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Circol ELT delivered a strong performance for 2024. Over 42,552 tonnes or 4.8 million waste tyres were collected and processed, the largest tonnage since the commencement of the scheme. This represented an impressive recovery rate of 96% of tyres placed on the market. Our activities delivered measurable environmental outcomes. We avoided the use of 22,708 tonnes of virgin rubber and displaced the equivalent of 11,244 tonnes of PET Coke, generating a total carbon benefit equivalent to 73,732 tonnes of CO2. These outcomes highlight the broader resource efficiency and carbon savings associated with the scheme's operation.

In 2024, we achieved a surplus after tax of €1.7 million. Our contingency reserve fund stands at €6.75 million which we are required to set aside as a condition of approval. This puts us in a strong position as we prepare for the expansion of the scheme to include all tyre categories.

#### **HIGHLIGHTS:**

- Funded recycling and recovery 42.5K tonnes or 4.8 million waste tyres.
- Member Numbers 2,626
- Recovery and Recycling rate 96%

A number of external factors shaped activity during the year. Input price inflation increased the cost of domestic processing and contributed to a greater share of waste tyres (37% or 15,838 tonnes) being used in waste-to-energy applications, primarily as a substitute fuel in cement kilns.

At the same time, international demand for recycled rubber materials strengthened. Improved container shipping rates supported increased exports, with 55% of collected tyres (23,457 tonnes) sent to India for recycling. Domestically, 2,859 tonnes were recycled in Ireland, while 17,987 tonnes were pre-processed locally ahead of export. This distribution reflects both the maturing of end markets and the flexibility of our operational model.

Aligned with our Strategic Plan and the proximity principle, we anticipate that as the scheme matures, there will be a stronger focus on promoting and showcasing sustainable outcomes for ELT. We expect that more tyres will be managed closer to their point of origin, directly supporting the circular economy and reducing the environmental impact of transportation.

Market development remains a core priority for Circol ELT, and we are advancing a diverse mix of initiatives that address short, medium, and long-term applications for ELTs. We will continue to advocate for regulatory frameworks that embrace circular economy principles, particularly the use of waste tyres as a resource.

As the scheme expands, we believe local retreading activity will become more attractive, especially as these tyres will not attract an environmental management fee.

Additionally, we anticipate significant local infrastructure investment will become a hallmark of an expanded scheme, driven by the increased volumes being managed within the system.

We thank the Department of Environment, Climate and Communications (DECC) for their continued support underpinning the operation of the tyre compliance scheme. The enforcement agencies, namely 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 to providing ongoing support to our Members, Collectors, Enforcement Agencies and Stakeholders. We are excited about the opportunities that lie ahead. Work continues in preparation for the scheme expansion to include all categories of tyres. We look forward to continuing to deliver sustainable outcomes for waste tyres on behalf of all our stakeholders in the years

**TONY KEOHANE (CHAIR)** 

Bill Collis

**WILLIAM COLLINS (CEO)** 



# RECOVERY AND RECYCLING RATE 96%

## BOARD MEMBERS 2025



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





#### **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.

Circol ELT is committed to best practice in corporate governance.

### CORPORATE GOVERNANCE FRAMEWORK

The primary corporate governance instruments adopted by Circol ELT are the approval from the Department of 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 periodically review and evaluate Board procedures to ensure that it is primarily focused on strategy, performance and accountability.
- The Board adopt the provisions of an agreed Code of Corporate Governance applicable to compliance schemes.

#### **ANNUAL GENERAL MEETING**

The 2024 annual general meeting of Circol ELT was held on Wednesday, 12 June 2024 at Clayton Hotel, Ballsbridge, Dublin 4. The Annual Reports for Circol ELT are available at: www.circolelt.ie

#### **COMPANY OFFICERS**

The following individuals acted as officers of the company during the year ending 31st December 2024:

#### **DIRECTORS**

Mr Tony Keohane, Chairperson

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

#### **COMPANY SECRETARY**

Ms Siobhan Donohoe

<b>Board Meeting Attendance</b>	13 Feb	16 May	19 Sep	28 Nov
Tony Keohane	*		•	•
Feargal Brennan	•	*		
Séamus Clancy		•	•	*
Des Collins	•	•	•	*
William Collins	•	•	•	•
Kevin Farrell	•		•	•
Colm Conyngham	•			•
David Kelly	•	•		•
Michael Layde	•	•	•	•
Tom Dennigan	•	•	•	
Deborah Spence	•	•	•	•

#### **BOARD COMMITTEES**

#### **FINANCE, AUDIT & RISK COMMITTEE**

Members: Mr David Kelly (Chair), Mr Séamus Clancy, Mr Des Collins, Ms Deborah Spence

The Committee reviews financial performance and reporting processes within the company. It also meets with our statutory auditors and tax advisors, Forvis Mazars.

