency Agreements with Government Agencies, Emergency Services Partners, and Other Organisations

Fire and Emergency have a Memorandum of Understanding (MoU) with [Hato Hone St John New Zealand](#) and [Wellington Free Ambulance](#) which outline the medical emergency services we will provide. There are also wider MoUs with the [New Zealand Police and Wellington Free Ambulance](#) and with [these organisations Hato Hone St John and NZTA](#) which respectively outline the services Fire and Emergency will provide for Level 3 Technical Rope Rescue and road incident management.

Fire and Emergency also have Operational Services Agreements (OSA). The [OSA](#) with the Department of Conservation (DoC) sets out the services Fire and Emergency will provide to them including the provision of the initial response to fire related call outs on DoC land.

Fire and Emergency also have an [OSA with the New Zealand Defence Force](#) (NZDF). This delineates the roles and responsibilities between Fire and Emergency and the NZDF for fires in designated defence areas and where the NZDF acts as the first responder to a fire on our behalf. Fire and Emergency have similar arrangements (referred to as Service Agreements) with large forestry owners which sets out the fire suppression services and resources we will respectively provide to each other.

A full list of all the other agreements Fire and Emergency have with other agencies and organisations is available on the [Portal](#).

5.3 Performance Measures for Fleet Assets

5.3.1 Annual report performance measures

We will use the [Annual Report](#) performance measures outlined in Table 5 below as a proxy for fleet asset performance.

Table 4 - Annual Report performance measures

Performance Measures	Notes
Reduction in appliance movements to unwanted alarm events	Multiple adverse weather events caused a spike in false alarm numbers. The measure was not included in the Te Tauāki o ngā Taumata Mahi me Tutuki 2023/2024 Statement of Performance Expectations (SPE) because the proposed initiatives to support the measure have been delayed while Fire and Emergency undertake further engagement with stakeholders.
Percentage of structure fires in urban environments arrived at by career crews within eight minutes	Various factors that are outside our direct control impact our response times, which make it very difficult to meet response time targets. Depending on the locality, factors such as traffic and road conditions, traffic calming measures and urban footprint expansion may play a part. We are focusing on improving the time taken from initial call to when we leave the station. This will help us to improve our overall response times.
Percentage of structure fires in urban environments arrived at by volunteer crews within 11 minutes	We did not meet the 85% target for this measure for 2023/24. Our volunteer crews arrived at 85% of incidents within 11 minutes 45 seconds. The time it is taking our volunteers to get to fire stations and crew appliances has increased in recent years. Many factors beyond our direct control affect our response times, making it challenging to meet our targets. Local conditions, such as traffic, road conditions, traffic calming measures, and urban expansion, all contribute to this issue. The availability of volunteer crews can also impact the timeliness of response.
Percentage of vegetation fires arrived at within 30 minutes (anywhere in New Zealand)	
Percentage of hazardous substances incidents arrived at by crews with specialist resources ¹³ within 60 minutes	
Percentage of motor vehicle accidents arrived at by crews with specialist resources within 30 minutes	
Percentage of career crews who respond to medical emergencies	Various factors that are outside our direct control impact our response times, which make it very difficult to meet response time targets. Depending on the locality, factors such as traffic and road conditions, traffic calming measures and urban

¹³ For the purposes of the AMP specialist resources refers to personnel with specialist skills and/or who are operating relevant fleet assets e.g., HazMat/Command vehicles.

Performance Measures	Notes
in urban environments within eight minutes	footprint expansion may play a part. In January – March 2024 the number of medical emergencies we attended that were outside our 8-minute response time increased with more incidents occurring in holiday locations further from stations.
Percentage of volunteer crews who respond to medical emergencies in urban environments within 11 minutes	Many factors beyond our direct control affect our response times, making it challenging to meet our targets. Local conditions, such as traffic, road conditions, traffic calming measures, and urban expansion, all contribute to this issue. The availability of volunteer crews can also impact the timeliness of response. In 2021/22 we recognised that there were ongoing challenges in achieving timely response in some locations and for certain call types. Adjusting the historic target, while retaining the importance of the time-based element of this measure, brings transparency to the challenges we face when responding in certain areas.

Medical emergencies in the context of these performance measures include both co-response and first response calls. Co-response calls are defined in our [Operational First Aid policy](#) as supporting ambulance services with ‘purple response’ calls such as cardiac arrest. In these cases, while ambulance services are the designated first responders Fire and Emergency may be the first on the scene to provide medical assistance. First response means an ambulance service may be significantly delayed or unable to attend a purple, red, or orange incident. In these cases, Fire and Emergency are likely to be the first provider of medical assistance.

5.3.2 Reporting on fleet assets performance and the Fleet Asset Management Plan

We will report on the agreed levels of service for fleet assets, and their associated performance measures, when they are defined and agreed. In the interim we will use the existing evaluation measures for the proxy levels of service outlined above. If new or improved fleet asset performance measures are required, we will collaborate with the relevant teams to develop these.

We will also provide reporting on whether the AMP’s benefits and objectives have been achieved when we have established the associated measures and reporting timeframes. However, at a minimum, progress reports on whether the AMP has met its stated benefits and objectives should be provided as part of the formal reviews outlined [below in Section 13.2](#).

6 Fire and Emergency Fleet Assets Emissions Reduction Targets and Initiatives

Based on Fire and Emergency's 2023 Electric Vehicle (EV) ¹⁴ Migration Plan this section outlines our emission reduction targets and whether we are meeting them. It also summarises a proposed white fleet optimisation programme and associated projects as well as the potential approaches and initiatives that could be undertaken to reduce red fleet emissions.

6.1 Fire and Emergency Fleet Assets Emissions Baseline and Targets

The Carbon Neutral Government Programme (CNGP) was established to accelerate the reduction of public sector carbon emissions (emissions) by assisting government agencies to be carbon neutral by 2025. Fire and Emergency will achieve this, in part, by optimising the size of the white fleet and purchasing the lowest emission vehicles that are available and meet operational requirements.

As of 30 June 2022, the red fleet was responsible for 29 percent¹⁵ of Fire and Emergency's total emissions and the white fleet 23 percent.¹⁶ Fire and Emergency's current Emissions Reduction Plan has set a target of reducing gross emissions by five percent for the red fleet and 20 percent for the white fleet by 2025. The 2030 targets are 30 percent for the white fleet and 10 percent for the red fleet compared to the 2018/19 financial year baseline.

Fire and Emergency has reduced fleet emissions in recent years. For example, fuel use was down 16 percent in 2021/22 compared to the baseline year of 2018/19. White fleet emissions were down 7.4 percent in 2022/23 compared to the baseline year. However, this was up from 2021/22. The lower emissions in 2021/22 could be due to the Covid 19 lockdowns, especially in Auckland. Further white fleet emission reduction opportunities are outlined below in Sections 6.2, [6.4](#) and [6.5](#).

Red fleet emissions also decreased in 2022/23 but only marginally (0.4 percent) which continues the trend of these emissions remaining relatively static. However, larger reductions cannot be practically achieved without significant operational changes and/or decreases in the delivery of our main and additional functions. This challenge is exacerbated by the limited available opportunities for migrating fire appliances to low emission alternatives.

We will focus on practical and affordable red fleet emissions reduction initiatives that do not negatively impact Fire and Emergency's operational responses or capabilities. More details on these initiatives are provided in [Section 6.11 below](#).

¹⁴ For the purposes of the AMP EVs are defined as Battery Electric Vehicles (BEVs), Plug-in Hybrid Electric Vehicles (PHEVs), and fuel cell electric vehicles (FCEV).

¹⁵ This equated to 4,125.2 tonnes of carbon dioxide equivalent (tCO₂e).

¹⁶ This equated to 3,173.7 tCO₂e. Note this figure also includes emissions from other diesel- or petrol-powered sources such as generators and portable pumps.

6.2 White Fleet Optimisation Programme¹⁷

6.2.1 Indicative programme structure

6.2.1.1 Overall approach

The planned approach is that white fleet optimisation should occur through a series of projects within a single programme (refer to [Section 6.2.3](#) below for more details on the individual projects). The programme and its associated projects will be aligned with the business-as-usual activities that are deemed most likely to deliver emissions reductions.

However, the major change management required should be delivered as a separate project. This acknowledges that easy wins or similar complementary changes may be identified that should be taken on board as part of effective fleet asset management. For more details on the approach, we will adopt for the white fleet optimisation programme and the other fleet asset projects involving change management refer to [Section 7.4.2](#) below.

6.2.1.2 Cost considerations

The individual projects' and overall white fleet optimisation programme (programme) costs are provided below in [Section 6.2.4](#). They are based primarily on estimates of the required staff time to complete the projects with varying rates for different project roles e.g., Business Analyst and Project Coordinator.

The projects may incur extra costs (such as required additional capabilities or technologies). However, it is assumed that those costs would be noted separately in the appropriate section(s) of the AMP or be the subject of a separate business case or budget bid. Note that our actual fleet asset management costs such as purchasing new vehicles are not included in the costs for the programme or its associated projects.

6.2.2 Programme outline

A phased approach will be adopted for the programme's implementation. This is summarised below along with an indication of the programme's overall sequencing and activities focus.

6.2.2.1 Phase 1 – Reconciliation and information building

6.2.2.2 Phase 2 – Implementing

6.2.2.3 Phase 3 – Optimise and strengthen

6.2.2.4 Phase 4 – Evaluating offsets and reinforcement

6.2.3 Programme projects

6.2.3.1 The proposed programme comprises the following projects:

Project 1 – Current state of the white fleet

Project 2 – Fleet governance

Project 3 – Fleet information

Project 4 – Costing efficiency

Project 5 – Policy renewal

¹⁷ This section is based on [previous work](#) that was completed for Fire and Emergency by Tenzing, a Wellington based management and technology consulting company. This programme and its individual projects are including in the AMP cost model in the FY28/29 and FY29/30 financial years.

Project 6 – White Fleet Emissions Reduction Strategy and long-term Plan

Project 7 – Enhance and strengthen white fleet emissions reporting

Project 8 – White fleet emissions optimisation

6.2.4 Programme cost model

A cost model was developed for the programme and its individual projects. The programme's high-level costs and underlying assumptions are provided in Table 6 below.

Table 5 - Programme and project costs

Programme Costs	Financial Year 1	Financial Year 2	Total
Programme Staff			
Programme and Change Managers	\$242,399	\$123,072	\$365,471
Programme Overheads			
Overheads (ICT, transport, onboarding etc)	\$332,574	\$166,288	\$498,862
Project Costs			
Project 1: Current State of White Fleet	\$184,800		\$184,800
Project 2: White Fleet Governance	\$94,160		\$94,160
Project 3: White Fleet information	\$111,760		\$111,760
Project 4: Costing Efficiency	\$143,660		\$143,660
Project 5: Policy Renewal	\$578,160		\$578,160
Project 6: White Fleet Emissions Strategy and long-term Plan	\$299,420		\$299,420
Project 7: Enhance and Strengthen White Fleet Emissions Reporting	\$323,480		\$323,480
Project 8: White Fleet Emissions Optimisation		\$199,980	\$199,980
Total Cost	\$2.31 million	\$489,340	\$2.80 million

6.3 Electric Vehicle Charging Infrastructure

For each BEV that is purchased or leased we will need to install an additional charger. We will prioritise the installation of EV charging infrastructure at Region and District Headquarters (HQ) because that is where most BEVs (and PHEVs) are located. Before EV charger installations occur, we will conduct site audits to determine:

- the preferred locations
- the capacity of the site's electrical infrastructure to cope with EV chargers

- whether any other associated works need to be completed.¹⁸

The Regional and District HQ site audits, along with others that have been identified as higher priority, should be completed by June 2025. We will liaise with the Risk Reduction Directorate before commencing these audits to ensure that we are following the advice on the installation of EV chargers that we are giving to the public.

Over time site assessments will be undertaken at all locations where staff work on a regular basis. We will also explore whether we can use the existing EV charging infrastructure at sites that we share with other government agencies as the opportunity arises.

To date EV chargers have been installed at:

- Te Hiku Regional HQ, Auckland
- The Equipment and Logistics Depot, Tauranga
- The National Training Centre, Rotorua
- National HQ, Wellington
- Ngā Tai ki te Puku District HQ, Hamilton
- Te Kei Regional HQ, Dunedin
- Te Kei District HQ, Invercargill
- Chester Street East, Christchurch
- Taihape Fire Station
- Porirua Station Bay of Plenty District HQ, Rotorua
- Hawke's Bay District HQ, Napier
- Taranaki District HQ, New Plymouth
- Te Ūpoko Regional HQ, Wellington
- The Christchurch Justice and Emergency Services Precinct

EV charger installations are currently in progress or in delivery planning phase at:

- Ngā Tai ki te Puku Regional HQ, Tauranga

6.4 White Fleet Vehicle Selection

White fleet vehicles will be selected by:

1. Documenting contractual vehicle requirements. These requirements will need to be endorsed by the relevant Tier 3 Manager as a minimum. Using station or office pool vehicles rather than a dedicated vehicle is the preferred option. Business units will need to provide suitable evidence for why a dedicated vehicle is necessary.
2. Highlighting any operational requirements e.g., towing capacity and off-road capability that have a material impact on whether a low emissions vehicle can be acquired. We will

¹⁸ Our current EV chargers are low-capacity AC, so it is expected that stations will have the capacity to cope with these with limited additional work required. These chargers are also on the Energy Efficiency Conservation Authority (EECA's) preferred supplier list.

provide the lowest emission vehicle that meets operational requirements, as well as other available alternatives that meet some of these so that the trade-offs between vehicle features, cost, and emissions can be clearly identified.

3. Providing the documented operational requirements for the role, Fleet team analysis, and proposed vehicle options to the Deputy Chief Executive (DCE) of the Organisational Strategy and Capability Development (OSCD) Branch and/or Service Delivery Operations Branch for approval on behalf of ELT. This will confirm that ELT are comfortable with the documented role requirements and that the vehicle selected is the lowest emission option available that meets operational requirements.

The [Motor vehicle policy](#) and/or the associated [Motor vehicle allocation schedule](#) will be updated where necessary to reflect the decisions made. The completed and in progress role and operational requirements to inform white fleet vehicle selection are provided in Tables 15 and 16 below.

4. The OSCD Branch regularly reviewing the vehicle requirements and optimal model for each role.
5. Evaluating new roles using this process before a vehicle is confirmed for allocation to the position or offered to staff filling that role.

All relevant employee role and operational requirement assessments are scheduled for completion by 30 June 2026. A full list of the current motor vehicle user agreements is available [here](#).

6.4.1 Pool, tool of trade, and contractual vehicles

As of August 2022, there were:

- Thirty-seven office pool vehicles.
- Two hundred and thirty-three station pool vehicles (these are white fleet emergency response vehicles that are located at a career fire station and can be used for both operational and non-operational purposes).
- Three hundred and thirty-seven tool of trade vehicles (these are white fleet vehicles that an employee uses and which they store overnight at their home. These vehicles are sometimes available for limited private use).
- One hundred and eighty-eight contractual vehicles (these are white fleet vehicles that an employee uses and which they must store at their home. These vehicles are normally available for full private use).

We will replace these vehicles with EVs when:

- their lease has expired
- they are due for replacement under the provisions of the [Motor vehicle policy](#)
- they have reached the end of their economic life.

This will only occur after agreed role and operational requirements have been established, the lowest emission option identified, and relevant approvals obtained.

6.5 White Fleet Emissions Reduction Opportunities

The State Sector Decarbonisation Fund (SSDF) administered by the Energy Efficiency and Conservation Authority (EECA) provides support funding for BEVs and their chargers. Under the

SSDF we can obtain up to a 45 percent discount or a maximum of \$24,000 per BEV on a 45-month lease and up to 55 percent or a maximum of \$22,000 per BEV on a 36-month lease. For the chargers we can get up to a 50 percent discount or a maximum of \$5,000 per charger.

As part of the SSDF criteria, we would need to provide reporting after 12 months on the energy and carbon savings that the BEV has generated. We could use this reporting data to address concerns raised by our personnel about the range and ability of BEVs to effectively meet role requirements and to promote their wider use and uptake. If sufficient funding is available, we will consider using the SSDF on a wider basis e.g., to replace all existing office pool cars over an appropriate and agreed time frame.¹⁹

Suppliers including Toyota, Isuzu, and Ford have advised that they will have low emission utes available within the next 12 to 18 months. We will confirm that they meet operational requirements, substantially reduce emissions, and their expected price range. We will also confirm when a PHEV van that meets our operational requirements will be available and their expected price range.²⁰

There are also policy changes that can be made to reduce white fleet emissions. The most important one is updating the [Motor vehicle policy](#) to require all contractual vehicles to be BEVs where the employee is not on an operational response roster. This update assumes that we would provide the required EV charging infrastructure and pay for any costs incurred by employees' use of commercial EV chargers.

Note that under proposed updates to the [Motor vehicle policy](#) the charging of our EVs on private premises would be at the employee's cost and responsibility. If we were to change this policy and allow employees to charge our EVs at home we could use EECA support funding.²¹ This support funding would involve the installation of 'smart' chargers at employees' private premises which would allow us to capture the use data to inform the costs that employees would need to meet. It would also involve a site assessment by a suitably qualified electrician to determine what, if any, electrical infrastructure upgrades would be required.

