



# Net Zero Transition Plan

2024



# Redefining Packaging for a Changing World

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### DS Smith Net Zero Transition Plan 2024

Our transition plan communicates the targets, actions and resources that we are deploying to enable the transformation to 'Net Zero' greenhouse gas (GHG) emissions.

It is a living document, setting out responses to climate-related risks and opportunities and highlighting the key initiatives that are intended to contribute to an economy-wide transition.

Our plan should be read alongside our 2024 Sustainability Report, which includes our annual progress update on delivering our Now & Next Sustainability Strategy, which aims to contribute towards leading the transition to a low carbon, circular economy.

This report has been voluntarily prepared with reference to the UK Transition Plan Taskforce (TPT) framework, which aims to set the 'gold standard' for robust and credible transition disclosures.

→ [Go to page 4 for our transition plan at a glance](#)

#### Cautionary statement

This plan contains certain forward-looking statements including in connection with the Group's emissions reductions targets, strategy and actions and other climate-related matters. By their nature, these statements involve uncertainty since future events and circumstances can cause outcomes to differ materially from those anticipated or may not be within our control. In addition,

the forward-looking statements reflect knowledge, information and estimates available at the date of preparation of this plan and based on current assumptions and expectations, and the Group undertakes no obligation to update these forward-looking statements. Nothing contained in this plan should be construed as a profit forecast, nor does it contain any investment, accounting, legal, regulatory or tax advice, nor is it a recommendation or invitation to enter into any transaction. You are advised to exercise your own independent judgement (with the advice of your professional advisers as necessary) with respect to the risks and consequences of any matter contained herein.

### Our 2024 reporting suite



Annual Report 2024



Sustainability Report 2024



ESG Databook 2024



## GROUP CHIEF EXECUTIVE'S INTRODUCTION

# Foreword from our Group Chief Executive

## Fast facts about our transition to Net Zero



We are a leading global packaging company, specialising in recyclable paper packaging



Our circular business model helps our customers to close the loop over many packaging life cycles



Our 1.5°C 2030 target is validated by the Science Based Targets initiative (SBTi)



We are committed to reaching Net Zero greenhouse gas (GHG) emissions by 2050



Since our 2019/20 base year, we have achieved a 19 per cent reduction in total GHG emissions and in 2023, we were recognised for corporate transparency and performance on climate change by global environmental non-profit CDP, securing a place on its annual 'A List'



**“Whilst it is widely recognised that manufacturing is one of the most challenging sector to decarbonise, we are committed to playing our part, securing the longevity of recyclable packaging in a low carbon, circular economy.”**

I am delighted to present our first transition plan, which describes the actions we are taking to deliver our science-based target, which is to reduce our Scope 1, 2 and 3 greenhouse gas emissions by 46 per cent by 2030, compared to 2019.

In today's world, the imperative for businesses to actively transition from fossil fuels and to find new ways of generating and consuming energy has never been more pronounced.

Making progress towards our ambitious climate targets helps to strengthen our commitment to delivering more circular solutions for our customers and wider society. It is a strategic imperative that fits well with our focuses on circularity, innovation and resilience.

Whilst it is widely recognised that manufacturing is one of the most challenging sectors to decarbonise, we are committed to playing our part, securing the longevity of recyclable packaging in a low carbon, circular economy.

I believe our commitment to reaching Net Zero is a strategic investment in the long-term future of our business, particularly through combined leadership in the circular economy and climate action. It is the businesses that are leading the climate transition that will be better positioned to foster innovation, deepen customer relationships, and increase their resilience.

We are committed to:

- Developing our plans in line with climate science
- Building innovative partnerships in the value chain to help to deliver our commitments,
- Advocating for greater clarity and certainty over long-term energy strategy from policymakers,
- Securing the circular economy as a key part of the solution to climate change, shifting how we make and consume resources as well as energy,
- Communicating regular progress updates through clear and transparent annual reporting, with reference to the latest climate disclosure standards.