Committee Meeting Attendance	30 Apr	20 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.

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

Committee Meeting Attendance	5 Mar	12 June
Tony Keohane	•	•
Feargal Brennan	*	
William Collins	*	*
Des Collins	•	*
Colm Conyngham	*	
Tom Dennigan	*	*



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	8 May
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	13 Feb	19 Mar	28 Nov
Tony Keohane	•	•	•
Feargal Brennan	*	•	
William Collins	*	•	•
Michael Layde		•	*





Circol ELT delivered a solid financial performance in 2024 reporting a surplus of €1.7m. This positive outcome was driven by a notable 7% increase in the number of tyres placed on the market, totalling 5m tyres. The scheme's activities represented the highest volume of tonnes collected and processed to date. In 2024, 42.5k tonnes were collected and processed, representing 96% of tyres placed on the market.

#### **FINANCE HIGHLIGHTS 2024**

- Membership Fee Income of €14.2m.
- Direct Recycling and Recovery cost of €8.9m.
- Historic Stockpile Remediation cost of €320k.
- Funded 4.8m tyres.
- Surplus after tax of €1.7m
- Contingency Reserve Fund of €6.75m.
- Balance sheet total net assets of €11.1m (2023: total net assets of €9.3m).

#### **REVENUE**

Membership fees of €14.2m (2023: €13.6m), driven by 5 million tyres, were reported to the scheme as being placed on the Irish market in 2024.

### DIRECT RECOVERY AND RECYCLING EXPENDITURE

Total expenditure for 2024 amounted to €8.9m (2023: €7.9m), with Circol ELT funding the recovery and recycling of 42.5k tonnes, the highest volume of tonnes collected and processed by the scheme to date.

#### **ADMINISTRATION EXPENSES**

Administration expenses amounted to €3.2m (2023: €2.8m). Included in this figure are wages and salaries of €1.6m, communications and PR €264k, office and other administration costs €1.3m.

### HISTORIC STOCKPILE REMEDIATION COST

As a condition of the 2023 re-approval, the company is required to make a financial contribution of €0.32m in 2024 (2023 €1.38m) to address the historic stockpile abatement of tyres lawfully stored on farms and haulier's vards.

#### **CONTINGENCY RESERVE FUND**

As a condition of approval, Circol ELT is required to build a contingency reserve fund of €6.75m. Currently, this €6.75m is ringfenced from day-to-day operations and may only be accessed in limited circumstances with prior agreement of the Minister.

#### **PROFIT & LOSS ACCOUNT**

#### FINANCIAL YEAR ENDED 31ST DECEMBER 2024

	2024	2023
	€	€
Membership fee income	14,293,567	13,600,071
Direct recovery and recycling costs	(8,918,505)	(7,964,362)
Gross profit	5,375,062	5,635,709
Administrative expenses	(3,243,971)	(2,830,143)
Historic Stockpile Remediation Contribution	(320,000)	(1,380,000)
Surplus on ordinary activities before taxation	1,811,091	1,425,566
Interest Receivable	191,548	-
Taxation	(268,161)	(176,682)
Surplus for the financial year	1,734,478	1,248,884

#### **BALANCE SHEET AS AT 31ST DECEMBER 2024**

	2024	2023
	€	€
Fixed Assets		
Tangible assets	13,137	8,085
Current Assets		
Debtors	3,847,704	3,566,103
Current asset investments	9,129,147	-
Cash at bank and in hand	2,658,729	9,608,766
	15,635,580	13,174,869
Creditors: amounts falling due within one year	(4,542,250)	(3,810,965)
Net Current Assets	11,093,330	9,363,904
Net Assets	11,106,467	9,371,989
Capital and Reserves		
Profit and loss account	4,356,467	2,621,989
Contingency reserve fund	6,750,000	6,750,000
Total equity	11,106,467	9,371,989



During the year 5 million car and motorcycle tyres were placed on the market by Members during 2024, an increase of 7% on 2023.

