

**SOUTH YORKSHIRE  
FIRE & RESCUE AUTHORITY**

**TRANSPORT ASSET MANAGEMENT PLAN**

**2008/09**

# Transport Asset Management Plan (AMP)

## Contents

Section No	Title	Page Number
<b>PART A</b>		
1	The Transport Asset Management Plan (AMP)	3
2	How the Transport AMP interlinks within the Corporate Structure & other Strategies	3
3	Context and Organisational Arrangements	3
4	Corporate Plan and Transport Asset Management Plan	5
4.1	Links between Finance and Transport Capital Expenditure	5
5	Purpose and role of the Transport Section within SYFR	6
6	Transport Section Overview	6
7	SYFR Transport Assets and the Asset Management Plan	7
7.1	Funding of Transport Assets	8
8	Existing Vehicle stocks	9
9	Progress since last AMP	9
9.1	Fleet Management System	9
9.2	Whole Life Costing	10
9.3	Review Data Capture Methods	10
9.4	Establish Relevant Benchmarking Syndicates	10
9.5	Feasibility of Introducing Vehicle Monitoring Systems	10
9.6	Level Scheduling of Appliances	11
9.7	Supply Chain Management	12
9.8	Annual Updates of Transport AMP	12
10	Vehicle, Plant and Equipment Asset Disposal Strategy	12
10.1	Strategy	12
10.2	Methodology	12
11	Environmental	13
11.1	Current Measures	13
11.2	Vehicle Emissions	13
11.3	Bio Diesel	13
11.4	Carbon Footprint	14
12	Current and Short Term Appliance Deployment	14

13	Technology	15
13.1	CAF's	15
13.2	CARP's	15
13.3	Mobile Data Transfer	15
13.4	CCTV	16
13.5	Fire Link	16
13.6	Technical Rescue Vehicle	16
13.7	BA Telemetry	16
14	Workshop Relocation	16
15	Procurement	16
16	Capital	17
17	Revenue Budget	17
18	Changes Expected During the Next Five Years	18
18.1	Changes in the Operation	18
18.2	Future Vehicle Requirements	18
18.3	Expiry of Current Operating Lease Arrangements	19
18.4	Transfer of Ownership of New Dimension Assets	20
18.5	Re-alignment of Service Costs	20
18.6	Increased Specialisation of Vehicle Repairs by Vehicle Manufacturers	20
18.7	The Promotion of Clean and Energy Efficient Road Transport Vehicles	21
<b>PART B</b>		
19	Review of Transport Section and Measuring Performance to enable improvements	21
19.1	Historical Standards	21
19.2	Target Performance Standards	21
19.3	Competitor Performance	21
19.4	Absolute Performance Standards	22
19.5	Reporting on the Key Performance Indicators	22
<b>PART C</b>		
20	Action Plan	23

## Appendices

Appendix 1A	Vehicle data spreadsheet
Appendix 1B	Current Appliance Replacement Programme
Appendix 1C	Proposed Appliance Replacement Programme

# TRANSPORT ASSET MANAGEMENT PLAN

## 1. TRANSPORT ASSET MANAGEMENT PLAN

This document represents the annual update of the Transport Section Asset Management Plan (AMP) that was produced and presented to the Fire Authority in April 2007. The document uses a similar format that has now been adopted in both the Property and ICT AMP's, informs on progress and changes made and also introduces new and relevant subjects for inclusion.

## 2. HOW THE TRANSPORT AMP INTERLINKS WITH THE CORPORATE STRUCTURE AND OTHER STRATEGIES

The corporate plan provides the focus for each of the Asset Management Plans; all have the overall objective of supporting the Capital Strategy and Medium Term Financial Plans, including Revenue Budgets.

The main focus of the Transport Section Asset Management Plan will be;

To provide and maintain a forward looking, progressive and resilient Transport Service, which uses industry wide best practice to enhance current service provision and facilitates improvement to the operational functions of SYFR.

The objectives of which are:-

- To support SYFR's corporate aims and objectives
- To ensure the most efficient use of resources, and provide and maintain an appropriate level of support
- To maintain appropriate levels of operational availability
- To strive to reduce Transport costs to the organisation
- To maintain an appropriate degree of flexibility to adjust to the changing demands that SYFR will face now and in the future
- To facilitate an appropriate long term plan to manage the vehicular assets of SYFR