I am confident that by pursuing our transition plan, DS Smith is positioned to have a real impact in helping to reduce the rise in global temperatures and that this transition plan report acts as a tool to support that.

I am incredibly proud of all of our people, suppliers, customers and other stakeholders for making this happen and look forward to your support and collaboration on this critical journey.

**Miles Roberts**  
Group Chief Executive



## AT A GLANCE

# Our Net Zero Transition Plan

## Our Purpose

Redefining Packaging for a Changing World

## Our Sustainability Strategy

### Now & Next



DS Smith Sustainability Report 2024



[Learn more about our Now & Next Sustainability Strategy and the progress we are making in our Sustainability Report](#)



## Carbon

Decarbonising our operations and value chain

### Ambition

Our plan intends to deliver a

# 1.5°C

validated science-based target

Reduce Scope 1, 2 and 3 GHG emissions

# 46%

by 2030 compared to 2019 and reach Net Zero GHG emissions by 2050

Also, we aim to engage

# 100%

of our strategic suppliers to set their own science-based targets by 2027

### Action

Our plan sets clear actions and milestones

In our own operations (Scope 1 and 2)

Reduce energy, materials and waste

Switch to renewable energy

Adopt new technologies

Our plan aims to engage and influence

In our value chain (Scope 3)

Suppliers

Customers

Consumers

### Accountability

Our plan responds to our identified climate-related risks and opportunities

Climate-related risks

Increased spend on carbon taxes

Increased threat to supply of raw materials

Increased severity of extreme weather events

Increased likelihood of water stress

Climate-related opportunities

Growth in demand for sustainable packaging

Greater resource efficiency

Use of lower-emission energy sources

Our plan is supported by

- Strong governance
- Transparent reporting
- Robust assurance



NET ZERO TRANSITION PLAN

# Ambition

As part of our Now & Next Sustainability Strategy, we have committed to a 1.5°C science-based target for 2030 and to reach Net Zero by 2050.



Redefining Packaging  
for a Changing World

The Power of Less<sup>®</sup>

## In this section

### Foundations

- Reaching Net Zero through the circular economy
- Business model and value chain
- Key assumptions and external factors



## AMBITION - FOUNDATIONS

# Reaching Net Zero through the circular economy

DS Smith is a leading provider of sustainable packaging solutions across Europe and North America.

Our circular business model, which includes recycling, paper and packaging operations, plays a central role in ecommerce, fast moving consumer goods (FMCG) and industrial value chains.

## Strategic ambition

Our strategic ambition is a part of our Now & Next Sustainability Strategy, which includes commitments relating to Circularity, Carbon, People & Communities and Nature.

Building on a long-term record of emissions reduction, in 2022 we accelerated our decarbonisation plans by setting a 1.5°C science-based target, validated by the Science Based Targets initiative (SBTi).

Our climate-related targets are:

- Reduce Scope 1, 2 and 3 GHG emissions 46 per cent by 2030 compared to 2019
- Reach Net Zero GHG emissions by 2050
- Encourage 100 per cent of our strategic suppliers to set their own science-based targets by 2027

In support of a 1.5°C transition to Net Zero, we are committed to considering the Paris Agreement in our business activities, including in our external engagement, as underpinned by the IPCC Sixth Assessment Report (AR6) and the IPCC Special Report on Global Warming of 1.5°C (SR1.5).

Our Now & Next Sustainability Strategy includes other commitments that supplement and support the ambition of our transition plan.

## Circularity-related ambitions that contribute to Net Zero

We have set circular economy ambitions that reduce emissions from resource efficiency, including that our packaging is to be recycled or reused by 2030; our packaging is to be optimised for individual supply chains by 2030; and to send zero waste to landfill by 2030.

