



Transport Asset Management Plan

2023/ 2028

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Transport Asset Management Plan

1 Overview

This plan supersedes all previous Transport Asset Management Plans (TAMP) and covers the period 2023/24 – 2027/28. The plan is updated on an annual basis in conjunction with the 5-year Capital Programme. The TAMP details all information relevant to the management and maintenance of the Merseyside Fire and Rescue Service (MFRS) vehicle fleet.

The Operational Preparedness Functional Plan, Service Delivery Plan and Integrated Risk Management Plan (IRMP) provide the focus for the annual review of the TAMP, which in turn guides the development of the proposed 5-year vehicle capital programme. Members consider the Capital Programme proposals as part of the Budget and Medium-Term Financial Plan that is approved each year at the Budget Authority meeting.

The Transport Asset Management Plan assists the Service by

- Providing and maintaining a forward looking, progressive and robust transport service, which uses nationally agreed 'best practice' to enhance the current service provision, in turn facilitating improvement and innovation to service delivery.
- Making available all information regarding future intentions within the Transport function available to all areas of MFRS to assist with their future planning.

The objectives of the Transport Function are,

- To support MFRS aims and objectives,
- To ensure the most efficient support and use of transport resources,
- To maintain the appropriate levels of operational capability,
- To reduce costs, offer value for money and to maintain a level of flexibility to adjust to the changing demands of MFRS,
- To facilitate the long-term planning of transport assets.
- To make provision for a long term sustainable environmentally friendly solution for the MFRA fleet.
- Compliance with Her Majesty's Government's Road to Zero Strategy and the Prime Minister's Ten Point Plan for a Green Industrial Revolution.

As a number of the vehicle assets have a longer asset life than 5 years the Operational Preparedness Directorate maintain a longer-term strategic asset review to ensure the requirements of the organisation are planned for. The strategic asset refresh review will incorporate consideration of new technologies and service developments. The governance of these programmes is through the Operations Board, SLT and the MFRA.

2 Capital Expenditure

Merseyside Fire and Rescue Authority (MFRA) has a five-year capital programme which supports a 20-year capital forecast.

The capital programme sets out in detail the anticipated expenditure for the current year and the following four years for all committed capital schemes approved by MFRA.

The Capital programme is formally approved by the Fire and Rescue Authority on an annual basis.

The capital programme allows for flexibility to assist with any change in circumstances or new innovations.

The purpose of the Transport Asset Management Plan is to provide focus as to how assets should be managed and how they support the objectives and priorities of MFRA. The plan is an essential tool in prioritising capital and revenue expenditure on assets to feed into respective capital and revenue plans.

The assessment of transport spending needs is based on several factors including vehicle age, condition, repair and projected maintenance costs plus the additional requirements of service delivery activity. This ensures that resources are targeted in the most effective way.

Where additional transport resources are required, capital and revenue bids are submitted as part of the budget making process annually. Flexibility exists within this process to allow for the introduction of any unplanned requirements that may emerge during the normal process of evaluation and innovation.

Capital bids are evaluated and prioritised and a full scheme appraisal is conducted. Once agreed at Director level the capital and revenue bids are submitted for MFRA consideration of affordability as part of the financial planning process.

3. Transport Function

The role of the transport function within MFRA is the provision and maintenance of vehicles and specialist equipment to meet user and stakeholder requirements. This in turn supports MFRA policies and legislative requirements. Whilst doing this, the ongoing promotion of environmental sustainability at a competitive price must be considered.

The transport function provides support to all departments within MFRS in addition to supporting several external agencies, in maintaining their emergency vehicles.

The Transport functions main areas of responsibility are.

- The design and procurement of fleet vehicles,
- Fleet management,
- Fleet maintenance,
- Engineering and technical support,
- Vehicle disposal.

The Design and Procurement of Fleet Vehicles – Detailed specifications are drawn up using an in-house consultation process with the proposed end users to ensure the final specification is fit for purpose. Research and development are carried out in house, a build design is agreed and the subsequent

procurement of necessary parts, materials or whole vehicles is carried out in conjunction with the Procurement Team within MFRS.

Fleet management - the management and upkeep of the MFRS vehicle fleet. This includes the management of.

- Vehicle Maintenance Records
- Vehicle Excise duty
- Registration and licensing
- Fuel
- Availability monitoring
- Incident investigation
- Whole life costs

Fleet maintenance - the repair and maintenance of vehicles and vehicle mounted equipment is undertaken by workshops within the Transport function. Specialist external contractors are engaged to deal with specialist repairs such as major RTC damage and specialist certification. Most repairs, maintenance, conversion or vehicle modification is carried out in house by qualified certificated staff.

