

ANNUAL REPORT 2021

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Authors: ELVES, 2022

Acronyms and abbreviations:

AER Annual Environmental Return

ASR Auto Shredder Residue

ATF Authorised Treatment Facility

CoD Certificate of Destruction

DECC Department of Environment, Climate, and Communications

DoT Department of Transport

EC European Commission

ELV End-of-Life Vehicle

ELVES ELV Environmental Services CLG
EPA Environmental Protection Agency

EPR Extended Producer Responsibility

EV Electric Vehicle

F-Gas Fluorinated Greenhouse gases

MAC Mobile Air Conditioning

NTFSO National Trans Frontier Shipment Office

PRI Producer Responsibility Initiative

PST Post Shredder Technology

QQI Quality and Qualifications Ireland

VM Vehicle Manufacturer

WERLA Waste Enforcement Regional Lead Authority

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I. CHAIR'S REPORT

On behalf of the Board of Directors, I take great pleasure in providing the 2021 Annual Report for the ELVES Compliance Scheme. While there have been challenges relating to environmental and market conditions throughout the year, combined with the ongoing difficulties relating to Covid-19, Brexit and the war in Ukraine, ELVES has continued to work hard on our members' behalf and achieved some notable success in expanding our work with the ATF network and other stakeholders in 2021.

Outlook for 2022 and beyond

Global view

Whilst uncertainty in the global market and the risk of recession will have a widespread effect on the market, the supply of new and used vehicles onto the market has also been constrained and this slowing of the market is likely to have an impact on the number of cars being scrapped in 2022, given the correlation between car sales and scrappage. Metal prices, a key influence on the operation of the ELV sector, grew throughout 2021 and are still high in early 2022. 2021 data is still being processed, but we expect this to be visible in the material flows through ATFs as destocking occurs. Metal price rises are expected to slow in 2022, acknowledging that a range of global factors have the potential to affect prices. We have acutely felt the impact of Brexit and oil prices on the cost of recycling and recovery, particularly relating to haulage rates for material going for further processing and this is not likely to improve in 2022.

Challenges lie ahead, but with a renewed focus on a climate resilient and resource efficient future, embracing a more circular business model, ELVES will build on its demonstrated capacity to achieve targets in a cost-effective manner, as required under its Approval and Code of Governance.

Regulatory Change

Ireland must reach EU recycling and recovery targets for ELVs as set out in the End-of-Life Vehicles Directive adopted in 2000. The Directive's main objectives were to promote reuse, recycling and recovery of ELVs and their components, improve the environmental performance of car manufacturers and all economical involvement in the vehicle's life cycle, and ensure the smooth operation in the internal market and avoid distortion of competition.

ELV Directive Review

The current Directive has had positive effect, it has restricted the use of hazardous substances, such as lead, mercury, cadmium and hexavalent chromium in vehicles and their parts. It has ensured that metal components in ELVs are reused, recycled or

recovered at very high rates. It has reduced the number of abandoned cars, established minimum harmonised technical requirements for the ELV treatment, and provided mechanisms to prevent uncontrolled disposal and illegal activities.

However, the European Green Deal (EGD) and the Circular Economy Action Plan (CEAP), required changes to the current Directive and identify vehicles as one of the seven sectors selected as key product value chains, in attaining a Circular Economy. A first draft is expected by the end of the year, likely in the form of draft Regulation rather than a modified Directive, facilitating quicker response to future challenges, and ensuring a single interpretation across the EU. ELVES and its Board look forward to seeing the new draft Regulations, providing feedback, and planning for their future implementation.

Batteries Regulations

The Batteries Regulations continue their progression through the regulatory process. A draft regulation on batteries and waste batteries was proposed on 10 December 2020, it is geared towards modernising EU legislation on batteries in order to ensure the sustainability and competitiveness of EU battery value chains. The proposal is part of the European Green Deal and related initiatives, including the new circular economy action plan and the new industrial strategy. The circular economy action plan identified batteries among resource-intensive sectors with high potential for circularity to be addressed as a matter of priority. It has three interlinked objectives: strengthening the functioning of the internal market (including products, processes, waste batteries and recyclate), by ensuring a level playing field through a common set of rules; promoting a circular economy; and reducing environmental and social impacts throughout all stages of the battery lifecycle. ELVES has provided feedback on the draft Regulations as they relate to the batteries in vehicles through the Department of the Environment's Batteries Working Group.

National Implementation of EU Policy

At national level, the new national waste policy, a Waste Action Plan for a Circular Economy was published by the Department of the Environment, Climate and Communications on the 4th of September 2020. This policy document fulfilled the commitment in the Programme for Government to implement a new National Waste Action Plan providing direction for future waste infrastructure and management in Ireland. ELVES supports the transition to a Circular Economy as we continue to educate and provide our Network with opportunities to increase sustainability in the treatment of End-of-Life Vehicles. We will always look for the potential in our recovery for more resource efficient programmes; including opportunities for more repair and re-use, acknowledging the need for shorter and more resilient supply chains and reiterating the fact that a circular economy can create local jobs, training and enterprise opportunities for the ELV recycling sector.