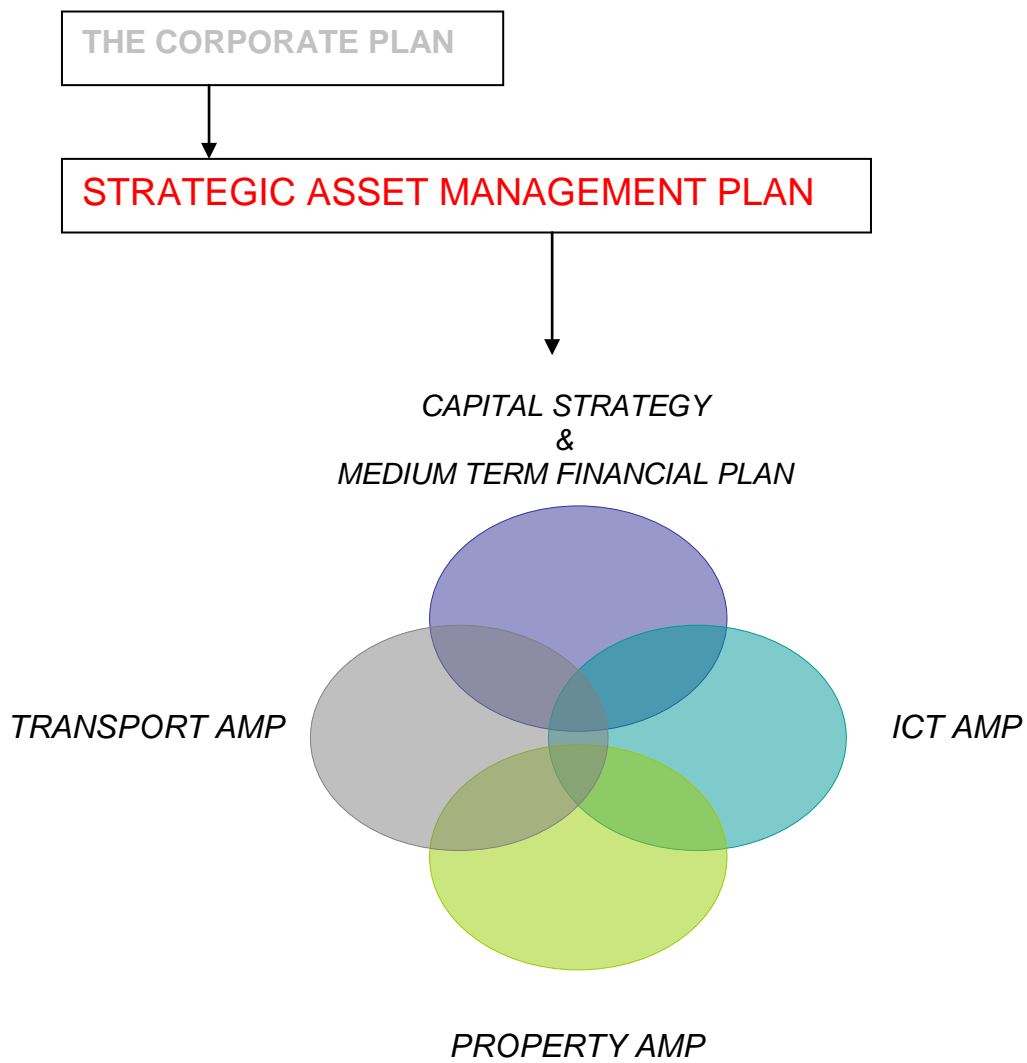
## 3. CONTEXT AND ORGANISATIONAL ARRANGEMENTS

The Corporate Plan provides the Focus for each of the Asset Management Plans; all have the overall objective to support the Vision of being:

*"...committed to acknowledging the diversity of communities and agencies and supporting them by working together in partnership for a safer South Yorkshire by:-*

- *Educating and encouraging people to take responsibility for their own safety*
- *Promoting risk reduction as a means of improving community safety, economic welfare, health and well-being*
- *Ensuring that there are no preventable emergencies*

The inter-relationship of the Transport Section Asset Management Plan with other Corporate Policies/Strategies is shown below;-



#### **4. CORPORATE PLAN AND TRANSPORT ASSET MANAGEMENT PLAN**

The Authority has established a Corporate Plan that outlines what it aims to achieve. It sets out in particular:-

- Vision, Mission and Values
- Key Policy Priorities and Goals
- Action Plans for Achieving the Key Delivery Objectives
- Action Plans for Achieving Planning Objectives

In order to support the Corporate Plan, SYFR has developed an evolving corporate and transport related Asset Management Plan. As part of this planning process a strategy was prepared in 2006 that outlines in summary a programme of works and changes during the period of the strategy (2006-2009).

The Transport Section Asset Management Plan aims to supplement the strategy and reflect on the vehicular assets, examining future changes and investment needs required for maintaining and improving performance.

The Transport AMP implements a comprehensive approach to the management of the Authority's vehicular assets. The plan aims to help achieve the specific asset management objectives that are stated in the SYFR Corporate Plan;

*"Implement a formal asset management plan supported with an asset management system covering the provision, development, maintenance and disposal of assets".*

It is intended that the plan shall be a live document that will evolve through time and reflect appropriate changes.

##### **4.1 Links between Finance and Transport Capital Expenditure**

The Authority has a three year capital strategy, capital programme and medium term financial plan which are linked together in the following way:

- The capital strategy is a key corporate document that describes how the Authority's capital investment plans support the achievement of its objectives and priorities. It sets out the overall framework on how capital needs are properly identified, evaluated, prioritised and financed. It is updated each year and submitted for approval by members as part of the budget process. Asset Management Plans provide a key input into the Capital Strategy
- The capital programme is derived from the capital strategy and sets out in detail the anticipated expenditure for the current year and following three years for all committed capital schemes and those which have been agreed to be of a high priority to proceed. It is also formally approved by members on an annual basis as part of the budget process following consideration of available capital resources and affordability.
- The medium term financial plan sets out the projected revenue spending and resources over a three year forward period. This therefore includes any financial implications arising from capital investment as well as revenue spending on asset maintenance.

One purpose of the Transport Asset management plan is to provide focus as to how assets should be managed to support the objectives and priorities of the Authority and is therefore an essential tool in prioritising capital and revenue expenditure on assets to feed into capital and revenue plans.

The assessment of Transport spending needs is based on several factors including vehicle age/wear, repair and maintenance commitments and the needs of operational services. This ensures that limited existing resources are targeted in the most effective and efficient way. Where additional resources are needed, Capital and Revenue bids are submitted as part of the budget making process each year, although there is some flexibility to introduce additional spending bids as and when required, to take account of unplanned emerging needs. Capital bids are evaluated and prioritised using a Capital Prioritisation model and a full scheme appraisal is conducted which, where appropriate, includes a Whole Life Costing appraisal. Priority spending bids are then submitted to the Authority for consideration of affordability as part of the budget and financial planning process.

## **5. PURPOSE AND ROLE OF THE TRANSPORT SECTION WITHIN SYFR**

The service vision of the Transport Section of South Yorkshire Fire & Rescue (SYFR) is the supply and maintenance of vehicles and equipment which meets user and stakeholder needs; Fire Service strategies and legislative requirements that facilitates and promotes environmental sustainability at a competitive price.

## **6. TRANSPORT SECTION OVERVIEW**

The Transport Section provides support to Operational, Community Safety and Support Services Departments within South Yorkshire Fire and Rescue.

The service provided covers three main functions:-

- Fleet Supply and disposal
- Fleet Management
- Fleet Maintenance

Fleet Supply and Disposal – the specification, acquisition and disposal of all SYFR vehicles. The acquisition and disposal of vehicle mounted fire fighting equipment.