Engineering and Technical Support – the transport function is available 24 hours a day, 365 days a year to offer technical support to all departments within MFRS. This support can be verbal advice over the phone or a physical attendance by a member of the team. During normal working hours, faults are reported through the Tranman web portal and if required this is followed up with a telephone call to workshops where the correct response is decided. Out of normal working hours, faults are reported through the Tranman web portal and are followed up with a phone call to Control if the fault is major. Control will then contact the on-call transport manager who will determine the most efficient response. The major consideration is the length of time the vehicle will spend unavailable as this may have a significant impact on operational response. All requests to the function are dealt with within one hour of the initial call and a way forward is to be established within 2 hours. The function also provides the option for a mechanic to attend the operational fire ground to ensure appliance effectiveness and reliability is maintained at the incident should this be deemed necessary by the incident commander. The on-call transport manager will also advise on the locality and availability of spare appliances. This manager is also available to attend any incident that involves an MFRS vehicle.

Vehicle Disposal – the transport manager has responsibility for the disposal of fleet vehicles and their on-board equipment at end of life. Several considerations are taken into account prior to disposal, which are detailed below.

- The disposal of MFRS vehicles can be done in several ways including the use of public and internal auctions for ancillary vehicles. Appliances may be sold to other end users such as other Local Authority Fire and Rescue Services, private Fire and Rescue Services or recognised training establishments.

- When a vehicle is identified as ready for disposal from the MFRS fleet, consideration is made on age, condition and potential value. The Transport Manager will then recommend whether the vehicle is repurposed, scrapped, sold or donated to an overseas charitable organisation.
- The disposal of appliances at end of life has recently come under intense scrutiny. Vehicles which are deemed ready for disposal are done so utilising recommendations laid down by the security agencies and by the NFCC Transport Officers Group.
- If the vehicle identified for disposal has a significant value, an SLT report will be provided and presented by the Director of Operational Preparedness. Any vehicle identified for disposal can only be actioned in accordance with the terms of MFRA's constitution..

4. [Vehicle Asset Management](#)

Asset management planning is the process used to plan for the acquisition, maintenance and disposal of renewable assets or activities in conjunction with NFCC Fire and Rescue Service best practice and the Driver and Vehicle Standards Agency (DVSA) guidelines.

All vehicular assets are purchased with a minimum of two years' warranty from the chassis manufacturer with an additional two-year warranty on the body and fittings from the body builder/contractor. Most light vehicles procured for the ancillary fleet come with a three-year warranty and carry a three-year roadside assistance package.

Specifications on new appliances and special vehicles are requested to be constructed of a composite body (Plastisol, /Polybody). This affords MFRA the option of a second life for the body following refurbishment.

The transport department provides the operational support to the MFRS vehicle fleet. This is for planned and unplanned maintenance. The transport department has the responsibility of ensuring that the fleet is operated within Transport legislation and health and safety regulations. The support provided includes a reporting mechanism to respond to day-to-day unplanned repairs, notifiable defects, planned maintenance requests and advice.

This system provides for out of hours reporting and produces a full audit trail. All vehicle maintenance records are documented electronically along with a hard copy of service sheets. The vehicle renewal frequency is established based on historical information however remains open to change due to operational and economic circumstances.

The current fleet has evolved over the years and includes a range of vehicles of a mixed age. History has shown the risk of obsolescence is high with several types of vehicles making them too difficult to maintain due to a lack of available components. (Asset refresh timescales are detailed in Section 6).

The decision to replace vehicles is determined by several factors as detailed previously. For budgetary purposes for the purchase of appliances, it is beneficial to spread the replacement cost over a longer period by replacing in

small manageable numbers. Historical evidence has shown that if the vehicles are procured in larger numbers, then the capital replacement costs remain high at each replacement period.

Replacing in small batches also allows MFRS to keep pace with new technology and innovations in design and development within the FRS business model.

An additional factor supporting smaller batch replacement of appliances takes into consideration the maintenance programme of these vehicles; large batches of vehicles purchased at the same time, will require servicing, testing or certification within the same timeframe providing avoidable capacity issues for workshops.

With regard to the smaller vehicles and the ancillary fleet, the factors guiding obsolescence and subsequent replacement are not subject to the same drivers. These vehicles tend to be less expensive than their operational counterparts and if replaced at regular pre-determined intervals provide a better residual value.