The automotive industry sector has faced many challenges throughout its history and I have no doubt it will rise to meet the Circular Economy and Green recovery challenges in 2022 and beyond, as it has done to date.

Campaigns & Key Achievements in 2021

The Board is proud that ELVES has met the ELV Targets, both our Network's and national targets, to date.

In 2015 the European Commission targets for the processing of ELVs were raised to 85% reuse and recycling and 95% reuse, recycling and other recovery, tough targets to achieve. In 2017, the ELVES Network of ATFs met these higher targets, and significantly pushed up national achievement from under 92.8% to 94.6%. The ELVES Network has met and exceeded the Network targets ever since and has been the driving force behind meeting the national targets of 85/95% reuse, recycling, and recovery since 2018. ELVES is expected to continue to achieve our reuse and recovery targets in 2021/22, however Producer compliance remains a challenge and work is ongoing, with stakeholders, to increase membership of ELVES.

Interest in joining our ATF Network continues to grow, and a new webpage was developed in 2021, to support the Network, aiming to be a 'go to' place for ATF information.

Electric ELVES has developed over the past number of years, with 57 ATFs trained by the end of 2021 in the handling of electric and hybrid vehicles and their batteries. This is a specialised training service requiring ATF specific training and carried out on behalf of ELVES by Salvage Wire Ltd. Despite restrictions, training and battery collections continued throughout 2021. The board is supportive of Electric ELVES evolving to meet the new requirements under the forthcoming Battery Regulations.

ELVES ran the successful nationwide campaign 'No Tanks', to remind the public not to dispose of household gas tanks in their old cars. This was in support of the installation of Autogas (Liquid Petroleum Gas) decommissioning equipment at metal shredders, to reduce the risk of incorrect gas tank handling. LPG tanks from vehicles can now be safely discharged at a range of locations around Ireland, such as Dublin, Cork, Galway, Limerick, Sligo, Letterkenny, and Mountmellick.

ELVES developed an F-Gas Pilot project to provide the QQI accredited Mobile Air Conditioning (MAC) training for free in 2021. The work on AC Gas removal and the provision of Mobile Air Conditioning (MAC) training for ATFs has proven very popular with 22 facilities trained to date. We look forward to continuing with further training in 2022. The team also collaborated with the EPA in producing the 'Recovery of Air Conditioning System Fluids from ELVs at Authorised Treatment Facilities and Metal Shredder Sites' quidance document for ATFs.

Re-use of car parts is promoted on social media and via competitions. In 2021 we got behind 'My Waste's Reuse Month' (https://www.mywaste.ie/reuse-month), running a competition to promote the week and the sites in our Network that sell parts for reuse.

ATFs in our Network are then incentivised to report this data to us as part of their annual returns. By weight, the most commonly re-used part is the engine, and in 2020, over 620 tonnes of engines were supplied for direct reuse.

In 2021, ELVES began the process of having its carbon footprint analysed. ELVES engaged with Carbon Footprint Ltd and commenced submitting data for a three-year period 2019-2021 to firstly achieve the internationally recognised Carbon Footprint Standard. We aim to achieve the Carbon Neutral Plus standard in 2022.

ELVES continues to work collaboratively with all stakeholders; the public, DECC, DoT, the EPA and enforcement bodies, the WERLAs and Local Authorities, to continually improve the collection, management, re-use and recycling of End-of-Life Vehicles in Ireland.

Thanks

On behalf of myself and my fellow Directors, once again, I acknowledge the great performance of the team and the ATF Network and thank them, for the work they have done, on site and remotely, in support of our Members and stakeholders in the past year.

I would also like to extend our thanks to our outgoing Directors Robert Guy (VW) and Noel Hughes, who finished their tenure as Board Members in 2022. Their service on behalf of members they represented was exemplary. My thanks as always to our Members, who have continued to support ELVES as they have done since we began our collection and recycling programme in 2017.

Finally, thanks to all of our stakeholders, in order to achieve or mutual goals, collaboration and co-operation is essential.

Karen Mahon Chair

2. ABOUTUS

ELVES is a private not-for-profit company and operates as a collective compliance scheme for the motor industry under the End-of-Life Vehicle Regulations. ELVES' operations are approved by the Minister for the Environment, Climate, and Communications. ELVES ensures that our national collection system, the ATF Network, will achieve minimum targets of 85% reuse and recycling and 95% overall when other recovery is included. Our members are professional importers of both new and used vehicles, which are:

- Domestic or passenger cars/ vans (no more than 9 seats) M1.
- Vans and light goods vehicles (under 3,500kg in weight) N1.