Fleet Management – the management and upkeep of the fleet. This function includes all duties associated with the upkeep of a fleet of vehicles.

- Insurance
- Vehicle Excise Duty
- Registration and Licensing
- Fuel Management
- Availability monitoring

Fleet Maintenance – the repair and maintenance of vehicles and vehicle mounted equipment. The transport workshops undertake the tasks involved. Specialist external contractors are engaged by the repair and maintenance facility as and when required. However, the majority of the repair and maintenance tasks are undertaken by Fire Service support staff.

## **7. SYFR TRANSPORT ASSETS AND THE ASSET MANAGEMENT PLAN**

Asset management planning is the process used to develop detailed plans for acquisition, maintenance, disposal and renewal activities. The plan identifies the asset policies that need to be in place to deliver the perceived and required operational service. For vehicular assets, the optimum maintenance strategies have been defined and are within Fire Service and Department for Transport guidelines.

All vehicular assets are procured with a minimum of 12 months warranty from the vehicle manufacturer; the majority of light vehicles have a whole vehicle warranty of 36 months duration. In respect of vehicles above 3500kg gross vehicle weight the body is generally not produced by the chassis manufacturer and is built and warranted by a specialist bodybuilder.

The transport section provides the operational support to the vehicle fleet. This may be unplanned repairs or scheduled preventative maintenance. The transport section has the responsibility to ensure that all vehicles stay within legislative and safety requirements.

The support provided includes a reporting mechanism to respond to day to day unplanned repairs and a planned preventative maintenance and inspection schedule to reduce the number and severity of unplanned repairs required.

All repairs are documented to ensure that works to transport vehicle assets are recorded to enable effective asset management.

Throughout the vehicle's life it is maintained in a safe, legal and roadworthy condition.

The vehicle renewal frequencies are established but remain open to change due to operational and economic circumstances.

The current vehicle fleet has evolved over the years to include vehicles of mixed age. Whilst it is generally accepted that the specialised, high value vehicles have a longer life and will therefore remain on the fleet for a longer period, the older the fleet, the more redundant in terms of modern principles and technology. The risk of obsolescence is a further consideration in determining vehicle life or refurbishment programmes.

The decision when to replace vehicles is determined by several factors. Due to the high cost of the more specialised vehicles it becomes beneficial to spread the initial capital cost over a longer period in accordance with predicted useful life the major drawback of this is that as technology moves on there is a danger that the vehicle will become outdated in respect of future technical developments that have become available. The vehicles effectiveness to the operational function becomes the "obsolescence gauge" and must be balanced with financial considerations in deciding vehicle life.

In respect of the non specialised fleet the factors guiding obsolescence and subsequent replacement are not subject to the same drivers. With non specialised vehicles, the vehicles tend not to be as expensive, a better residual value is anticipated and the capability of the vehicle is not as restrictive, subsequently it has more of a saleable value in percentage terms. The decision regarding when to replace is more financially based by reviewing reliability, maintenance costs and disposal value.

## **7.1 Funding of Transport Assets**

Prior to the introduction of the new prudential capital finance system in April 2004, which removed the restrictions on the Authority to borrow to fund capital investment the majority of the Authority's appliances were acquired utilising operational lease arrangements. This method of funding vehicle acquisition means that the vehicle is not owned by the Authority, and the Authority is therefore required to make annual leasing payments to the lessor for the duration of the lease period. The operational lease arrangement does not include any maintenance responsibilities; these are financed and undertaken by the Transport Section of SYFR. When the end of each lease period is reached the vehicle is inspected by the lessor to ensure that the vehicle complies with the return conditions and collection is arranged. No capital or revenue receipt is generated from the disposal of these vehicles when the lease expires.

Since April 2004, a financial option appraisal is undertaken to identify the most cost effective funding method for SYFR vehicle acquisitions. Most recently vehicles have been funded utilising the Authority's own capital resources rather than leasing. This means that a capital or revenue receipt at disposal is achieved and the arrangement allows for more flexibility during the life of the vehicle and in respect of appliance modifications providing SYFR with the opportunity to make autonomous decisions without seeking the approval of the any respective lease companies. Any enhancements to vehicle condition or capability are to the benefit of SYFR rather than the lease company.

## **8. EXISTING VEHICLE STOCKS**

There are currently 184 Vehicles within the fleet. The vehicular assets are based across the South Yorkshire area and located at one of the organisations property assets or assigned to a particular area. **(See appendix 1, fleet list)**

## **9. PROGRESS SINCE LAST AMP**

During 2007 several action points have progressed. Listed below are the individual areas together with a summary.

### **9.1 Further utilisation of the Fleet Management System**

(previous action point a, completion by April 2008),

The current Fleet Management System utilised by the Transport Section is Tranman series 5. The system producer has updated Tranman over the years and the current model available is series 9. However, Tranman series 5 still provides an effective Fleet Management tool for SYFR and remains fit for this purpose. The system is used to record, monitor and control the details of the fleet. The system provides fleet management control, and contains key modules to manage fleet information, maintenance activity and stores issues. The Fleet information module enables the system to define a vehicle inventory appropriate to SYFR vehicular assets.

The Fleet Management System continues to be updated with vehicular asset information. The system comprises of a number of modules relevant to the management of a fleet of vehicles. The following modules on the system have been updated and provide a shared database amongst Transport Section staff.

#### **i) Vehicle Inventory**

The system contains the SYFR Vehicle Asset Inventory, which continues to be updated and some location fields have been modified to enable “one click” system reports to be obtained or configuration of “look up” viewers and selection of required data enables the production of more defined reports. The system can be interrogated to find vehicles by station or call sign. This can be exported to Microsoft Excel for further manipulation or electronically posted to other sections of SYFR.

#### **ii) Annual Events**

Over the past 8 months the Fleet Management system has been populated with Fleet information, recently there has been an influx of information into the system to provide standard reports on annual events such as MOT testing, Vehicle Re Licensing, annual fleet disposals and purchases.