To determine the feasibility of this we will gather supporting data before obtaining approval from ELT (or relevant members). If ELT approves this initiative, we will commence formal discussions with EECA on a potential pilot or wider rollout of home charging for our EVs (whichever is deemed more suitable and appropriate). We would also develop the necessary supporting collateral using the lessons learned from other government agencies who have introduced this.

6.6 Forecast Electric Vehicle Migration Volumes

Table 6 - Forecasted migration of the white fleet to low emissions vehicles by volume

Financial Year	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40
ICE ²²	740	672	551	474	354	316	299	183	176	166	159	151	140	128	119	112	84	50
Hybrid	24	25	107	109	113	108	108	91	17	14	13	11	11	11	11	11	11	11

¹⁹ Using the SSDF for future BEV and charger purchases is contingent on its criteria not changing significantly, suitable vehicles being identified for replacement, and the preferred BEVs being available when required. More details on the SSDF are available [here](#).

²⁰ When the timeframe for the PHEV utes and vans are confirmed the AMP and EV Migration Plan will be updated.

²¹ Preliminary discussions with EECA indicate that Fire and Emergency would be eligible for support funding to allow employees to charge our EVs at home.

²² These vehicles have an internal combustion engine (ICE) that is fuelled by petrol or diesel.

PHEV	27	94	128	191	271	292	299	317	365	356	316	286	286	199	124	84	63	63
BEV	4	4	9	21	57	79	89	204	237	259	307	340	358	457	541	588	637	671

Note that the above figures may overstate the number of PHEVs in the 2023/24 financial year because of current supply chain issues. However, they may also understate the number of BEVs because we expect that a detailed analysis of each role, and the resulting operational requirements will result in more opportunities for them to be introduced.

The continuing high numbers of ICE and hybrid vehicles in the short- to medium-term is due to the current assumptions of a twenty-year life for station based LRVs and the market availability dates of PHEV utes and vans. The white fleet's migration to EVs could be accelerated by bringing forward the required capital expenditure to have an earlier than planned replacement of station based LRVs. There are also emerging supply chain issues with ICE vans which may impact the forecast numbers above.

6.7 Change Management

6.7.1 Training development and implementation plan

To ensure the successful introduction of EVs and to maximise emission reductions our driver training may need to be updated. Our current EV related driver training is mainly delivered through the use of supporting technical guides which reflects their limited rollout to date. As a larger number of EVs are acquired we may need to develop a supporting training delivery and implementation plan so there is more consistency in how they are operated. Formal training at scale rather than self-paced training via the technical guides would also potentially accelerate the uptake and adoption of EVs.

6.7.2 Change management plan

As part of the wider rollout of EVs Fire and Emergency's existing change management approach will be used (for more details refer to [Section 7.4.2 below](#)). This includes developing a change management plan and supporting communications to:

- dispel any employee misconceptions associated with EVs (e.g., that they lack the required range to meet operational requirements)
- explain the benefits and features of EVs
- outline the required changes in business processes arising from their introduction.

Providing employees with the facts and a clear understanding of the EV Migration Plan, addressing their queries and concerns, and reflecting (and where necessary acting) on their feedback is more likely to facilitate a successful transition to EVs.

6.8 Cost Estimates

Funding has not been approved for transitioning the white fleet to EVs. To obtain this funding additional analysis will need to be undertaken including the results from the planned site audits for charger installations. This means that the cost estimates below are indicative only. They are also based on key assumptions such as the availability of EVs that can meet operational requirements including having the required load capacity, towing ability, and off-road capabilities.

We anticipate that SSDF funding will only be a limited part of our EV migration efforts. This is because SSDF funding is only available for BEVs and their chargers. However, as noted above in our EV Migration Plan PHEVs, not BEVs, will constitute the majority of Fire and Emergency's low emission vehicle acquisitions for at least the next five years.

In addition, Fire and Emergency is cost constrained because of our reliance on the Levy and a lack of alternative revenue streams. This could also slow the transition of the white fleet to EVs because they are currently more expensive than their ICE equivalents.

6.8.1 Electric vehicle charging infrastructure implementation costs

The expected capital and operating expenditure for our EV charging infrastructure provided below in Table 8 and Table 9 is based on two key assumptions. Firstly, that all EVs will be leased with a dedicated charger for each BEV and another for every two PHEVs.²³ And secondly, that the expected volumes of EVs in the EV Migration Plan are delivered.

Table 7 - Forecast electric vehicle charging infrastructure capital expenditure

	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	FY 32/33	FY 33/34	FY 34/35	Total
\$M	0	0	0	0.8	0.7	1.4	1.1	1.0	2.6	2.7	10.3

Table 8 - Forecast electric vehicle charging infrastructure operating expenditure²⁴

	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	FY 32/33	FY 33/34	FY 34/35	Total
\$k	45	70	90	90	90	90	90	90	90	90	835

6.9 Constraints

One of the major constraints hindering the migration of the white fleet to EVs is that they do not meet all of our operational requirements. This means that most of our current and planned EV acquisitions are for non-operational vehicles such as office pool cars.

Another constraint is that while EVs are becoming more common they are still not a mature product. This creates a significant amount of uncertainty about the future availability of the required EV capability as well as what the actual costs will be. We will continue to keep a watching brief on the EV market and take advantage of new vehicles that meet operational requirements as and when they become available.

6.9.1 Operational requirements

The main operational requirements that EVs need to meet are summarised below.

6.9.1.1 Load capacity

Our vehicles often need to be loaded to their full load capacity. An EV's battery adds extra weight which means that it would be unable to carry the required load without breaching the statutory and/or manufacturer's specified weight limits. We are relying on EV battery suppliers to resolve this weight issue.

²³ 7.2kW chargers will be installed for both PHEVs and BEVs to future proof our EV charger network.

²⁴ These costs exclude any increase in monthly leases due to the higher purchase price of EVs as well as any differences in ongoing costs.

6.9.1.2 Towing capacity

There are heavy vehicles which need towing including generators, ablution facilities, kitchen demonstrators, and canteen trailers. Transporting these heavy vehicles requires white fleet vehicles with a high towing capacity. Current EVs typically have a low towing capacity or towing heavy loads significantly reduces their range.

6.9.1.3 Off-road capability

Fire and Emergency need to respond to incidents that occur off formed roads. Some staff also require vehicles with off road capability to conduct their day-to-day business. Current EVs are only suitable for on road operations.

6.9.1.4 Disaster resiliency

Fire and Emergency must be able to operate during a large-scale natural disasters and other significant emergency events. BEVs are unlikely to be suitable for emergency responses during these events because of the widespread power outages that are expected to occur. PHEVs would be better because they can still use petrol if necessary.

Migration of emergency response white fleet assets to BEVs will require the resiliency and availability of the backup electrical supply / charging infrastructure to be as good as or better than the current equivalent for petrol and diesel. Otherwise, Fire and Emergency risk having a reduced ability to support communities during disasters and other significant emergency events.

6.10 Electric Vehicle Transition Plan

The plan in Table 10 below assumes that EV white fleet assets that meet operational requirements will be available in the stated financial years.

Table 9 - Forecasted migration of the white fleet to EVs by Financial Year (FY)

Vehicle type	FY25/26	FY26/27	FY27/28	FY28/29	FY29/30	FY30/31	FY31/32
Ute full load	PHEV	PHEV	PHEV	PHEV	PHEV	PHEV	PHEV
SUV	BEV	BEV	BEV	BEV	BEV	BEV	BEV
SUV AWD	PHEV	PHEV	PHEV	BEV	BEV	BEV	BEV
SUV 4WD	PHEV	PHEV	PHEV	PHEV	PHEV	PHEV	PHEV
Hatchback	BEV	BEV	BEV	BEV	BEV	BEV	BEV
Van light load	PHEV	PHEV	PHEV	PHEV	PHEV	PHEV	PHEV
Van full load	Diesel	Hybrid	Hybrid	PHEV	PHEV	PHEV	PHEV

Note that this high-level plan does not consider when each individual white fleet asset might be suitable for moving to a lower emissions alternative that meets operational requirements. It also does not preclude us from acquiring more BEVs over the next two years. For example, during that timeframe we expect that all our office pool cars will be a BEV.

6.11 Reducing Red Fleet Emissions

The red fleet is the main source of our emissions. However, reducing these is challenging because there are limited low emission alternatives available that meet our operational needs and statutory requirements. For example, the weight of the battery precludes the deployment of Type 3 electric appliances. Red fleet EVs are also an immature and expensive product.

However, despite these challenges we still need to reduce red fleet emissions. To do this we can draw on the experiences of our Australasian Fire and Emergency Service Authorities Council (AFAC) partners such as Australian Capital Territory (ACT) who have recently deployed their first electric appliances.

We also commissioned Business and Economic Research Limited (BERL) to do a [literature review](#)²⁵ to find out what other jurisdictions²⁶ are doing to reduce their red fleet emissions. The UK, the USA, and Australia (including the ACT example cited above) all had local instances of electric fire appliances being used with no operational issues being noted.

Apart from the obvious solution of using electric fire appliances to reduce red fleet emissions the BERL literature review also identified technological and operational adjustments that could be made which are summarised below. We then provide high-level details of a proposed trial of an electric red fleet vehicle. Finally, we outline the proposed next steps to reduce red fleet emissions.

6.11.1 Technological changes to reduce red fleet emissions

BERL's literature review (literature review) identified compressed natural gas and liquefied petroleum gas as fuels that could be used to reduce red fleet emissions but these would require costly vehicle modifications and would increase our running costs. As an alternative, diesel additives such as a cetane number enhancer could be used.

The literature review identified high quality, fully reformulated diesel combined with an exhaust aftertreatment system as the most beneficial and cost-effective fuel related red fleet emissions reduction method. According to the literature review the most commonly used exhaust aftertreatment systems are a diesel oxidation catalyst, particulate traps, and continuously regenerating traps.

A potentially more promising solution to reduce red fleet emissions relates to idling. Idling occurs when the fire appliance's engine is left on when it is stationary e.g., when the pump is operating or when they are stuck in traffic travelling to and from an incident. Research cited in the literature review found that up to 42 percent of total operational engine time for fire appliances was taken up by idling. It also found that the fuel consumed during just ten minutes of idling was the equivalent of driving eight kilometres. If a fire truck idled an average of ten minutes per day, it would consume just over 100 extra litres of fuel per year.²⁷ The implementation of this is being explored.

²⁵ At the time of writing this literature review has yet to be published. We will provide a link when it is and in the interim for further reference, if necessary, a link is provided to a copy located in our Shared Drive.

²⁶ The jurisdictions surveyed for the literature review were Australia, the United Kingdom (UK), the European Union (EU), the United States of America (USA), and Canada.

²⁷ This figure is based on converting USA gallons to New Zealand litres. According to a [Unit Converters website](#) a US gallon is equivalent to 3.785 New Zealand litres. The figure supplied by the literature review was 27 US gallons which equates to 102.206 New Zealand litres.

According to the literature review the most commonly used idling reduction technology is an Auxiliary Power Unit (APU). Using an APU can reduce greenhouse gas emissions by 420 kilograms in CO₂ equivalents per year. A local study from a USA fire brigade found that installing APUs led to a 77 percent reduction in their diesel fuel use.

However, newer appliances have batteries that sound a warning when their levels get too low and eventually shut off vehicle functions such as lights. We could more widely adopt this functionality to reduce emissions without introducing APUs or fuel changes. We will incorporate this in training for new fleet.

In the most recent Emissions Reduction Plan (Plan), it was noted that red fleet emissions could be decreased by shifting the equipment it conveys to electrical or battery powered. For example all appliance hand tools, and illumination are now battery powered.

We are also trialling battery powered roadside rescue equipment and investigating potential solutions for on-station charging of multiple lithium-ion batteries. The Plan also notes that we could potentially use drones during wildfire events for additional key functions and tasks such as reconnaissance.

6.11.2 Operational changes to reduce red fleet emissions

We could also introduce operational changes to reduce red fleet emissions. These are preferred because they are low cost, easy to implement, and are likely to generate larger emissions reductions than the technological changes cited above.

The first operational change would be to simply instruct fire crews to switch off the appliance when it is not in operation. The appliance systems would warn crews when it needed to be switched on at which point, they would do so and switch off again when appropriate.

The second operational change that should be implemented is to have a nationally consistent response to unwanted / false alarm callouts. Currently there is significant inconsistency in our operational responses to these incidents across and between regions. For example, some stations deploy up to four vehicles to these incidents while others only use one or two. We should introduce national guidelines so a consistent number of vehicles attend these incidents which would reduce our costs and overall red fleet emissions.

These recommended operational changes to reduce red fleet emissions would also align with the [Climate Response Strategy](#) which states that “We will explore how we respond to incidents, and use our fire appliances generally, with the aim of identifying efficiencies in the way we use our vehicles without compromising the effectiveness of our response.” In a previous report²⁸ BERL made suggestions on how to reduce false alarm / unwanted callouts. These included improved and more flexible alarm systems as well as better installation and maintenance regimes.

Finally, we could reduce the overall age of the red fleet. This would help to reduce red fleet emissions because engine deterioration, which occurs as a vehicle ages, also increases emissions. Older red fleet vehicles are also less likely to have the latest available emissions reduction technologies. The implementation of these options will be explored within our work programmes.

6.11.3 Trialling an electric red fleet vehicle

The easiest way to reduce red fleet emissions is replacing the current appliances with low emission alternatives. However, our investigations to date have uncovered significant reliability

²⁸ [Economic Cost of Unwanted Fire Alarms, BERL, June 2019.](#)

issues with the currently available electric fire appliances. Electric fire appliances would also be in breach of New Zealand's current axle weight limits because of the battery weight and they lack the required load capacity.

However, despite these barriers it would still be beneficial to trial an electric fire appliance to determine their fitness for purpose and ability to meet requirements in varied operational contexts. This could potentially be supported by funding from EECA if their current funding eligibility rules for heavy vehicles are changed to include fire appliances. We would also need to work with NZTA to increase the axle weight limits or obtain an exemption for the trial (unless battery weights are reduced by the appropriate amount).

In addition, or as an alternative to trialling an EV fire appliance we could trial an electric ISV and/or OSV. This would reduce overall red fleet emissions and would provide a good opportunity to obtain learnings and experiences from the use of EV technology in different operational contexts. More importantly if there were any reliability issues with these vehicles it would not unduly compromise our service delivery or operational response. There are electric ISV vehicles available from New Zealand suppliers which makes them easier to source for any potential trial.

There are also promising local and international developments in the use of hydrogen fuel for heavy vehicles including the planned 2024 rollout of fuelling stations in both the North and South Islands. Hydrogen fuel may be more reliable and will not cause any weight issues.

We could trial a hydrogen fuel vehicle in 2025 if one is available that is affordable and meets our operational requirements. However, that will not be the main focus as hydrogen fuel technology is less mature than electric in a heavy vehicle context and it is also likely to be more expensive until it is widely used.

6.11.4 Next steps

Work has started on a project to introduce a more consistent approach to unwanted callouts / false alarm responses. Fire crews will also be advised via the normal channels to reduce idling related emissions by switching off their appliance engines when they are not in operation and it is safe and appropriate to do so.

We can also use existing technologies in newer appliances to reduce idling related emissions without compromising the delivery of our main and additional functions or operational responses. As noted below in the [Improvement Plan](#) we will also improve our existing idling related data in the Smartrak system to confirm how much time our appliances spend idling, the costs, and (if appropriate) targeted interventions for appliances with higher levels of idling time.

We will submit a 2026/27 financial year budget bid to trial APUs and other appropriate technologies to reduce red fleet emissions. This trial will provide useful data and learnings and confirm (or otherwise) the efficacy and cost effectiveness of these technologies before we commit the time, resources, and money to a large-scale deployment. It is recommended that we also resolve any idling data issues in the Smartrak system before a wider rollout of APUs and/or other idling reduction technology.

In the same budget bid, we are also proposing a trial of an electric ISV and/or OSV. It is important that this trial takes place within the next 12-18 months because as noted below in [Section 7.4.7](#) the OSVs are reaching the end of their service lives and will soon need replacing. On the same basis we should also consider trialling electric specialist fleet assets to replace those which are reaching the end of their service lives. This could include the BA tenders and Lighting Plant vehicles.

The results of this trial(s) will inform our future red fleet emissions reduction efforts. For example, the trial may show that we can replace existing ISVs, OSVs, and other appropriate

specialist fleet assets with electric versions. However, it may also demonstrate that a wider deployment is not achievable in the near term and/or the emissions reductions or improvements to the delivery of our main and additional functions does not justify the additional expense and effort.

We will keep a watching brief on developments in the electric fire appliance market. When we are satisfied that the reliability, weight, and load capacity issues have been resolved we will source at least one for a trial. It is expected that this will occur within the next three to five years.²⁹ We will also keep a watching brief on emerging drone technologies such as heavy lift to assess whether these could be used for more tasks and functions to further reduce air fleet emissions.

DOES NOT REFLECT BUDGET AVAILABILITY

²⁹ This could be sooner if EECA can provide support funding, the axle weight limits are increased, and ELT prioritise this investment.

7 Managing Fire and Emergency's Fleet Assets

This section puts our fleet assets into groups and associated sub-categories, outlines their maintenance plans and schedules, summarises the proposed renewal and upgrade plans and projects, and lists the supplier contracts that have expired.