Organisational service integration - while the vehicle assets are the responsibility of the Transport department, several other departments within MFRS work in conjunction with the department to provide future planning, finance, governance and support.

5. [Vehicle Fleet](#)

The present vehicle fleet is broken down into eight categories for ease of identification,

- Pumping appliances
- Special appliances
- Aerial appliances
- Officer response vehicles
- Blue light ancillary
- Ancillary vehicles
- Marine fleet
- Lease cars
- Grey fleet (Non MFRS vehicles)

Pumping appliances - Vehicles that comprise of a water storage tank and a firefighting multi-pressure fire pump. These appliances are designed as rescue pumps that carry specialist rescue and cutting equipment.

Pumping appliances are placed into 5 groups to manage the replacement programme, they are, Papa 1, Papa 2, Papa 3, Reserve and Support.

Special appliances - Vehicles designed for specific or special functions such as demountable pods, water rescue, marine rescue, prime mover hook lifts and crane lorry.

Aerial appliances - Vehicles that have the capability of elevating a platform or ladder for high-rise rescue or firefighting as a water tower.

Officer Response Vehicles - These are vehicles used by Flexi Duty officers to respond to incidents under blue light conditions. These are all wheel drive vehicles for use in adverse weather conditions. These vehicles are a mixture of provided and lease vehicles. (See Section 8 for lease vehicles).

Blue light ancillary- These vehicles are smaller operational response vehicles, such as water support unit, water rescue unit, wildfire vehicle, drone vehicles etc.

Ancillary vehicles - Vehicles that are not used at operational incidents and are primarily used for other service delivery requirements, support services, detached duties, community risk management and general service transport. This fleet consists mainly of cars and vans.

Marine Fleet- MFRS Marine fleet consists of two Atlantic 75 ex RNLI rescue boats based on the River Mersey.

Lease Cars –The majority of these cars are for Fire officers and used for response to emergency calls and personal use. There are also a number of cars used by managers in their day-to-day role within the authority. (See Section 8)

Grey Fleet - Vehicles that are privately owned by employees and are used in connection with the employer's business. These come in two categories: - Essential user and Casual user- Essential and Casual car user vehicles are privately owned and are for general business purposes – these categories are not used for emergency response.

Overview of Vehicle Types

Pumping Appliances

- 30 x Rescue Pumps
- 1x Specialist Pump (SRT)
- 1 x MTA appliance
- 10 x Reserve appliances,
- 1 x Reserve specialist pump (SRT)
- 9 x TDA appliances
- 1 x Youth Engagement

Special Appliances Operational

- 4 Aerial Appliances
- 2 Wildfire Vehicles
- 6 x Prime Movers
- 13 x Demountable pods
- 1 x Crane Lorry
- 1 x LGV Driver Training Vehicle
- 21 x Officer Response Cars [4x4]
- 4 x IIT Officer Response Cars [4x4]
- 1 x Welfare Unit

- 1 x Water Rescue Unit
- 1 x Out of Area Deployment
- 1 x Canine Unit Mercedes Vito
- 1 x HVP Support Van
- 2 x Atlantic 75 rescue Boats
- 1 x Hovercraft
- 2 x Blue light Mini Busses

Ancillary Vehicles

- 21 x Station resilience cars
- 7 x PCV
- 31 x Vans
- 64 x Light Cars
- 1 x Occupational Health Mobile Unit
- 2 x Driver Training
- 1 x RTC Education Units
- 1 x JCB Tele Truck
- 1 x Forklift Truck
- 13 x Trailers

Officers Lease Cars

- 25 x Cars

Vehicles identified for disposal

- 6 Appliances
- Ancillary cars and vans
- CSU
- Hovercraft
- 28m CPL

National Resilience Vehicles

- 6 x Prime Movers
- 8 x PODS
- 1 x DIM
- 1 x Toolcat

Reserve Fleet

The reserve fleet of pumping appliances are utilised for scheduled maintenance and non-scheduled repairs to the operational front-line and support appliances. Currently, MFRA maintains its reserve fleet of pumping appliances at 25% - 4 to 1.

We have four fully kitted reserve appliances which are used for scheduled maintenance on the appliance and all its equipment, short term repairs and modification programmes. This allows the downtime of the operational appliance to be kept to a minimum. MFRA have six un-kitted reserve

appliances that are utilised for medium to long term unscheduled work. This is to ensure suitable and sufficient operational resilience is always available.

If there is an increase or decrease in the number of pumping appliances this ratio should be maintained.