The full list of members can be found on our website. These undertakings fund our activities, which are:

- Providing information to the public about why, how, and where to scrap a car.
- Supporting our ATF Network (reuse and recycling).
- Supporting our reprocessors (recycling and recovery).

ELVES is led and controlled by a Board of non-executive directors, consisting of representatives from the motor sector and independents. At each AGM one third of the Directors who have been longest in office since their last election retire. Our Board collectively ensure delivery of the organisation's objectives, set strategic direction, and uphold best corporate governance.

AL ALL (D)		0.70
Alan Nolan (R)	Independent	3/3
Anja Köckritz (R)	Independent	2/3
Brian Cooke (A, N)	SIMI	3/3
Ciaran Kinahan (N)	MDL	3/3
Clodagh Walsh	Volvo	3/3
Colin Griffin (A)	Gowan Motor Distribution Ltd	3/3
Fiacra Quinn (E)	ELVES	3/3
Ken Ward	Nissan	3/3
Irene Collins (A)	Independent	3/3
Karen Mahon (Chair)	Independent	3/3
Paul Murray (R)	Toyota	3/3
Robert Guy	VW Group Ireland	3/3

^{*} Includes remotely and by proxy. E – Executive. Committees: Audit (A), Nomination (N), Remuneration (R)

The Board is open, responsive, and accountable to its users, beneficiaries, members, and others with an interest in its work. There are internal committees on nomination, remuneration, and auditing, not only to safeguard ELVES' activities and reputation, but also to recognise achievements. The company secretary is Maples Secretaries Ltd, the auditors are Clinton Higgins Ltd, and the solicitors are LK Shields Solicitors.

The AGM was held in September with the Subscribing Members in attendance. In normal years, ELVES would hold a stakeholder meeting alongside the AGM, where representatives of vehicle manufacturers from across Europe are invited to attend. In 2021, this had to be cancelled due to health and safety reasons. Regular communications about the work programme and key developments continued through group emails providing updates and one to one interaction by phone, email and zoom. As an example, a July 2021 email update to our Producer stakeholder list covered a variety of topics including Target achievement, the F-Gas Pilot Project, Electric ELVES, the ELV Directive consultation and our work on LPG tank decommissioning equipment.

Communicating with associated members who are importing used vehicles to encourage compliance requires a more direct approach. As a first step, these producers must self-declare that they are professional importers, as defined in the ELV Regulations. From that point onwards there is monthly communication with each producer until they are compliant. These communications are important to impart information concerning the Regulations, forthcoming changes, and gauge the level of satisfaction with the scheme. Upon joining each Producer receives a membership certificate.

Throughout 2021, ELVES was in regular contact with all ATFs in Ireland to ensure they are aware of the Electric ELVES programme and the support it continues to provide despite the prevailing conditions. In addition to two postal mails outs to all ATFs, each ATF in the country was sent two copies of an EV handling health and safety poster in 2021. ELVES also regularly communicates with the VM members about the programme, both to provide information and to ensure we have the latest process information for the electrified vehicles they supply.

ELVES was in constant contact with the ATF Network on a range of issues. In 2021, 24 Network updates were sent to ATFs in the Network, covering a range of useful communications including AER reporting reminders, information on the Electric ELVES programme, and event alerts. These group emails are however just a small fraction of the interaction ELVES has with the ATFs in its Network. The vast majority of interaction with ATFs is on a one-to-one basis, by phone, email and when restrictions allow, in person.

Funding and Expenditure

Upon approval of ELVES in 2016, the agreed level of funding was set as not less than €1.7M per annum, to be paid by the VM members. Additionally, ELVES built up a contingency reserve fund of the same amount. While professional importers of used vehicles contributed an additional 16% (including backfees) to this income, private imports of either new or used vehicles contribute nothing. Regulatory changes in 2020 mean that obligated producers will pay a fee per unit supplied from January 2023.

In 2021, ELVES income was 1.923 million and its expenditure 1.922 million. Of this, 68% was spent on direct reuse, recycling and recovery, 11% on advertising, marketing and PR, 6% on compliance management and 15% on administration and overheads. ELVES always strives to provide value for money for its members and to minimise costs where at all possible. In 2021, cost savings were achieved in some areas (such as travel and office expenses) due to the restrictions imposed by the pandemic. However, this was against a backdrop of rising inflation and fuel costs, meaning the cost of direct recycling increased. With cost increases expected into 2022, recycling and recovery solutions are being reviewed to ensure best value for money is achieved.

In 2021, ELVES presented at the International Automobile Recycling Congress virtually. This was a good opportunity to communicate about ELVES and its activities in Ireland to representatives of VM members from across the continent, other compliance schemes, and FC officials

3. STATISTICAL REPORT

Supply & Compliancy

In 2021, the total supply of new and used obligated vehicles was in line with the previous year.

