



Circol
FLEET

ANNUAL REPORT

2023

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CEO & CHAIR STATEMENT

As Ireland's Producer Responsibility Organisation for the management of car waste tyres generated in the market we wish to thank our 2,659 member producers and retailers for their support in 2023 in delivering another successful year. The level of member reporting and collection compliance continues to grow. This resulted in Circol ELT delivering an overall strong performance across all facets of our Approval requirements as set by the DECC.

In 2023 we achieved a surplus after tax of €1.24m, of which €820k was transferred to a contingency reserve fund. At year-end 2023 our contingency reserve fund stood at €6.75 million. As a condition of our approval, we must build up a contingency reserve fund of €6.75 million by the end of 2027. This puts us in a strong position as we prepare for the expansion of the scheme to include all tyre categories from January 1st, 2025.

Our activities prevented the use of 21,984 tonnes of virgin rubber and replaced the equivalent of 9,366 tonnes of Petroleum Coke coal, generating a total carbon benefit equivalent to 63,112 tonnes of CO₂.

HIGHLIGHTS:

- Funded recycling and recovery of 39K tonnes or 4.4 million waste tyres.
- 2,659 Members
- Recovery and Recycling rate 95%

Waste to energy - Input price inflation, particularly around energy, makes processing more costly and fuel substitution as waste to energy more attractive for cement kilns. In the year 34% or 13,105 tonnes of waste tyres were used as a fossil fuel replacement.

Additionally, the re-emergence of the Asian market has been a feature of activity in 2023. This dynamic has been driven by a softening of container prices combined with an increase in demand for recycled rubber. In the past year, 56% of total tonnes, or 22,074 tonnes of waste tyres was sent to India.

Aligned to our Strategic Plan, we envisage that as the scheme matures, there will be a greater focus on promoting and showcasing sustainable outcomes for End of Life Tyres. Market development continues to be a key focus for Circol ELT. We are moving forward with an exciting menu of initiatives covering short, medium and long-term uses of ELT. We will continue to seek to influence the regulatory framework around circular economy principles using waste tyres as a resource.

We thank the Department of the Environment, Climate and Communications (DECC) for their continued support underpinning the operation of the tyre compliance scheme.

This commitment is evidenced by the fact that the Minister has renewed our approval to act as a Tyres and Waste Tyres Compliance Scheme for a further five-year period to December 2027.

The enforcement agencies, namely the Waste Enforcement Regional Lead Authorities (WERLAs), the Environmental Protection Agency (EPA), and the Local Authorities (LAs), have been instrumental in maintaining compliance standards and ensuring that noncompliance is challenged. We are committed to supporting their efforts in promoting compliance as a positive experience for the tyre industry. We also recognise the role of the Producer Register Limited (PRL) in facilitating producer reporting.

We extend our deepest appreciation to the Members who have consistently supported our scheme. Your active involvement yields significant benefits for the environment, communities, and biodiversity, making a

tangible difference in our shared mission. Additionally, we want to extend a heartfelt thanks to the Circol ELT team, and their unwavering commitment in providing ongoing support to our Members, Collectors, Enforcement agencies and Stakeholders.

We are excited about the opportunities that lie ahead. We welcome the Minister's commitment to extend the Tyre Scheme EPR to include all categories of tyres from 1st January 2025. Work continues to prepare for the scheme expansion. We look forward to continuing to deliver sustainable outcomes for waste tyres on behalf of all our stakeholders in the years to come.



TONY KEOHANE (CHAIR)



WILLIAM COLLINS (CEO)



**RECOVERY AND
RECYCLING
RATE 95%**

BOARD MEMBERS 2023



Tony Keohane
Chair



William Collins
CEO



Feargal Brennan
Independent



Séamus Clancy
Independent



Des Collins
Independent



Colm Conyngham
Tyre Manufacturer



Tom Dennigan
Tyre Manufacturer



Kevin Farrell
Tyre Retailer



David Kelly
Independent



Michael Layde
Independent



Deborah Spence S.C.
Independent

CIRCOL ELT



Siobhan Donohoe
Financial Controller & Company Secretary

A photograph of a person running on a red track. The person is wearing a white long-sleeved shirt, white shorts, and blue and orange sneakers. A large green circular overlay is centered over the image, containing the text 'SEEKING SUSTAINABLE SOLUTIONS FOR END OF LIFE TYRES' in white, bold, uppercase letters. The background is slightly blurred, showing other people in the distance.

**SEEKING
SUSTAINABLE
SOLUTIONS
FOR END OF
LIFE TYRES**



GOVERNANCE

CORPORATE STRUCTURE

Circol ELT, a single-member company limited by guarantee, was approved to operate the tyre compliance scheme under the Waste Management (Tyres and Waste Tyres) Regulations 2017 from 1st October 2017 until 31 December 2022. The Licence was extended for five calendar years to 31st December 2027. Circol ELT is committed to best practices in corporate governance.