6. [Asset Refresh Programme](#)

The timescales for the MFRS vehicle asset refresh programme are detailed below.

- Papa 1 and Papa 2 Pumping Appliances will be replaced at 10 years. This then creates a roll down process of the refreshed appliances to move to Papa 3, reserve and support appliances positions. This will enable MFRS to achieve a life period for Papa 3 and reserve appliances of no more than 16 years and support appliances of no more than 19 years. This is for the period 2023 -2028, if there were to be an increase or decrease in fleet size, the replacement programme would need to be altered.
- Special Appliances are replaced after 15 Years.
- SRT appliance to be replaced at 10 years
- Officers Response Cars to be replaced after 5 years
- Blue Light Ancillary Vehicles to be replaced after 10 years.
- Ancillary Vehicles to be replaced between 5 -10 years dependant on use.
- Demountable Pods to be replaced after 20 years

A Long-Term Capability Management Programme has been established and introduced for the replacement of PODs following an extensive POD review process.

The timescales detailed above are accurate for front line use. It is anticipated that on occasion, vehicles may be kept past these dates but will not be used as part of the front-line operational response.

The replacement of ancillary vehicles is not purely based on age; the following factors are taken into consideration prior to the replacement of the vehicles.

- Condition
- Mileage
- Usage
- Reliability
- Corporate image
- Cost effectiveness

Vehicle refresh for 2023/24 include

- 1 x High Reach Extendable Turret vehicle
- Various PODs
- Various Cars and Vans.
- Flexi-duty officer response vehicles

A detailed breakdown of all vehicle purchases can be seen in the 5-year capital programme.

7. Environmental Considerations

Ongoing practical considerations to reduce the carbon footprint of MFRS have been implemented over recent years. Environmental initiatives currently practiced within the transport and workshops functions are as follows.

- The re-grooving, casing and recycling of tyres.
- The recycling of lead acid batteries.
- The environmental disposal of waste, engine oil, filters and rags.
- The recycling of engine coolant.
- The Recycling of waste metal.
- The recycling of appliances at end of life.
- The recycling and collection of office waste.

All the above initiatives have been captured as part of the current MFRS Environmental Policy.

Vehicle Emissions - the Intergovernmental Panel on Climate Change (IPCC) has identified the following as potentially harmful gases:

- Carbon Monoxide (CO)
- Methane (CH₄)
- Nitrous Oxide (NO)
- Hydro Fluorocarbons (HFC's)
- Sulphur Hexafluoride (SF₆)

The largest global emissions by volume is carbon dioxide which originates from the burning of fossil fuels, including the combustion process that occurs in compression ignition or spark ignition motor vehicle engines.

MFRA have been proactive by continuing to purchase vehicles with the latest technology along with compliance with the government guidelines on exhaust emissions.

All vehicles registered after 1st January 2015 within the MFRA fleet must meet Euro 6 emission standards. The appliances purchased over the last financial year by MFRA have an integrated Euro 6 silencer which contains a full-flow particulate filter which features continuous regeneration and two parallel SCR catalysis with a unique high-precision Adblue dosage system.

The recent replacement of the smaller ancillary vehicles has resulted in a large drop in emissions due the procurement of new vehicles with smaller and more fuel efficient engines.

New Government Emission Targets.

In 2020, the government set new targets on vehicle emissions for vehicle manufacturers and transport operators to achieve.

Their main aim is to reduce pollutants produced by vehicle emissions and remove the sale of new petrol and diesel engine powered vehicles by 2030. In short, to move to using alternative powered vehicles.

Although the technology is available within the industry, it is mainly at this time used in small cars and vans. Technology to advance the driving range, the life of electric vehicle batteries and the performance of vehicles is improving all the time. These vehicles are however more expensive to purchase at present and charging infrastructure needs to be implemented before MFRA can move forward with introducing Ultra Low Emission Vehicles (ULEVs) into the fleet.

Developments are being made in the fire appliance market with two suppliers developing fully electric B type fire appliances. At present, these are expensive in comparison to their diesel equivalents (2-3 times more expensive). The Transport department will continue to monitor the development of these vehicles over the coming year.

The Authority needs to be mindful that continued investment is required to achieve the 2030 targets set out by the Government. Investment is needed in the vehicle capital refresh programme for its ancillary fleet of cars and vans and pumping appliances. Additional investment within the estates department will be needed for the phased implementation of the necessary infrastructure and facilities to charge vehicles at locations across the MFRA estate.