Supply of total vehicles, 2021	M1 (car)	N1 (van)	Total	
New Imports	104,932 (62%)	28,742 (80%)	133,674 (65%)	
Used Imports	63,617 (38%)	7,269 (20%)	70,886 (35%)	

Compliancy, 2021	M1 (car)	N1 (van)	Total	
Of New Imports	100%	100%	100%	
Of Used Imports	13%	6%	13%	

This means that 87% of used imports put onto the road in Ireland have not contributed to their end-of-life management, a trend which has continued since 2017.

In 2020, the supply of new cars decreased, but in 2021 there was a slight increase, while the trend in the import of used vehicles continued to decline due to lack of supply from the UK or Japan.



ATF Network

The total number of ATFs and those permitted or certified to accept and handle ELVs is 221. However, on closer analysis operational ATFs has dipped below 160 sites. The ELVES Network comprised 64 ATFs, with more expressing an interesting in joining throughout the year.

The ATFs are reporting data in the first half of 2022 concerning waste management activities undertaken in 2021. This process is ongoing as this report is being authored.

Auditing of ATFs continued for much of the year to be remote and desk-based, again with the anticipated restrictions in the quality and scope of audit that could be performed. ELVES also produced a how-to video for the ATFs to support them in filling out their Annual Environmental Returns for their 2020 data (link below).

https://bit.ly/AnRtn2021

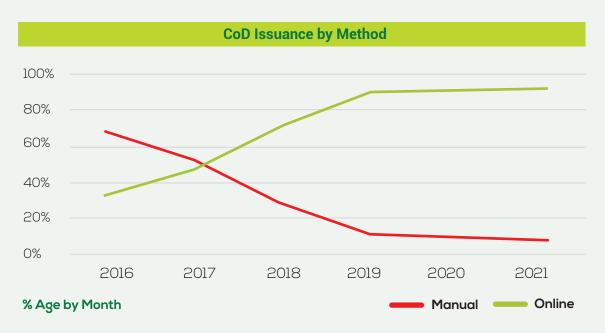
CoD Issuance

ELVES commenced operations in 2016 and established a Network of ATFs. As part of this process, ELVES supported improvements to and promoted the use of www.motorelv.ie, the Department of Transport's online system for issuing electronic CoDs. The results were immediate and can be seen here. Now an ATF can issue the registered owner with a print of an electronic CoD should they request it, while the Driver Services Division will post out a copy within a week. The system can also be used with identification where the logbook is either lost or stolen.

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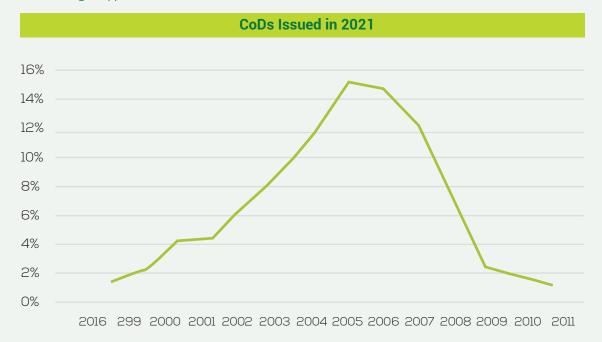
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The ELVES Network issue the majority of the CoDs in Ireland.

Year	ELVs through Network (%age nationally)	CoDs through Network (%age nationally)
2017	40%	62%
2018	53%	73%
2019	67%	80%
2020*	61%	79%
2021*	52%	72%

From the CoDs issued last year, it is possible to determine the average age of the vehicle as being 16 years old before being scrapped.



Targets

The ELVES Network has met and exceeded the reuse and recycling targets since 2017 and has thereby been the driving force behind meeting the national targets of 85/95% reuse, recycling, and other recovery from 2018 up to 2020. As expected, the Network's performance will have a strong influence on national target achievement in 2021.

ELVES measures target against the estimated total ELVs arising, not CoDs. This means that everything is counted and crosschecked at ATFs, metal reprocessors, and other points of export of waste material. ATFs cannot meet targets on their own and depend on downstream metal reprocessors to use PST on the ASR fraction to further separate material for recycling. ELVES financially support these PST operations and thereby ensure that all the ATFs in our Network meet their targets, as legally required.

% age nationally	2017	2018	2019	2020	2021*
Reuse & Recycling	85.9	86.2	87.4	90%	>85
Recovery & Reuse	94.6	95.2	95.2	97%	>95

^{*} The data is subject to further analyses and validation by the EPA.

4. EDUCATION & AWARENESS

ELVES education and awareness activities in 2021 continued unabated, with online and radio still a strong focus given the continuing restrictions on public events.

