

End of Life Vehicles (ELVs) & Abandoned Vehicles (AVs) Briefing Paper

This paper summarises the End of Life Vehicles (ELVs) and Abandoned Vehicles waste opportunities in Hampshire required to meet the Vision of the MRS.

This is based upon the best information that we have available. The consultation process at the workshop on the 31st March 2004 and through discussion in April and May will help to identify further information and to develop and complete the issues contained within this process by June 2004.

The Opportunities outlined below are the results of discussion with industry experts and detailed research into the topic. This research is summarised in the following pages.

The Information contained within this briefing paper will develop following this consultation into one section of the Material Resources Strategy.

This paper also links to the follow papers:

- **Plastics**
- **Metals**
- **Glass**

The main opportunities to meet MRS vision

Within Hampshire:

- Develop co-ordinated partnerships between County, District, Borough and Unitary authorities.
- Consider integrated County-wide collection and disposal contracts.
- Promote co-operation of Planning and Environmental Departments, to ease development of new waste facilities

Within the South East Region:

- Promote economic stability in order to fuel investment in processing infrastructure in the region.
- Promote market development for materials derived from ELV's e.g. plastics, glass

Nationally:

- Consistent regulation of authorised treatment facilities.
- Consistent enforcement of depollution requirements.
- Enforcement of tax, MOT and insurance regulations.
- Market development for materials produced e.g. plastics, glass

On a European Scale:

- Ensure level playing field in all EU member states with regard to enforcement of ATF standards.
- Share Best Practice.

What is the current ELV & AV resource situation?

Current Trends

Approximately 2 million tonnes of ELV waste arises each year in the UK. The fluctuating metal market has a great influence on the economic viability of processing ELVs. The cost of disposing ELVs has generally risen in the UK and this has been predominantly due to the low value of scrap metal. Other factors that have had an influence include gradually increasing standards for vehicle dismantlers, cars becoming more complicated & reliable (fewer second-hand spares sold), low interest rates & economic prosperity (low cost loans & finance for new cars), the attitude of society (throw away society), low cost of second hand cars, the inconsistent approach of Local authorities in awarding disposal contracts, declining landfill space, landfill tax, & the landfill Directive. Note. Current high price of scrap metal has meant that cost to last owner of disposing of ELVs and AVs has recently fallen dramatically.

In Hampshire the District authorities are responsible for the collection of AVs and the County Council is responsible for their safe storage and disposal. The two unitary authorities are responsible for all three activities. In practice, District councils in Hampshire carry out all three stages and invoice the County for storage and disposal of these vehicles. Currently vehicles that are reported to the local districts as abandoned are issued with a notice of removal, removed and stored whilst the registered owner is notified. During this time checks with the Police National Computer are carried out to ensure that the vehicle is not of Police interest. If no response is received from the owner the vehicle is destroyed.

The time between the notification to the district authorities and removal of the AV will be reduced in order to prevent associated crime (arson/vandalism) and the storage period of the vehicle will also be reduced through strengthened links with the Police, Fire Service and **Driver & Vehicle Licensing Agency (DVLA)**. All AVs will be taken to a contracted authorised treatment facility where they will be treated. The Dti have stated that the vehicle producers will be responsible for the recycling & recovery targets identified in the ELV Directive and they would utilise their network of contracted authorised treatment facilities. If an un-contracted authorised treatment facility takes in a vehicle, they would be responsible for reaching the target. Once the ELV has been treated the Directive states that a Certificate of Destruction (CoD) is to be passed from the treatment facility to the vehicles last registered owner.

Estimated Arising (tonnes) per annum in Hampshire, Portsmouth and Southampton

In 1998, around 1.8 million vehicles were scrapped in England and Wales (SWMA for the South East, Environment Agency 2000). Unfortunately, there are no reliable regional or local estimates of ELV's. Notwithstanding this, data contained in the SWMA in relation to waste tyres indicates that the South East (excluding London) accommodates approximately 17% of England and Wales' licensed vehicles. Based on this percentage, it could thus be said that just over 300 000 ELVs arise in the South East each year.