It outlines what new fleet assets we require, by when, and at what cost. This section also assesses our fleet assets' condition, functionality, and utilisation and summarises their disposal policies and processes.

7.1 Fleet Asset Groups

To create fleet asset lifecycle and management plans we need to define what our fleet asset groups are. For the purposes of the AMP, the fleet asset groups and sub-categories are based on their assigned JDE categories which are outlined in Table 11 below.

Table 10 - Fleet asset groups and sub-categories

White fleet asset group	White fleet asset group sub-categories	Red fleet asset group	Red fleet asset group sub-categories
Caravan		Bus	
Forklifts		Rural Appliance	Large, Medium, Single Cab, and Crew Cab
Hatchbacks		Type 1 Appliance	4x4, Vintage, and Light
Marine		Type 2 Appliance	4x4 and Vintage
Motorcycles		Type 3 Appliance	Vintage and Heavy
SUVs		Type 4 Aerial Appliance	
Station Wagons		Type 5 Aerial Appliance	
Trailers		Type 6 Aerial Appliance	
Utes	4x2 Single Cab, 4x2 Double Cab, 4x4 Double Cab, 4x4 Extra Cab, and Smokechasers	Specialist Vehicle	BA Tender, Canteen Vehicle, Command Unit, Fire Medical, Fire Police, HazMat, Hazmat/Command, Heavy Rescue, Hose Layer, ISV, LRV, Lighting Plant, Operational Support, USAR
Vans	Cargo and Minibus	Ultralight	4x4
		Water Tankers	4x2, 4x4, 6x4, and 8x4

7.2 Red Fleet Asset Maintenance

The [Appliance maintenance policy](#) restricts the maintenance that can be carried out on red fleet assets. This includes not being able to add or modify fixtures and fittings or install equipment that requires securing in place or a power supply without prior approval from the National

Manager, Fleet. Examples of where the National Manager, Fleet's approval would be required are:

- Adding or modifying a fixture that holds PPE such as helmets.
- Adding equipment that requires its battery charger to be part of the appliance's main wiring.
- Making any modifications that could potentially breach manufacturer requirements e.g., to seats, cab, or chassis.

The Appliance maintenance policy is supported by an [Appliance maintenance schedule](#) which states that all appliances must be serviced on a two- or four-year cycle and obtain a Certificate of Fitness (CoF) every six months.³⁰ There are three levels of maintenance service:

- **A Service:** Basic service which comprises of core checks and tasks.
- **B Service:** Intermediate level service which includes tasks that are not required as often as those in the A Service.
- **C Service:** Comprehensive service.

Note that it varies for each appliance depending on their type and the number of calls attended, kilometres travelled, and hours used.³¹

These regular maintenance schedules are supported by an [Appliance equipment requirements policy](#) which states when additional equipment can be carried and who needs to authorise this. The policy also defines inventory checks and how often these should be conducted.³² Finally, it advises staff what to do if an item is missing, damaged, or about to expire.

For the 2023/24 financial year³³ eighty four percent of preventative maintenance service work orders were completed within sixty days of their scheduled date. This compares to eighty five percent for the 2022/23 financial year.

The average time appliances have spent out of service in the 2023/24 financial year up to May 2024 was 23 days overall. The average time they spent out of service categorised by their age was:

- 10 days for appliances aged 1-5 years.
- 16 days for appliances aged 6-10 years.
- 26 days for appliances aged 11-20 years.

In the 2022/23 financial year the comparable figures were seven days overall, three days for appliances aged 1-5 years, eight days for appliances aged 6-10 years, and seven days for appliances aged 11-20 years.

In the 2022/23 financial year the average amount of time fleet assets spent in the workshop was 21 days with a longest recorded stay of 246 days. For the 2023/24 financial year the comparable figures are 64 average days in the workshop with a longest recorded stay of 181 days. A more detailed breakdown of maintenance data and asset configuration is provided in Appendix 3 – Fleet Maintenance Details.

³⁰ These maintenance services and cycles do not include aerial appliances. Aerial appliances are inspected separately and have their own maintenance schedules.

³¹ The final maintenance decisions are determined for each appliance by which of their number of calls, kilometres travelled, or hours of use has the lowest number.

³² Daily for career appliances, weekly for volunteer appliances, and after each use for HazMat equipment.

³³ For the 2023/24 financial year this is up to May 2024.

The average time spent in the workshop for all the fleet assets are much lower than the overall average of 21 days for the 2022/23 financial year and 64 days for the 2023/24 financial year. It is likely that the longest stays are relief appliances that are located in the workshop but are not out of service. Recent data changes which allow us to differentiate relief and training appliances from frontline red fleet assets will help us confirm this reason for longer workshop stays in the future.

Similarly, the busier workshops are taking longer to repair and maintain red fleet assets. In the first instance it is recommended that the supplier's average days for workshop visits are cross-referenced against their contractual obligations to assess if this is an issue. If these average workshop stays are identified as an area of concern, we should apply the appropriate remedies provided for in the contract. It should also be determined if there are any general learnings from these investigations that could help improve other suppliers' performance.

7.3 Fleet Assets Renewals and Upgrades

7.3.1 Mobility programme

The [Mobility Programme's](#) main objective is to install a dedicated tablet in 1,100 fire appliances over the next three years in conjunction with the Public Safety Network radio equipment upgrades (refer below for more details).³⁴ The tablet will allow firefighters to more easily update important and useful information.

For example, the Operational Site Data (OSD) App enables firefighters to review and update building information when they are attending an incident or doing scheduled site inspections. The OSD App also automatically uploads any updated building information into the Station Management System which makes this immediately available to all the other fire crews and planning personnel across the country.

The tablet also provides access to the BA Equipment Check application form. This form enables firefighters to quickly review and update BA equipment information during their scheduled checks. These updates are automatically uploaded into a national database so the data is immediately available to all the personnel who are using the BA Forms App.

The tablet also uses the Mobile Response Application (MRA) to provide the following information:

- Incident turnout information including the current Alarm Level.
- Incident Route, Street, Satellite, and Topographical maps for the incident area.
- Location of responding appliances (using ALPS if it is installed), water mains, and fire hydrant details.³⁵
- Building and Operational Information i.e., Site Reports, Diagrams, Contact Details, and Tactical Plans.
- Firecom Message Logs as the incident evolves.
- Access to the Officer Notebook, Command and Control Field Book, and Command and Control Manual.
- Access to weather information.

³⁴ As of July 2023, 240 appliances have had the tablets installed.

³⁵ ALPS is the acronym for the Automatic Location and Positioning System. Refer to [Section 11.1 below](#) for more details.

Other additional features planned for the tablets include K-Codes and other critical communication acknowledgement functions as well as the provision of appropriate and relevant status messaging.

7.3.2 Public Safety Network

The [Public Safety Network](#) (PSN) will be used by all of New Zealand’s frontline emergency services. Fire and Emergency will use the PSN to replace our existing LMR equipment and infrastructure with a single nationwide secure digital radio service. The PSN will also provide a multi-network priority cellular broadband capability which includes voice, video, messaging, and data. Crucially the PSN will provide voice and messaging services in areas where cellular service is currently unavailable.

The PSN has three workstreams: LMR, Priority Cellular and Roaming, and Personal Alerts. To progress these workstreams over the next four years the PSN’s implementation will include the:

- Replacement of existing analogue LMR devices with new ones that can access the PSN.
- Installation of portable smartphones and routers in appliances to replace the current fixed vehicle phones.
- Installation of PSN SIMs to allow cellular roaming and provide priority access from frontline cellular devices (i.e., tablets, phones, and vehicle routers).³⁶ Migration of PSN SIMs to South Island Service Delivery staff work phones is underway. Spark will be responsible for this rollout from March 2024.
- Priority access for PSN enabled cellular devices is being developed via a Spark/One NZ joint venture. They are currently working on the design review with Fire and Emergency and other agency teams.

The hardware that we are planning to install in Fire and Emergency fleet assets is outlined in Table 15 below.

Table 11 - Fleet asset hardware installations

White fleet	Red Fleet ‘Category 1’	Red Fleet ‘Category 2’
Support LMR Handheld Control Head (HHCH) or Support LMR Colour Control Head ³	Appliance LMR Colour Control Head	Appliance LMR Colour Control Head
LMR Antenna (TBC)	LMR Antenna (TBC)	LMR Antenna (TBC)
Smartphone Charger / Mount and power supply (NB the power supply is TBC)	Portable LMR Charger	Portable LMR Charger
Smartphone power supply (TBC)	Mobility Tablet, Cradle, and Charger	
	Power Relay Solution	Power Relay Solution

³⁶ As of March 2024 1,005, staff were scheduled to have PSN SIMs installed on their work phones. The equivalent figure for red fleet assets is 891 as well as 700 laptops or tablets that are being installed with PSN data SIMs.

³⁷ The difference between a HHCH and the other control heads is their size (HHCH are smaller) and configuration (HHCH has all the control buttons on the handset).

	Cellular Router and Booster Antenna	Cellular Router and Booster Antenna
	Smartphone Charger / Mount and power supply (NB the power supply is TBC).	Smartphone Charger / Mount and power supply (NB the power supply is TBC)

7.3.3 White fleet renewals and upgrades

The high level criteria for the renewal and upgrade of white fleet vehicles is outlined in the [Motor vehicle policy](#) which states that contractual vehicles will be replaced every three years or 100,000km whichever comes first. Vehicles may be retained beyond this timeframe at the Chief Executive's discretion.

The policy also states that pool and tool of trade vehicles will be replaced after six years or 150,000 kilometers whichever comes first. However, pool vans may be retained for longer than six years if they have low mileage. The National Manager, Fleet makes the decision about when to replace pool or tool of trade vehicles taking into consideration how to achieve the best and most economical use from the vehicle as well as the optimal resale value (where applicable).

7.4 New or Replacement Fleet Asset Projects

If there are material changes to the deadline, costs, scope, or objectives for fleet asset projects it would automatically trigger an update of the AMP as part of the formal review schedule outlined below in [Section 13.2](#). We will also update the AMP to add in new fleet asset projects as and when necessary and appropriate.

7.4.1 Project objectives

There are a range of fleet asset replacement projects that are at various stages of completion which are summarised below. We need to develop relevant and appropriate reporting measures for project purposes and to determine if the benefits as well as the strategic objectives and outcomes have been achieved. This is particularly important where the projects are intended to improve the delivery of our main and additional functions.

The existing projects outlined in the AMP may not address the questions that need answering including whether the white fleet can continue to operate effectively and efficiently if it moves to EVs. The projects may also not achieve the stated or required benefits and strategic objectives and outcomes. If this is the case separate projects and associated reporting mechanisms will be necessary.

7.4.2 Procurement of fleet assets

7.4.2.1 Procurement approach for fleet asset services

Maintenance and repairs

Fire and Emergency will be guided by two key principles when arranging the maintenance of fire appliances:

1. They will be maintained to a high standard throughout their economic / operational life.

2. They are expected to have a high level of reliability and meet operational requirements throughout their entire lifecycle.

There are currently no individual service providers that can provide an acceptable maintenance regime for all brigades throughout New Zealand. The essential nature of appliance maintenance and repair services also requires diversity and resilience in their provision, meaning that more than one supplier is needed.

However, one supplier will be responsible for all the appliance maintenance and repairs at each station. If necessary, the supplier will outsource work to specialists and warranty providers to ensure that the maintenance is performed to the required standard in a timely and cost-effective manner.

Fire and Emergency will procure maintenance and repair services via open tenders published on the [Government Electronic Tendering Services \(GETS\) website](#) on the basis that adjacent areas do not have contracts expiring at the same time. This will ensure that we have an experienced, alternative nearby option if there is service unavailability in a particular geographic area.

We will determine the size and boundaries of the advertised areas by considering the planning associated with appliance movements, the location of suitable workshops and the required incident response times.

Parts

Original Equipment Manufacturer (OEM) parts are fitted to fleet assets where possible in order to ensure maximum compatibility and reliability. Where necessary or appropriate these parts will be directly sourced from the OEM representative(s) or supplier(s) based in New Zealand. This would usually be done on our behalf by our fleet maintenance service providers as part of their existing contracts.

Support services

Support services including training may be purchased directly from suppliers. For example, second level training or technical support for Bronto aerial appliances will be sourced directly from their New Zealand based authorised agent.

Current suppliers

We have suppliers right across New Zealand providing a wide range of services.³⁸

7.4.3 Aerial appliances replacement project

Orders have been placed for five new aerial appliances consisting of three medium Type 5s, one large Type 5, and a Type 6 to replace the ones that have reached the end of their service life or will do so in 2024-5. The medium Type 5s will be deployed to Thorndon Station in Wellington as well as the Christchurch City and Dunedin City Stations. The large Type 5 is going to Parnell Station in Auckland and the Type 6 to Hamilton City Station.³⁹

There is also a larger project planned which will replace all the Type 4 aerial appliances with the first of these reaching its target life of twenty years in 2024.

The major risks with this project are deemed to be:

³⁸ The suppliers and service descriptions are contained in our [Procurement Database](#).

³⁹ These appliances have had their final inspections completed. When they are shipped to New Zealand, Fire and Emergency will officially take ownership of them.

- Delays in confirming the operational requirements for the Type 4 replacement aerial appliances.
- Whether the market can deliver on the agreed operational requirements.

7.4.4 Type 1 and 2 appliances replacement project

The main objective of the Type 1 and 2 appliance replacement project is to establish new supply contracts that ensure an ongoing ability to purchase these appliances as and when needed. Part of the rationale for this project is the need to purchase approximately twenty-four new type 1 and/or Type 2 appliances every year to maintain the current red fleet size and ensure that it remains within its target age.

This project requires approval from the Board because the contracts' value is \$120 million for an expected 10-year term. The Board has delegated the approval of the key procurement documents to the Chief Executive for this project.

New Type 1 and 2 appliance contracts are required as the current Type 1 contracts expire in 2025 and 2026, and the previous Type 2 contracts have expired. There are currently sufficient Type 2 appliance orders to ensure they are currently all within their target life but this will change as the Type 2 fleet ages. The existing fleet includes Type 1 appliances outside the target life and the proposed new contracts will allow examples of both Type 1 and 2 appliances to be purchased in future.

The scheduled timeframe for the Type 1 and 2 appliance replacement project is 1 July 2023 to 30 June 2028.

7.4.5 Type 3 appliances acquisition project

Four new Type 3 appliances were received in July 2023. These have been trialled in Auckland, Hamilton, Napier, and Christchurch and a preferred supplier identified. An initial order of 14 appliances has been placed with the preferred supplier for delivery in FY25/26.

The Board also approved the procurement of an additional 28 Angloco MAN Type 3 appliances from the UK which are due for delivery in FY25/26.

7.4.6 Rural appliances replacement project

The main objective of the rural appliances' replacement project is to establish a new supply contract for rural appliances (both single and crew cab appliances) to replace the previous contracts which have expired.

If a new contract is not established, we will not be able to procure any replacement / additional rural appliances. This will result in larger numbers exceeding the target age of 25 years and a corresponding increase in the red fleet's overall age.

The risks are deemed to be low of not being able to agree and approve operational requirements, the market not being able to meet those requirements, and the ability of the project to deliver the vehicles by 30 June 2028.

7.5 Fleet Assets Condition Assessment

7.5.1 Determining the condition of fleet assets

We determine the condition of fleet assets by using three key criteria. The first is whether the fleet asset can meet operational requirements and effectively and efficiently deliver our main and additional functions. We ensure that fleet assets meet this requirement through regular maintenance schedules as well as the CoF and WoF inspection and testing regimes. Our current high level maintenance approach is to repair anything which prevents fleet assets from being fully operational and legally compliant.

Our proactive maintenance schedule includes:

- Servicing fleet assets every three or six months.
- Servicing appliances in accordance with manufacturers' recommendations.
- Major service checks on aerial appliances.
- Dedicated appliance checks on Frasers manufactured MAN Type 3s
- Any retrofits required for health and safety or reliability reasons.

The second key criterion we use to determine a (red) fleet asset's condition is whether it is within its target age range. The current target is to have 90 percent of red fleet assets within their specified age range.

The targets' age ranges consider the flexibility that is needed to allow for the early decommissioning of any appliances that may require high-cost repairs when they are close to their target replacement age. We also want to retain high performing vehicles past their target replacement age.

The red fleet target ages are based on key factors including remaining fit for their intended purpose throughout their lives and maximising their total cost of ownership. The percentage of red fleet assets within their target age range and their average age is provided in Table 16 below.⁴⁰

Table 12 - Age of the red fleet

Appliance Type	Target asset life (years)	Within target life	Average age
Type 1	25	61%	18
Type 2	25	91%	13
Type 3	20	49%	20
Type 4	20	100%	18
Type 5	25	67%	24
Type 6	25	40%	23
Rural	25	87%	14
Water Tanker	25	72%	17
Specialist Vehicle	25	80%	17

⁴⁰ These figures are obtained from the [Fleet Dashboard](#) and are current as of May 2024.

