



TRICEL

GENERATIONS OF INNOVATION

The Tricel Group
Sustainability Review

2021

EXECUTIVE SUMMARY

TRICEL AT A GLANCE



IRELAND'S LARGEST COMBINED SOLAR & HEAT PUMP SYSTEM INSTALLED

We have installed Ireland's largest combined Heat Pump and Solar PV system. A 775kW Solar PV system will displace 561,000kWh of grid electricity along with 3 large heat pumps which 684,000kWh of heat energy. In total this will reduce our carbon Foot print by 357,800kg of CO₂ per year. We have started a feasibility study to replicate this at our Tricel Gloucester plant.

357,800 kg CO₂ p.a.

THE TOTAL REDUCTION IN EMISSIONS FROM THE COMBINED SYSTEM

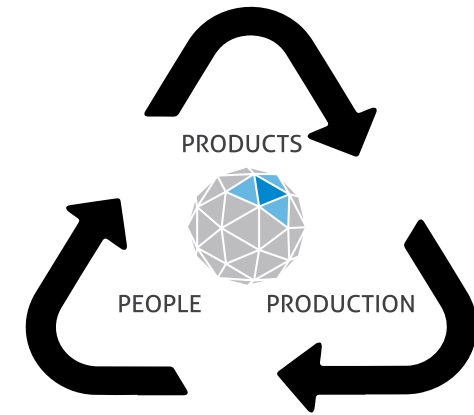
300 X 

THE EQUIVALENT TO THE EMISSIONS SAVED FROM POWERING 300 HOMES PER ANNUM

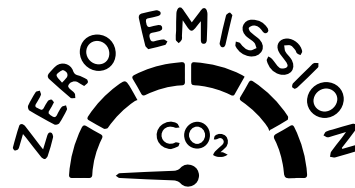
OUR SUSTAINABILITY MISSION & VISION

Building a more sustainable future has become a priority for us, our employees and our customers. To do this we are investing in our **production facilities**, our **products** and our **people**.

We choose to operate in a transparent and responsible manner, which will create value for Tricel and our stakeholders for years to come.



OUR SUSTAINABILITY TARGETS LONG TERM



NET ZERO EMISSIONS



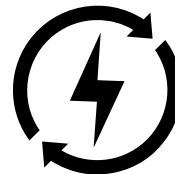
ISO APPROVED ENVIRONMENTAL MANAGEMENT



ISO APPROVED H&S

OUR CURRENT SUSTAINABILITY FOCUS

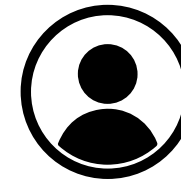
REDUCING ENERGY CONSUMED BY SMC KG
FOCUS ON ON-SITE ENERGY GENERATION



551

kilowatt hours to process every tonne of SMC*

MINIMUM AMOUNT OF EMPLOYEE IN-HOUSE TRAINING (LEARNUPON) HOURS COMPLETED



15

hours per person/per annum*

REDUCING THE AMOUNT OF WASTE REQUIRING LANDFILL DISPOSAL



0.11

tonnes of landfill per tonne of SMC produced*

TRICEL AT A GLANCE



A message from our CEO, Mike Stack

Firstly I'd like to welcome everyone to our sustainability review. While environmental issues have always been on the agenda in Tricel, in 2021 we formed our ESG team to encompass all elements of sustainability and to put a structure on our approach.

This has helped us to advance our sustainability goals in a transparent manner. Building a more sustainable future has become a priority for us, our employees and our customers. To do this we are investing in our production facilities, our products and our people.

We embrace new ideas and approaches to ensure we go the extra mile. Our core values walk hand in hand with sustainability principles and are embedded in each strategic decision made.

Our company ethos "Generations of Innovation" is built around three interlinking themes; Innovation, Quality and Heritage, which have been developed over the last 50 years. We will continue to apply these same principles on our journey to a more sustainable future.

The infographic features a world map composed of blue dots. Several Tricel logos are placed on the map, primarily in Europe and North America. To the right of the map, four black boxes with white text provide key statistics: "6 MANUFACTURING SITES", "15 LOCATIONS", "Ship to 50 COUNTRIES WORLDWIDE" (with a globe icon), and "600+ EMPLOYEES".