## Nature-related ambitions that contribute to Net Zero

The resilience of our circular business is dependent on the provision of natural resources and ecosystem services. Although we recycle used packaging, fresh fibre is required as the primary raw material and as a renewable fuel, in the form of biomass. Water is also a critical natural resource, used to transport fibres through the process and as a conduit of energy, in the form of steam. We are in the process of assessing our dependencies on nature and setting targets to regenerate nature, taking a science-based approach.



## Circularity to transform how we make and use things

We see the circular economy as a key solution to reach Net Zero, alongside shifting the global energy system away from fossil fuels. In the circular economy, the aim is to achieve more from what we already have. In comparison to the traditional linear economy, it is a superior model for limiting climate change, using existing materials over and over again, for as long as possible, lessening demand for virgin products.

## Keep products and materials in use

This means designing for durability, reuse and recycling to keep materials circulating.

## Design out waste and pollution

This includes reducing greenhouse gases and pollutants in air, land and water.

## Regenerate and renew nature

The circular economy avoids the use of non-renewable resources and preserves or enhances renewable ones, for instance by managing forests sustainably.

Cardboard packaging works well in the circular economy because it is circular by nature. It is produced from fibres sourced from responsibly managed forests, that can be recycled multiple times over. This keeps materials in use, designs out waste and regenerates and renews nature.

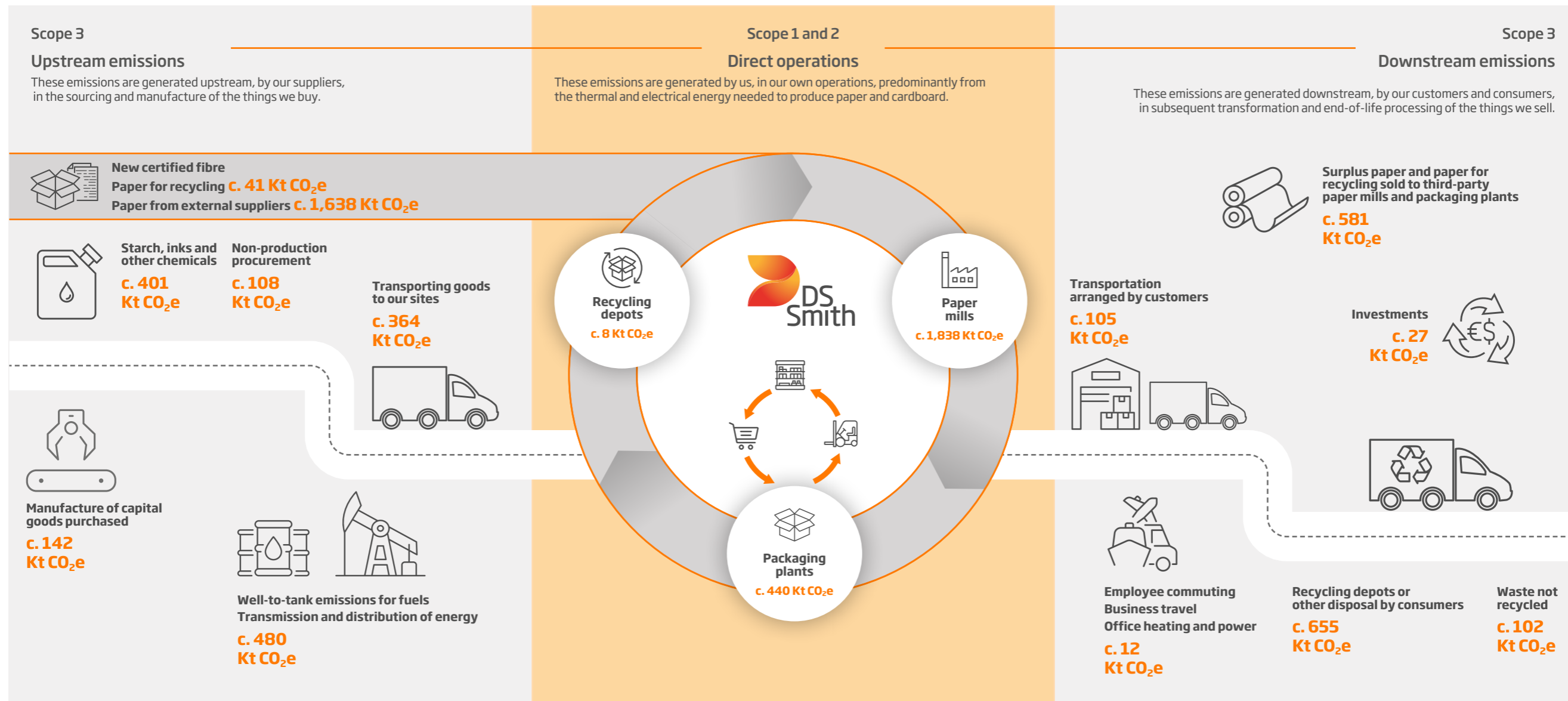
The circular economy and enabling our customers to enter the circular economy, with widely recycled packaging plays a key role in our transition plan.