Across our social media platforms, ELVES shared and created a wide range of content to promote its ATF network and raise awareness about the right way to scrap a vehicle. ELVES uses competitions, automotive trivia, and innovative car recycling videos to get the message of responsible vehicle recycling across to the public. Averaging over three posts a week, popular posts included our Do you Know What to Do? video, Guess the Depollution item competition and the EPAs Circular Economy of an ELV infographic.



Since ELVES came onto the scene in 2017, a major focus for Ireland's End-of-Life Vehicle compliance scheme has been to improve public awareness about the correct way to recycle ELVs. The average person does not tend to spend a lot of time thinking about it, but knowing how to correctly scrap a vehicle can save time and potential fines. The key messages that ELVES has been communicating to the public are clear:

- 1. Only deal with an ATF (a permitted scrapyard), and
- 2. Always get a Certificate of Destruction (CoD), which ends the owner's responsibility for the vehicle.

This simple process ensures that a vehicle is recycled responsibly by a permitted scrapyard, the national vehicle register is updated, and the obligations of the vehicle's last owner are met. With a CoD in their possession, the last owner can also apply for any motor tax refunds they may be entitled to.

ELVES' advertising directs the public to the website, where they can find and contact their nearest ELVES ATF to arrange the scrapping of their vehicle. The website also provides information on which ATFs offer a collection service and whether they sell second-hand parts. The impact of ELVES' education and awareness campaigns has been seen through the year-on-year increases in public interaction with the scheme via email, social media, and through the website. Based on the positive results from a recent Red C Survey (highlighted below) the simple message on scrapping a car is also reaching people.

An important distinction ELVES aims to highlight is the one between ATFs and illegal breakers. As those in the industry know, illegal car breakers cannot provide CoDs and are not compliant with regulations designed to protect the environment from the potential hazards involved in the process of vehicle dismantling and recycling. However, not everyone realises that without a CoD, the last registered owner of a vehicle handed over to illegal breakers will continue to be responsible for the vehicle whether it sits in a field or ends up back on the road. Owners will also continue to receive motor tax renewal reminders. The public are also informed to be wary of cash-for-cars type advertisements from organisations unable to provide a valid waste permit or issue CoDs. In contrast, ATFs are regulated to operate in accordance with environmental regulations, are granted waste facility permits, and are inspected by local authorities. ELVES continues to get this message across to as many people as possible through radio, social media, and advertising.

ELVES also devised a new webpage 'For ATFs' on the website in order to bring specific ATF related issues together in one place: https://www.elves.ie/ForATFs. This has the following topics, some of which are new in 2021 and are described below:

- End-of-Life Vehicle (ELV) Regulations
- Annual Return Guidance for ATFs
- Mobile Air Conditioning (MAC) / F-Gases
- Electric ELVES
- IDIS
- ELVES ATF Network
- List of Waste Codes
- IMVRA
- LPG Decommissioning Equipment
- No Tanks Campaign

LPG & Other Tanks

Liquid Petroleum Gas (LPG) tank removal is part of the depollution process for converted vehicles. However, the tanks can contain residual gas, and if not properly decommissioned before shredding, these may explode during the shredding process, causing damage to equipment and noise pollution for those living near the processing plants. Therefore, it is important that the gas is extracted and that the tank is depressurised before it is shredded and recycled.

As a solution, ELVES installed LPG tank purging and flaring equipment at metal recyclers in Ireland. The portable equipment means that LPG tanks from vehicles can now be safely discharged at a range of locations around Ireland, such as Dublin, Cork, Galway, Limerick, Sligo, Letterkenny, and Mountmellick.



Additionally, BBQ and home cooking gas cylinders are often left in scrap cars, and if not spotted by the ATF, can again present a health and safety and noise pollution risk when going through a shredder. To compliment our work on LPG tank recycling, ELVES also developed the public focused 'No Tanks' campaign to encourage people not to leave old gas canisters in the boots of old cars when they send them for recycling. The 'No Tanks' suite of material was shared widely by local authorities and others in the waste industry and is available through the www.elves.ie/en/for-atfs







F-Gas Regulations

Air conditioning gases are required to be removed from ELVs as part of the depollution process. Some air conditioning gases are fluorinated greenhouse gases (F-Gases) and as such a specific technical qualification is needed by the person removing them from ELVs. Previously, this qualification would have been through City & Guilds, but because of Brexit it now needs to be issued by a European qualifications authority such as QQI.

To help ATFs in the Network adjust to this change, ELVES developed an F-Gas Pilot project to provide the QQI accredited Mobile Air Conditioning (MAC) training for free. In 2021, 26 staff from ATFs in the ELVES Network successfully completed the training with more planned for 2022.