#### **iii) Plant and Equipment**

The Fleet Management system is being developed to provide a ready inventory of equipment detail. Whilst much of this detail is already captured within the system it needs to be recorded with easily recognisable formats to enable easy data extraction. The system is being modified to enable capture of identification number, type, supplier and precise location in a practical manner. The eventual outcome will be that a vehicle registration number or call sign can be interrogated and the Fleet Management system will provide the details of the items allocated to that appliance or station.

#### **iv) Bookings Module**

The current pool of vehicles within Transport Section is used by other departments on an ad hoc basis; the pool consists of 8 vehicles; 4 cars and 4 vans. The pool vehicles are booked via the transport section in CHQ and the booking section of the current Fleet Management system has been recently upgraded to provide a more effective method of monitoring and controlling utilisation. The bookings module is a shared system enabling access by Transport CHQ staff. The module also enables pool utilisation to be monitored to ensure vehicles are fully utilised and avoid an unnecessary pool size due to under utilisation. This area satisfies the current need for pool vehicle monitoring.

#### **9.2 Produce whole life costing information for vehicles**

(previous action point b, completion by October 2008)

The whole life costing information is now available within the Fleet Management system. However, further work needs to be carried out to examine some of the base information that informs the Fleet Management System (FM). For example, whilst the workshop labour rate is active within the FM system, the rate has no documented calculation formula to support the figure (see 18.5), neither does the rate capture proportional devolved costs from other sections that provide support to Transport Section.

Without the inclusion of these currently unidentified costs, the workshop labour rate is inaccurate as it does not accurately represent all proportional costs to Transport section. The actual costs of providing the service need to be known. The construction of an accurate Workshop Labour Rate, Stores on cost and subsequent production of a Vehicle Provision Premium will provide the building blocks to benchmark with other organisations and provide the functional basis for future changes to the business processes.

#### **9.3 Review data capture methods/production of PI's**

(previous action point c, completion by April 2009)

A review of the fleet management system has taken place to identify the methods available for specific data capture to produce Transport Performance indicators. Some of this information is shown in the table below. The PI's can then be networked to provide a benchmark of performance.

#### **9.4 Establish relevant benchmarking syndicates**

(previous action point d, action completed by April 2008)

SYFR has become a member of the Freight Transport Association (FTA). Membership includes access to the Public Authority Transport Network and provides a day to day opportunity to network and benchmark with other organisations. The network has 60 Emergency Service members and over 400 Local Authority members and information is exchanged between members and the network is used to share good practice arrangements and other Transport related information.

#### **9.5 Feasibility of introducing vehicle monitoring systems**

(previous action point e, action completed by April 2010)

No progress has been made on this action point at current time and the action point will be rolled forward into the next action plan.

## 9.6 Level scheduling of appliances

(previous action point f, action completed by April 2010)

A proposal to “level out” the replacement of fire appliances is being produced. The current programme for the replacement of appliances is shown in appendix 2. This programme is based on previously predicted vehicle life that is concurrent with the current operating lease method of funding the acquisition of appliances. The proposal to “level schedule” vehicle replacements will provide the following benefits;

- Even out the average age and wear factor of the fleet
- By maintaining an average age and wear factor this will enable a more “straight line” in demand for vehicle repairs
- Reduce the risk of premium direct labour costs (overtime payments) associated with heavy workloads
- Reduce workshop lost time due to a reduced workload when average fleet age is low
- Enable more even and constant availability due to a consistent average age/wear across the fleet
- Assist revenue budget predictions for vehicle maintenance and repairs and smooth out some of the “ripples” caused by uneven average/age wear
- Facilitate supply chain management with vehicle suppliers and enable an aggregated demand to be communicated to Fire Buy and its awarded suppliers
- Reduce the peaks and troughs currently seen in the current Transport Section Capital Expenditure Programme
- Promote Firefighter confidence in the fleet and the replacement programme
- Enable any equipment/appliance modernisation to be introduced consistently and gradually rather than wait for “replacement cycle years”. Each year would provide a known number of replacements in proportion to overall fleet size and the predicted life expectancy.

**9.7 Supply Chain Management**  
(previous action point g, Action completed by April 2009)

No specific progress has been achieved on this action point, this area falls in to the remit of the Fire Buy framework agreement. Discussions will take place with Fire Buy with a view to establishing what benefits of supply chain management can be driven via themselves.

**9.8 Annual Updates of the Transport Section Asset Management Plan**  
(previous action point h, action completed by April 2008)

As outlined within this document.

**10. VEHICLE, PLANT AND EQUIPMENT ASSET DISPOSAL STRATEGY**

**10.1 Strategy**

To reduce the number of assets wherever possible following review and challenge of the portfolio. Assets surplus to requirements will be disposed of at the earliest opportunity and proceeds used as a corporate resource.

**10.2 Methodology**

All vehicle plant and equipment will be reviewed by the Fleet Manager and the Equipment Manager on a regular basis and the need to retain them is challenged by means of:

- Review of operational strategy
- Review of specific service areas
- Review of community projects such as life courses and community safety projects
- Review of individual assets identified from asset register (fleet management system) information

Assets which are identified from such reviews as being unused or under-utilised or which are likely to become so are referred to the Head of Technical Services and the appropriate Head of Service for the recorded user department.

If the Head of Service for the user department deems the asset surplus to requirements then the asset will be electronically advertised to all other departments of SYFR. Departments that feel they have a need for the equipment would need to prepare a mini-business case to justify the request.

If no further use is identified for the asset and the asset is deemed surplus to requirements then the asset will be disposed of via trade auction.

Revenue or capital receipts generated by the disposal of assets shall be treated as a corporate resource.

## **11. ENVIRONMENTAL**

### **11.1 Current Measures**

The current environmental policy of SYFR encourages practical considerations to be introduced to improve the carbon footprint of SYFR. Several environmental initiatives are currently in place within the Transport Section.

- The re-cutting and casing recycling of tyres
- The recycling of lead acid batteries
- The environmental disposal of waste engine oil
- The use of bio diesel
- The recycling/collection of office waste

All the above initiatives have been discussed at the Environmental Forum and have been captured as part of the current Environmental Policy.