CORPORATE GOVERNANCE FRAMEWORK

The primary corporate governance instruments adopted by Circol ELT are the approval from the Department of the Environment, Climate and Communications and the Terms of Reference for the Committees of the Board. While recognising the importance of these formal instruments, good corporate governance requires a commitment to, and the practice of, values that guide the company in serving the needs of all its stakeholders. The directors, officers and employees of the company commit to these values.

The Board of Directors have adopted the following policy objectives in relation to its Corporate Governance Responsibilities:

- Circol ELT is committed to ensuring the effective operation of the Board and its Committees in conformity with the highest standards of corporate governance.

- The Board will periodically review and evaluate Board procedures to ensure that it is primarily focused on strategy, performance and accountability.
- The Board will adopt the provisions of an agreed Code of Corporate Governance applicable to compliance schemes.

COMPANY OFFICERS

The following individuals acted as officers of the company during the year ending 31st December 2023:

DIRECTORS

Mr Tony Keohane, Chair
Mr William Collins, CEO
Mr Feargal Brennan, Independent
Mr Séamus Clancy, Independent
Mr Des Collins, Independent
Mr Colm Conyngham, Tyre Manufacturer
Mr Tom Dennigan, Tyre Manufacturer
Mr Kevin Farrell, Tyre Retailer
Mr David Kelly, Independent
Mr Michael Layde, Independent
Ms Deborah Spence, Independent -
(Appointed 23rd February 2023)

COMPANY SECRETARY

Ms Siobhan Donohoe

Board Meeting Attendance	23 Feb	25 May	14 Sep	23 Nov
Tony Keohane	✓	✓	✓	✓
William Collins	✓	✓	✓	✓
Feargal Brennan	✓	✓		✓
Séamus Clancy	✓	✓	✓	✓
Des Collins	✓	✓	✓	✓
Colm Conyngham	✓	✓	✓	✓
Tom Dennigan	✓	✓	✓	✓
Kevin Farrell	✓	✓	✓	✓
David Kelly	✓	✓		✓
Michael Layde	✓	✓	✓	✓
Deborah Spence		✓	✓	✓

BOARD COMMITTEES

FINANCE, AUDIT & RISK COMMITTEE

Members: Mr David Kelly (Chair), Mr Séamus Clancy, Mr Des Collins, Ms Deborah Spence (Appointed 23rd February 2023).

The Committee reviews financial performance and reporting processes in the company. It also meets with our statutory auditors and tax advisors PwC.

Committee Meeting Attendance	6 Apr	18 May	8 Nov
David Kelly	✓	✓	✓
Séamus Clancy	✓	✓	✓
Des Collins	✓	✓	✓
Deborah Spence	✓	✓	✓

STRATEGY & MARKET DEVELOPMENT COMMITTEE

Members: Mr Tony Keohane (Chair), Mr Feargal Brennan, Mr William Collins, Mr Des Collins, Mr Colm Conyngham, Mr Tom Dennigan. (Des Collins, Colm Conyngham and Tom Dennigan joined the Committee in Mar 2023.)

The Committee ensures there is a clear and defined strategy aligned with the overall mission and goals.

Committee Meeting Attendance	23 Feb	24 Apr	7 Sep
Tony Keohane	✓	✓	✓
Feargal Brennan	✓	✓	✓
William Collins	✓	✓	✓
Des Collins		✓	✓
Colm Conyngham		✓	✓
Tom Dennigan		✓	✓

FEES AND FUNDING COMMITTEE

Members: Mr Michael Layde (Chair), Mr Séamus Clancy, Mr William Collins, Mr Colm Conyngham, Mr Kevin Farrell, Ms Siobhan Donohoe.

The Committee makes recommendations to the Board regarding the level of funding to be paid in relation to waste tyres recovered by Approved Recovery Operators and the level of the annual membership fee to be paid by Circol ELT members.

Committee Meeting Attendance	12 April
Michael Layde	✓
Séamus Clancy	✓
William Collins	✓
Colm Conyngham	✓
Siobhan Donohoe	✓
Kevin Farrell	

REMUNERATION COMMITTEE

Members: Mr Tony Keohane (Chair), Mr Feargal Brennan, Mr William Collins, Mr Michael Layde.

The Committee determines and agrees with the Board on the framework and broad policy for the remuneration of the Chief Executive, Chairman, Directors, Senior Management and Employees. The Committee is also responsible for benchmarking and reviewing the ongoing appropriateness and relevance of the remuneration policy and company pension scheme.

The Committee is also responsible for identifying and nominating candidates to fill board vacancies as and when they arise for the approval of the Board.