The Transport Manager is to undertake a study with other FRS Transport Managers/Fleet Engineers, to determine the best route for MFRS to take to achieve government targets, looking at: -

- Types of available vehicles and their capabilities
- Price of vehicles, Investigate purchase or lease options
- Maintenance costs
- Whole life costs.
- Charging infrastructure
- Government incentives and initiatives
- The transport manager is to consult with the estates manager for the future introduction of electric vehicle charging infrastructure at MFRA sites to coincide with the vehicle fleet refresh programme.

The move to ULEVs is a small part of a wider organisational move to net zero carbon emissions. A "Preparing for 2030" group has been formed which will report into the Estates strategic Group for direction and governance.

C.A.F.S (Compressed Air Foam System)

CAFS, which is utilised to enhance the MFRA firefighting capability has been utilised within the fleet since 2005. This system uses a foam/water/air mixture to produce a firefighting media that reduces the water consumption used during normal firefighting activities. This reduction in water also has the result of reducing the "Runoff" which is an environmental pollutant. Run off consists of the residual water utilised during firefighting operations which enters into the drainage, sewer system or natural water courses.

8. Vehicle Lease Arrangements

MFRS have operated two types of vehicle leasing.

- Senior Officer Vehicles - this scheme allows uniformed senior officers to lease a vehicle for business and private use. These vehicles have to meet

a set criteria set out within the relevant Service Instruction. The lease period is over four years and the vehicle is inspected prior to return to the lease company and any damage or excess mileage must be paid for.

- Fleet vehicles (Appliances & Ancillary vehicles) - over the years several fleet vehicles such as appliances and ancillary vehicles (cars & vans) have been procured through an operating lease scheme, this has proved to be expensive compared with outright purchase. Cars and vans procured by outright purchase have proven to be the best value option. Ancillary vehicles are purchased through a government framework agreement (Crown Commercial Services) and are kept for between 5 years and 10 years depending on use. At end of life the vehicles are disposed of through public auction or closed bids from within the Service. This has produced a good resale value and the whole life cost of those vehicles is below that of any lease or long-term hire agreement.
- With the potential introduction of ULEV's into the fleet an analysis of lease, versus outright purchase will be undertaken to determine the most cost-effective route to market for MFRS
- Fire appliances – these have on occasion been procured under an operating lease scheme; this has proven to be an expensive option due to the expectations of the lease company as to their condition on return. Experience has shown that following inspection by the FTA certain repairs, tyre wear and paint conditions have all required renovation at considerable cost. This type of scheme also inhibits the Service in extending the life of the appliance should they wish to do so and under the terms and conditions of an operating lease you cannot purchase the appliance from the lease company

9. Spot Hire

To maintain a fleet of ancillary vehicles that meet the needs of MFRA at all times is both impractical and expensive. There are times when there is a demand for vehicles which exceeds the current fleet size. The most cost-effective method to provide resources during this period is to “Spot Hire”.

This involves hiring a vehicle for a short period at short notice. Having engaged with several vehicle hire companies MFRS has two primary vehicle hire companies that provide a low hire rate. The agreement also ensures that the vehicles are delivered to and collected from service premises.

10. Whole Life Costs

The whole life vehicle cost information can be found within the Fleet Management system (Tranman). This captures all costs for servicing and repairs which includes labour, parts, traffic accident damage, insurance, tyres and fuel.

MFRS have replaced fuel pumps at their premises. These systems will allow all fuel usage to be up-loaded into the fleet management system to be included in the vehicles whole life cost.

11. [Benchmarking](#)

Benchmarking is carried out routinely within the Northwest Transport Officers Group of which the MFRA Transport Manager is a standing member. This comprises of key performance indicators on servicing, non-scheduled work, modifications, Traffic Accident damage, whole life costs and research and development within the industry.

12. [Link to Business Continuity Plans](#)

MFRA has a Business continuity plan that is tested periodically throughout the year using different scenarios. ([Link to Transport Business Continuity Plan](#))

As part of our BCP we also have a formal agreement with our colleagues in the Northwest Fire and Rescue services for mutual assistance if they have the availability at the required times.

13. [Internal Audit](#)

Liverpool City Council are commissioned for governance purpose to provide an annual audit for MFRA. During this process, the Transport department is challenged on various sections of the work they carry out during the year. This usually consists of ensuring processes which are part of MFRA policies and procedures, and regulations relating to the transport department are adhered to.

If there are any shortcomings in these processes, then the auditor will make recommendations to remedy them in the final report.