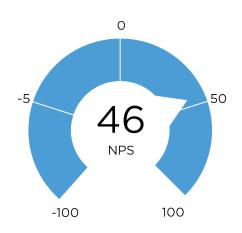
At Circol ELT, we operate with a membercentric approach, ensuring that our scheme is designed to support and benefit our members at every stage. Our commitment to this focus drives us to continuously improve our services, making compliance simpler and more effective for all stakeholders.

#### **KEY METRICS FOR 2024**

- Tyres placed on market Passenger Car / Van / 4x4 tyres reported by Producers increased from 4.7m tyres in 2023 to 5m tyres in 2024 (7% increase).
- Member satisfaction Net Promoter Score (NPS) of 46 (7 point increase from 39 in 2023).
- Recruitment 152 Members joined the scheme

#### **NET PROMOTER SCORE**

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 46 in 2024 (2023, 39). We thank members for participating in our annual survey and we were delighted to donate €1,000 to each of Children's Health Ireland and the Irish Cancer Society on their behalf.



#### **RECRUITMENT**

As of December 31st 2024 membership stood at 2,626 - A net decrease of 33 members since the start of the year.

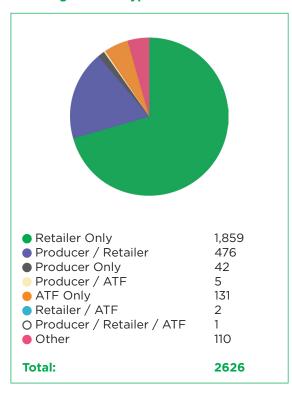
MEMBERSHIP MOVEMENT SUMMARY				
Member Numbers 01-01-2024	2,659			
Add Recruited	152			
Less Revoked	(185)			
Member Numbers 31-12-2024	2,626			

87 revocations were voluntary as the members were no longer obligated (ceased trading, no longer dealing in tyres, etc.), with 98 members revoked due to either lack of reporting or non-payment of fees:



REVOCATION REASON	NUMBER
No longer obligated	87
Non-compliant	98
Total	185

### Circol ELT membership comprises the following member types:



No applications for membership have been refused or subjected to an appeals process. To date 232 Farmers have registered with the scheme.

#### **MEMBER AUDITS**

During 2024 we conducted 30 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 includes:

#### **Site visits**

 We conducted over 60 site visits to members to consult on a range of issues as well as providing on-site reporting assistance and support.

#### **Reduced reporting burden**

In an effort 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 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 and to help make their reporting experience more efficient and hassle-free.

#### Monthly reporting reminder emails

 We continue to issue reminder emails to our members to help advise them of their reporting requirements.

#### **Email and phone support**

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

#### **ENFORCEMENT**

Any identified operators who are not a member of the scheme are added to our Local Authority (LA) enforcement portal. This allows us to collaborate with the LAs regarding operators who may have obligations and require enforcement follow up. This approach has worked very successfully and helps ensure a fair and equitable compliance landscape. This portal has been in operation throughout 2024 and is constantly updated to reflect the compliance status of tyre operators nationally.

All 185 members who were revoked in 2024 were reflected in the enforcement portal as referrals to their relevant LA.

We also collaborated with LAs where a small number of illegal tyre dumps were reported to the scheme. We engaged with them to assist in the investigation and restoration of the affected areas.



### **OPERATIONS**

Key Metrics	Ireland	Ireland	Outside the EU			Total
	Recycled	FFR	Recycled	FFR	Steel	Total
2024 TONNES	2,859	1,500	23,457	14,338	399	42,552
	7%	3%	55%	34%	1%	100%
2023 TONNES	3,321	100	22,074	13,105	461	39,061
	9%	0%	56%	34%	1%	100%

#### \*FFR - FOSSIL FUEL REPLACEMENT THROUGH WASTE TO ENERGY

Circol ELT funded the recovery and recycling of 42,552 tonnes of ELT, which equates to 4.8 million tyres. This accounted for 96% of tyres placed on the market (5m) in 2024. In total, the waste tyre market was up 8% (circa 398k tyres) in volume compared to 2023. This represented the largest volume of tonnes managed by the scheme since it was established in October 2017.

Operating activity in 2024 was characterised by further decreases in local recycling, coupled with the continued robust performance of markets outside the EU for recycling and recovery.