Committee Meeting Attendance	23 Feb	23 Nov
Tony Keohane	✓	✓
Feargal Brennan	✓	✓
William Collins	✓	✓
Michael Layde	✓	✓



FINANCE

In what was another volatile economic environment, exacerbated by an energy crisis in Europe, Circol ELT delivered a solid financial performance in 2023 with a surplus of €1.24m. As a condition of our approval, we are required to make a financial contribution to address historic stockpile abatement of tyres, lawfully stored on farms and hauliers' yards of €1.38m, by December 2023 and an additional €0.32m by December 2024.

We have accumulated a contingency reserve fund of €6.75m. As a condition of our 2023 re-approval granted by the DECC, we must build up a contingency reserve fund of €6.75 million by the end of 2027. The reserve fund is ring-fenced from day-to-day financial requirements and is held in trust by Circol ELT for its Members. The purpose of this fund is to ensure the availability to Circol ELT Members of sufficient resources for the continued delivery of the Scheme in the event of non-renewal of the licence.

FINANCE HIGHLIGHTS 2023

- Membership Fee Income of €13.6m
- Direct Recycling and Recovery costs of €7.9m
- Historic Stockpile Remediation cost of €1.38m
- Funded 4.4m tyres.
- Surplus after tax of €1.24m, of which €820k was transferred to a contingency reserve fund.
- Contingency Reserve Fund of €6.75m (required to achieve €6.75m by end of 2027 under terms of our re-approval).

- Balance sheet total net assets of €9.3m (2022: total net assets of €8.1m)

REVENUE

Membership fees of €13.6m (2022: €11.72m), driven by 4.7 million tyres reported to the scheme as being placed on the Irish market in 2023.

DIRECT RECOVERY AND RECYCLING EXPENDITURE

Total expenditure for 2023 amounted to €7.9m (2022: €7m), with Circol ELT funding the recovery and recycling of 39k tonnes, the highest volume of tonnes collected and processed by the scheme to date.

ADMINISTRATION EXPENSES

Administration expenses amounted to €2.8m (2022: €2.9m). Included in this figure is wages and salaries of €1.4m, communications and PR €246k and charges of €654k based on two SLA's (Service Level Agreements) with The Producer Register Ltd and Applus Inspection Services Ireland Limited.

HISTORIC STOCKPILE REMEDIATION COST

As a condition of our approval, we are required to make a financial contribution to address historic stockpile abatement of tyres lawfully stored on farms and hauliers' yards of €1.38m by December 2023 and an additional €0.32m by December 2024.

CREDITORS

The creditor's amount of €3.8m includes trade creditors of €164k, accruals for €3.3m and taxation €309k.

CAPITAL & RESERVES

The capital and reserves figure of €9.37m million comprises a contingency reserve fund of €6.75m and profit and loss account of €2.6m. The transfer to the contingency reserve fund is based on the agreed proportion of the EMC (Environmental Management Cost) being used for this purpose.

PROFIT & LOSS ACCOUNT FINANCIAL YEAR ENDED 31 DECEMBER 2023

	2023	2022
	€	€
Membership fee income	13,600,071	11,722,844
Direct recovery and recycling costs	(7,964,362)	(7,011,169)
Gross profit	5,635,709	4,711,675
Administrative expenses	(2,830,143)	(2,969,594)
Historic Stockpile Remediation Contribution	(1,380,000)	-
Surplus on ordinary activities before taxation	1,425,566	1,742,081
Taxation	(176,682)	(221,932)
Surplus for the financial year	1,248,884	1,520,149

BALANCE SHEET AS AT 31ST DECEMBER 2023

	2023	2022
	€	€
Fixed Assets		
Tangible assets	8,085	10,930
Current Assets		
Debtors	3,566,103	3,476,246
Cash at bank and in hand	9,608,766	6,838,512
	13,174,869	10,314,758
Creditors: amounts falling due within one year	(3,810,965)	(2,202,583)
Net Current Assets	9,363,904	8,112,175
Net Assets	9,371,989	8,123,105
Capital and Reserves		
Profit and loss account	2,621,989	2,193,239
Contingency reserve fund	6,750,000	5,929,866
Total equity	9,371,989	8,123,105

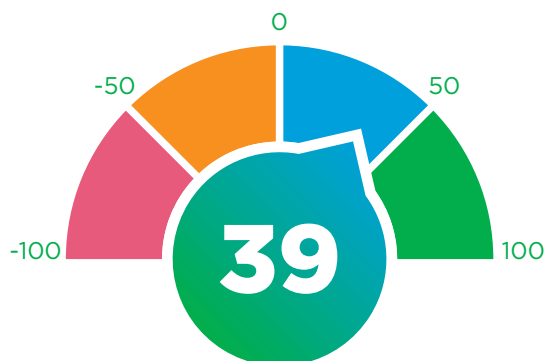
MEMBERSHIP

4.7 million car and motorcycle tyres were placed on the Irish market by Members during 2023, an increase of over 13% on 2022.