### **11.2 Vehicle Emissions**

The Intergovernmental Panel on Climate Change (IPCC) has identified the following as potentially harmful gases;-

- Carbon Monoxide
- Methane
- Nitrous Oxide
- Hydro Fluorocarbons
- Sulphur Hexafluoride

The largest global emissions by volume are of 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.

The recent purchase of new appliances has seen the introduction of Exhaust Gas Recirculation (EGR) into the SYFR fleet. EGR provides the vehicle with a means to adhere to current Euro 4 and Euro 5 emissions standards. The basic concept of EGR is that the gases from the exhaust of the compression ignition engine are re-circulated, in effect turned back from the exhaust and diverted into the induction side of the engine to be re-burned as part of the combustion process. This process ultimately reduces the harmful gases exhausted to atmosphere.

Within the coming months we will also see the introduction of vehicles fitted with Selective Catalytic Regeneration (SCR). SCR also fulfils the requirements of the Euro 4 and Euro 5 standard this however is achieved in a different manner. The SCR system relies on the injection of "ad blue" into the exhaust system as an after treatment of the combustion process. The "ad blue" injection alters the composition of the harmful exhaust gases to reduce their detrimental effects to the environment.

### **11.3 Bio Diesel**

Bio diesel is a mixture of mineral diesel fuel and vegetable derived fuel. The current fleet operates on a 5/95 mixture of these fuels and there are two specific concerns with regards to bio diesel and the SYFR fleet;-

- Bio diesel has a reduced calorific value when compared to mineral diesel. This means that the power produced is slightly less than mineral diesel. This is obviously a concern to emergency fleets and their ability to respond quickly.
- Bio diesel does not have the same lubricity as mineral diesel and using bio diesel in larger ratios may necessitate more frequent and regular engine oil changes.

The feasibility of introducing greater ratios of bio diesel will be looked at over the next 12 months, this however will only be considered for implementation when it is safe to do so without detriment to vehicle performance.

#### **11.4 Carbon Footprint**

Measurement of the carbon dioxide produced by the fleet emissions can be calculated using a formula established by the Freight Transport Association. A specific amount of carbon dioxide is produced for a quantity of fuel burned. This calculation assumes that fuel burns completely whilst in reality motor vehicle engines are not 100% efficient and will produce by products of the combustion process. The following formula represents a theoretical approach to quantifying the carbon dioxide emissions of a compression ignition engine;-

1litre of diesel fuel burns completely (only if 100% efficient) to produce 2.63kg of carbon dioxide.

By studying the fuel used by of the fleet it is possible to calculate the fleet's carbon footprint. As new technology is introduced into the fleet, it is plausible that the current fuel usage of the SYFR fleet will reduce and subsequently the size of the carbon footprint.

The theoretical carbon footprint of the SYFR fleet based on the fuel used in 2007/08 is  $(474,295 \times 2.63\text{kg}) = 1247.39$  tonnes per annum.

### **12. CURRENT APPLIANCE DEPLOYMENT**

The deployment of fire appliances throughout the boundaries of South Yorkshire is a constantly evolving activity. The allocation of rescue pumps to stations is determined by a number of factors. Generally this is decided by the number of calls and activities at each station with the busier stations receiving the most up to date and durable appliances. Whilst this is the main contributor to rescue pump allocation, there are other mitigating circumstances that also influence the decision, for example;-

- a) Balance of standby cover and capability required in an area
- b) Location of current stations
- c) Type of calls/activity received at stations

Within the first stage of the current allocation plan, the most recent acquisitions were deployed to three of the busier stations.

The second stage saw the remaining newly acquired assets dispersed across the SYFR area to ensure that there was an even distribution of the improved firefighting capabilities provided by the relatively new Compressed Air Foam Systems (CAFS) technology.

The third stage of the allocation plan will be to introduce the new Combined Aerial Rescue Pumps (CARP's) machinery into each of the four main areas and due to the multiple role that each of the CARP's appliances will perform, it has been identified that these should be deployed within the centre of each area. (see 13.2 below for further CARP's information).

The final stage of the current allocation plan will see each of the four centrally located (in respect of the four individual areas) stations receive a newly acquired appliance deployed alongside the CARP's units.

Ultimately the service as a whole will have then provided the following;-

- a) Even spread of durable and up to date firefighting technology across the whole area.
- b) Aerial capability within the centre of each of the main four individual areas.
- c) Durable and up to date appliances at the busier stations.
- d) Improve resilience between areas enabling the "cross pollination" of "familiar" resources should it be required.
- e) Through monitoring and control, "a shared burden" policy can be adopted in time whereby an appliance from one of the busier stations can be re-deployed (and vice versa) to a quieter station without facing all the implications of unfamiliarity and retraining.
- f) An improved utilisation of SYFR assets.

## **13. TECHNOLOGY**

### **13.1 Compressed Air Foam Systems (CAF's)**

Compressed Air Foam Systems have now been introduced into the Brigade. The units have been strategically distributed around the South Yorkshire area to provide blanket cover of the new technology throughout the region.

### **13.2 Combined Aerial Rescue Pumps (CARP's)**

SYFR has received delivery of the first CARP vehicle. Training will be carried out over the following months to facilitate installation into the operational fleet. CARP's vehicles will enhance vehicle utilisation and provide a greater degree of flexibility when attending the scene of a fire. The incident commander is able to carry out a dynamic risk assessment and deploy the aerial facility with immediate effect, providing an immediate rescue capability if required. The CARP's will also reduce operating costs and improve utilisation when compared with stand alone aerial appliances that spend the majority of time on standby rather than in use.

### **13.3 Mobile Data Transfer (MDT's)**

MDT terminals are now installed and hardwired into all Appliances. These units will be available for firefighters to access information from the deployed appliance.

#### **13.4 CCTV Camera's**

CCTV Camera's have been fitted to appliances. The cameras will be used to record visual information at Fire Grounds and en route. This will enable the capture of visual information and enable further opportunities for improvement of services.

#### **13.5 Fire Link**

The Fire Link mobile communication system will be installed during the next 12 months. The Fire Link system will provide improved communication to all mobile units and will eventually link each appliance with the proposed Regional Control Centre.