Appliance Type	Target asset life (years)	Within target life	Average age
Total		72%	17

The third key criterion we use to determine a fleet asset's condition is its use. This is because fleet assets tend to deteriorate with increased use and can become less reliable. Fleet assets must have high levels of reliability so they can continue to meet operational requirements and effectively and efficiently deliver our main and additional functions

The condition of red fleet assets is also validated through observation of the following:

- The number of appliances that are retired before the end of their expected life due to defects that are deemed uneconomical to repair.
- The market value of appliances when they are disposed of.
- Parts availability.
- Failure to respond within target times to an incident (refer to [Section 5.3.1 above](#) for more details).
- Servicing and repair costs.
- Overall appliance capability and technology relative to the newest generation of appliances, including safety features, performance, emissions generated, and occupant comfort.

7.6 Fleet Asset Allocations

7.6.1 Appliance allocations

7.6.1.1 Appliance allocations policy

The key supporting policy for achieving the red fleet assets' condition target state is the [Fleet procurement and allocation policy](#) which provides the following criteria for allocating Type 1, 2, and 3 appliances:

- consideration of local risk
- quantity and type of incidents that are attended
- the population the appliance is serving
- average time of nearest supporting appliances
- available station resources.

The other high-level factors determining appliance allocations are:

- New appliances go to the busiest stations so that full benefit can be taken of their warranty period and latest features.
- As appliances age, they are progressively moved to less busy stations.
- Appliances are located and moved on the basis that their whole-of-life workload should be like others of the same type.

The busiest appliances go to Tier 1 stations, the next busiest to Tier 2, and the least busy to Tier 3. An appliance's workload is determined by the average number of emergency responses it has attended over the preceding three years.

Table 17 below shows the underpinning calculations for determining appliance allocations using Tier 1 as an example.

Table 13 - Determining appliance allocations

Type	Est. number of appliances	Expected life	Annual replacement		Years in Tier 1	No. in Tier 1	Calculation
			Rate	No.			
3	181	20 years	5%	9	3	27	$181 \times 5\% = 9 \times 3 = 27$
2	220	25 years	4%	8.8	7	62	$220 \times 4\% = 8.8 \times 7 = 61.6$ which is rounded up to 62
1	290	25 years	4%	11.6	10	116	$290 \times 4\% = 11.6 \times 10 = 116$

The full list of the target time (in years) for appliances in each Tier is provided in Table 18 below.

Table 14 - Appliance target years by Tier

	Tier			
Type	1	2	3	Total
1	7	8	10	25
2	7	8	10	25
3	3	7	10	20

7.6.1.2 New appliances delivery schedule

A regional fleet needs to be in a similar condition to other regions as well as between / across its areas and districts. The total number of Type 1, 2, and 3 appliances and the quantity of each type in each tier are fixed. This means that when new appliances are introduced to the fleet using the [New appliance delivery schedule](#) older appliances are transferred to less busy stations or disposed of. This is referred to as a 'cascade' between positions in each Tier. Appliance cascades are facilitated by the [Appliance cascade plan schedule](#) (cascade plan) and [Appliance allocations schedule](#).

The dates noted in the cascade plan are one month after the expected delivery date from the supplier to allow sufficient time for delivery to the station, training, and locker fit out. The actual delivery date will vary from those provided in the cascade plan because of the work required at each station. It is also subject to change due to other factors that can affect delivery timeframes such as delays caused by supply chain issues.

The ISV delivery schedule is not included in the cascade plan so is outlined in Table 19 below.

Table 15 – Example ISV delivery schedule

Estimated delivery date	Station	Region
May 2023	Auckland USAR	Te Hiku
May 2023	Palmerston North USAR	Te Ūpoko
TBC	Dunedin City	Te Kei
TBC	Nelson	Te Ihu
TBC	Invercargill	Te Kei

7.6.1.3 Appliance cascades

How we applied the appliance allocation priorities and principles to the [cascade plan](#) is outlined in Table 20 below.

Table 16 - Applying appliance allocations priorities and principles to the cascade plan

Priority	Principle	How we applied the principle to the cascade plan
1	Cascaded appliances to the allocated Type.	We will put the correct appliance type in unless there is a shortage. If a station is supposed to have a Type 1, we will give them a Type 1.
2	Replace Type 1 appliances where the allocation is a Type 2 or 3.	We will prioritise replacing a station's appliance if they have a Type 1 and they are supposed to have a Type 2 or 3. This is because the Type 1 appliance is likely to be too small to carry all the required equipment. If the Type 1 being replaced at a Tier 2 station is a similar age to those at Tier 3 stations there are no more cascades to Tier 3. If the Type 1 is replacing a Type 2, the Type 2 cascades to a Tier 2 station.
3	Replace appliances that are outside the allocated Type or Tier age limit.	If a station already has the correct appliance type which is at the right age, then others in the Tier that do not meet these criteria will be upgraded first.
4	Replace appliances that are problematic from a maintenance or reliability perspective.	If red fleet assets e.g., Mitsubishi FP418s are starting to become unreliable or need additional maintenance to meet the required CoF standard we will prioritise their disposal
5	Replace the oldest appliances. However, where their age is similar assign a higher priority to replacing the busiest appliances.	Replacing the oldest appliances will be prioritised starting with the busiest of those of the same age. For example, the replacement of Ford Cargo appliances will start been prioritised because they are becoming more difficult to maintain.

When we have established which appliances are to be replaced, the transfers will be arranged to minimise the fit outs and transport distances required. For example, ferry trips are to be avoided where possible.

The current [cascade plan](#) includes the upcoming new appliance deliveries and is outlined in Appendix 4 - Cascade plan.

7.6.2 Aerial appliance and Hazmat/Command vehicle allocations

There are separate allocation schedules for aerial appliances (including reliefs) and HazMat/Command vehicles which are listed below:

- [Aerial appliance allocations](#)
- [Relief aerial appliance allocations](#)
- [HazMat/Command vehicle allocations.](#)

The aerial appliance allocation schedule notes the number and type of aerial appliances as well as where they are located. This schedule is updated annually to reflect their current locations and planned movements.

One of each type of relief aerial appliance is allocated to Rotorua, Christchurch, Dunedin, and Auckland. The relief aerial appliance allocation schedule outlines their priority locations. As is the case for non-relief aerial appliances this schedule is updated annually to reflect their current locations and planned movements.

Similarly, the Hazmat/Command vehicle allocation schedule lists where they were located at the time of publication. There is currently no review period set for this allocation schedule. However at a minimum it should be updated to reflect the movements of these vehicles to new stations.

7.6.3 White fleet allocations

Vehicles in the white fleet fall into three categories of contractual, toll of trade, and pool vehicles. Details of the categories, sub-categories, and allocations are provided in the [Motor vehicle policy and the Motor vehicle allocation schedule](#).

7.7 Fleet Asset Functionality Assessments

The operational requirements that are established as part of the optimisation programme (refer to [Section 6.2 above](#) for more details) will be used as the basis for determining whether a white fleet asset is functional or not. In the interim, a fleet asset will be deemed functional if it:

- can convey the required equipment and personnel (including PPE) **and**
- has passed its CoF or WoF **and**
- is compliant with relevant statutory requirements including NZTA's load carrying and axle weight limits **and**
- is compliant with any additional manufacturer's requirements including maximum axle weight limits **and**
- has met any additional Fire and Emergency requirements such as minimum tyre treads.

The required equipment for appliances, LRVs, and specialist vehicles are detailed in a series of lists provided above in [Section 7.2](#).

7.7.1 Statutory requirements

The statutory requirements that we must comply with include the [Vehicle Dimensions and Mass Rule \(2016\)](#) which provides the dimension and mass limits to enable vehicles, in particular heavy truck and trailer combinations, to be operated safely on New Zealand's roads.

This rule includes the legal axle and tyre weight limits. This legal limit includes the weight of the vehicle as well as the people in it, the equipment it is carrying, and all the fluids it transports (e.g., water and fuel).

There must be a certain proportion of weight on the front axle. The vehicle must also meet static roll threshold limits. If a red fleet asset is involved in an accident the Police Commercial Vehicle Safety Team will weigh it to confirm that at the time of the accident it complied with the statutory weight limits.

Other important statutory requirements that we must comply with are the 2005 Land Transport Rule for Dangerous Goods which applies when our personnel are transporting BA cylinders or

driving water tankers when they are used to transport drinking water. More details on the Transporting BA cylinders and Water tankers policies are provided in [section 3.2.2 above](#).

As well as meeting these (and other relevant and appropriate) statutory requirements fleet asset functionality will also be determined by whether they can efficiently and effectively deliver the main and additional functions outlined in the [Fire and Emergency New Zealand Act 2017](#) which are listed for reference in Table 25 below.

Table 17 - Fire and Emergency's main and additional functions

Main functions	Promoting fire safety (including guidance on the safe use of fire as a land management tool)	Providing fire prevention, response and suppression services	Providing for the safety of persons and property endangered by incidents involving hazardous substances	Rescuing trapped people because of transport accidents or other incidents	Providing urban search and rescue services
Additional functions	Assisting and responding to: • Medical emergencies. • Maritime incidents. • Weather events, natural hazard events and disasters. • Incidents where substances present a risk to people, property or the environment. • Any other situation if we are able to help	Promoting safe handling, labelling, signage, storage and transportation of hazardous substances	Performing rescues including line and animal rescues, and rescues from collapsed buildings, confined spaces, unrespirable and explosive atmospheres and swift water	Providing assistance at transport accidents	

7.7.2 Fire and Emergency requirements

Fleet asset functionality is also determined by whether they have met Fire and Emergency's additional requirements. These include tyres which must not be retreads, have a minimum tread of 3mm and, for red fleet assets, be a maximum of 10 years old.

Fleet assets must also meet minimum crash protection requirements which include the:

- [Australasian New Car Assessment Program \(ANCAP\) 4-star rating](#)⁴¹
- [United Nations Economic Commission for Europe Regulation 29](#) (UN ECE 29)⁴² or equivalent
- [Euro 6 emission standards](#) for ICE vehicles.

7.8 Fleet Asset Utilisation Assessments⁴³

7.8.1 Red fleet utilisation

Over the reporting period Type 1 appliances had an average of about 15,500 responses per annum.⁴⁴ This was much lower from 2001 to 2010 with an average of about 11,280 responses per annum with a significant increase from 2011 to 2019 to about 17,340 responses per annum. This was followed by another large increase from 2020 to 2023 where they averaged nearly 22,000 responses per annum.

Type 2 appliances were busier than Type 1 appliances over the reporting period with an average of about 18,500 calls per annum. They have been more consistently busy than the other red fleet assets with smaller increases over the reporting period. For example, from 2001 to 2010 they averaged about 16,700 responses per annum. This was followed by an increase from 2011 to 2019 where they averaged about 19,500 responses per annum. Unlike most fleet assets there was not a significant increase between 2020 and 2024 where they averaged about 21,000 responses per annum.

Type 3 appliances were by a significant margin the busiest fleet assets with an average of nearly 83,500 responses per annum over the reporting period and they also had a different trend line. From 2001 to 2010 they had a similar number of average responses as the entire reporting period of about 82,800. However, they then had a large decrease to an average of about 79,500 responses per annum from 2011 to 2019. Like Type 1 and 2 appliances there was an increase between 2020 and 2023 but it was larger with an average of about 94,000 responses per annum.

Type 4 aerial appliances had much lower utilisation rates than the Type 1, 2 and 3 appliances as well as a different trend line. However, they were the busiest of the aerial appliances with an average of about 7,000 responses per annum over the reporting period. Like Type 1 and 2 appliances they had a much lower utilisation rate between 2001 and 2010 where they only averaged about 4,500 responses per annum. However, there was a much larger relative increase than for the Type 1, 2 and 3 appliances from 2011 to 2019 with the number of responses doubling to an average of about 9,000 responses per annum. In contrast with the Type 1, 2 and 3

⁴¹ ANCAP is a car safety performance assessment programme based in Australia which specialises in the crash testing of automobiles. The published results underpin its five-star rating system with one being the least safe and five the most. A five-star rating would be achieved if the vehicle met the highest standard in all tests as well as featuring advanced safety assistance technologies.

⁴² UN ECE R29 specifies the requirements for head restraints for motor vehicles and their trailers. These restraints are intended to protect vehicle occupants from neck injuries during a rear end collision.

⁴³ The analysis in this section is based on the [Fleet Asset Dashboard](#) which matches incident data to a vehicle's call sign. This means that the number of incidents for some vehicles will be overstated because their call sign was temporarily allocated to another vehicle while it was out of service for preventative or scheduled maintenance, repairs, or for its CoF or WoF. It also does not include relief appliances. However, while this makes the data inappropriate to use for individual vehicle analysis at a fleet asset group level its use is acceptable.

⁴⁴ For the purposes of this analysis the reporting period is from 2001 to 2023. To give a better indication of changes over time the reporting period has been split into three different timeframes: 2001 to 2010, 2011 to 2019, and 2020 to 2023.

appliances there was no noticeable increase during the 2020 to 2023 time period from the 2010 to 2019 time period.

Type 5 aerial appliances had much fewer responses than Type 4s averaging about 1,800 responses per annum over the reporting period. Their trend line was also more volatile than the other red fleet assets. For example, from 2001 to 2010 their responses almost halved to an average of about 1,000 responses per annum. From 2011 to 2019 their responses more than doubled to an average of about 2,500 per annum. However, they then had a much larger decrease than the other fleet assets between 2020 to 2023 with an average of about 2,200 responses per annum.

Type 6 aerial appliances had lower utilisation rates than Type 4 and 5 aerial appliances with an average of about 1,778 responses per annum over the reporting period. However, they had a similar trend line to Type 3 appliances. From 2000 to 2010 they averaged about 1,749 responses per annum. But they had a larger decrease between 2011 and 2019 with an average of about 1,338 responses per annum. They also had a more significant increase between 2020 to 2023 more than doubling their responses to average about 2,841 per annum.

Rural appliances had a lower utilisation rate than the Type 1, 2, 3, and aerial appliances. They only averaged about 1,500 responses per annum over the reporting period. Rural appliances also have a more pronounced trend line than the other red fleet assets. For example, rural appliances responses halved between 2001 and 2010 to average 748 per annum. However, between 2011 and 2019 they more than doubled their responses to average about 1,700 per annum. This was followed by another substantial increase between 2020 and 2023 where they averaged about 2,800 responses per annum.

Ultralight appliances had the lowest utilisation rates of all the appliances with an average of about 1,100 responses per annum. However, ultralight appliances did have a similar trend line to Type 2 appliances. For example, they had a small decrease between 2001 and 2010 where they averaged about 1,035 responses per annum. This was followed by a small increase to an average of about 1,125 responses per annum between 2011 and 2019. There was also only a modest increase between 2020 and 2023 with an average of 1,234 responses per annum.

Water tankers had higher utilisation rates than Type 5 and Type 6 aerial appliances averaging about 3,700 responses per annum over the reporting period. However, they had a similar trend line to rural appliances. Their responses nearly halved between 2001 and 2010 to an average of about 2,150 responses per annum. However, this doubled between 2011 and 2019 to an average of about 4,300 responses per annum. There was also a substantial increase between 2020 and 2023 with an average of 6,300 responses per annum.

Specialist vehicles had a wide variation in their overall average response rates and changes over time. ISVs only averaged about 100 calls per annum and there were no recorded responses between 2001 and 2006. For the full reporting period of 2010 to 2019 like most of the other red fleet assets they had an increase (albeit smaller) to average 135 calls per annum. Like the other red fleet assets, they had a large relative increase between 2020 and 2023 averaging about 210 calls per annum.

Trucks and Light Response Vehicles (LRVs) also had no recorded responses from 2001 to 2004. However, they had more than double the responses of ISVs over the reporting period averaging about 255 calls per annum. Like ISVs they had an increase over the 2010 to 2019 time period but it was larger averaging about 360 calls per annum. Like the other red fleet assets, they also had a larger increase over the 2020 to 2023 time period averaging about 520 calls per annum.

OSVs had complete data for the reporting period and more responses overall than ISVs, trucks, and LRVs averaging about 326 calls per annum. Like water tankers and rural appliances OSVs had

a large decrease over the 2001 to 2009 time period averaging only about 180 calls per annum. As was the case with water tankers and rural appliances their responses more than doubled between 2010 and 2019 to about 370 calls per annum. Like ISVs, trucks, and LRVs there was another substantial increase between 2020 and 2023 where OSVs averaged about 540 calls per annum.

BA tenders had lower response rates than the other red fleet assets. With full data available they only averaged about 120 calls per annum. Like Type 2 appliances they had the same average calls from 2001 to 2010 as for the entire reporting period. However, like Type 6 aerial appliances BA tenders had a decrease in responses between 2011 and 2019 to about 105 calls per annum. Like most of the other red fleet assets they had a large relative increase between 2020 to 2023 averaging about 150 calls per annum.

The Canteen specialist vehicles had the lowest utilisation rates of the red fleet assets. This was in part because there was data missing for 2001, 2002, and 2004. However, they had more complete years than ISVs, trucks, and LRVs but still only averaged about 30 calls per annum over the reporting period. Like most of the other red fleet assets they had a decrease from 2001 to 2010. But it was modest with an average of about 24 calls per annum. They also had a large relative increase between 2011 and 2019 with an average of about 37 calls per annum. Unlike the other red fleet assets there was a relatively large decrease between 2020 and 2023 with an average of 28 calls per annum.