In addition to this, ELVES also helped develop EPA Guidance on the F-Gas Regulations for all ATFs in Ireland and this can be found here: https://bit.ly/EPAFGasGuidance.

Further material and training will be provided in 2022.

Red C Survey

The results of a Red C Survey conducted for ELVES in early Summer 2021, indicates that the important distinctions highlighted by ELVES between ATFs and illegal breakers are being understood by the public.

- The survey revealed a 400% increase in key terms that are used in ELVES advertising since 2016. Terms such as ATF, Authorised Treatment Facility and Permitted Scrapyard, are now commonly recognised,
- There is now brand awareness of the trade names of specific ATFs in the ELVES Network.
- 56% of people surveyed chose 'Ending your responsibility for the vehicle' over 'Scrap price offered' as the most important factor when choosing where to scrap a car, and
- Since 2016, there is a 127% increase in respondents who could correctly describe the process involved in scrapping a vehicle.

A particularly effective awareness project is an ongoing collaboration between ELVES and the Department of Transport, in which an explainer leaflet on vehicle scrapping is included with motor tax renewal reminders. This is also featured in the text of the on-line reminders. Since it began in 2018, this project has reached all Irish motorists renewing their motor tax.

5. ELECTRIC ELVES



Electric ELVES is the programme for industrial batteries (soon to be defined as an EV battery) from hybrid and electric vehicles in Ireland. It has been set up by ELVES and information on its operation has been sent to ATFs, OEMs, Distributors, and dealerships. The Electric ELVES programme provides support to these undertakings should they receive an EV battery that needs collection. The programme is available to all ATFs, not just those in the ELVES Network. It also covers those EV batteries arising in the aftersales sectors. With the support of the Vehicle Manufacturers the programme provides a variety of supports to ATFs in the handling of these vehicles including:

- Hybrid and electric vehicle awareness training,
- Information on safe battery removal via the International Dismantling Information System (IDIS),
- Additional manufacturer support in the event of a damaged EV battery, and
- Free collection and recycling of EV batteries if required.

The awareness training that originally commenced in September 2019 continued on-line in 2021.

EV Batteries

In December 2020, the European Commission published a draft proposal for a new Batteries Regulation to ensure a safe, circular, and sustainable battery value chain for all batteries, including to supply the growing market of electric vehicles. The proposal includes measures to improve raw material sourcing, establish a tracking mechanism through battery passports, set increased recycling efficiencies and targets, and attempt to codify reuse and repurposing. The draft crucially proposes a new management system for EV batteries and the framework for their future EPR. Following its successful track record in this area, the ELVES Board, as well as the Board of the Society of the Motor Industry (SIMI) expressed their support in 2021 for ELVES to manage EV battery takeback and recycling both now and into the future under the proposed Batteries Regulation.

Through the DECC's working groups, ELVES has contributed to the European consultations on the refinement of the draft.

6. ELVES & THE CIRCULAR ECONOMY

Over the past century, the ELV sector has strong circular economy foundations with reuse of cars and their parts common place and metal values underpinning a long-standing recycling industry. However, with the need for a circular economy, the industry intends to improve. The challenge is to ensure that circular economy strengths, like reuse, are not lost and current recycling and recovery practice improves materially. The result would be a system that is more circular, one that has moved away from a reliance on fossil fuels throughout a vehicle's lifecycle, and one where the high-quality recycling of vehicle materials is supported.

So, what is meant by the phrase 'Circular Economy'? According to the Ellen McArthur Foundation, a circular economy:

'is restorative and regenerative by design. Relying on system-wide innovation, it aims to redefine products and services to design waste out, while minimising negative impacts. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural and social capital'.

This definition of circular economy is important in the context of ELVs, as alongside recognising the need to effectively manage and maintain the resources in ELVs, a key function of ELVES, it allows stakeholders to consider the role of vehicles and ELV recycling in the wider system. Our transition to electric vehicles, and potentially hydrogen in the future, will be key to the 'transition to renewable energy sources', as will reducing our reliance on virgin materials that produce more CO2 in production. It also does not forget the employment provided by ATFs, many of whom are small family businesses, and how this contributes to the nation's social capital by sustaining local jobs through the dismantling and recycling of ELVs.

How the ELV sector currently contributes to a circular economy

Under the ELV Directive, Ireland has to meet a minimum 85% reuse and recycling rate, and 95% overall where other recovery is included. This means that the overall target of 95% could be entirely from reuse and recycling. As highlighted above, with the intervention of ELVES, Ireland is now meeting both of these very high targets. However, it is important to delve a little deeper to understand where the circular economy of vehicles can be improved and where an organisation such as ELVES can play a role.