#### **13.6 Technical Rescue Vehicle**

This vehicle is a new fleet asset. The vehicle will provide a rapid response technical rescue capability for the SYFR area and enhance current emergency service provision to the people of South Yorkshire. The vehicle will undertake rope and water rescue within its remit.

#### **13.7 Breathing Apparatus (BA) Telemetry**

The installation of the BA Telemetry System which was approved by members in April 2007 has begun. All Rescue Pumps are being installed with on board vehicle chargers, BA equipment, and a BA control board the equipment provides for improvements in communication and exceptional monitoring and control capabilities from outside the incident.

### **14. WORKSHOP RELOCATION**

The construction of the new SYFR workshops at Eastwood in Rotherham has commenced. The relocation represents an opportunity to improve the current repair and maintenance facilities.

Maintenance and repair of vehicles and equipment is currently carried out at two sites within the region's dedicated vehicle workshops at the Command Headquarters in Sheffield city centre and an equipment, ladder and body/paint shop at Eastwood in Rotherham.

As part of the redevelopment of Sheffield City Centre, the current workshop facility at Command HQ is to be re-sited to the Eastwood site. These changes will provide an opportunity to improve the layout of the facility and improve the flow of repair and maintenance operations through the workshop providing the flexibility for specific task driven work areas (selecting the most appropriate work area for the repair to be undertaken).

### **15. PROCUREMENT**

As reported within the first issue of the Transport AMP, during early 2007 a specific procurement body was formed for Fire and Rescue Services. Initially this facility has concentrated its efforts on framework arrangements for the procurement of appliances and a total of six separate companies were awarded Fire Buy status for the supply of Fire Appliances.

More recently the Fire Buy portfolio has increased to include support/light vehicles and in April 2008 we will see the introduction of a framework for the procurement of equipment. The introduction of Fire Buy has provided Fire and Rescue Services with an opportunity to make efficiency savings on the administration and advertising costs prevalent to the procurement of Fire Appliances. The proposed replacement of four appliances for March 2009 delivery will be acquired via the Fire Buy framework arrangement.

## 16. CAPITAL

Transport section capital expenditure forms part of an investment strategy drawn from the replacement cycle of vehicles and equipment.

The transport section replacement programme sets out the capital resource requirements relevant to the delivery of corporate objectives and projects.

The Transport Section replacement programme will be affected by the current financial pressures faced by SYFR. The current capital programme for vehicles may change over the current months. The table below is a forecast of the current capital programme for transport assets for 2008 – 2010:

	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>
	<i>£000</i>	<i>£000</i>	<i>£000</i>
Emergency Response	1,131	630	805
Support Vehicles	56	0	0
Training	10	0	0
Community Safety	16	0	0
<b>Total</b>	<b>1,213.00</b>	<b>630</b>	<b>805</b>

## 17. REVENUE BUDGET

The transport section revenue budget will be heavily influenced by the transport section replacement programme mentioned above. It is unlikely that year on year capital spending will remain constant, there will be fluctuations in the costs transferred to the revenue budget. As mentioned above, the levelling out of vehicle purchases over an anticipated life span will help to even out revenue expenditure across the years. The alternative would be to accept that fluctuations will occur between different years, and budget accordingly. A similar concept applies to vehicle maintenance expenditure, as vehicles age, more costs will be incurred. Unless the same numbers of vehicles of the same type are purchased each year there will be fluctuations in vehicle maintenance expenditure. Improved asset management planning can ease the fluctuations to enable more even and accurate budget forecasting.

The budget is divided into numerous individual cost centres/expenditure heads to enable budget monitoring and control. The annual budget is affected by the following factors, these factors need to be taken into consideration when setting the Transport Section budget:-

- Number of Vehicles
- Age
- Usage
- Driver/User behaviour
- Specification

As an uneven fleet matures the cost of maintenance and upkeep will fluctuate as the volume and severity of repairs and maintenance changes.

## **18. CHANGES EXPECTED DURING THE NEXT FIVE YEARS**

Within such a high profile, highly technical and heavily regulated area it is forecast that several alterations to current practice will become evident over the next five years. These areas may be driven by operational practices, central government initiatives, good practice, legislation or environmental concerns.

### **18.1 Changes in the Operation**

The Transport Sections operational strategy needs to be flexible to adjust to the requirements of the users. During previous years the service remit of SYFR has increased. The scope of the service is now wider and the service is expected to attend an increased range of incidents. This trend will no doubt continue and whilst this change of focus will not reduce the establishment costs of having an emergency fleet on standby it may reflect on the capital expenditure and running costs and create more of a demand for non standard items of vehicles and equipment. Furthermore if targeting of the prevention of fires is successful this may produce a change in user operation and could reduce the number or influence the design of the emergency vehicles required.

### **18.2 Future Vehicle Requirements**

The future vehicle requirements of SYFR are currently based on cyclical estimates and effected by changes in the location of stations and operational activity. Early 2008 will see a reduction in the current number of appliances with the introduction of the CARP's vehicles. The CARP's product combines the functionality of both a rescue pump and an aerial appliance. The current aerial appliance's are under utilised assets and by combining their role with the role of a rescue pump will produce operational cost savings as well as equipment savings and will effectively reduce the operational rescue pump fleet by four vehicles. The current cyclical Fire Appliance (including specials) replacement programme based on previously predicted/expected life cycles can be seen at **appendix 3**.

During 2008 we anticipate further fleet movement in respect of additional vehicle numbers

- 2 flexi duty officers vehicles
- 1 technical rescue vehicle

The vehicle fleet continues to increase in size, during the last calendar year the current fleet expanded by 30 vehicles;-

- 27 flexi duty officers vehicles
- 1 Articulated tractor unit for training purposes
- 2 British Red Cross vehicles(maintenance only)

### 18.3 Expiry of current Operating Lease Arrangements

Over the next five years 28 of the current operating leases used to acquire appliances will expire. As notified within the previous Asset Management Plan (2007), these vehicles are not owned by SYFR but leased from different leasing companies. Once the primary lease expiry is reached the Service is faced with two options:

- a) return the vehicles to the lessor, or
- b) re-lease the vehicles under a new leasing arrangement.