Local cost base, particularly around energy and labour, impacted operating cost bases for collectors and processors in Ireland. This dynamic impacts the economics of waste tyre granulation processing in Ireland. It makes processing to smaller sizes more costly and export for fuel substitution as waste-to-energy more attractive. In 2024, cement kilns continued to generate significant demand for fuel, through fossil fuel replacement from waste to energy.

Recycling in Ireland decreased by 2% from 9% (3,321 tonnes) in 2023 to 7% (2,859 tonnes) in 2024. Furthermore, as container shipping prices softened throughout 2024, markets outside the EU with lower energy and labour costs became more attractive. It is worth noting that while Irish end market totals appear low with a combined recycling and energy recovery of 11% (4,359 Tonnes), a further 17,987 tonnes were pre-processed in Ireland for subsequent export. This resulted in 55% or (23,457) tonnes of waste material exported for recycling, 9% (3,650 tonnes) of this was pre-processed as shred in Ireland.

The energy recovery market was sustained at 14,338 tonnes (34%); all 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, a significant trial utilising 1,500 tonnes took place in 2024. We expect this market to

increase in 2025 once the trial results get approval. Managing waste tyres in facilities near the origin of the waste arising aligns with both the circular economy and the proximity principle.

Circol ELT collaborates with numerous 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 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 WERLA's (Waste Enforcement Regional Lead Authorities) regionally.

Accurate data is critical 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 96% collection and processing rate for all passenger car and motorcycle tyres sold in Ireland (including tyres on new and used imported vehicles).

### **CONTRACT COMPLIANCE AND AUDIT PROGRAMME**

Regular site visits take place throughout the year with our 22 authorised collectors. 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 on a regular basis.



SEEKING SUSTAINABLE SOLUTIONS FOR END OF LIFE TYRES

### COMMUNICATIONS

#### **COMMUNICATIONS AND ENGAGEMENT**

We engaged in extensive communication efforts with stakeholders, particularly our members, to support discussions around the scheme's expansion and the integration of new tyre categories.

Throughout 2024, our communications strategy played a crucial role in promoting circular economy practices, raising public awareness, and supporting initiatives that reduce tyre waste before it occurs.

Our campaigns are designed to reach a broad audience, from motorists to school communities and environmental project leaders. We invested €264k in communication activities that disseminated information to the public about sustainable tyre scheme activities and their environmental benefits.

#### **KEY HIGHLIGHTS FROM THE YEAR INCLUDE:**

#### PROMOTING SUSTAINABLE TYRE USE

Our commitment to sustainability begins long before a tyre reaches the end of its life. In 2024, we ran a series of social media campaigns aimed at educating motorists on how proper tyre care extends tyre lifespan, ultimately reducing waste generation.

These campaigns covered:

- Regular tyre pressure checks to improve efficiency and reduce wear.
- Encouraging motorists to visit their local Circol ELT retail member to get their tyres checked.
- Sharing practical driving tips to reduce tyre degradation.

To amplify this message, we also conducted two national radio campaigns, reinforcing key safety messages while highlighting how proper tyre maintenance supports sustainability goals.

### SOCIAL MEDIA CAMPAIGNS: ENGAGING AND EDUCATING

Our digital marketing efforts continued to be a cornerstone of our communications strategy in 2024. We structured our content around four key pillars:

- Sustainability: Showcasing success stories from our recycled rubber projects, explaining the benefits of circular economy practices, and encouraging businesses and communities to adopt sustainable solutions.
- Education: Providing informative content on the environmental impact of tyres, tips for extending tyre life, and the benefits of recycled rubber products.
- Tyre Safety (Waste Reduction): Promoting regular checks for correct tyre pressure, wheel alignment, and tread depth to ensure optimal performance, improve safety, and reduce premature tyre replacement.
- Waste Management: highlighting the responsible management of end-of-life tyres.

This structured content plan helped us engage a wide audience, ensuring each campaign aligns with our broader goals of reducing waste and promoting sustainable tyre management.

### SCHOOLS COMPETITION: RECYCLED RUBBER FOR SAFER PLAYGROUNDS

Our nationwide school's competition returned for its second year, and the quality of entries was even higher than the previous year. Schools were invited to participate by creating sustainability-focused projects that highlighted waste tyres as a valuable material.