Command vehicles had similar response rates to ISVs, trucks and LRVs averaging about 110 calls per annum over the reporting period (noting data for 2001 and 2002 was unavailable). They also had a larger increase between 2001 to 2010 than the other specialist vehicles with their responses averaging about 240 calls per annum. However, they had a much larger decrease of over ninety percent between 2010 and 2019 where they averaged only about 17 calls per annum. They also had a much larger relative decrease between 2020 to 2023 where they only averaged about 10 calls per annum.

Foam tender vehicles had higher utilisation rates than all the other specialist red fleet assets except HazMat averaging about 690 calls per annum over the reporting period. Like most red fleet assets there was a decrease in responses over the 2001 to 2010 time period averaging about 535 calls per annum followed by a large increase between 2011 to 2019 where responses averaged about 735 calls per annum. They had a larger increase over the 2020 to 2023 time period averaging about 980 calls per annum.

Hazmat vehicles had the highest utilisation rates of the specialist red fleet assets averaging 790 calls per annum. Like most of the other red fleet assets they had a large decrease in responses over the 2001 to 2010 time period averaging about 525 calls per annum. Hazmat vehicles also had a larger increase (in terms of the number of responses) over the 2010 to 2019 time period averaging about 920 calls per annum. They also had a larger increase in terms of actual responses attended over the 2020 to 2023 time period averaging about 1,155 calls per annum.

Hose layers had lower utilisation rates than most of the other red fleet assets averaging about 60 calls per annum over the reporting period. Like most of the other red fleet assets they had a decrease between 2010 to 2019 which was relatively large averaging about 40 calls per annum. They had a similar increase between 2011 to 2019 averaging about 64 calls per annum. Hose layers had their largest increase between 2020 to 2023 averaging about 90 calls per annum.

Lighting plant vehicles had lower utilisation rates than hose layers averaging about 38 calls per annum over the reporting period. Unlike hose layers and most other red fleet assets they had a small increase between 2001 and 2010 with an average of about 41 calls per annum which was also their average response rate between 2011 to 2019. Also, unlike most other red fleet assets

they had a large relative decrease between 2020 to 2023 where their average responses almost halved to about 22 calls per annum.

USAR vehicles had the lowest utilisation rates averaging about 10 calls per annum over the reporting period. Like hose layers they also had an increase between 2001 to 2010 but it was larger averaging about 15 calls per annum. Unlike most other red fleet assets USAR vehicles had a large decrease between 2011 to 2019 more than halving their average responses to about seven calls per annum. Like canteen red fleet assets USAR vehicles had a decrease between 2020 to 2023 but it was larger almost halving again to about four calls per annum.

Overall, these utilisation rates reflect the general increase in the incidents that Fire and Emergency has attended in recent years. This is likely driven in part by the scope of our main and additional functions. There has also been a shift away from attending fires to responding to:

- medical emergencies
- motor vehicle accidents including occupant extractions
- the increasing number and severity of natural disaster events caused by climate change e.g., the 2023 Auckland Anniversary floods and Cyclone Gabrielle.

This is clearly demonstrated by the utilisation of rural appliances and water tankers which mostly had a significant increase over the reporting period especially in the 2020 to 2023 reporting period (although still lower than the other red fleet assets). These utilisation rates may also reflect the current cascade approach where Type 1 and 2 appliances are positioned in less busy stations and Type 3 appliances at the busiest ones.

As expected, also had lower utilisation rates reflecting the services they deliver and the populations / communities they serve. A more detailed analysis would be helpful to ensure that the workloads for these assets is being equitably distributed and their total cost of ownership maximised.

It may also be worth considering an overall review of the red fleet asset target lives based on these utilisation rates. For example, we could potentially extend the target life of fleet assets with low utilisation rates such as rural appliances and water tankers and potentially shorten it for highly utilised assets like Type 3 appliances. Any such shifts would need to increase the value of the assets' total cost of ownership while maintaining their current high levels of reliability.

7.8.2 White fleet utilisation⁴⁵

Leased white fleet vehicles had higher utilisation rates than rural and ultralight appliances, water tankers, and specialist fleet assets. However, they had a similar trend line. They averaged about 2,640 responses per annum over the reporting period. This nearly halved between 2001 to 2010 to an average of about 1,417 responses per annum. However, this more than doubled between 2011 and 2019 to an average of about 3,365 responses per annum. This was followed by another large increase between 2020 to 2023 to an average 4,080 responses per annum.

Trailers had the by far the lowest utilisation rate of all the fleet assets analysed for the AMP. This is mainly due to incomplete data between 2001 and 2014. However, they had a similar trend line to rural and ultralight appliances as well as specialist assets. Over the reporting period they only averaged about eight responses per annum. From 2011 to 2019 to an average of nearly seven responses per annum. This was followed by a fourfold increase between 2020 to 2023 where they averaged about 30 responses per annum.

⁴⁵ Not all the white fleet asset groups were analysed because the data was unavailable.

Utes had a higher utilisation rate than leased vehicles and Type 5 and 6 aerial appliances averaging about 3,090 responses per annum over the reporting period. However, their trend line is similar to Type 1 appliances. From 2001 to 2010 they had a relatively large decrease where they averaged about 2,090 responses per annum. However, this was followed by a large increase from 2011 to 2019 where they averaged about 3,365 responses per annum. Like most other fleet assets utes also had a large increase from 2020 to 2023 where they averaged 4,970 responses per annum.

Vans had the highest utilisation rates of the white fleet assets averaging about per 3,125 responses annum over the reporting period. Vans' trend line was similar but less pronounced than utes. From 2001 to 2010 they had a large decrease to an average of about 2,623 responses per annum. There was a large increase to an average of 3,366 responses per annum from 2011 to 2019. This was followed by a relatively small increase to average about 3,848 responses per annum from 2020 to 2023.

The higher utilisation rates for white fleet assets compared to the rural and ultralight appliances and specialist assets reflects their increasingly important operational support and frontline operational roles. However, the exception to this are trailers with large numbers and extremely low utilisation rates. We should review trailer numbers and allocations to make sure we have the right numbers at the right locations for the tasks they are required to perform.

We could also consider pooling trailers where they are used infrequently or even leasing or hiring them, as necessary. This might also be an appropriate solution for other white fleet vehicles especially where their additional capabilities such as extra load and towing capacity are only used infrequently.

7.9 Fleet Asset Disposals

We dispose of fleet assets for a variety of reasons including (but not limited to) because they are obsolete, worn out, or surplus to requirements.

The [Asset disposal – plant equipment intangibles and fleet Guideline](#) (Asset Disposal Guideline) documents the process for the disposal of fleet assets and the issues to be considered when doing so.

7.9.1 Current fleet asset disposals

According to the [May 2024 red and white fleet registration report](#) there are a total of fifty four fleet assets which have a current disposal request consisting of:

- one ultralight 4x4 appliance and one hose layer
- six Type 1 appliances
- eleven Type 2 appliances
- five Type 3 appliances
- six rural appliances
- five utes
- four vans
- five water tankers
- eight trailers
- two leased vehicles (one ute and one hatchback).

The expected disposal proceeds for these (and other) fleet assets are:

- Appliances: Type 1: \$2,300, Type 2: \$5,300, and Type 3: \$5,300.
- Aerial appliances: Type 4: \$15,000, Type 5: \$20,000, and Type 6: \$20,000.
- Rural appliances: medium single cab \$8,000 and medium double cab \$10,000.
- Specialist vehicle: \$15,000.
- Medium water tanker: \$12,000 and large water tanker: \$16,000.
- Ute \$5,000.

More details on previous fleet asset disposals are available [here](#).

DOES NOT REFLECT BUDGET AVAILABILITY

8 Fleet Assets Financial Information

This section outlines fleet asset related revenue and expenditure. It provides the underlying fleet asset replacement assumptions and high-level costs including the required capital and operating expenditure.

This section also provides the amount we spend on fleet asset maintenance as well as current costs and cashflow forecasts.

8.1 Overview

As well as the acquisition costs (including those associated with procurement) fleet assets also require ongoing expenditure for their management and running costs (e.g., fuel, registration, Road User Charges, CoF, or WoF, maintenance, repairs, and upgrades). Fleet asset disposal and replacement costs also need to be factored in when undertaking financial forecasting because otherwise fleet assets will become degraded leading to subsequent future liabilities and potential failure to deliver our main and additional functions.

It is important that sufficient funding and resourcing is made available so that short-, medium-, and long-term strategic objectives and outcomes are met. When fleet asset resourcing plans are drafted the first three years must be on as robust a basis as possible. Their underlying assumptions need to be well understood and articulated as well as having been 'stress tested' in real-life operational and organisational contexts.

To meet these requirements the AMP's financial projections are as accurate as possible for the first three years. Years four to six are intended to achieve our strategic objectives and outcomes, while years seven to 10 (and beyond) are intended to achieve more aspirational goals such as a more rapid transition of the white fleet to EVs.

It is important that fleet assets total costs of ownership are reduced. However, this is challenging because fleet assets are now expected to undertake an increased scope of activities which requires additional equipment storage and extra, more complex, and costly capabilities. The current inflationary environment also makes maintenance and repairs more expensive because of increased labour and parts costs. There are also increased costs associated with the acquisition of new fleet assets.

These financial challenges are offset by:

- The increasing reliability of fleet assets.
- The establishment of a New Zealand based appliance build industry which has resulted in efficiency costs savings being passed onto us.
- Technological developments meaning that closer measurement of use and wear is now possible which allows for the implementation of more targeted and optimised fleet asset maintenance schedules.

Additional cost efficiencies and savings can be made by:

- Documenting operational requirements-based fleet asset specifications.
- Standardising fleet asset types and fitouts as much as possible.
- Optimising fire appliance maintenance and repair processes and proactively managing suppliers.
- Reducing the number of white fleet assets.

- Replacing white fleet assets with lower emission alternatives where they are available, affordable, and meet operational requirements.
- Selecting tool of trade and pool vehicles based on the lowest total cost of ownership from candidate fleet assets that meet operational requirements.

8.2 Fleet Assets Revenue and Expenditure

The total revenue and expenditure are provided in Table 27 below along with whether the output class is running a net surplus or deficit.⁴⁶

Table 18 - Fleet asset revenue and expenditure

Output Class	Levy	Other revenue	Total revenue	Total expenditure	Net surplus/(deficit)
Fire prevention including promotion of fire safety, compliance and enforcement	\$70.85 million	\$6.58 million	\$77.43 million	\$77.59 million	(\$169,000)
Fire response and suppression	\$384.98 million	\$12.81 million	\$397.79 million	\$421.60 million	(\$23.81 million)
Render safe hazardous substances and provide for safety at incidents	\$7.16 million	\$284,000	\$7.45 million	\$7.85 million	(\$400,000)
Rescue as a result of transport accidents and urban search and rescue	\$111.07 million	\$3.93 million	\$115 million	\$121.64 million	(\$6.64 million)
Responding to other emergencies including medical, maritime, other rescues and natural hazard events	\$99.19 million	\$13.22 million	\$112.41 million	\$108.63 million	\$3.78 million

The Fire and Emergency Levy (Levy) provides, on average, 97 percent of our total revenue from which the fleet capital and operating costs are funded. The Levy is forecast to rise two percent annually. However, the level it is set at after the completion of the current consultation will determine the financial strategy for fleet assets and whether investment in them can be increased.⁴⁷

Having the necessary levels of investment to ensure that fleet asset acquisitions and management reflects or aligns with established good practice means either the Levy needs to increase or alternative financing approaches need to be considered e.g., more leasing of fleet assets or borrowing. Maintaining (or decreasing) current fleet asset investment is likely to result in significant financial issues which could adversely impact operational requirements and the ability to meet our health and safety obligations and responsibilities.

⁴⁶ These figures and the ones in Section 8.3 are derived from our [Annual Report](#) and represent the totals as of 30 June 2023.

⁴⁷ The Government announced a 12.8 percent increase in the transitional levy in August 2023. The new levy rates and who will pay these will be determined through formal consultation with the New Zealand public and key stakeholders in 2024.

8.3 Fleet Assets Expenditure⁴⁸

Fleet expenses were \$31.4 million for the 2023/24 financial year compared to \$27.0 million for the 2022/23 financial year. This included vehicle leases which were \$5.3 million in the 2023/24 financial year compared to \$4.0 million in the 2022/23 financial year. Vehicle leases are deemed to be operating leases because they do not transfer all the risks and rewards incidental to fleet asset ownership to Fire and Emergency. Payments made under an operating lease are recognised as an expense on a straight-line basis over the lease term.

In the 2023/24 financial year acquisition costs totalled \$26.0 million for fire appliances and \$307,000 for motor vehicles. Disposal costs totalled \$5.6 million for fire appliances and \$112,000 for motor vehicles.

8.3.1 Fleet assets cost model

A supporting cost model has been developed for fleet assets related expenditure. This is based on known expenditure which includes day to day running costs as well as larger scale projects including the ones noted in [Section 7.4 above](#).

The [Assets and capital expenditure guideline](#) (asset guideline) provides details of costs that should be included in the fleet asset cost model.

8.3.2 Fleet assets capital and operating expenditure

Fleet asset expenditure falls into two broad categories: capital expenditure (capex) and operating expenditure (opex). The [Capital expenditure and donated assets policy](#) defines capex as an individual asset valued at over \$1,000 (excl. GST) when it is a new asset with a lifespan of more than one year or an existing asset being upgraded to increase its economic benefit.

Fleet assets purchased with capex are recorded in the Fixed Asset Register. Verification and depreciation actions are required for fleet assets for the duration of their life.

Operational equipment that is conveyed on fleet assets and is regularly tested in line with the [Standard tests \(OM P\)](#) requirements or is tracked and monitored by the Asset Management Information System (AMIS) can also be capitalised.

From the 2023/24 financial year project costs that were previously classified as opex can now be categorised as capex. These include:

- All project costs incurred up to the point of a preferred supplier being selected and a purchase order being placed.
- All project costs incurred during the provisioning, testing, and deployment of a new fleet asset.
- All project-related training and communication costs, including the development of policies, processes, and procedures.
- All costs associated with the project's close out phase.

⁴⁸ The expenditure figures below are derived from our [Annual Report](#).

The [Annual Report](#) notes that Fire and Emergency capital commitments of \$21.8 million for fire appliances at the end of the 2023/24 financial year.⁴⁹ This reflects the long (circa 18 months) lead time for the delivery of new appliances.

8.3.3 White fleet expenditure

\$9.8 million was spent on 790 staff vehicles⁵⁰ in the 2023/24 financial year compared to:

- \$9.2 million was spent on 771 staff vehicles⁵¹ in the 2022/23 financial year
- \$9.2 million for 741 staff vehicles in the 2021/22 financial year.
- \$8.5 million for 726 staff vehicles in the 2020/21 financial year.

The increase in the number of vehicles and associated costs is due to the growth of Fire and Emergency since its establishment in 2017. The increased costs may also be partly attributable to the higher purchase price for EVs.

8.4 Fleet Assets Replacement Costs and Assumptions

The underlying assumptions for fleet assets replacement costs are:

- The current fleet size will remain unchanged.
- No cost inflation is included and this will be included at a whole-of-organisation level for consistency.
- There is no major change in the relevant foreign exchange rates e.g., the US or Australian dollar or Euro.
- Costs are based on a like for like replacement of current fleet assets plus other capex costs outlined below.
- The current target asset lives are retained.⁵² The red fleet target ages and the percentage that are within their target life are provided in [Section 7.5.1](#) below. The fleet asset target lives in years are provided in Table 48 below.

The replacement and overall fleet asset capital and operating expenditure are based on the prioritisation outlined in Table 28 below.

Table 19 - AMP Fleet Asset Expenditure Prioritisation

AMP Priority	Description
1. HSS (Health and Safety Standard)	• Addresses H&S risk • Makes existing fleet assets safe for use now • Addresses regulatory compliance

⁴⁹ Capital commitments are the aggregate amount of capex contracted for, but not recognised as paid or provided for, at balance date. Commitments which can be cancelled and have penalty or exit costs explicit in their agreements are reported as minimum future payments, including the value of the penalty or exit cost.

⁵⁰ This covers contractual, tool of trade, pool, and station-based response vehicles that are available for staff.

⁵¹ This covers contractual, tool of trade, pool, and station-based response vehicles that are available for staff.

⁵² Noting that in individual instances fleet assets may need replacing sooner if they are low performing or can have their lives extended if they are high performing.