T TEAM
Working together to deliver the best outcomes through **relationships, respect** and **sharing**

R RESOURCEFUL
Adopt **lean thinking** in every way we **work**

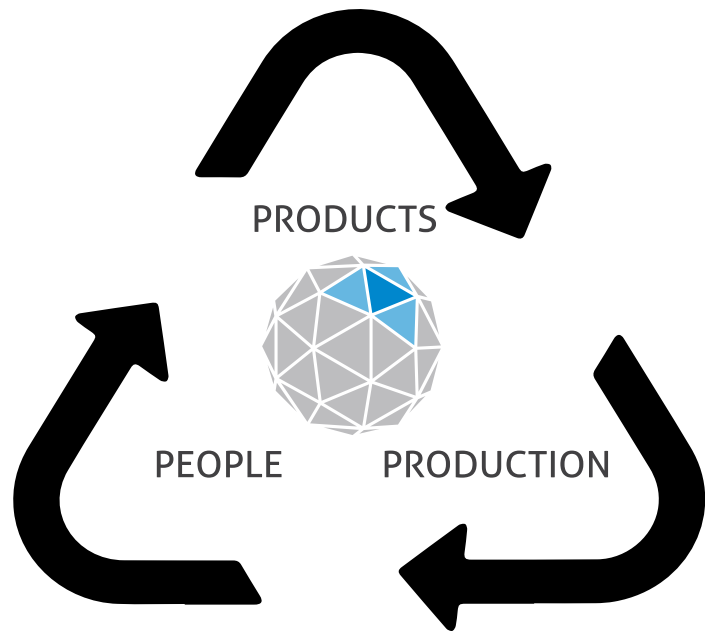
I INTEGRITY
Demonstrate **sound moral, ethical judgement** by doing the **right thing**

C CUSTOMER CENTRIC
Understand and **deliver** to the needs of our customers

E EMBRACE CHANGE
Be **creative, open-minded** and **resilient** in the face of **change**

L LEADER
Have the **courage, personal integrity** and **vision** that inspires and motivates others

...Continually Grow through Innovation and Change



We believe that sustainability is key to our core business strategy and we will promote this across the group. For Tricel, sustainability is about doing the right thing and protecting our environment for a better future.

Our approach to sustainability covers three main pillars Environment, Social and Governance. With these pillars in mind, we are continually investing in our **production facilities**, our **products** and our **people**.

OUR SUSTAINABILITY MISSION & VISION

The Tricel Group is committed to achieving the UN's Sustainable Development Goals (SDGs). The areas we feel that we would have the most impact right now are broken down into our Priority and Contribution Goals.

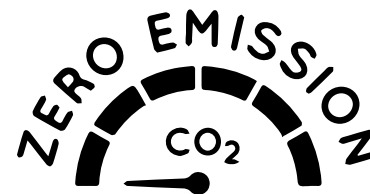
Tricel Priority Goals:



Tricel Contribution Goals:



LONG TERM SUSTAINABILITY TARGETS



NET ZERO EMISSIONS

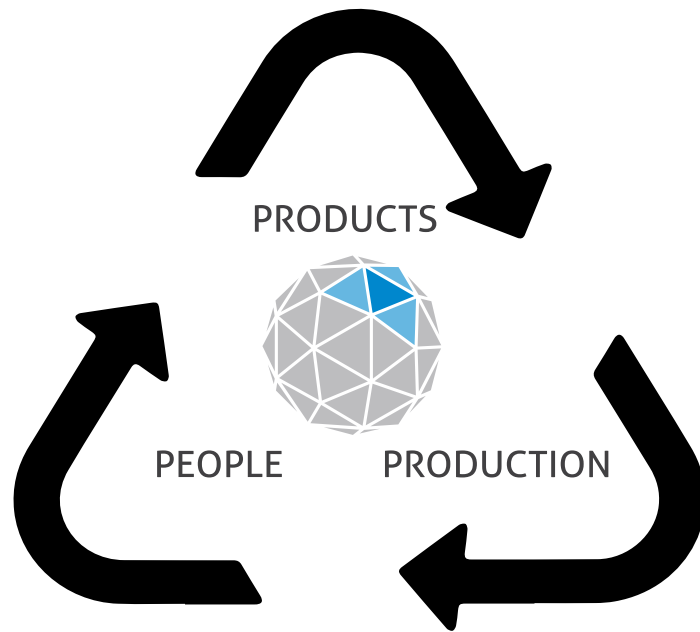


ISO APPROVED ENVIRONMENTAL MANAGEMENT



ISO APPROVED H&S

OUR 2021 SUSTAINABILITY ACTIONS



PRODUCTION IMPROVEMENTS

Over the past 3 years Tricel has installed a new state of the art SMC manufacturing facility at our headquarters in Killarney, Ireland. This ensures we have the most efficient solution for the manufacturing of our SMC material. To complement this we have installed Ireland's largest combined Heat Pump and Solar PV system. A 775kW Solar PV system will displace 561,000kWh of grid electricity along with 3 large heat pumps which 684,000kWh of heat energy. In total this will reduce our carbon Foot print by 357,8001kg of CO2 per year. We have started a feasibility study to replicate this at our Tricel Gloucester plant.

We have upgraded our manufacturing facility Dewey Water at Weston-Super-Mare in the UK with increased insulation, efficient heating and LED lighting.