The winning entry came from St. Joseph's N.S., Ballyheigue, Co. Kerry, who produced a wonderful video about tyre care and the resource that tyres can become at the end of their life. The winners were awarded recycled rubber matting to upgrade their playground, promoting both safety and environmental responsibility.

### INVESTING IN INNOVATIVE RECYCLED RUBBER PROJECTS

Our commitment to finding practical, circular solutions for waste tyres was further





demonstrated through key projects that integrated recycled rubber into community spaces.

In 2024, we successfully supported projects that:

- Installed recycled rubber pathways in woodland areas, providing durable and environmentally friendly surfaces for public access routes.
- Applied recycled rubber solutions around sports pitches, enhancing player safety while delivering a sustainable alternative to traditional materials.

#### KEY PUBLIC AND TRADE EVENTS

In 2024, we actively engaged with the public and industry stakeholders by attending several key events, including:

- The National Ploughing Championships in Ratheniska, Co. Laois in September.
   This three-day event attracted 244,000 attendees, where we showcased recycled rubber matting and Flexi-Pave porous surfaces. We also engaged with the farming sector to discuss the expansion of the scheme to include agricultural tyres.
- The Local Authority Services National Training Group Annual Roads Conference in May, where we engaged with local authority representatives to discuss sustainable road surfacing solutions.
- The FTMTA Farm Machinery Show at Punchestown in November, providing an opportunity to connect with the agricultural sector.

- The Auto Trade Expo, where we met with motor industry organisations and our members to discuss tyre waste management and recycling.
- We were proud to once again be a sponsor at the Pakman Awards, which celebrate environmental excellence and innovation. This year's shortlist for the Tyre Champion award featured Continental Tyre Group Ltd, Bridgestone Tyres, and NR Rubber Products. The award went to NR Rubber Products, a County Louth-based company recognised for their exceptional use of recycled tyre rubber in matting products.

As we move into 2025, we remain committed to building on these achievements by continuing to promote responsible tyre management, investing in innovative recycling initiatives, and supporting community-driven sustainability projects. Through strategic communication and engagement, we aim to further reduce waste and enhance environmental outcomes for Ireland.





# CARBON CALCULATOR

We believe that adopting a circular approach to waste tyre management is an integral element to ensuring Ireland meets its carbon reduction targets. We are working to integrate recycled rubber into the standard green procurement process for government agencies.

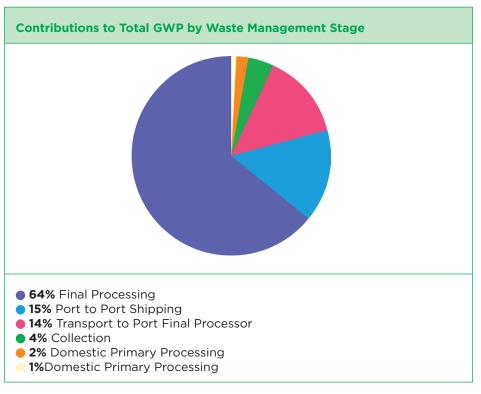
In 2024, our efforts in recovering and recycling end-of-life tyres (ELTs) delivered a total carbon benefit of 73,732 tCO2e (tonne of Carbon Dioxide Equivalent).

This was achieved through:

- Displacing the equivalent of 11,244 tonnes of PET Coke
- Avoiding the use of 22,708 tonnes of virgin rubber

#### The results for 2024 are shown in the table below:

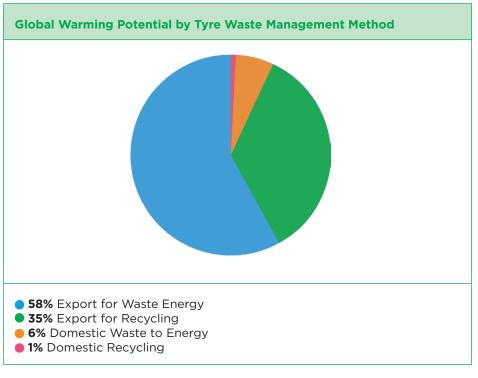
Total Tyres collected (tonnes)	42,552	
Waste to Energy in Cement Kilns		
Tonnes of tyres recovered	15,838	
Equivalent displaced coke from cement kilns (tonnes)	11,244	
Equivalent emissions avoided from burning pet coke (tCO2e)	74,766	
Emissions generated by recovering tyres in cement kilns(tCO2e) (2.95 tCO2e/t)	42,330	
Net Carbon Benefit arising from recovering ELTs (tCO2e) (1.71 tCO2e/t)		32,436
Recycling		
Tonnes of tyres recycled	26,715	
Equivalent virgin rubber weight (tonnes)	22,708	
Equivalent emissions avoided producing moulded virgin rubber (tCO2e)	65,377	
Emissions generated by recycling tyres as moulded rubber products (tCO2e) (0.88 tctCO2e/t)	24,081	
Net Carbon Benefit arising from recycling ELTs (tCO2e) (1.57 tCO2e/t)		41,296
Total Carbon Benefit Recovering and Recycling ELTs (tCO2e)		73,732