2. Minimum Viable Product	• Avoids failure of a critical fleet asset • Addresses technology obsolescence • Provides a minimum level of expected capability and performance to meet business / functional needs
3. Meet Key Performance Indicators (KPIs)	• Avoids failure of a fleet asset • Meets current levels of service
4. Grow / Increase	• New initiative • New capability

Table 20 - Fleet asset target lives

White fleet asset category ⁵³	Target asset life (years)
Aerial appliances	20
Caravans	30
Command vehicle	25
Hatchbacks	20
Marine	25
Motorcycles	25
Station Wagons	20
SUVs	20
Trailer	50
Type 1, 2, and 3 appliances	25
Rural appliances	25
Specialist vehicles (including ISVs and OSVs)	25
Utes	25
Vans	20
Water tankers	25

The forecast fleet assets costs are detailed in the following sections. Note that the figures in tables are rounded and therefore don't fully reconcile to the totals, and fleet asset replacement costs may be understated if they are replaced by EVs or a lower emissions alternative. However,

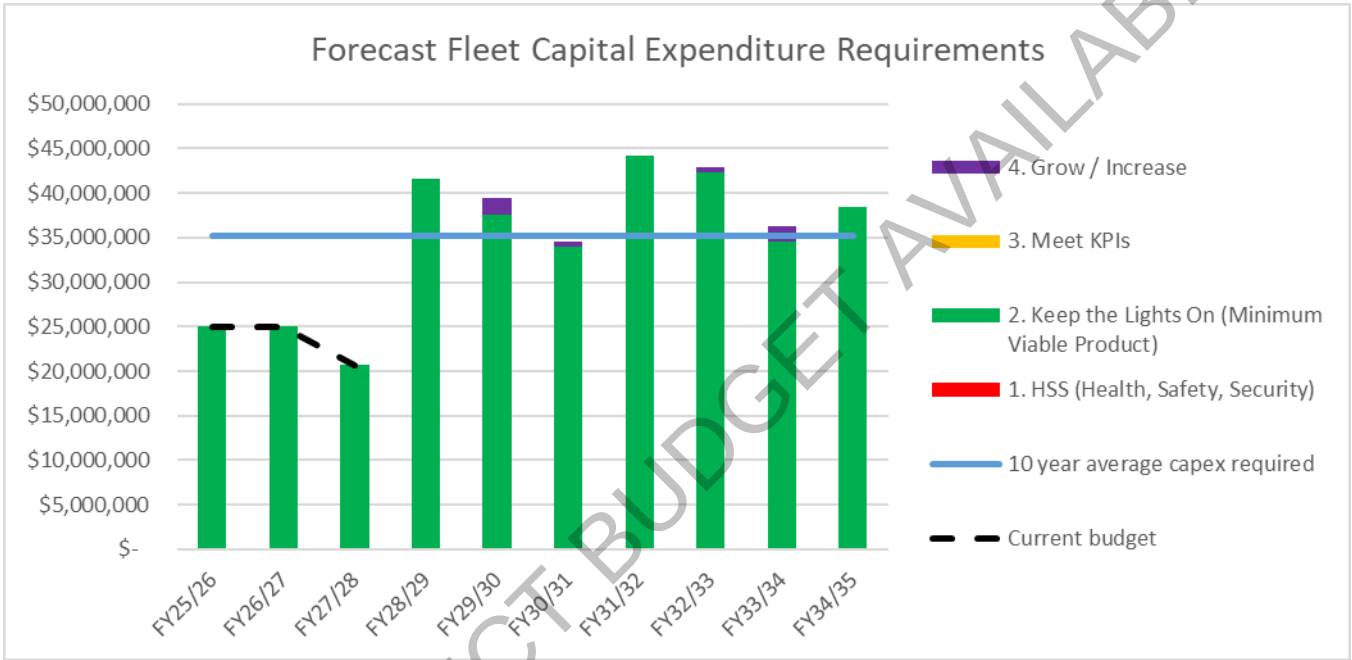
⁵³ These categories are based on the ones outlined in [Section 3.2](#) above.

for light vehicles (white fleet) it is anticipated that price parity between ICE vehicles and EVs will be achieved within the next five to ten years.⁵⁴

8.4.1 Fleet assets replacement capital expenditure

The fleet asset capital expenditure requirements are provided as a summary in Figure 2 and by project in Appendix 6 – Fleet financial information. The figures are presented against SOI and projected levy revenue for the first three years – out years reflect associated forecast bow wave. Figures do not include carry forward provisions.

Figure 2 - Fleet asset replacement costs

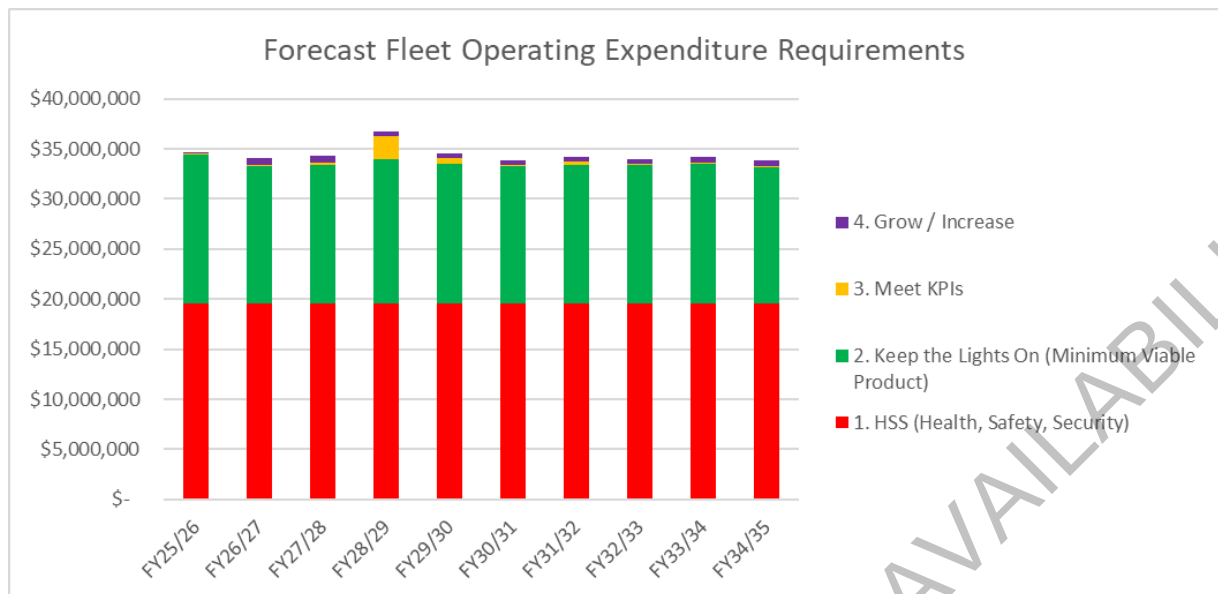


8.4.2 Fleet assets operating expenditure

The [Capital expenditure and donated assets policy](#) defines opex as asset related costs that are not covered by capex. These include costs incurred after an asset is capitalised. The forecast opex (including business as usual (BAU)) for the fleet assets replacement programme broken down by the AMP priorities outlined above in Table 28 as well as by project are summarised in Figure 3 and Appendix 6 – Fleet financial information.

⁵⁴ The Climate Change Commission in a [news article](#) from April 2024 state that EVs will hit price parity with ICE vehicles by 2032 and be 15 percent cheaper by 2040.

Figure 3 - Fleet asset operating expenditure summary

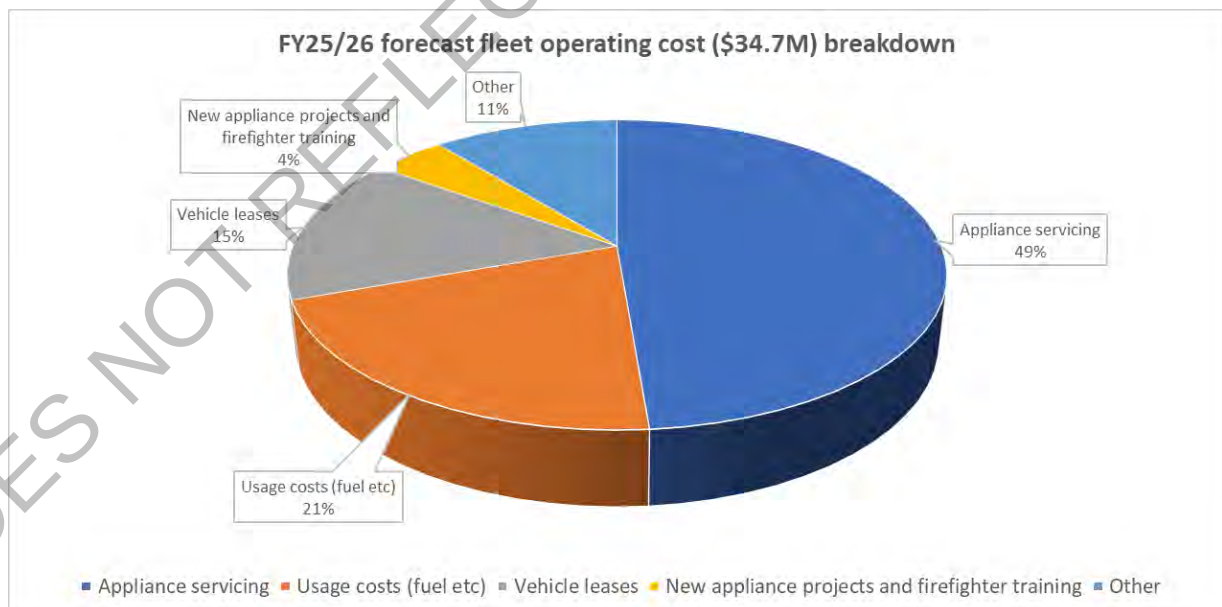


The above costs include vehicle running costs such as fuel, road user charges, annual licensing, lease costs, servicing and repairs, and replacement project operating costs.

8.5 Fleet assets maintenance expenditure

Figure 4 below shows the high level breakdown of forecast FY25/26 fleet total operating costs.

Figure 4 - FY25/26 fleet operating costs by category



Appliance servicing (including both proactive and reactive (repairs)) comprises approximately half the fleet operating costs, which together with leases (15%) and usage related costs (fuel, road user charges, annual licensing (21%)) make up a total of 85% of the overall fleet operating costs.

Key factors affecting vehicle-related costs are the number of vehicles in the fleet, the type of vehicle (especially the type of appliance), the usage of the vehicle and the age of the vehicle.

9 Fleet Assets Risk Management Strategies

Fire and Emergency's risk management collateral will be used to assess and manage fleet asset related risk. These risks include personnel health and safety, business continuity, and emissions reduction.

The overall aim of the risk strategies is to assess the risk:

- of operational failure of fleet assets
- to the successful attainment of our strategic outcomes
- to the efficient and effective delivery of our services.

A key factor in the development of the risk strategies will be agreeing on what is Fire and Emergency's 'risk appetite' in a fleet asset context.⁵⁵ After the risk appetite has been established appropriate steps need to be taken to reduce the impact of any fleet asset failures for:

- the New Zealand public
- our personnel
- Fire and Emergency.

There is a need to manage the risks associated with fleet asset ownership, with the principal objective being to minimise disruption to our personnel and service delivery. These risks are managed through a variety of methods which range from scheduled maintenance and renewal and replacement of fleet assets through to business continuity planning.

As per the [fleet asset risk register below](#) the overall risk rating for fleet assets is medium / high because there are factors outside of our control that could have an adverse impact. These include ongoing funding and regulatory constraints as well as challenges in meeting emissions reduction targets.

For the majority of the known or identified fleet asset related risks the existing controls are considered to be adequate. However, improvements in key areas including fault management, monitoring supplier performance, and better use of data are additional controls that are required to mitigate the actual or potential impacts of fleet asset related risks.

9.1 Organisational Risk

The Assurance and Risk team manage organisational risk. They have published a range of supporting collateral including a [risk management standard](#) which is used to identify and manage risk.

⁵⁵ The ISO 31000 risk management standard refers to risk appetite as the 'amount and type of risk that an organisation is prepared to pursue, retain or take.' It represents a balance between the potential benefits of innovation and the threats that change inevitably brings. ELT will need to determine the agreed risk appetite for fleet assets.

9.2 Operational Risk

Controlling operational risks can be achieved by implementing the capital projects outlined above in [Section 7.4](#). The timing of fleet asset related projects should be based on controlling risks with specific consideration given to the following:

- strategic and service delivery objectives
- criticality
- asset condition
- cost
- demand.

Minimising disruption to the fleet assets' operations is paramount and achieving this is an integral part of the large number and wide range of fleet assets policies, processes and practices which are used to inform their day-to-day and longer-term operating procedures. Improving fleet assets policies and procedures will also help reduce the likelihood and consequences of failure.

Due to the nature of our core tasks and functions each region, district, and station have business continuity plans to ensure services can always be delivered, no matter the prevailing conditions. An example of a current business continuity plan is the one for [NHQ](#).

9.3 Fleet Asset Risk

Fleet asset data can be used to:

- improve decision making
- set a foundation for advanced asset management practices
- assist with the identification, understanding, and management of the risks associated with fleet asset ownership

However, there is no systematic method or supporting data to assess red fleet assets condition. Red fleet assets condition is currently assessed through fault identification, identification of any issues during their regular maintenance, and the CoF testing and inspection regime.

Age and mileage are currently used as proxies for the condition of white fleet assets. These proxies assume that older vehicles with higher mileage are more unreliable. Older white fleet assets are also more likely to require additional, unscheduled, and more costly maintenance or repairs in order for them to continue meeting operational requirements and effectively and efficiently deliver our services.

However, none of these formal or informal assessments provide useful or detailed information about the performance and condition of fleet asset groups, sub-categories, or individual fleet assets.

Improving the data as well as the supporting processes, practices, and methods is fundamental to improving fleet asset risk management. As noted below in [Section 11](#) plans are underway to introduce a new fault management system and a new asset management system. These systems will provide better data which can be used to determine (among other things) which individual fleet assets have more faults, maintenance, or repairs compared to others in the same asset group or sub-category.

There are also risks associated with the allocation of fleet assets. Individual stations, districts, or even regions may have fleet assets that are not well aligned with their known or potential risks.

To avoid ineffective and inefficient service delivery It is critical that the right fleet assets are deployed to the right areas at the right times. A risk-based allocation approach is the preferred method to achieve this as it is a more objective method for deploying fleet assets in part because it is underpinned by robust and evidence-based assessments.

Another emerging risk which is specific to EVs are battery related fires. These can be mitigated by:

1. **Proper storage and management.** To increase EV battery safety and longevity they should be stored at 5-20°C. This avoids overheating which shortens the battery life and escalates the fire risk. It also avoids colder conditions which affects battery efficiency and means they require more frequent charging.
2. **Avoiding overcharging.** Charging should not be done overnight. Charging should only be used to maintain the battery levels at between 50 and 100 percent.
3. **Managing the batteries with care.** Proper handling can extend the battery's lifespan. Punctures are to be avoided as they can generate fire risk. Disposal of EV batteries also needs to be done following the correct processes and procedures.
4. **Regularly cleaning the charging ports to avoid the build-up of dust and grime.** The build-up of dust and grime can create a fire hazard. A simple cloth can be used which will optimise battery performance as well as reducing the fire risk.
5. **Only purchasing batteries from appropriate Fire and Emergency suppliers and/or the EV manufacturer.**

If there is an EV battery fire the electrical supply should be cut off by flooding it with water. Ideally, the area should be evacuated, and firefighters deployed to deal with it.

9.4 Critical Fleet Assets

For the purposes of the AMP critical fleet assets are defined as those considered to be essential for the continuation of service delivery i.e., fire appliances and other frontline operational vehicles including those in key support roles or undertaking specialised functions such as HazMat/Command vehicles or aerial appliances.⁵⁶ Critical fleet assets are managed and maintained through comprehensive maintenance contracts.

The condition of our critical fleet assets is discussed above in [Section 7.5](#). However, in general, we are not meeting our appliance age range targets. Despite new ones recently entering service there are a larger number of older critical fleet assets still being used. The risks associated with older critical fleet assets will be mitigated if we deliver the fleet asset replacement projects and appliance production plan, noted [above in Section 7.4](#) and [Section 7.4.11](#) respectively, on time and on budget.

Another related risk for critical fleet assets is whether our stations allow for their safe exit and entry. For example, in the future before larger fire appliances are purchased, we will need to ensure that the relevant stations' appliance bay doors can manage this. If the doors are too narrow and/or too low we may need to establish a programme of work to adjust them.

Similarly, if axle weight limits are increased and we acquire heavier fleet assets as a result (e.g., an EV appliance), we may also need to strengthen our station parking bays to accommodate them. This work is currently unplanned and unbudgeted for which could delay acquisition if we

⁵⁶ Note that this is an interim definition until one is agreed with our stakeholders.

cannot secure funding within required timeframes. If the budget bid and funding for this work is only identified post purchase it would further delay their operational deployment.

9.5 Funding Constraints

Regular renewal and replacement of fleet assets is vital because ageing fleet assets can fail even in optimal conditions. However, obtaining the requisite funding to do this may not be possible given the existing constraints and uncertainty. This means that there is a short to medium term risk of:

- reduced levels of service (refer to [Section 5](#) above for more details)
- sub-optimal delivery of our services
- failure to meet operational and/or statutory requirements.

It may also lead to increases in the total ownership costs for fleet assets because of additional (and unbudgeted) maintenance and repairs.

To mitigate these risks a more compelling rationale must be provided for the funding of fleet asset related projects. It is also critical that the ongoing Levy review considers fleet asset requirements as well as making ELT aware of the consequences if additional long-term funding is not secured.

However, if the decision is made not to fund certain projects or in the longer-term there is insufficient funding because of a lack of Levy increases and/or an inability to source alternative revenue we will need to reprioritise to reflect this. These reprioritisations will need to be included in the AMP, operational plans and, if necessary, the Fleet Strategy.