If option a) is taken up then the Service is faced with the following circumstances;

- Acquiring replacements within sufficient time to replace the returning assets
- Assenting to undertake any repairs required or make financial recompense for any shortfall in the vehicles condition in line with the original lease agreement
- Make payment to the leasing company for an “end of lease” vehicle condition inspection
- Securely store the vehicles until the lease company arranges the disposal or collection
- Deliver or stand the cost of delivering the vehicle to a location identified by the lease company

If option b) is taken up, then the Service is faced with the following circumstances, however upon expiry of the new leasing period the circumstances described in option a) above will also then apply;

- Arrange a new lease (in effect an extension of the primary lease) to run concurrently from the end of the primary lease
- Continue to maintain the vehicle over the life of the new lease
- Negotiate a reduced leasing rate for the duration of the new lease

Several operating lease arrangements have expired during 2007/08, some of these had already been subject to a lease extension and a relatively low cost settlement of the lease was agreed. A return is currently being negotiated with the leasing company for seven further vehicles. These vehicles were acquired in 1998 and have reached the end of their primary leasing period.

The expiration of operating lease arrangements and the costs incurred by this process will make further demands on Transport Section and the Brigades budget process. No contingencies have been put in place within the Transport Section to accommodate the “end of lease” charges as 2007/08 is the first year that SYFR have reached any leasing expiry dates; however the costs will be captured in the whole life vehicle costs of individual vehicles.

#### **18.4. Transfer of Ownership of New Dimension Assets**

It has been proposed that during 2008 we will see a transfer of ownership of the New Dimensions Assets to SYFR. The Service currently accommodates four New Dimension vehicles;-

- Prime mover with double hose box
- Prime mover with hose box and high volume pump
- Incident response vehicle with forklift
- Detection, investigation and monitoring (DIM) vehicle

We anticipate receipt of a further prime mover within the next 12 months. The initial suggestion is that the proposed transfer will attract “new burden” funding.

The receipt of a further New Dimension vehicle may provide further opportunities for some rationalisation; however this will depend on any central government usage restrictions.

#### **18.5 Re-alignment of service costs**

The current Transport Section revenue budgeting process does not capture all the costs of operating the fleet. Areas such as accommodation, finance and Human Resources support are not devolved to the Transport Section. It is necessary to capture these areas and any others and apportion appropriate costs to the Transport Section to ensure that the Workshop labour rate, Stores On cost and the cost of Vehicle Provision are accurate and reflect the true cost. Without the capture and inclusion of these costs any comparative data for benchmarking can only be compared with organisations with the same arrangement. Furthermore the current costs do not provide sufficient financial information as a basis for sound financial and organisational decisions to be made.

The introduction of recharging budgets would highlight how the Transport section turnover is divided between different service areas or future external parties. This system is not practised at the moment as the Service does not operate a recharging system and the individual cost centres have only recently been introduced and require some refinement. The enabling of realistic costs and charging structure will provide an indication of the level and size of the Transport Section support to other areas of the Service and provide the comparators to drive competitive behaviour and enable comparisons with other organisations to produce best practice. It would also provide the emphasis for other budget managers to consider the financial effect of Transport Provision when developing their individual services.

An initial approach has been made to other sections to establish these previously unidentified costs.

#### **18.6 Increased specialisation of vehicle repairs by vehicle manufacturers**

The repair and maintenance of modern motor vehicles is changing at a fast pace. The introduction of the “block exemption” legislation has prevented vehicle manufacturers and their respective agents from including clauses in warranty agreements to reduce competition. However many manufacturers are introducing computer based diagnostics and have written their own programmes to facilitate this. Whilst this may provide labour savings to manufacturers agencies and dealers it causes problems for in house workshops such as ourselves due to the variety contained within the fleet.

Whilst many manufacturers are willing to provide the necessary software to fleet customers, the number of different makes within the SYFR mixed fleet make this cost prohibitive. As this situation increases, the in house workshop may need to specialise on the vehicular attributes specific to fire appliances that are not locally available. These services could also be promoted to other organisations to reduce the overall overhead costs per unit.

Exploring the possibilities of forming partnerships with external organisations to provide service in some areas, may produce benefits to the organisation in respect of cost, quality, and availability and provide the wider range of specialisation that a modern fleet requires. This may take the form of specialist area arrangements (tyres, accident repairs etc), extended warranty, contract hire, "lump sum" repair and maintenance contracts with guaranteed buy back options (guaranteed disposal price at end of life) or individual "day works" with agreed menu prices and discounted labour rates.

### **18.7 The promotion of clean and energy efficient road transport vehicles**

The Commission of the European Communities is considering a proposal to introduce lifetime costs for energy consumption, CO<sub>2</sub> emissions, and pollutant emissions to be linked to the operation of the vehicles to be procured. It is proposed that these areas will become public procurement award criteria, in addition to the vehicle price. The general principle is to encourage public procurement as a means of promoting eco-innovations and therefore increase demand and competitive behaviour within the market place.

## **19. REVIEW OF TRANSPORT SECTION AND MEASURING PERFORMANCE**

Before devising an approach to the improvement of the Transport Section it is necessary to measure current performance. The urgency, direction and priorities of improvement will be driven by operational requirements; all operations need some kind of measurement as a prerequisite for improving performance. Performance measurement is a process of attempting to quantify actions and it is usually necessary to use more than one gauge of performance to avoid chasing targets in isolation.

There are several ways of using performance information all involve comparing the information gained against some kind of standard. Listed below are several standards that could be used.

### **19.1 Historical Standards**

Historical Standards would mean comparing current performance with previous performance. A study of the past is not necessarily a good comparator of the future, however it would provide an indication for trend analysis purposes.

### **19.2 Target Performance Standards**

These standards are set arbitrarily to reflect a level of performance that is thought reasonable.