The chart illustrates the contributions of each Tyre Waste Management Process Stage to total Global Warming Potential (GWP).

#### **Key Observations:**

- Final Processing represents the most significant contributor to GWP, followed by transport-related emissions. This highlights key areas for targeted carbon reduction efforts.
- Understanding these contributions helps us to identify key areas in ELT management that require improvement to enhance our environmental sustainability.

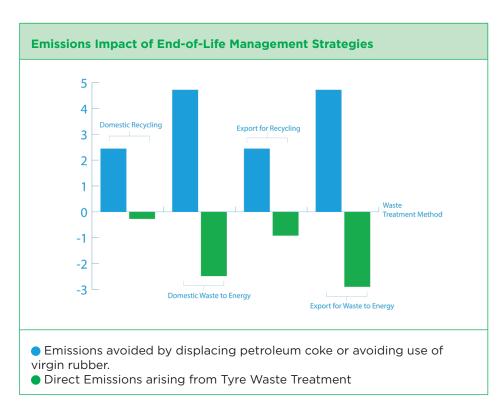


This chart illustrates the contributions of each End-of-Life Scenario (EoL) to Total GWP.

#### Key Observations:

- Export-based processes contribute to 93% of total GWP, emphasising the importance of prioritising close to home recycling solutions whenever possible.
- Reducing reliance on export methods could significantly lower our carbon emissions, improving our tyre waste management sustainability.

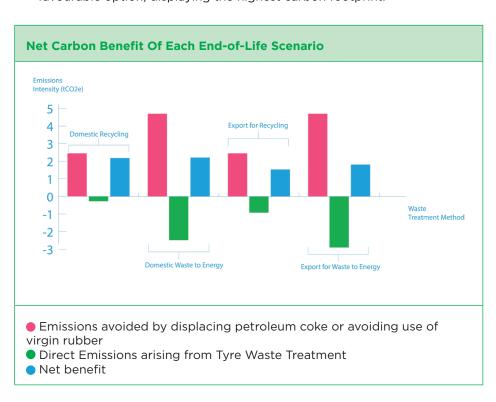




This graph illustrates the emissions impact per end-of-life (EoL) scenario for tyre waste treatment.

#### Key Observations:

- Domestic Recycling demonstrates the most effective balance, providing significant environmental benefits with minimal emissions.
- Export for Waste to Energy emerges as the least environmentally favourable option, displaying the highest carbon footprint.



This graph illustrates the net carbon benefit of each end-of-life option.

#### Key Observations:

- Domestic Recycling and Domestic Waste to Energy offer significant environmental benefits by managing waste locally on the island of Ireland.
- Export for Recycling and Export for Waste to Energy offer fewer environmental benefits, further reinforcing the carbon advantages of managing our ELTs locally.

We have continued our collaboration with Goodbody Clearstream Solutions, a specialist in corporate climate and sustainability solutions, to further refine our carbon calculator. Our methodology adheres to the principles outlined by ISO 14040. Utilising a partial life cycle assessment framework, specifically from gate to grave, our carbon calculator considers stages such as tyre collection, domestic primary processing, transportation, and final processing.

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

The results for 2024 table demonstrates that recycling ELTs represents the lowest carbon impact. However, the carbon benefit arising from using tyre shred as an alternative fuel in cement kilns is significant. Using ELTs as an alternative fuel in cement kilns avoids emissions generated by the incineration of petroleum coke.

In 2024, we participated in a trial investigating the use of 1,500 tonnes of recycled tyre granulate as a fossil fuel replacement in cement production, substituting petroleum coke with a more sustainable alternative, and reducing carbon emissions in the industry.