KEY METRICS FOR 2023 INCLUDED

- Tyres placed on market - Passenger Car / Van / 4x4 tyres reported by Producers increased from 4.1m tyres in 2022 to 4.7m tyres in 2023 (13% increase).
- Member satisfaction - Net Promoter Score (NPS) of 39 (1 point increase from 38 in 2022).
- Recruitment - 195 new Members joined the scheme.

NET PROMOTER SCORE



*NPS ranges from -100 to +100, with an NPS of 38 indicating that the company has more promoters suggesting that customers are satisfied and are likely to recommend the company's products or services to others.

We measure our members' experience using Net Promoter Score (NPS). We continue to prioritise working with and assisting our members wherever possible. This has been reflected in an improved member satisfaction (NPS) rating of 39 in 2023 (2022: 38). We thank members for participating in our annual survey and were delighted to once more donate €1,000 to the Irish Cancer Society on their behalf.

MEMBER SURVEYS

Membership feedback is important to us. It helps drive continuous improvement of our services and to enhance the benefits of scheme participation. In 2023 we once again conducted a survey to help us improve Members' experience.

SURVEY FINDINGS

Some of the strongest feedback from members related to a buoyant market, associated labour shortages and cost increases. Members also acknowledged our efforts to reduce the reporting burden as well as offering some suggestions to further improve their membership experience.

ONLINE SALES

Member feedback regarding B2C online distance sellers has helped drive their recruitment and has resulted in the vast majority of these online tyre purchases now

having an EMC attached, funding their end of life tyre management. This ensures a level playing field for the wider tyre industry.

USED CAR IMPORTS

Applus Inspection Services Ireland Ltd. (trading as Applus+) is a company that provides vehicle inspection services, including NCT (National Car Testing) and VRT (Vehicle Registration Tax) services in Ireland.

In September 2022 we engaged the services of Applus+ to collect EMCs on all relevant tyres at VRT inspection of imported used vehicles. We now capture 100% of associated EMCs.

RECRUITMENT

As of December 31st, 2023 membership stood at 2,659 - A net increase of 2 members since the start of the year.

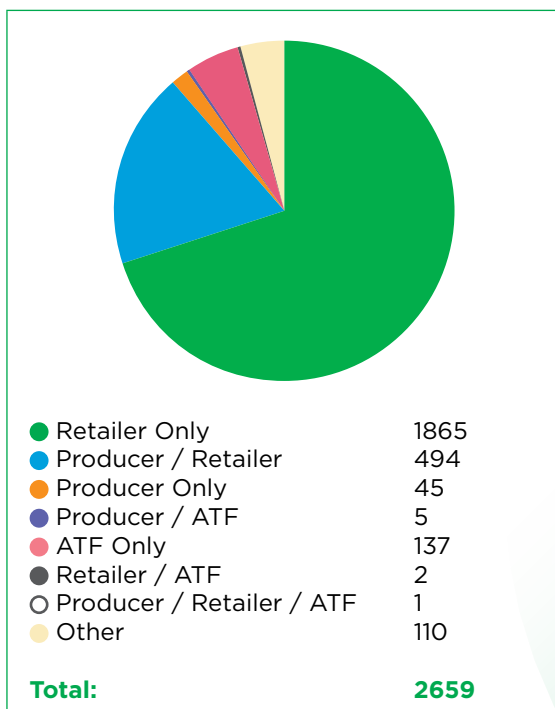
MEMBERSHIP MOVEMENT SUMMARY

Member Numbers 01-01-2023	2,657
Add Recruited	195
Less Revoked	193
Member Numbers 31-12-2023	2,659

108 revocations were voluntary as the members were no longer obligated, with 85 revoked due to either lack of reporting or non-payment of fees:

Revocation Reason	Number
No longer obligated	108
Non-compliant	85
Total	193

Circol ELT membership comprises the following member types



No applications for membership have been refused or subjected to an appeals process. 166 Farmers have registered with the scheme.

MEMBER AUDITS

During 2023 we conducted 214 member audits.

The purposes of our audits are to ensure Members report correctly and to guarantee clarity, traceability, and fairness throughout the scheme. The emphasis of the audit programme is to encourage and support Members in fulfilling their compliance obligations.

MEMBERSHIP ACTIVITY

Compliance assistance and improved membership experience are a key focus for Circol ELT. Guidance and assistance provided to our members to help them meet their compliance obligations include:

Reduced reporting burden

- To reduce the reporting burden on our members we offered over 2,000 Members the option of changing to 6 monthly reporting. Almost 700 members have taken up this option and have reported a strong level of satisfaction with this new arrangement.