The Automotive Consortium on Recycling and Disposal (ACORD), an industry working group, has compiled data on the materials in ELVs. In 2000, the average weight of a car was 1 142kg (1.1 tonnes). The material breakdown of an average passenger car for 2000 is set out in Table 1 below. Additionally, based upon the likelihood of there being 300 000 ELVs arising in the South East, Table 1 also calculates how much of the component materials are likely to arise on an annual basis in the South East.

Table 9.1 Main Components of End of Life Vehicles

Material Type	Average Weight (kg)	% of Total	Estimated Quantities (tonnes) Arising in the South-East Based on Total ELV of 300 000 units @ 1.1 tonnes each (2000)
Ferrous Metals	780	68.2	225 060
Non-Ferrous Metals	89	7.8	25 740
Electrical/Electronics	8	0.7	2 310
Fluids	24	2.1	6 930
Plastics	104	9.1	30 030
Carpet	4	0.4	1 320
Process Polymers	12	1.1	3 630
Tyres	40	3.5	11 550
Rubber	18	1.6	5 280
Glass	33	2.9	9 570
Battery	13	1.1	3 630
Other	17	1.5	4 950
TOTAL	1 142	100	330 000

(Source: DTi *End of Life Vehicles Factsheet*, May 2002)

Based on the above, it is therefore calculated that regionally, in the order of **330 000 tonnes** of ELV is generated in the South-East each year (based upon 1998 and 2000 data).

Work conducted by Viridis on behalf of SEEDA at the beginning of 2003 has sought to apportion total ELV waste for the south-east region out to the individual Waste Planning Authorities. This was carried out by considering the percentage of households with use of at least one car (as provided in the UK National Statistics, ONS, 2002), taking an average of the ELV arising over this value and multiplying by household numbers. On this basis, Hampshire was allocated a 20% share of the regional figure, which based upon the data set out in 2.18 above, gives a total amount of ELV waste for Hampshire in 2000 of **66 000 tonnes^A**.

Estimated Recycling Element

At present, there is little publicly available data to illustrate how much ELV is recycled in Hampshire, Portsmouth and Southampton.

Approximate Capacity for Handling ELV in Hampshire, Portsmouth and Southampton

At the end of 2003, there were 44 metal recycling/recovery sites (MRSs) located across Hampshire, Portsmouth and Southampton. Despite these numbers, the vast majority are small operations licensed to accept <10 000 tonnes per annum. Only two sites were licensed to accept up to 250 000 tonnes per annum - Dundas Spur, Portsmouth and Northern Ironworks, Southampton. The available data has not enabled a full assessment of how many of the existing MRSs are geared towards meeting the provisions of the ELV Regulations, although the data has shown that a recent permission was given to build an ELV facility within the confines of an existing MRS at Barfield Close, Winchester.

Total licensed throughput capacity of these facilities stood at almost 1.2 million tonnes per annum in 2000/01 (with only 291 000 tonnes of this capacity being taken up in the same year).

Current Legislation

Both ELVs and AVs are regulated by a number of specific regulations/legislation, but these are not directly connected as AVs and ELVs are not the same thing and do not arise the same way

Road Traffic Regulation Act 1984, The Refuse Disposal (Amenity) Act 1978, The Removal and Disposal of Vehicles Regulations 1986 & The Removal, Storage and Disposal of Vehicles (prescribed Sums and

^A This figure is approximately 3 000 tonnes more than the total apportioned figure given in the Viridis Report (January 2003), which was calculated using a baseline UK ELV figure of 330 000 vehicles / approximately 310 000 tonnes per annum. However, the precise origin of the calculation that 330 000 units equates to 310 000 tonnes is unclear and so has not been applied in this baseline report.

Charges, etc.) Regulations 1993 set out the responsibilities for local authorities collecting and disposing of AVs.

Environmental Protection Act 1990, Environmental Protection (Special Waste) Regulations 1996, Environmental Protection (Controlled Waste) Regulations 2001 etc. controls collection, storage, treatment & disposal of wastes, which include ELVs & their derived wastes.