Waste to Energy in Ireland	
Tonnes of tyres recovered	1,500
Equivalent displaced coke from cement kilns (tonnes)	1,065
Equivalent emissions of burning pet coke (tCO2e)	7,081
Emissions generated by recovering tyres in cement kilns (tCO2e)	3,727
Total Benefits Comparison (tCO2e)	3,353

The results of the Carbon Calculator will serve as a foundational measurement for our strategic roadmap, aligned with Ireland's climate goal of achieving a 50% carbon reduction by 2030.

### INNOVATION



#### **LEAN ON GREEN**

We are committed to advancing sustainable solutions for end-of-life tyres that benefit the environment and the economy. Through research, collaboration, and strategic action, we are driving innovation to create a greener future for waste tyre management in Ireland.

#### **RESEARCH PROJECTS**

Our involvement in several research initiatives reflects our commitment to sustainable solutions for end-of-life tyres (ELTs):

Project ENTYRE: Mapping the Role of End-of-Life Tyres in Ireland's Circular Economy. This EPA-funded initiative led by University College Cork is exploring sustainable pathways for ELTs in Ireland. Circol ELT is a steering committee member for this project, actively providing industry insights and supporting stakeholder engagement to enhance the research's impact.

Barriers and Enablers to a Circular Economy Transition in Ireland. This EPA-funded initiative is being led by The Rediscovery Centre and Munster Technological University. A portion of this research is focusing on circular interventions for ELTs. We are supporting the efforts of the project to advance truck and bus tyre retreading to extend tyre life and reduce reliance on virgin materials.

Construct Innovate is Ireland's national research centre for construction technology and innovation, dedicated to driving sustainable advancements in the construction industry. As members of the Construct Innovate Network, we have partnered with University of Galway and University College Dublin in advancing two projects utilising the Construct Innovate Seed Fund.

- Integration of ELTs Produced Crumb Rubber in Pavement Construction for Enhanced Performance (University College Dublin) – exploring how ELTderived crumb rubber can enhance asphalt performance and durability.
- Assessment of Recycled Tyres as an Underlay Floor Treatment (University of Galway) - investigating the acoustic properties of recycled tyre rubber

underlays, and their potential applications in the construction industry.

Circol ELT is providing recycled rubber materials and expertise for both projects.

#### **IRISH INDUSTRY SUPPORT**

We are actively collaborating with Irish businesses to integrate recycled rubber into innovative products, supporting the transition to a circular economy.

In partnership with Sustainable Surface Solutions, an Irish company dedicated to developing environmentally friendly surfacing solutions, we supported the installation of FlexiPave at five locations around the country in 2024.

FlexiPave is a porous surface composed of recycled tyre rubber, stone aggregate, and a binder, making it suitable for various applications such as equestrian access paths, tree surrounds, nature trails, cycle routes, and golf course paths. These installations successfully repurposed nearly 4,000 end-of-life tyres into durable, porous paving surfaces. In addition to their positive environmental impact, these installations have provided valuable community benefits by enhancing public and recreational spaces.

NR Rubber is an Irish company specialising in the production of durable, anti-slip, and easy-to-clean rubber mats made from end-of-life tyres. Their products are designed for a variety of applications, including equestrian yards, farms, gardens, playgrounds, gyms, and industrial buildings. By transforming waste tyres into practical solutions, NR Rubber is contributing to the circular economy while promoting sustainable product innovation. We are supporting NR Rubber to complete product testing for acoustic certification.

We continue to collaborate with RAMfit, an innovative Irish company that specialises in the design and manufacture of high-quality exercise equipment. RAMfit is known for producing durable, functional fitness gear made using recycled rubber. These initiatives reflect our continued commitment to driving sustainable solutions for end-of-life tyres while supporting innovation, industry collaboration, and environmental protection.



### **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.<sup>1</sup>

Collector: Contracted Circol ELT Collector.

**CO2e:** Carbon Dioxide Equivalent is a metric measure used to compare the emissions from various greenhouse gases on the basis of their GWP, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

**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 is a term used to describe the relative potency, molecule for molecule, of a greenhouse gas, taking account of how long it remains active in the atmosphere. <sup>2</sup>

**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 a producer to sell on to consumer or another Retailer.

WERLA: Waste Enforcement Regional Lead Authorities.



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