CSV option for reporting

- Reporting via CSV (Comma Separated Value) files is targeted at our members who have more complex reporting activity. We continue to assist members with this feature to help make their reporting experience more efficient and hassle-free.

Monthly reporting reminder emails

- We continue to send out reminder emails to our Members to help advise them of their reporting requirements.

Email and phone support

- We continue to provide email and phone support to all our members relating to reporting, legislative queries and other account feedback.

OPERATIONS

Key Metrics	Ireland	Ireland	Outside the EU			Total
	Recycled	FFR	Recycled	FFR	Steel	
2023 Tonnes	3,321	100	22,074	13,105	461	39,061
	9%	0%	56%	34%	1%	100%
2022 Tonnes	3,965	0	7,162	24,008	405	35,540
	11%	0%	20%	68%	1%	100%

*FFR - Fossil fuel replacement through Waste to Energy

Circol ELT funded recovery and recycling of 39,061 tonnes of ELT which equates to 4.4m tyres. This accounted for 95% of tyres placed on the market in 2023. In total the market was up 10% in volume compared to 2022. This represented the largest volume of tonnes managed by the scheme since it was established in October 2017.

Operating activity in 2023 was characterised by further decreases in local recycling coupled with a move back towards recycling outside the EU with the strengthening of the Indian marketplace as a recycling destination.

Ongoing price inflation, particularly around energy, adversely impacted operating cost bases for collectors and processors in Ireland principally in the first half of the year. This dynamic has a push-pull effect on waste tyre granulation processing in Ireland. It makes processing more costly and export or fuel substitution as waste to energy more attractive. In 2023 cement kilns still generated significant demand for fuel, through fossil fuel replacement through waste to energy.

As a result of this shift, recycling in the Republic of Ireland decreased by 2% from 3,965 tonnes in 2022 to 3,321 tonnes in 2023. Furthermore, as container shipping prices softened considerably throughout 2023, markets outside the EU with lower energy and labour costs became more attractive. This resulted in 56% or 22,074 tonnes of waste material being exported for recycling, an increase of 14,912 tonnes over 2022.

Although the energy recovery market dropped by 45% in 2023 to 13,105 tonnes, all this material is processed to sub 70mm in Ireland before the tyre shred is exported. While Irish kilns do not currently use waste tyres as a fossil fuel replacement, this is expected to change with significant trials taking place in 2024. It is the objective of Circol ELT to manage waste tyres in facilities near the origin of the waste so that it aligns with both circular and proximity principles to deliver the best environmental outcomes.

Circol ELT collaborates with various agencies with enforcement powers around the movement of waste tyres and the compliance of permit holders at the collection and facility level. We have established strong relationships with the NTFSO (National Trans Frontier Shipping Office) and NWCPO (National Waste Collection Permit Office). Additionally, we engage with all Local Authorities at a local level and WERLAs (Waste Enforcement Regional Lead Authority) regionally.

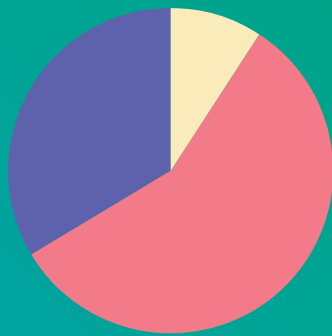
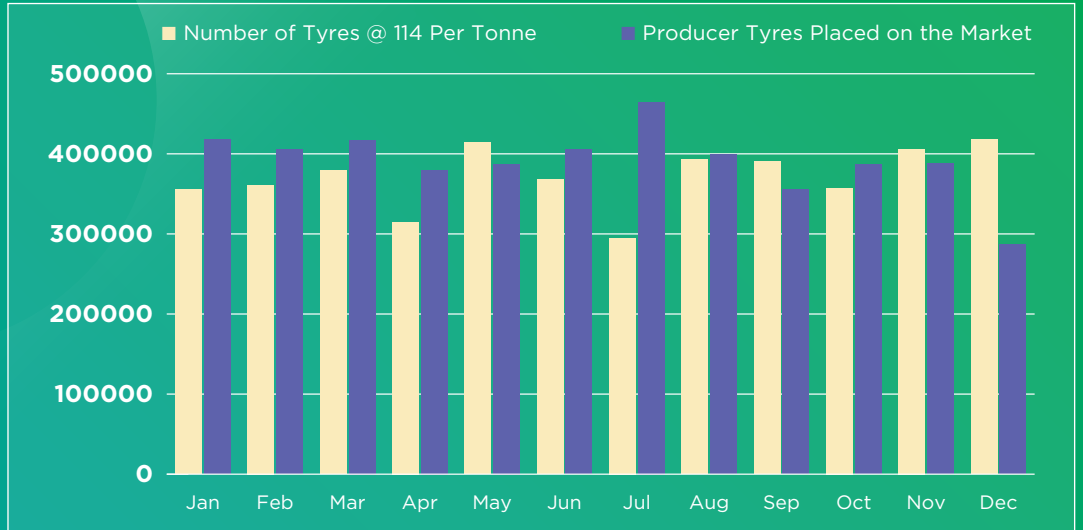
Accurate data is essential for effective data analysis in our day-to-day operations. Therefore, extensive data reconciliation is conducted by both the Operations and Membership teams. Our network of collectors and processors achieved a 95% collection and processing rate throughout the year. In other words, 95% of all passenger car and motorcycle tyres sold in Ireland were collected and sent for recycling or recovery.