In Tricel Poitiers in France we have added more office spaces and larger canteen facilities to improve the working conditions of our employees. Investment in robotics will increase manufacturing efficiency and reduce part defects to ensure higher quality and less waste.

PRODUCT IMPROVEMENTS

Tricel continue to increase sustainable solutions across our range or markets. As the worlds reliance on clean water increases, we are taking steps to develop products for the storage, pumping and treatment of water and wastewater. We continue to invest in R&D to offer our customers the sustainable solutions that they seek. Helping to protect our environment with our increasing range of wastewater treatment options. Our Tricel Seta, zero energy passive domestic waste water plant, is a growing share of our French market to meet custom demands. We continue to develop our flat pack model which results in huge transport savings.

Action pumps and Tricel Pumps increased range of variable speed pumps and monitoring equipment ensure our customers have the latest in efficient pumping solutions. Synthetic oils offer more environmentally friendly options to Finol Oil customers along with our Fuel Economy calculator which can reduce unnecessary oil changes. While our Composite material companies, Tricel Leeds and Tricel Newry offer or large range of sustainable products such as acetone replacements, recycled resins, low styrene resins and natural fibres.

INVESTING IN OUR PEOPLE

Our sustainability journey is not possible without our employees. It is they who set the standards and drive the changes required for us as a company to be more sustainability. We are building a culture continuous improvement and continue to invest time in training and education across the group. We have introduced a wellbeing week and undertake multiple community activities through the year. These will help the company but we hope also our employees in their own lives.

IRELAND'S LARGEST COMBINED SOLAR & HEAT PUMP SYSTEM



Anne & Con Stack (founders of Tricel) pictured with Micheál Martin T.D., Taoiseach, along with current Tricel Directors, Richard Stack, Mike Stack (CEO) and Con Stack Jnr.

In August 2021, amid the Covid 19 pandemic, Tricel began the ambitious installation phase of Ireland's largest combined Heat Pump and Solar PV system to date at our Killarney Facility. Working closely with Enerpower, the 775kw Solar PV system consisting of large solar arrays was fitted to the roofs of 3 of the factory's main units. Tricel's Solar PV system will displace 561,000 kwh of grid electricity, reducing our carbon emissions by 182,000 kg of CO₂ per annum.

We also installed a total of 3 large heat pumps to replace all kerosene boilers on-site, providing heat to five of the factory's main units. Our Heat pump system will provide 684,000 kwh of heat energy, reducing our carbon emissions by 175,800 kg of CO₂ per annum.

The total reduction in emissions from this combined Solar PV and Heat Pump project equates to 357,800 kg of CO₂ per year which is the equivalent to the emissions saved from powering 300 houses every year. The project, which was partially funded by SEAI, was completed in late 2021, marked with a site visit by An Taoiseach, Micheál Martin.



ENERGY TARGET

REDUCING ENERGY
CONSUMED BY SMC KG

FOCUS ON ON-SITE
ENERGY GENERATION

357,800 kg CO₂ p.a.

THE TOTAL REDUCTION IN EMISSIONS
FROM THE COMBINED SYSTEM

300 X 

THE EQUIVALENT TO THE EMISSIONS SAVED
FROM POWERING 300 HOMES PER ANNUM

EMPLOYEE WELLBEING

Our employees are key to us achieving our sustainability objectives. Throughout the year, 15 hours training per person was provided via the following formats:

- Learnupon (online training)
- Email communication
- Face to face

Education is vital to the success of the ESG project. Through continuous training we ensure that employees are kept up to date with the positive impact that they can have both at home and in our work environment. One of our training initiatives was based around our commitment to the All-Ireland Pollinator Plan. We have encouraged all group employees to create their own 1m² pollinator friendly area to help save the bee population, which is threatened with extinction.

A number of grass areas in Tricel Killarney have been identified to transform in to wild flower meadows. A landscaper has been commissioned to replace some of the existing grass and reseed them with native Irish wild flower seeds. A number of bee hotels will be positioned within the meadows to provide shelter for the bees. The presence of wildflowers with nectar-rich plants will help support dwindling populations of native pollinators including butterflies, moths and bees, helping to sustain insects that pollinate our food crops.

To the rear of Tricel HQ Killarney, there is a ring fort. The ring fort will be cleared (and not disturbed), with the area to the west of the ring fort transformed in to a recreational area. The area will contain picnic benches and possibly a water feature surrounded by another wild flower meadow. Over the next couple of years, it is envisaged that Tricel will develop a walk way through a portion of the woodland to the rear of the Tricel site. Access to the wooded area will be from this point.

We have also introduced a Composting initiative in to the canteen whereby tea bags, ground coffee, baked good including bread, rice and other grains, egg shells, fruit and vegetables will be composted. It is envisaged that this compost will be used to help enrich the wild flower areas throughout Tricel.