The Landfill Directive (1999/31/EC) seeks to reduce the types & volumes of waste going to landfill and imposes controls on any waste that is landfilled.

The Motor Salvage Operators Regulations 2002 regulates operators that deal wholly or partly in the recovery for reuse or sale of salvageable parts from motor vehicles. It requires that all operators register with their local authority.

End of Life Vehicle Directive (2000/53/EC) & corresponding UK regulations 'producer responsibility' legislation. Seek to reduce pollution associated with treatment & disposal of ELVs and to reduce amount waste from ELVs that is landfilled. Applies minimum environmental standards to ELV treatment sites. It requires all operators that handle undepolluted ELVs to be licensed and to decontaminate all ELVs. Operators working under exemption (see disposal options) cannot handle undepolluted ELVs. Directive also looks specifically at trying to reduce the amount of waste generated by setting recycling & recovery targets, prompting vehicle manufacturers to consider final disposal options when the vehicle is first designed.

Codes of Practice: There are few best practice guides available on the treatment of ELVs. CIWM produced guidance on AVs that also included best practice for treatment of ELVs. Following recent meetings regarding the National Abandoned Vehicle Strategy, the Office of the Deputy Prime Minister (ODPM) is preparing a summary of Best Practice in tackling abandoned vehicles to distribute to local authorities.

National examples: **DEFRA Guidance on Part VII and Schedule 5 of the End of Life Vehicles Regulations 2003 – The keeping and treatment of waste motor vehicles and conditions of site licences.**

Current environmental issues

The level of hazardous materials that could be released into the environment is dependent upon the type and age of vehicle and the way in which it is treated. With all vehicles there is the potential for leakages before, during and after the depollution process. Vehicles that have been vandalised and burnt-out pose a particular risk to the community and environment. Hazardous elements include lubricating oils, fuels, coolant and batteries.

Current Fiscal policies

Landfill Tax was introduced in 1996 and currently stands at £14 per tonne for active waste and £2 per tonne for inert waste. From 1st April 2004 active waste will be charged £15 per tonne.

What is being recovered now and what infrastructure is in place?

Current Disposal Options

About 2 million ELVs occur every year in UK. Estimated about 300,000 AVs last year. Generally, they are dismantled & crushed without proper decontamination and proper records are not kept. There is a wide variety in standards of dismantlers, even if licensed. Shredders & scrap yards do not depollute ELVs at all. Most of the metals are already recycled but about 450,000 tonnes of non-metallic material (shredder waste) from ELVs is landfilled in the UK each year.

Current Standards

The Dangerous Substances & Explosive Atmospheres Regulations – DSEAR were introduced on 9 December 2002 to implement the ***Chemical Agents and Explosives Atmospheres Directive*** which addresses fire and explosion risks from dangerous substances including petrol.

Current Specifications

A consortium of 24 international vehicle manufacturers have developed a CD-ROM based set of multi-marque dismantling instructions called the ***International Dismantling Information System***. The system displays potentially recyclable materials from vehicles as the individual car parts (in graphic and/or text mode) in a number of languages. Also provides information on hazardous wastes and specialised procedures (e.g. airbag deployment).

Current Costs

The Government has yet to make final decisions on funding. But between 2002-2006 this will be met by the last owner (in the case of AVs by public spending). It is anticipated that it will be VMs that are responsible for additional costs after 2007. Dismantlers, scrap yards & shredders will have to invest to meet the new ATF standards. Likely to be fewer ATFs than present number of dismantlers & scrap yards.

Current Benefits

The implementation of the Directive will ensure that all ELVs are accounted for and treated properly, and DVLA informed that each vehicle is destroyed. ELVs will be handled only by legitimate businesses (ATFs), which will operate to higher business standards, yielding more trained workforce, employment opportunities & tax revenues. There will be significantly reduced environmental pollution from dismantlers, scrap yards & shredders. A greater proportion of waste currently produced by ELVs will be diverted away from

landfill and become available as useful material. This will have benefits in saving the energy used in production of these materials. Vehicle manufacturers will have to 'design for End of Life'.

Current Key players

Producers, importers, dismantlers/ ATFs/ scrap yards/ shredders, insurers, material reprocessors.