Circol ELT offers collection of waste passenger and motorcycle tyres to members at no additional cost once the EMC (Environmental Management Cost) has been paid. However as Commercial, Agricultural, Construction and Industrial tyres are not subject to an EMC, they do incur a cost for disposal. These tyre categories are expected to become part of the scheme in 2025.

CONTRACT COMPLIANCE AND AUDIT PROGRAMME

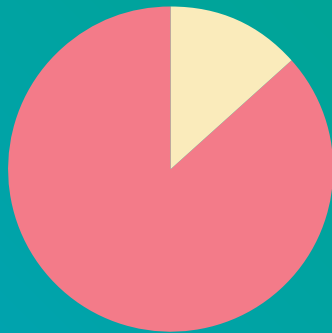
Regular site visits take place throughout the year. Compliance and Financial audits also take place throughout the year. End market verification is a particular focus for the team. We validate all end markets using recognised inspection service providers. Circol ELT staff also visit end-market destinations.

COLLECTION AND PROCESSING RATE 2023



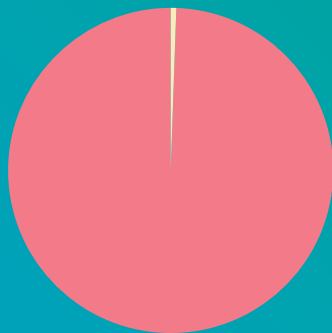
END MARKET TONNES BY COUNTRY 2023

Ireland	3,421
India	22,546
Turkey	13,094
Total	39,061



RECYCLING BY COUNTRY 2023

Ireland	3,321
India	22,535
Total	25,856



ENERGY RECOVERY BY COUNTRY 2023

India	11
Ireland	100
Turkey	13,094
Total	13,205



ENERGY RECOVERY V RECYCLING 2023

Recycling	25,856
Energy Recovery	13,205
Total	39,061

COMMUNICATIONS

OUR APPROACH

Public advocacy is a fundamental pillar on which our communications activity is based. We promote the fact that proper and timely tyre maintenance saves money, saves fuel, is better for the environment and ultimately, saves lives.

In 2023 we invested more than €150,000 in communications activities. We executed national campaigns using radio, print, digital media and events. Our messaging was designed to help reduce the national carbon footprint. We encouraged good tyre management practices to promote tyre safety, extend tyre life and reduce transport emissions.

Member engagement is a cornerstone of our communications strategy. We highlight the tyre industry's contribution to environmentally friendly management of waste tyres in Ireland.

CAMPAIGNS

TYRE SUSTAINABILITY RADIO CAMPAIGN

Our approach to communication will continue to advocate for tyre maintenance to improve road safety, reduce carbon emissions and promote sustainability. Promoting waste tyres as a resource remains a central priority for our communication strategy. It emphasises the importance of driving on properly inflated tyres to promote safety, reduce fuel consumption and extend tyre lifespan. The messaging also promoted our Members by encouraging drivers to get their tyres checked at their local Circol ELT Member outlet.

IMPACT OF THE CAMPAIGN:

- Promoting road safety and reducing waste through better tyre care.
- Encouraging drivers to take action by getting their tyres checked by Circol ELT member outlets.

- Recognition of Members' active role in the Tyre Scheme.
- Lowering Carbon impact through extended tyre life and reduced fuel consumption through better tyre performance.

IRISH ROAD SAFETY WEEK 2023



**SAFE TYRES
SAVE LIVES**

Visit circolelt.ie

**CIRCOL
ELT**
Driving a sustainable tomorrow

Ensure your tyres are winter ready, maximise your cars fuel efficiency and protect you and your family.

Get your tyres checked today!

VISION ZERO
SAFETY FOR ALL

RSA
Road Safety Authority

Circol ELT Supporting National Road Safety Week

Collaboration with the Road Safety Authority (RSA) is a key partnership for Circol ELT. In October 2023 during Road Safety Week we ran a national radio campaign reaching over 2.9 million adults. The radio ad promoted road safety through sustainable tyre care. A digital poster for Member outlet waiting rooms was produced to support the campaign.

SCHOOLS COMPETITION

We ran a competition open to all primary schools with first prize being a playground upgrade using recycled rubber matting, to the value of €20,000.