We also run a yearly employee well being week and hold quarterly Employee Recognition awards.



From top right: Image of the wood area at the rear of Tricel HQ, Killarney, Bee Hotels made with Sustainable Timber from the local Killarney Men's Shed, Our employee pollinator friendly education poster, and a map showing designated wildflower areas for Tricel HQ Killarney.



The World Bee population is in dangerous decline!

This is because we have *drastically reduced* the amount of food (flowers) and bee safe nesting sites in our landscapes.

WE CAN SAVE THE BEES!

Tricel encourages each employee to create their own 1m² pollinator friendly area:

- Leave 1m x 1m (or more) of your garden grow wild
- Create pollinator friendly flower arrangements
- Create hanging baskets & flower pots

TOP TIP: Lavender, Thyme, Sunflowers, Snowdrops and Buttercups are among the best pollinator plants to have in your garden!



PEOPLE TARGET

MINIMUM AMOUNT OF EMPLOYEE IN-HOUSE TRAINING (LEARNUPON) HOURS COMPLETED



15 HOURS TRAINING

per person/per annum completed for 2021

WASTE REDUCTION

At the end of 2021 we analyzed costs for waste which had increased on 2020. The increase was due to increase production on-site as the company grew, increased waste from capital projects and increases in disposal charges.

Waste disposal costs	2020	2021	% INCREASE
	€97,443	€110,969	13.8%

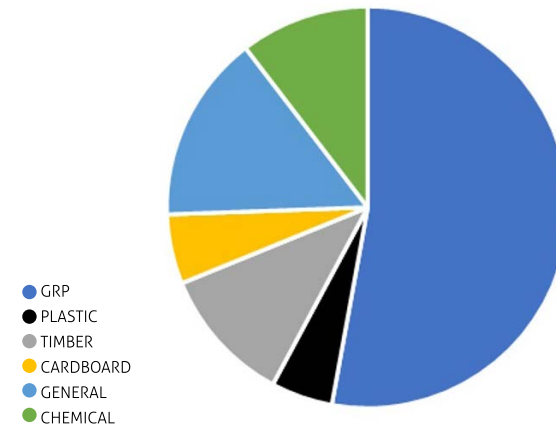
Surprisingly, recycling takes the smallest amount of waste made up on mostly cardboard. There is no recycling collection for plastics, cans etc. on-site. Based on the information gathered our priority had to be to Reduce, Reuse and Recycle.

Key actions taken included investigating the best recycling facilities on-site. A government change in legislation coincided with this decision which allowed for soft plastics to be recycled. This was a big help as it allowed us to potentially recycle a much larger % of our waste.

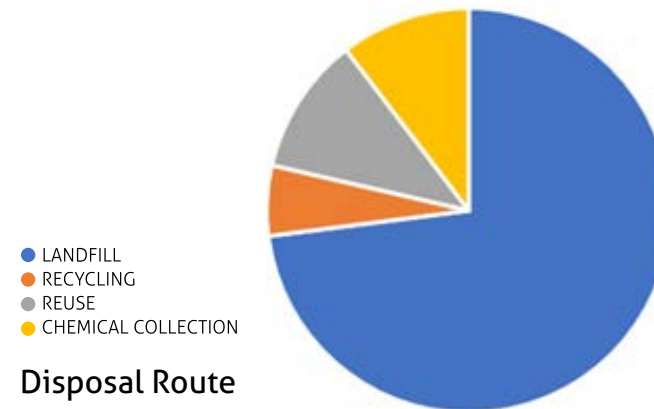
Further studies were carried out per category to identify exact sources of waste and possible reclassification of disposal route. To date, in dept analysis of the GRP, Plastic and Timber have identified the following actions to be taken:

- **Reduce GRP waste** – focus on defect rates in production
- **Reuse GRP waste** – feasibility study to see if GRP can be used as an aggregate in eco – concrete
- **Reuse plastic waste** – plastic bags generated in Compounding can be used as alternative to the plastic bags bought for packing in stores
- **Reduce plastic waste** – engage with plastic pipe supplier to change supply length
- **Reduce plastic waste** – a biodegradable Cling film has be trailed
- **Recycle plastic waste** – better recycling options on-site
- **Reuse timber waste** – pallets generated in the compounding department to be reused for shipping by stores
- **Reuse general waste** – feasibility study to introduce a composter on-site for organic waste which would feed into our biodiversity project.

Our overall aim is to continue to reduce the amount of waste requiring landfill disposal.



Waste Breakdown 19/07-26/07 2021



Disposal Route



WASTE TARGET

REDUCING THE AMOUNT OF WASTE REQUIRING LANDFILL DISPOSAL

0.11 TONNES OF LANDFILL

per tonne of SMC produced in 2021



TRICEL

GENERATIONS OF INNOVATION