National: DTI, DEFRA, Environment Agency, Driver & Vehicle Licensing Agency, Charles Trent Ltd.,

Hampshire: CD Jordan Ltd.

ELV and AV Waste Sector Support

Local Government Association (LGA) is a voluntary lobbying organisation that represents the local authorities of England & Wales to promote better local government. The LGA aims to put local councils at the heart of the drive to improve public services and work with Central Government to ensure that the policy, legislative and financial context in which local authorities operate supports that.

Motor Vehicle Dismantlers Association (MVDA) represents the interests of about 220 vehicle dismantlers. Involved in lobbying Government and regulators, to benefit its members. Distributes information to members.

British vehicle Salvage Federation (BVSF) Represents the interests of about 100 of the larger insurance-contracted dismantlers. Involved in lobbying Government and regulators, to benefit its members. Distributes information to members

British Metals Recycling Association (BMRA) represents the interests of scrap yards and shredders.

All three organisations (MVDA, BVSF, BMRA) sometimes work co-operatively in lobbying.

Automotive Consortium on Recycling & Disposal (ACORD) is a cross-sectoral political organisation that lobbies Government. It has representatives from motor vehicle manufacturers, vehicle dismantling and shredding industries the plastic & rubber manufacturing industries. Component suppliers, the steel & glass industries, insurance industry & UK Government Departments are also members. Promotes collaborative work by membership.

Consortium for Automotive Recycling (CARE) is a technical consortium (an offshoot of ACORD) involving the main UK motor vehicle manufacturers/importers and vehicle dismantlers. Carries out pilot projects exploring recycling & recovery technologies, material end markets. This group focuses on energy recovery, standards for dismantlers and research into rubber and plastics recycling.

Examples / Case Studies:

National:

AVs: Operation Crackdown run by West Sussex County Council.
Operation Cubit in Kent (2001).
Banger Buster Scheme in Liverpool (2002).
Car Clear in Bristol and Avon area (2003).

ELVs: Research into Shredder Residue Separation (CARE-Brighton University).
Generic plastics standards projects (e.g. PROVE).
Development of continuous pyrolysis (CARE- Brighton University).

Hampshire:

AVs: Operation Clean Sweep (2000), Project Car Clear (2002)
Crime Reduction Environment Week (CREW) (2004) in Southampton

How is this likely to change by 2020?

Future legislation

- The European Hazardous Waste Directive (91/689/EC) and the revised European Waste Catalogue 2002.
- Battery Directive, Incineration Directive, (tyre directive) may also have an effect

Future Disposal options

The ELV Directive states that ELVs can only be treated by ATFs that meet new standards of operation. There must be an adequate network of ATFs nationally to allow convenient surrender by last owner. There must be no cost to last owner if ELV is complete when delivered to ATF (from now onwards for vehicles made after 07/2002, & for all vehicles from 2007 onwards). Directive also sets recycling & recovery targets of 85% by weight of all ELVs by January 2006 & 95% by 2015.

However, local authorities will still need to have disposal contracts in place post 2007, as invariably, abandoned vehicles are not complete and as such will not be eligible for free take back. In addition, if manufacturers let their contracts to different ATF's, a local authority collection contractor will have to visit several destinations to drop off vehicles. This may lead to local authorities to accept the cost of disposal rather than transport a vehicle to an ATF which may or may not provide free depollution.

Future Trends

As ELV non-metallic materials are diverted from landfill, due to the recycling & recovery targets in the ELV Directive, markets for these materials will gradually develop. This will be driven by the vehicle manufacturers liability for reaching the targets. They themselves have potential to provide major end-markets for materials. New & existing technologies will be developed for automated separating of materials from shredder residue, making use these materials more economically favourable.

Future environmental issues

Authorised treatment facilities that comply with regulations will mean that there will be lower risk of environmental pollution from fluids and other hazardous wastes. The risk to the community from abandoned vehicles will be reduced by central government enforcing the taxation and registration systems, and local authorities reducing the time taken to remove vehicles once they have been reported.

Further Information

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