### **19.3 Competitor Performance**

By comparing performance standards against competitors or similar organisations provides a good indication of what is achievable in each given area and focus the section on achieving competitive advantage.

## 19.4 Absolute Performance Standards

An absolute performance is one which is taken to theoretical limits. These standards are perhaps never achievable but do allow calibration with a theoretical limit.

## 19.5. Reporting on the Key Performance Indicators

The initial Transport AMP suggested numerous performance indicators for Transport Section, the majority of these have now been populated and several others added. The table below provides this information.

There are a wide variety of indicators that can be gleaned from Transport Undertakings that can be applied to the SYFR fleet, these provide the widest possible indication of performance and need to be the “building blocks” of further indicators. Some of the indicators below are unable to be produced at present time as the information has not been collected previously or the base information has not been captured in its entirety. The current workshop labour rate, fleet management cost and stores on costs are inaccurate or don't currently exist, it is proposed that these areas be subject to further work.

Some of the indicators below have been selected for their ease of collection, to encourage comparative data from other organisations, others have been added for their direct relevance;-

National Performance Indicators	Definition	Performance
Primary Indicator	Fixed Costs per vehicle (not running costs)	Data not presently collected
Primary Indicator	Maintenance costs per vehicle	£3029.41
Primary Indicator	Vehicle running costs (fuel, insurance, VED) per vehicle VED = £7300 Fuel = £379,436 Ins = £186,644.10	£3116.30
Primary Indicator	CO2 value of fleet (based on 2.63kg per burnt litre of fuel, allowing for 100% engine efficiency)	1,247,396 kg (1247.39 tons) per annum Average 6.77 tonnes per vehicle
Primary Indicator	Fleet management costs	£478.79 per vehicle per annum
Primary Indicator	Remaining lifetime	Data not presently collected
Primary Indicator	Vehicle purchase costs (average appliance cost based on current fleet)	£198,345.55
Primary Indicator	Vehicle availability(April to Dec, whole fleet, doesn't include queuing time or where vehicle left “on run”)	97% (270 days x 184 vehicles, 49680 possible, 1491 down)

<b>Local Performance Indicators</b>	<b>Definition</b>	<b>Performance</b>
Primary Indicator	Vehicle serviced within 7 days of schedule	Data not presently collected
Primary Indicator	Number of road traffic accidents reported(per annum)	49
Primary Indicator	Number of vehicle per mechanics employed 184 vehicles 6.5 MVC's(foreman has 50% admin and supervisory duties within his role)	28 vehicles per mechanic (28.30)
Primary Indicator	Number of unplanned breakdowns	Data not presently collected
Primary Indicator	Maintenance cost per call/mobilisation	£19.46
Primary Indicator	Maintenance costs per mile (based on 2,131,200 miles)	26p per mile
Primary Indicator	Fleet (not capital) cost per call/mobilisation	£79.67
Primary Indicator	Fleet costs per part of weighted vehicle (taking account of different cost/technologies required for maintenance of different vehicles)	Data not presently collected
<b>“Building Block” Indicators</b>	<b>Definition</b>	<b>Performance</b>
Primary Indicator 1	Whole Cost of Transport Provision expressed as a percentage of Organisational Turnover	4%
Primary Indicator 4	Stores on cost (the cost of providing a dedicated Transport Stores facility expressed as a percentage on cost)	Data not currently available
Primary Indicator 6	Workshop Labour rate(all costs of providing and staffing a workshop divided by the number of saleable hours)	Current Rate installed within FMS system. £24 per hour (rate doesn't reflect true cost)

Primary Indicator 7	Rental premium ( cost of providing vehicle to include parts and stores on cost, workshop labour rate in maintenance element and costs of fleet management and capital cost of vehicle with residual value predicted for disposal)	Data not currently available
Secondary Indicator 2	Pool Vehicle Utilisation	85%(only available from January)

## 20. ACTION PLAN

- a) Maintain the fleet management system to provide an effective fleet management tool (April 2008 and ongoing)
- b) Re- align the costing structure of the Transport Section to capture all the costs attributed to Transport section and inform whole life costs more accurately(aim to complete October 2008)
- c) Use the data capture methods provided by the Fleet Management System and the re-aligned costs captured in the action point above to improve the accuracy of the figures for the performance indicator table above (aim to complete April 2009)
- d) Use the established benchmarking syndicates to exchange information with other organisations and provide comparative data and develop good/best practice (aim to complete Oct 2009)
- e) Explore the benefits and feasibility of vehicle monitoring systems and undertake a cost benefit analysis to establish the practicalities of introducing a system to SYFR (aim to complete April 2010)
- f) Devise a plan to “level schedule” the purchase of vehicles to reduce budget fluctuations and stabilise the fleet’s year on year wear factor (aim to complete April 2010)
- g) Follow up the principle of supply chain management with Fire Buy to explore the benefits that could be obtained (aim to complete April 2009)
- h) To successfully integrate the new dimensions assets into the SYFR fleet and explore the opportunities that this may present (dependent on time table for transfer)
- i) Consider the introduction of “plastic” fire bodies into the SYFR fleet. Current body building advances have increased the practicalities of these materials and introduction of “plastic” bodies has enabled the feasibility of a “double life” principle. By remounting the fire body to a second chassis the cost of replacement fire bodywork may provide an opportunity to make savings on future capital expenditure, furthermore this may provide maintenance savings due to the reduction of repairs caused by the effects of corrosion. (aim to complete April 2009).

- j) To introduce vehicle emission testing to annual services (aim to complete October 2009)
- k) Investigate the introduction of an accurate recharging budget system for the provision of Transport Services. The basis of the system would be to capture all the relevant costs and ensure that the cost is distributed via the workshop labour rate, stores on cost and vehicle provision/rental premium. Each vehicles cost to be “rolled up” into a hire charge that can be levied to the appropriate department, this may take the form of individual service level agreements internal vehicle users. Introduction of departmental trading statements will provide more awareness to budget managers and promote further the concept of “best value” principles. To align with capture of accurate costs as outlined in b) above. (aim to complete April 2010).
- l) Update the Transport Section Asset Management Plan (April 2009)