We should also review any fleet assets that are not performing to the required level and are using additional monies that could be reallocated to acquisitions, replacements, and upgrades. This review should also be used to determine if we need to transfer identified low performing fleet assets to less busy stations or whether they should be disposed of following the policies and processes outlined in [Section 7.9 above](#).

9.6 Regulatory Environment

The current regulatory environment is preventing the implementation of key initiatives. For example, because of the extra battery weight we cannot even trial electric fire appliances as they would breach the current statutory axle weight limits.

It is important that Fire and Emergency perspectives are considered well before relevant or appropriate legislation and regulations and their associated programmes and initiatives are enacted. For example, if we continue to work closely with NZTA this should lead to more traffic calming and speed interventions being implemented that meet our operational requirements and comply with relevant guidance e.g., using raised safety platforms rather than speed humps which are more likely to damage our red fleet assets.⁵⁷

9.7 Climate Change

Fire and Emergency's climate change response is an iterative process. It will involve keeping up to date with new information, monitoring changes, and reviewing the effectiveness of existing responses. Climate change poses three key risks for fleet assets.

⁵⁷ The Designers' guide to firefighting operations – Emergency vehicle access which is available [here](#).

The first is increased demand for services because of more severe and frequent weather events. Effectively responding to these extreme weather events is likely to require new capabilities. These new capabilities may require fleet assets needing to convey additional equipment and personnel making it more challenging to comply with the statutory load carrying and axle weight limits.

The second risk is whether we can continue to operate if the climate change event is sufficiently severe. For example, we may be unable to respond if roads and/or other critical infrastructure such as local or regional electricity networks and petrol supplies are damaged or taken out of commission altogether. Our future planning needs to consider how to make areas known or likely to be vulnerable to severe weather events more self-sufficient and resilient if critical infrastructure is out of action for a lengthy period and back up facilities or services cannot be supplied.

This may include:

- installation of additional generators
- stockpiling fuel
- collaborating with relevant central government agencies, local authorities, and our emergency services partners to leverage their resources and establish alternative access routes.

The third risk is if we are unable to meet government mandated fleet emissions reduction targets. This could result in sanctions up to and including monetary penalties or fines as well as potentially forced changes to our business and operations. It is important that we deliver the EV migration plan (assuming there is sufficient funding and the relevant white fleet assets are available).

For more details on Fire and Emergency's emission reduction plans and initiatives refer to [Section 6 above](#).

9.8 Risk Actions

The trade-off options associated with fleet assets risk mitigations are outlined in Table 33 below.

Table 21 - Fire and Emergency fleet asset risk actions

Risk action	Description
Do nothing / accept the risk	Awareness of a potential risk does not necessarily have to result in taking appropriate preventative measures. For example, we are continuing to acquire BEVs to help meet our emissions reduction targets despite the increased risk of battery related fires.
Risk management strategies	This involves the implementation of enhanced risk management strategies for demand management, contingency planning, quality processes, data analysis and reporting. We could also (where appropriate and necessary) reduce our levels of service for fleet assets.
Operational strategies	This requires reducing unnecessary damage to fleet assets by implementing improved training. We will need to do follow up monitoring to assess the efficacy of this approach and then determine whether additional changes or improvements are required. We also need to make sure all of the fleet assets' operational policies, processes, and procedures are readily accessible, easily understood, and are being adhered to.

Risk action	Description
Maintenance strategies	Where appropriate or necessary we will modify fleet assets maintenance regimes to increase their reliability and extend their economic and operational lives.
Asset renewal strategies	We will rehabilitate or replace fleet assets to maintain levels of service as well as ensuring that overall, they remain within their target age range.
Development strategies	We will obtain the necessary funding to acquire a new fleet asset or upgrade an existing one.
Asset disposal/rationalisation	This involves disposing of fleet assets that are identified as being surplus to requirements. Alternatively, we can undertake a rationalisation exercise using a risk-based allocation approach to ensure that the right quantity and type of fleet assets are being deployed to the right areas.

9.9 Condition and Risk Grading

We will use Table 34 below as the basis for determining a fleet asset's condition as well as for establishing the level of risk and prioritisation for remedial action (where this identified as been necessary).

Table 22 - Fleet asset condition and associated risk grading

Grading	Description	Definition
0	No longer in service	The fleet asset is awaiting disposal or has already been disposed of.
1	Excellent	The fleet asset is in sound physical condition and is meeting or exceeding expected performance levels and operational requirements.
2	Good	The fleet asset is in an acceptable physical condition. There is a minimal risk of short-term failure and potential for deterioration. Only limited remedial work is required.
3	Average	Significant deterioration of the fleet asset is evident. While failure is unlikely in the short-term further deterioration is likely. More remedial work is required but the fleet asset still meets operational requirements.
4	Poor	Fleet asset failure is likely in the short term. Substantial remedial work is required in the short term and the fleet asset is only meeting minimum levels of performance.
5	Extremely poor	The fleet asset has failed, failure is imminent, and/or there is a safety risk. Major remedial work or replacement is urgently required. The fleet asset is not meeting operational requirements or expected performance levels.

Typically, fleet assets which have the poorest grading and are deemed to be the most critical to service delivery will be assigned the highest priority for additional or unscheduled maintenance, urgent repairs, or, if necessary, disposal and replacement.

9.9.1 Fire and Emergency's Risk Matrix

Fire and Emergency has a risk matrix which will be used to assess fleet asset risk. This is available [here](#).

9.10 Fleet Assets Risk Register

The major fleet asset related risks (i.e., with a moderate or more severe consequence) are outlined in the fleet assets risk register in Table 37 below. The risks are classified by category along with their associated consequence, likelihood, and proposed mitigations.

Table 23 - Fleet asset risk register

Category	Consequence and commentary	Likelihood	Mitigation
Safety, Health and Wellbeing	Moderate: Incorrect, inappropriate, or dangerous use of fleet assets leads to severe injury of driver and/or crew and/or members of the public	Unlikely	Ensure the latest safety features are incorporated into vehicle specifications and requirements as well as making these a priority in vehicle selection and acquisition. Ensure the relevant and appropriate policies and procedures, including the maximum allowable speeds, are adhered to when travelling to and from and attending incidents. Ensure training on operating fleet assets is focused on the safety, health, and wellbeing of personnel and (where necessary or appropriate) members of the public. Fleet asset operator training (including driving) needs to be provided at regular and appropriate intervals.
Operational capability	Major (and potentially Catastrophic): We are unable to deliver services due to natural hazards e.g., an earthquake or severe weather event	Likely	Build flexibility into fleet assets so they can continue to operate effectively and efficiently in extreme natural hazard events. Ensure back up power and fuel supplies are in place and work with local authorities and communities on emergency prevention and preparedness. Build specialist fleet assets and/or prototypes where required on a regular basis to ensure innovations in design, equipment, and capabilities are monitored and evaluated for introduction into the fleet as and when appropriate or necessary.
Operational capability	Major: If critical fleet assets fail it will adversely impact service delivery potentially leading to avoidable severe injury or death.	Unlikely	Ensure maintenance schedules and inspection regimes including the lists, checklists, and tests outlined above in Section 7.2 are adhered to. Replace fleet assets that have reached or exceeded their target life as soon as possible.
Operational capability	Moderate: Lack of knowledge of the fleet assets' condition creates reliance on individuals to assist with establishing priorities and/or modelling to inform asset management planning for fleet asset groups and/or sub-categories.	Likely	Use improved systems and data to form a more comprehensive and accurate picture of fleet asset condition. Review fleet asset condition criteria to ensure they remain fit for their intended purpose and can meet current and expected future demand, levels of service, and operational requirements.

Category	Consequence and commentary	Likelihood	Mitigation
Operational capability	Moderate: Key fleet asset replacement projects are delayed or postponed. Appliance production volumes would need to increase in subsequent years which might be beyond suppliers' capacity to deliver. It also would create financial pressures by requiring transfers across financial years.	Likely	It needs to be made clear to ELT the consequences of not meeting the budgeted / planned appliance production volumes. Ensure that the fleet asset replacement projects start on time and on budget. However, given the projects' duration and known supply chain issues we need to make sure that sufficient contingency funding is available for the likely delays and cost overruns.
Financial	Moderate: Funding constraints mean key aspects of the AMP cannot be delivered, including the acquisition of new fleet assets and critical renewal and replacement projects.	Possible	Use the AMP as the basis for funding decisions and to make the consequences clear if key projects are not delivered. These consequences could include fleet assets exceeding their target age or mileage and/or not being able to deliver our services and meet operational requirements effectively and efficiently. Ensure that the ongoing Levy review incorporates fleet asset requirements when determining any actual or potential increases (or maintaining it at current levels) as well as a careful consideration of the impacts of any planned cuts.
Stakeholder and partners confidence	Moderate to Major: Stakeholder dissatisfaction could prevent the realisation of project outcomes and benefits. Agreed project outcomes are delayed leading to higher levels of stakeholder dissatisfaction.	Likely	Engage with key stakeholders, especially the unions, as early as possible to gain their support and buy-in for the AMP's objectives and outcomes. Ensure key projects such as those associated with renewals, replacements, and acquiring new fleet assets are agreed, and where necessary compromising on less important projects and outcomes. Ensure there is ELT support so they will back the AMP's key projects, objectives, and outcomes even if significant stakeholder opposition or concerns are raised.
Performance against strategy	Moderate: Incomplete, low quality and/or missing data means key AMP and/or Fleet Strategy and/or wider strategic objectives or outcomes are not achieved. For example, if there is a lack of appropriate data, we will not be able to implement a risk-based allocation approach or develop agreed levels of service.	Possible	The improvement initiatives (refer Sections 10 and 11 below) for identifying and addressing system / data gaps need to be implemented. We need to work closely with the Data and Insights and ICT teams on identifying and addressing system / data gaps as well as ensuring adequate back up plans are in place to mitigate system outages and to prevent the loss of critical data.

10 Fleet Assets Improvement Plan

This section provides the fleet asset improvement plan including the proposed improvement initiatives for each of the sections above as well as those related to data and systems below.

10.1 Overview

A key feature of Fire and Emergency's asset management framework is the continuous improvement of our practices, processes, and tools. Improvement programmes and projects are essential to ensure that fleet assets are efficiently and effectively managed now and in the future.

Underpinning all of the improvement initiatives is a need to increase the knowledge of fleet assets by implementing advanced asset management practices. This should allow the delivery of the best level of service within existing and projected financial constraints. Fleet asset management approaches also need to align with good industry / emergency service practice.

10.2 Fleet Assets Improvement Priorities

One of the key improvement areas over the next three years is building efficiencies into business-as-usual practices. Efficiencies should be considered in financial, utilisation, and sustainability terms because they all impact on the overall performance of fleet assets.

The key to more efficient and effective fleet asset management is developing better baseline data on their condition and utilisation. There are also opportunities to exploit efficiencies to improve fleet assets performance as well decreasing their maintenance and operating costs and providing better value for money.

For example, if benchmark operating costs can be determined then it will be easier to identify fleet assets that are under performing. It is also important to determine which fleet assets are performing at higher-than-expected levels and why as the basis for wider improvements across the sub-category, group, or entire red and/or white fleet as appropriate.

More work needs to be done to ensure that we are maximising fleet assets' whole of life costs including the total cost of ownership and the value for money that they are providing. There also needs to be a greater understanding of critical fleet assets, particularly specialist ones such as Hazmat / Command Units. There are also large gaps in the development and monitoring of appropriate and relevant levels of service measures which are a key component of fleet asset performance and good asset management practice.

There are also weaknesses or gaps related to:

- integration of relevant systems and data
- the basis and reliability of the capital project estimates
- staff resourcing for key projects.

10.3 Fleet Assets Improvement Priorities Monitoring

The Fleet team will be responsible for the implementation of the improvement priorities outlined below over the next three years. We will also monitor their effectiveness and whether they realise the anticipated benefits and achieve the expected outcomes.

To implement the improvement priorities, realise their benefits, and achieve the expected outcomes we will need to work closely with the:

- ICT Directorate
- National Equipment and Logistics Directorate
- Strategy and Performance Directorate
- Service Delivery Operations Branch
- Service Delivery Design Branch
- Data and Analytics Directorate.

Note we will adjust existing improvement initiatives and add new ones to the plan outlined in Table 38 below as and when required based on changes to the operating context and Fire and Emergency priorities.

10.4 Fleet Assets Improvement Plan⁵⁸

Table 24 - Fleet assets improvement plan

AMP Section(s)	Improvement required	Actions	Team(s) Responsible	Priority	Expected completion ⁵⁹	Resources Required
3, 4, 5, 6, 7, 8, and 9	Roll out the Fleet Asset Management Information System (FAMIS)	Establish a formal trial after the completion of the JDE enhancement project to assess if it can meet our FAMIS requirements. We will evaluate the results at the end of the trial to determine if any modification, upgrades, or enhancements are necessary for JDE or if a new system is necessary.	Systems Analysis, ICT Architecture and Strategy, Service Delivery Design Testing Services, Project Management	High	2030	High, if a new FAMIS is required. Medium if it only involves modifying or upgrading JDE.
3, 4, 5, 6, 7, 8, and 9	Integrate fleet asset data and systems	Develop technical and process / administrative protocols so the relevant systems and databases can interoperate. Create a data warehouse to function as a central repository for fleet asset data.	Database and Integration, Data and Insights, Finance, Service Delivery Design, Testing Services	Medium	2026	Medium. A dedicated project team may be required.
3,4,5,6,7,8, and 9	Improve fleet asset data quality	Publish supporting policies, processes, and procedures for fleet asset data maintenance, validation, and cleansing.	TBC	High	2026	TBC. Further discussions will be necessary to determine who can assist us with the development of data

⁵⁸ The expected completion will be the calendar year we expect the project or initiative to be completed by. Based on the Auckland City Council AMPs the order of the improvement priorities is based on the section number(s) they relate to not on their priority or importance.

⁵⁹ The Fleet team will be involved in all these projects so the teams listed here are leading or supporting us to complete the improvement plan initiative as appropriate and necessary.

AMP Section(s)	Improvement required	Actions	Team(s) Responsible	Priority	Expected completion ⁵⁹	Resources Required
		As part of this work, we also need to resolve known data quality issues. For example, the idling data in the Smartrak system is not accurate. This initiative should resolve this issue (and others) to improve fleet asset management as well as reducing costs and emissions.				maintenance, validation, and cleansing policies, processes, and procedures.
3,4,5,6,7, and 8	Complete a fleet asset data stock take	The results of the stock take will be used to identify the data and system gaps as well as the additional requirements to address these. Once the solutions are agreed and scoped, a programme or a series of projects will be established setting out the expected start and finish dates as well as the high-level costs, objectives, and expected benefits.	Project Management, Change and Service, ICT Delivery, Systems Analysis	Medium	2025	High. A dedicated project team(s) will be required to scope out and implement the preferred solutions.
3, 7, 8, and 9	Achieve 'core' data capability as defined by the International Infrastructure Management Manual (IIMM). ⁶⁰	We will achieve an IIMM 'core' data capability rating by ensuring that: We capture sufficient information to provide a comprehensive deprecated replacement cost valuation which includes a fleet asset's physical attributes, replacement cost, age, and expected life. We collaborate with relevant stakeholders to document the fleet asset hierarchy, identification, and attribute standards in the AMP and/or other appropriate supporting document(s). We will also collaborate with relevant stakeholders to:	TBC	Low	2027	TBC as further discussions are required to confirm who can assist us with the key actions and associated projects for this improvement initiative.

⁶⁰ A password and username from the Te Ao Mārama team is necessary to access the IIMM which is available from the IPWEA [website](#).

AMP Section(s)	Improvement required	Actions	Team(s) Responsible	Priority	Expected completion ⁵⁹	Resources Required
		undertake a formal information needs analysis for fleet assets develop a Fleet Information Strategy and Data Improvement Plan determine who will collect and update fleet asset criticality and risk related data as well as when this will occur.				
5, 6, 7, 8, and 9	Roll out a fleet asset Fault Management System (FMS)	Establish a formal trial for the Smartrak system (refer to Section 11 below for more details) to assess if it can meet our FMS requirements. We will evaluate the results at the end of the trial to determine if any modification, upgrades, or enhancements are necessary for the Smartrak system or if a new system is necessary.	Systems Analysis, Project Management, and Data and Insights	High	2026	High if a completely new FMS is required. Medium if it only involves modifying or upgrading the Smartrak system.
5	Improve fleet asset condition data	We will link up existing data sets and develop new ones if necessary.	Database and Integration	Low	2027	Low
1 and 5	Develop service level agreement data	Use relevant and appropriate existing data sets e.g., those from the Fleet dashboard or create new ones if necessary.	Systems Analysis and Data and Insights	High	2025	Low
5	Using the above data establish agreed fleet asset levels of service ⁶¹ as well as how we will monitor and measure performance against them	We will attain an IIMM 'core level' of maturity in the development and monitoring of levels of service by: Obtaining feedback on customer needs and expectations and then analysing and documenting this. Ensuring that the level of service statements cover a range of attributes and are	Service Delivery, Data and Insights, Strategy, Reporting, and Monitoring	High	2026	Medium

⁶¹ Research is underway to determine if we can adopt or adapt other jurisdictions' fleet asset levels of service. This research may also influence or determine what supporting data is used for our fleet asset levels of service.