Reuse

ELVES promote the reuse of car parts by ATFs within its Network. ATFs that sell second hand car parts are listed on our website and we promote this part of their activities on social media and via competitions. In 2021 we got behind 'My Waste's Reuse Month' Ireland reports to the EU on the weight of non-metal reused through the sale of second-hand car parts and this weight contributes to the achievement of the 85% reuse and recycling target. (https://www.mywaste.ie/reuse-month/), running a competition to

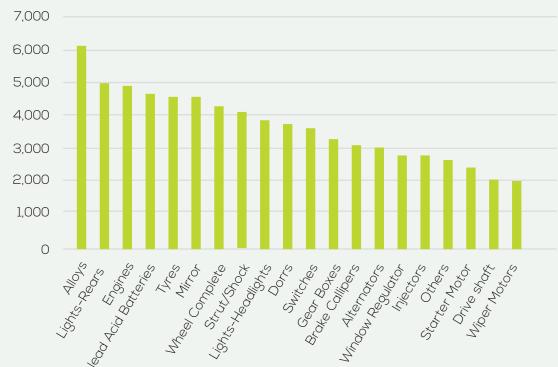
promote the week and the sites in our Network that sell parts for reuse. ATFs in our Network are then incentivised to report this data to us as part of their annual returns.

It is important to note that due to the way Ireland reports its ELV target achievement, recording of parts for reuse focuses on those parts that have a non-metal content. Other metal parts would have been sold for reuse but are not reported here.

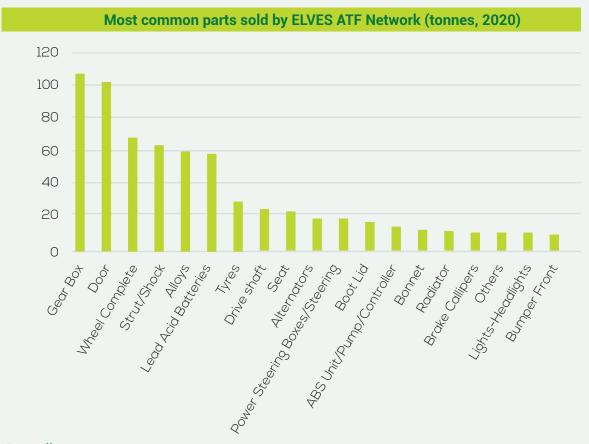








By weight, the most common part is the engine, and in 2020, over 620 tonnes of engines were supplied for direct reuse. The following graph shows the most common succeeding engines. In total, the recorded parts (focused on those with a non-metallic content) contributed over 1,466 tonnes to the reuse and recycling target.

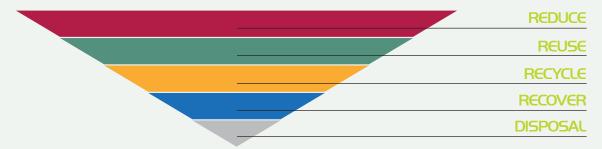


Recycling

When ELVs are processed, the majority of the materials in them are recycled. With over 75% of an ELV being made up of metals, both ferrous and non-ferrous, this constitutes the majority of recycled material. It is not however the only material recycled, with plastics and glass removed after shredding for recycling into new products.

Other recovery

The final 10% of the targets can be made up of other recovery as a maximum. In practice, this can mean using the material as fuel in processes such as Waste to Energy. This as a process is low on the waste hierarchy, but an important and useful outlet for the small amount of residual material left once reuse and recycling has been maximised.



A Circular Future

Change is occurring rapidly in the motor industry with electrification and new business models that have the potential to support circular economy innovation. Significant Regulation is also in development that is expected to affect ELVES operations in the future, and its role in the circular economy of the wider vehicle sector.

ELVES, through its Electric ELVES programme, is helping prepare ATFs for electrification and ensuring they have the awareness and skills needed to manage electrified ELVs when they arise. This programme continued in 2021, collecting batteries for recycling and delivering training online.

ELVES is keeping a close eye on battery recycling technologies available to the Electric ELVES programme that have potential to deliver the higher quality recycling needed to meet the ELV targets. Some processes used under the current Batteries Directive have poor recycling efficiencies and cannot be relied on in the future for EV batteries. Future battery recycling efficiency targets will be a significant part of the circular economy, as both virgin and secondary materials will be needed by vehicle manufacturers for future EV battery production.

Increasing understanding of what a circular economy is and how different sectors may contribute will also be key to the transition. In 2021, ELVES was extensively quoted in an article on the circular economy of vehicles in the Irish Times. The article by Neil Briscoe, can be found through this link: *Is recycling old cars, instead of selling them abroad, better for the planet?* https://bit.ly/IrishTimesDec2021

Supportive Regulation

Regulation aimed to support the transition to a circular economy is in train at both a national and EU level. ELVES is supportive of the measures introduced through the Circular Economy Bill and the Waste Action Plan for a Circular Economy and those that apply to its operation as an EPR scheme. The draft proposal for a Batteries Regulation is the first EU Waste Regulation to take a strong circular economy approach in considering the environmental, economic, and social aspects of batteries' lifecycles. The focus of ELVES' analysis was the framework proposed for the management of EV batteries, how this may support reuse, repurposing and recycling, and how this will interact with the ELV management system and any expected changes to the ELV Directive.