“The children love the experience of playing on a safe and forgiving surface. The recycled rubber matting is ideal for the school environment and gives us a safe space for all types of play activities.”

Peter Walsh - Principal
St. Conaire’s National School

A suite of online resources were created including colouring sheets, fact sheets and puzzles to educate children on the benefits of recycling End of Life Tyres. The competition attracted 99 schools’ entries. The winning school, St. Conaire’s National School in Shannon, produced a comic strip promoting the management of tyre waste as a valuable resource. The playground installation utilised rubber from over 1,500 waste tyres.

PAKMAN

The Pakman Awards are the leading national environmental awards. Circol ELT sponsors the Tyre Champion category. The finalists were Tyreworld, Kevin O’Leary Tyres and Sean McManus Tyres, all of whom represent excellence in environmental practice in the tyre industry. Sean McManus Tyres won the overall Tyre Champion Award, having displayed an outstanding approach to sustainable practices in tyre retail.



DIGITAL

Our digital marketing uses social channels including Facebook, Instagram, X and LinkedIn.

Our pages showcase eco-friendly products made from recycled rubber and highlight the benefits of good tyre care for road safety, reduced waste generation and cost effective motoring. We also ran two consumer competitions on Facebook for motorists to win a €500 voucher towards a new set of tyres. The competition promoted our Member outlets, as entrants had to nominate their local tyre retailer.

Our approach to communication will continue to sustainably advocate for tyre maintenance to improve road safety and reduce carbon emissions. Promoting waste tyres as a resource remains a central priority for our communication strategy.

A two minute animation was developed to educate the public on the life story of End of Life tyres including the recycled end products and their uses and is now shown in NCT testing centres across the country.



**SCAN TO VIEW
THE STORY OF
END OF LIFE TYRES**



SUSTAINABILITY

OUR COLLECTIVE CHALLENGE

Private transport is one of the world's leading emitters of greenhouse gases. The benefits of proper tyre maintenance are often overlooked as an easy way to reduce these emissions. Our approach to sustainability starts before a tyre becomes waste. We actively promote the benefits of proper tyre maintenance to increase their performance and life span, reducing fuel use and CO2 emissions. This strategy is aligned with Ireland's Climate Action Plan to halve our greenhouse gas emissions by 2030, reaching net zero by 2050.

We promote innovative uses for ELT: recycled rubber granulate, powder and chip can be used in a wide range of applications to manufacture products.

Tyres processed in Ireland are granulated for sports pitch applications and used as raw material for matting and road surfaces.

Primary processing of larger tyre shred is used as an alternative to fossil fuels in the manufacture of cement. Tyre Modified Asphalt also offers real opportunities. Research has shown that Tyre Modified Asphalt (TMA) creates premium road surfaces, with improved noise reduction, drainage and wear characteristics resisting rutting and cracking. These benefits result in the reduction of CO2 emissions and lower energy consumption over the lifetime of a road surface.

Project Ireland, through the National Investment Framework for Transport in Ireland (NIFTI) places active travel as a number one sustainability priority. Active travel includes greenways and cycle paths which we are exploring as a potential growth area for sustainable use of ELT rubber.

International research has shown that the use of this material when used as a base layer in their construction has significantly reduced the impact of injury arising from falls.

We are actively working with a number of local authorities to promote the use of this material as part of our national active travel infrastructure.

Circol ELT continually seek to partner with research institutes and international experts to explore the use of recycled rubber in a variety of applications. As members of the European Tyre and Rubber Manufacturers Association, we continue to explore innovative ways to use recycled rubber in a variety of applications including moulded products, pavement surfaces and powder application.

CARBON CALCULATOR

Our overall objective is that recycled rubber forms part of the standard green procurement process for government agencies. We believe that a circular approach to waste tyre management can be part of the solution to helping Ireland achieve its carbon reduction targets.

In 2023 we:

- displaced the equivalent of 9,366 tonnes of PET Coke
- avoided the use of 21,984 tonnes of virgin rubber

The results for 2023 are shown in the table below:

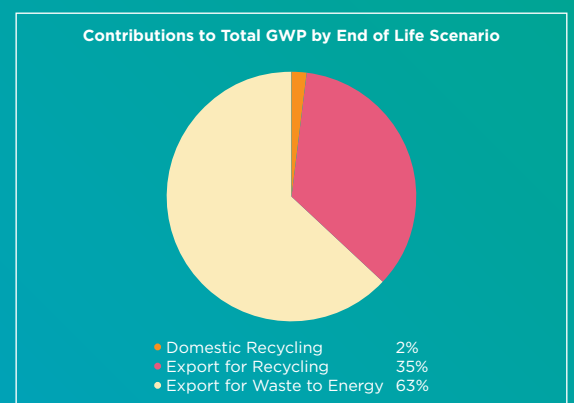
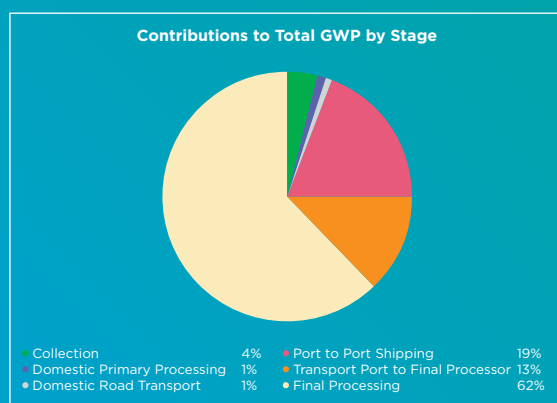
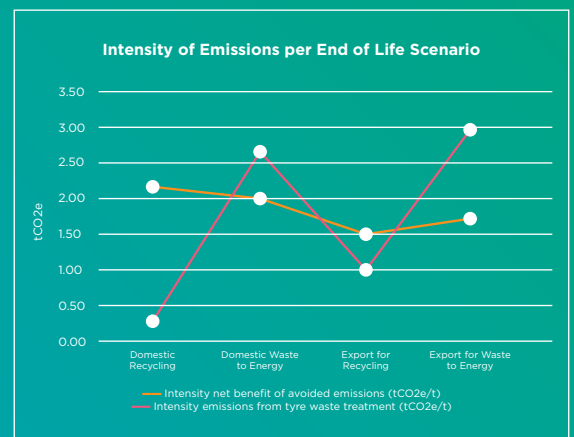
Total Tyres collected (tonnes)	39,061
Waste to Energy in Cement Kilns	
Tonnes of tyres recovered	13,205
Equivalent displaced coke from cement kilns (tonnes)	9,366
Equivalent emissions avoided from burning pet coke (tCO ₂ e)	61,447
Emissions generated by recovering tyres in cement kilns (tCO ₂ e) (2.95 tCO ₂ e/t)	38,907
Net Carbon Benefit arising from recovering ELTs (tCO ₂ e) (1.71 tCO ₂ e/t)	22,540
Recycling	
Tonnes of tyres recycled	25,856
Equivalent virgin rubber weight (tonnes)	21,984
Equivalent emissions avoided producing moulded virgin rubber (tCO ₂ e)	63,295
Emissions generated by recycling tyres as moulded rubber products (tCO ₂ e) (0.88 tCO ₂ e/t)	22,723
Net Carbon Benefit arising from recycling ELTs (tCO₂e) (1.57 tCO₂e/t)	40,572
Total Carbon Benefit Recovering and Recycling ELTs (tCO₂e)	63,112

To develop our carbon calculator we partnered with Goodbody Clearstream Solutions, a specialist in corporate climate and sustainability solutions. Our methodology adheres to the principles outlined by ISO 14040. Embracing a partial life cycle assessment framework from gate to grave, the stages observed include tyre collection, domestic primary processing, transport, and final processing.

For the generation of our analysis, we drew upon both primary and secondary data sources to ensure comprehensiveness and accuracy.

The above table demonstrates that recycling ELTs represents the lowest carbon impact (0.88 tCO₂e/t). While managing ELTs as a fuel alternative in cement kilns, has a higher carbon impact per tonne (2.95 tCO₂e/t). However, there are significant carbon benefits arising from using tyre shred as an alternative fuel in cement kilns, as it avoids emissions generated by the incineration of petroleum coke. Each tonne of waste tyre processed as Waste-to-Energy (WtE) results in an increased net carbon benefit (1.71 tCO₂e/t).

The results of the project will provide a measurement basis for our strategic roadmap aligned with Ireland's climate ambition to achieve a carbon reduction of 50% by 2030.



GLOSSARY

ATF: Authorised Treatment Facility for end of life vehicles

Circular Economy: The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.¹

Collector: Contracted Circol ELT Collector

DECC: The Department of Environment, Climate and Communications

ELT: End of Life Tyre

ELV: End of Life Vehicle

EMC: Environmental Management Cost

EOW: End of Waste

EPA: Environmental Protection Agency

FFR: Fossil Fuel Replacement

GWP: Global Warming Potential

Petroleum Coke Coal / PET: Commonly called Petcoke, is a solid, carbon-rich material similar to coal. It is derived from oil refining, and it's a byproduct produced during the cracking process. Petcoke can be used as a fuel during cement production.

PRL: Producer Register Limited

Processing facility: A tyre recycling plant

Producer: The first person to put a tyre on the market in Ireland

Retailer: Buys tyres from Producer to sell on to consumer or another Retailer

WERLA: Waste Enforcement Regional Lead Authorities

1. Definition of Circular Economy from European Parliament: <https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits>



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