AMP Section(s)	Improvement required	Actions	Team(s) Responsible	Priority	Expected completion ⁵⁹	Resources Required
		aligned with organisational service planning and performance management processes. They also need to be: - o periodically measured and reviewed - o aligned and (where appropriate) integrated with existing performance measures. We also need to understand the agreed levels of service and their cost relationships and then outline this in the AMP. Note, if necessary or appropriate, we will develop new performance measures for the agreed levels of service.				
6	Develop a fleet asset sustainability framework and work programme	Before developing a fleet asset sustainability framework and work programme a more robust emissions baseline needs to be established that looks at both the fuel and waste related emissions that we are generating. Once we have established this baseline, we will develop a sustainability framework and associated work programme to guide fleet emission reduction efforts.	Strategy and Performance ⁶² , Planning and Data and Insights	Medium	2026	Medium
7	Categorise fleet assets as part of an overall lifecycle management plan	We will determine whether the fleet asset groups and sub-categories outlined above in Section 7.1 are appropriate and fit for their intended purpose.	Service Delivery	Medium	2025	Medium

⁶² Discussions will be held with the Principal Advisor Environmental Sustainability as to whether they or the Fleet team are responsible for this improvement initiative.

AMP Section(s)	Improvement required	Actions	Team(s) Responsible	Priority	Expected completion ⁵⁹	Resources Required
		We will then develop an overall fleet asset lifecycle management plan and, if necessary, a new categorisation of fleet assets. Note, if appropriate or necessary, we will develop a separate lifecycle management plan for each of the fleet asset groups and/or sub-categories.				
7	Develop appropriate and relevant data and processes to support the fleet assets' lifecycle management plan(s)	We will develop a data map and cleansing and validation processes. We will also establish appropriate fleet asset metadata including who collected the data and the method used for doing so.	Data and Insights, ICT Architecture and Strategy	Medium	2025	Medium
8	Develop a fleet asset lifecycle cost model	We will develop an agreed fleet asset lifecycle cost model. We will use the agreed cost model to create a robust 10-year view of all fleet asset costs.	Finance and Business Operations	High	2025	Low
9	Develop and document risk processes for fleet assets at a portfolio, group, sub-category, and individual level	We will develop and document these risk processes and update the fleet asset risk register (refer Section 9.10 above). We also need to develop strategies to manage the highest risks for the most critical assets and documenting these in the AMP and/or an associated risk management plan.	Risk and Assurance, Service Delivery, Strategy, Reporting, and Monitoring	Low	2026	Low
9	Develop a fleet asset criticality framework	We will work with the stakeholders listed to develop a framework for our critical fleet assets which will be used as the basis for their acquisition and ongoing management.	Strategy and Performance, Service Delivery, Risk and Assurance	Medium	2026	Medium

10.5 Improvement Monitoring

It is recognised that our AMP is a living document that needs to be kept current and relevant as priorities for Fire & Emergency may change. The regular review of the improvement programme is important for the asset portfolios as we wish to improve our AM practices to support Fire & Emergency strategic direction.

The following review activities will be undertaken:

Frequency	Review Task	KPI	Action	Audience
Three yearly	AMP	100% Achievement	Formal adoption of the plan by the ELT and endorsement by the Board	ELT, the Board, The Treasury
Quarterly	Improvement plan	100% Achievement	Monitor and update the improvement plan list of tasks	Asset Managers
Annually	Monitoring and reporting	100% Achievement	KPIs identified in this table will be monitored and reported on annually.	DCE Organisational Strategy and Capability Development, Asset Managers

11 Fleet Assets Systems and Data

This section summarises the existing fleet asset related data and systems. It then outlines recommended improvements / solutions for addressing data and system gaps that can be implemented in the short-term before noting the future requirements and how these will be developed.

11.1 Existing Fleet Assets Systems and Data

Smartrak is currently being used as the fleet asset fault management system (FMS). Smartrak allows for the monitoring of how long and how often fleet assets are out of service. As noted above in the [Improvement Plan](#), we will assess whether Smartrak can meet requirements for our FMS and if not, we will acquire a new one.

Smartrak can also be used to monitor our total red fleet emissions broken down by appliance types and models. The Wall box system can also be used to track emissions savings from our EV fleet. Wall box also provides the amount and costs of electricity used as well as real time monitoring of an EV's operational and non-operational use.

The main fleet asset management database is JDE. JDE contains all the available fleet asset information including specification data, warranty information, lease information, maintenance schedules, and ownership arrangements. There is a JDE enhancement project currently underway. It is anticipated that this project will provide improved reporting and additional functionality.

This additional functionality includes improved coordination and automation of key administrative tasks. For example, JDE will be able to 'check' with the Approval Plus system and close work records that have an associated paid invoice. This should prevent unnecessary work records being generated when service bulletin updates are published. JDE could also establish the next appropriate service arising from the service bulletin which is currently a manual process. Additional processes and functions will be added over time as more feedback and review is provided on the project.

Once the JDE enhancement project is completed and being used as part of day-to-day operations it will be determined if additional improvements are needed (and can be added) or whether a new fleet asset management information system (FAMIS) is necessary to provide more comprehensive, useful, and accessible fleet asset data and reporting (refer to [Section 10.4 above](#) for further details). When making this decision we will need to consider whether there should be a wider project to include all of our asset classes including Property and ICT or whether we retain a separate asset management system just for fleet.

We are also working with the Planning team to develop a fleet asset 'dashboard.' This dashboard will use JDE and other available data to provide key information (e.g., the total number of red fleet and white fleet assets that we have). This dashboard will be used on a trial basis as part of our day-to-day work to determine what gaps it has as well as the additional improvements that are required. As noted above in [Section 10.4](#) we will use the dashboard data as our proxy for actual levels of service if necessary and appropriate.

The Automatic Location and Positioning System (ALPS) data is used by authorised personnel to coordinate fire appliances in a real-time operating environment, improve those operations, and aid investigations into incidents and complaints (when appropriate approval is received). ALPS improves operations by (among other things):

- Dispatching the nearest fire appliances to an incident.

- Providing information on the availability of fire appliances for emergency management.
- Providing navigational assistance to fire appliances.
- Assisting with the management of fleet servicing and repairs.

The [Access to and use of ALPS data policy](#) outlines who is allowed to use the data and what it can be used for. We will work with the Strategy, Reporting and Monitoring team to develop improved reporting using ALPS data.

This improved reporting data will be used to:

- track and monitor the condition and performance of fleet assets
- track and monitor fleet asset maintenance and repair expenditure
- investigate why particular fleet assets are out of service for longer (or shorter) periods
- confirm the completion of each component of our proactive service regime⁶³

The existing 60- and 90-day open work record reporting will be used to inform an improved view of the actual condition of a fleet asset. We are working with our IT suppliers to improve fleet maintenance reporting so that it is based on the time fleet assets spend at workshops.

The unions have been consulted on revisions to the [Motor vehicle policy](#). These revisions include a proposed deployment of telemetry technologies in white fleet vehicles to achieve the same or similar benefits that appliances get using ALPS data.⁶⁴ This is being considered because telemetry technologies would play an important role in improving the deployment of fleet assets, addressing fleet asset information and data gaps, and improving health and safety outcomes.

However, there are concerns about what data would be captured and how it would be used. We will work with the unions to address these concerns.

We rolled out a dedicated app in 2024 for vehicles that are leased from Orix. This allows Orix to send personalised reminders to drivers reminding them of key dates and obligations such as maintenance, servicing, and warrants of fitness.

Finally, spreadsheets are also used to house crucial fleet asset data sets such as the red and white fleet monthly reports from JDE, the fleet's warranty schedule, and the EV Migration Plan's supporting data. We also use data supplied by the Policy team including the latest fleet emission reduction targets.

11.2 Fleet Assets Data Maintenance, Cleansing, and Validation Processes

Currently fleet asset data validation occurs when appliances are relocated, new call signs are allocated, or other significant changes are made to an individual fleet asset. The relevant [Improvement Plan initiative above](#) provides high-level details on how we will develop and document policies, processes, and procedures for fleet asset data maintenance, validation, and cleansing.

⁶³ If ALPS data is unable to do this, we will need to develop a separate reporting regime to meet this requirement.

⁶⁴ We are considering a consolidation of ALPS with other existing telemetry systems / applications such as those that are part of the [Mobility Programme](#).

11.3 Fleet Asset Systems and Data Requirements

The key requirement for fleet asset systems and data is that they enable, contribute to, or support the efficient and effective delivery of our services. There are immediate steps that can be taken to address known issues or gaps. These gaps include a lack of a clarity on how frequently fleet assets are deployed and what they are used for. It is also unclear how individual fleet assets are performing. For example, are they:

- Enabling career and volunteer crews who are attending incidents to meet target time frames (refer to [Section 5.3.1 above](#) for more details).
- Enabling the career and volunteer fire crews to effectively deal with the incidents when they are there.
- Out of service more often compared to other fleet assets in the same group or sub-category.

Other known data gaps that need addressing are how quickly is a fire put out or the number of lives that have been saved as part of the response to medical emergencies and the actual contribution of fleet assets to this.

Smartrak provides data on how often and long a red fleet asset is idling. However, this data is not accurate. If we can resolve this quality issue, we could use this data to better determine where the most effective reductions could be made in fuel costs and emissions and have more targeted communications with relevant fire crews so they can decrease their idling time.

There is a lack of clarity on fleet asset performance because there are no reliable performance measures. This means that we do not know how well a fleet asset is performing when delivering services especially relative to other fleet assets in the same group or sub-category.

We also do not know what impacts (if any) a fleet asset's day to day operations has on its maintenance requirements and how or if this measurably shortens its life. It is important that we improve our utilisation of existing systems such as Smartrak so we can better understand which fleet assets are more likely to have faults, and why, so appropriate solutions can be implemented.

We need a high degree of interoperability between systems so a more complete picture can be developed of fleet assets at an individual, sub-category, group, or red or white fleet level.

We need to assess whether the data captured outside of existing systems and databases should be retained 'as is, where is' or included as part of a new system or database. This should be done as part of a wider information needs analysis exercise and a data and systems 'stock take' where all existing data and systems are documented (refer [to the relevant Improvement Plan initiatives above](#) for more details).

Appendix 1 – Asset acquisition since establishment of Fire and Emergency

The following number of fleet assets have been acquired (purchased i.e. excluding leased vehicles) since Fire and Emergency's establishment in 2017:

Financial year	Appliances	Light vehicles	Trailers/Other	Total
2017/18	21	21	10	52
2018/19	45	37	9	91
2019/20	55	3	15	73
2020/21	56	1	18	75
2021/22	36	0	15	51
2022/23	40	0	7	47
2023/24	33	0	13	46
2024/25	31	0	13	44
Total	317	62	100	479

Appendix 2 - Supporting collateral & policy review

There is an extensive set of collateral available to support the efficient and effective management of fleet assets and to ensure that operational requirements are met. This collateral is summarised below except for:

- Appliance allocations (refer to [Section 7.6.1](#))
- White fleet allocations (refer to [Section 7.6.3](#))
- Fleet asset disposals (refer to [Section 7.9](#))
- Fleet asset maintenance (refer to [Section 7.2](#)).

We have desk files to support the Te Hiku and Te Ūpoko Region Fleet Coordinators on our [Shared Drive](#). Each region also has collateral on our Shared Drive to support their day-to-day fleet asset related activities as follows:

- [Te Hiku](#) (referred to on our Shared Drive as Region 1)
- [Ngā Tai ki te Puku](#) (referred to on our Shared Drive as Region 2)
- [Te Ūpoko](#) (referred to on our Shared Drive as Region 3)
- [Te Ihu](#) (referred to on our Shared Drive as Region 4)
- [Te Kei](#) (referred to on our Shared Drive as Region 5).

The other fleet asset related collateral is published on the [Portal](#) and is summarised below.

Policies

Aerial appliances

The [Aerial appliances policy](#) states that if an aerial appliance will be out of commission for less than two weeks Region or District management need to determine if it needs replacing and if so what with. Aerial appliances out of commission for more than two weeks will be replaced by either a relief aerial appliance or one from another brigade provided they have a lower risk of an incident requiring an aerial appliance than the brigade receiving it.

Water tankers

The [Water tankers policy](#) must be read alongside the [Guidelines for operational policies and procedures](#). This policy applies when there is insufficient water for Fire and Emergency to conduct operations, or where there are extraordinary circumstances which require us to transport drinking water.

A water tanker is defined in the policy as one that has a minimum capacity of 4,000 litres. Water tankers cannot be articulated (semi-trailer) vehicles and must adhere to prescribed load calculations and statutory axle weight limits.

Water tankers used to transport drinking water must also comply with relevant legislation and guidelines as well as being registered with the Ministry of Health as Tankered Drinking Water Carriers.

HazMat/Command vehicles

The [HazMat/Command vehicle policy](#) must also be read alongside the [Guidelines for operational policies and procedures](#). HazMat/Command vehicles will be replaced by a relief vehicle if they are out of service for more than two weeks. For shorter periods appropriate specialist support needs to be arranged by the relevant Region or District Manager.

Quad bike and light utility vehicle (LUV)

According to the [quad bike and LUV policy](#) quad bikes should only be used when appropriate training has been provided and the correct helmet is worn. They must be operated in accordance with relevant manufacturer's specifications e.g., passenger carrying limits. Quad bikes must not be driven on public roads or exceed 30 km/h.

Quad bikes or LUVs should not be used to tow trailers. The only authorised modifications to quad bikes or LUVs are ones that are:

- within the manufacturer's specified limits
- conducted by a reputable supplier
- suitable for the vehicle's intended use.

Beacons and sirens

The [Beacons and sirens policy](#) states that fire appliances will get beacons and sirens installed before entering service. For other fleet assets they are only fitted if it is essential for their role. When they are fitted, they must meet the applicable statutory and Fire and Emergency requirements. The procedure to obtain beacons and/or sirens is available [here](#) and the application form is [here](#).

Use of operational vehicles

The [Use of operational vehicles policy](#) notes that Fire and Emergency operate the following categories of vehicles:

- fire appliances
- OSVs which are dual role vehicles⁶⁵ and fitted with beacons, sirens and LMR
- supplementary vehicles which are typically not used in a frontline operational context.

Operational vehicles can be made available for 'miscellaneous' use including travel to and from Fire and Emergency supported field days or official United Fire Brigades' Association (UFBA) competitions. Operational vehicles can also be used for static or active displays provided safe practices are conducted which include complying with the permitted use of the air horns or sirens.

Volunteer fire brigades can fundraise for additional operational vehicles. However, before doing so they should consult with their Region Manager to ensure that the vehicle will:

- be cost effective.
- improve the provision of emergency services to the community.
- add to the standing of Fire and Emergency.

⁶⁵ For the purposes of the AMP dual role or dual-purpose vehicles will be defined as those that are used to perform both operational and non-operational tasks and functions.

A formal proposal seeking permission to acquire the vehicle should be prepared by the volunteer fire brigade for the Region Manager. This proposal needs to outline the vehicle's specifications, use, equipment, branding, and availability. It also needs to be determined who will be responsible for its housing, insurance, management, and running costs.⁶⁶

Driving policies

Driving policy

The [Driving policy](#) outlines the safety requirements that our personnel must adhere to when they are driving any Fire and Emergency vehicle. These include not wearing helmets and ensuring they are securely stowed in an approved manner, not smoking in the vehicle, and using a guide when reversing an appliance. The policy also outlines the maximum allowable speeds while driving to and from incidents.

Driver training

The [Driver training policy](#) states that all driver training must comply with statutory requirements and other relevant and appropriate Fire and Emergency policies. All personnel who drive as part of their role at Fire and Emergency must do refresher training at least every five years or sooner if required by their District Manager. Prior learning can be recognised except for emergency response driving.

Using cellphones in vehicles⁶⁷

The [Using cellphones in vehicles policy](#) must be read alongside the [Guidelines for operational policies and procedures](#). Mobile phones can only be used when the vehicle is safely parked unless the call is to 111 or *555 and it is unsafe to pull over.

Hands free sets can be used but only infrequently and briefly when it is safe to do so. They will only be fitted in vehicles with an identified operational need. Staff are responsible for the payment of any fines for breaches of the relevant road rules and regulations.

Transporting Breathing Apparatus (BA) cylinders

The [Transporting BA cylinders policy](#) must also be read alongside the [Guidelines for operational policies and procedures](#). Fleet assets must carry no more than 25 BA cylinders and comply with the [Land Transport Rules: Dangerous Goods 2005 clauses 9.2\(1\) \(b\) \(i\) and 1.2 \(2\) \(e\)](#).

Only fleet assets approved by the National Fleet Manager or that are designated BA tenders can carry more than 25 BA cylinders. Designated drivers must drive BA tenders as well as carry a copy of the [exemption notice](#) and a placard in order to meet statutory requirements. The exemption notice allows the BA tender to carry up to 65 nine litre BA cylinders and up to 420 litres of water provided no other dangerous goods are present.

Fuel card

The [fuel card policy](#) applies when:

⁶⁶ The acquisition of vehicles by volunteer fire brigades using funds raised by the community will be covered in the brigade owned vehicle policy which will replace this section. It is also important that these acquisitions comply with both the [Capital expenditure and donated assets policy](#) and the [Assets and capital expenditure guideline](#).

⁶⁷ As noted below this policy will be incorporated into an updated driving policy.