In 2022, a draft ELV Regulation is expected that will take a similar circular economy approach to ELVs and will lay the regulatory goal posts for future ELV management.

7. GREEN PROCUREMENT

ELVES operates a Sustainable Procurement Policy incorporating green, circular and ethical procurement. As part of its commitment to this policy it reviews the steps undertaken in each area of procurement during the year.

Road transport vehicles and services

With restrictions in place for much of 2021, ELVES use of road transport was more limited than normal.

No new vehicles were purchased in 2021. One vehicle was sold, and an EV was put on order for 2022.

Facilities services

The office lighting was changed from CFL to LED during the year. Additionally, the shared office complex was fitted with 17kW of PV solar panels. This will be commissioned in 2022.

Cleaning products and services

Cleaning services were suspended in 2020 and 2021 while staff worked from home.

Electronic products

No new electronic products were purchased in 2021. One of the company laptops was not performing and as such its battery was upgraded.

Paper products and printing services

Paper purchased for day-to-day printing was Ecolabel certified. One print run of DoT Motor Tax reminders was produced, on recycled (and recyclable paper).

Food and Catering Services

Not assessed for 2021 due to staff working from home and no group meetings being held.

Textile products and services and merchandise

No ELVES merchandise was purchased in 2021.

Carbon footprint

Strong measures to address the climate emergency is key to a circular future and in addition to our work on Electric ELVES, in 2021 ELVES began the process of having its carbon footprint analysed. ELVES engaged with Carbon Footprint Ltd and commenced submitting data for a three-year period 2019-2021 to firstly achieve the internationally recognized Carbon Footprint Standard, Carbon Assessed, and then, through contributions to approved projects, achieve Carbon Footprint Standard, Carbon Neutral standard in 2022.

8. REGULATOR & LOCAL AUTHORITY ENGAGEMENT

A strong, effective enforcement regime is essential to ensure high levels of compliance and target achievement. While ELVES is responsible for the target achievement of its Network, it does not have direct responsibility for enforcement of the ELV Regulations. The Waste Enforcement Regional Lead Authorities (WERLAs) are responsible for coordinating waste enforcement actions within regions, setting priorities and common objectives for waste enforcement, ensuring consistent enforcement of waste legislation across the three existing waste management planning regions.

Despite restrictions, ELVES engaged with the DECC, DoT, the EPA, and some local authorities. Additionally, ELVES attended the Waste Advisory Group meetings and the Industry Contact Group to the National Waste Enforcement Steering Committee.

ELVES meets regularly with the EPA as part of continuous dialogue about ways to improve the collection, quality, and timeliness of ELV data reporting. ELVES has undertaken a number of initiatives to improve data reported with the EPA and DoT (shredder trial, reuse data, missing parts study, improvements to annual return system and guidance, CoD system amendments, reporting support to ATFs, shredder credit applications). In 2021 ELVES worked with the EPA on further recommendations to improve user friendliness of the AR portal for 2022. Future discussions are planned about a new Shredder Trial and how the ELV Directive review will impact on future data needs.

ELVES provided updates to the DECC on implementation of the minimum EPR requirements including the introduction of pricing per unit sold. All OEMs/ Distributors and the DECC were informed of the and price per unit sold commencing in 2023.

With regard to supporting enforcement, ELVES role is primarily one of compliance assistance to the sites in its Network that are permitted to accept ELVs for treatment and to potential Producer members. This type of assistance sits at the base of the enforcement pyramid, in the area of education and guidance, and is a continuous activity for ELVES.

For ATFs, this compliance support is provided through annual reviews ATF's ELV data, site audits, production of guidance and day to day interactions. In 2021 ELVES also produced a 'How to' video to assist ATFs in the completion of their Annual Returns. As discussed elsewhere in this report, we also worked with the EPA on the development of guidance on ATF obligations around the handling of Air Conditioning Gases at ATFs. ELVES also added a 'Report an Illegal Breaker' function to its website in 2021. Through this online function, members of the public can anonymously report illegal ELV breakers, and ELVES, in turn, can pass this information onto the enforcement authorities.

In the area of support for Producer enforcement, Producer obligations are explained clearly on the ELVES website and the need for used vehicle importers to be compliant with the ELV Regulations is promoted through advertising through a variety of channels. One to one support is also provided to those who think they may have obligations under the ELV Regulations and to local authority personnel responsible for enforcing the Regulations. In 2021, funding to support enforcement was not requested from ELVES.



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