## AMBITION - FOUNDATIONS

## Our value chain carbon footprint





## AMBITION - FOUNDATIONS

# Business model and value chain

## Climate risks and opportunities

We have identified seven climate-related issues that may have a potential future financial impact on DS Smith.

In the short term, new carbon taxes could be introduced, or existing taxes extended as a policy tool to incentivise decarbonisation.

In the medium to long term, raw materials could become more expensive or difficult to acquire due to disruption or shifts in market dynamics caused by climate change.

The frequency and severity of extreme weather events could increase, and competition for water could increase.

In the short term, there are opportunities to capitalise on the growth in demand for sustainable packaging, use fewer resources and adopt lower-emission energy sources.

Risks and opportunities could arise over the short term (0-3 years), medium term (3-10 years) and long term (10+ years).





These fit with the Group's corporate and capital planning cycle (three years) and the risk reporting cycle (one year), which is used to assess and communicate risk.

Our climate scenario analysis gives illustrative financial impacts in a potential future 1.5°C and contrasting 2°C scenario.




For more information about how climate-related risks and opportunities are identified, assessed and managed, alongside how their potential financial impacts are calculated, please refer to our complete TCFD disclosures.

See our [Task Force on Climate-related Financial Disclosures \(TCFD\) on pages 60 to 77 of DS Smith Annual Report 2024](#)

## Climate-related risks and their potential financial impact illustrated in our climate scenario analysis

Climate-related risk	Type	Time horizon	Likelihood		Potential financial impact as indicated by reference to climate scenarios and our analysis
			1.5°C scenario	>2°C scenario	
<b>Transition</b>					
 <b>Increased spend on carbon taxes</b>	Policy and legal	Short term	•••••	•	£45-107 million potential increase in operating costs, depending on the price of future allowances in emission trading schemes, which would likely be greater in a 1.5°C scenario versus a >2°C scenario as a way to meet public policy objectives.
 <b>Increased cost of raw materials or threat to supply</b>	Market	Medium - long term	•••	•••••	£26-87 million potential increase in production costs attributable to climate-related disruption, which would likely be greater in a warmer scenario (e.g. 10 per cent increase in costs in a >2°C scenario versus 3 per cent increase in a 1.5°C scenario).
<b>Physical</b>					
 <b>Increased severity of extreme weather events</b>	Acute physical	Medium - long term	••	•••••	£8-90 million potential business value-at-risk due to production downtime, assuming 1-12 months of disruption at one of our paper mills located in a region prone to specific climate events (e.g. 12 months in a >2°C scenario versus one month in a 1.5°C scenario).
 <b>Increased likelihood of water stress</b>	Chronic physical	Long term	••	•••••	£1-2 million potential business value-at-risk due to production downtime, assuming 7-31 days of interruption at one of our paper mills located in a region at risk of water stress (e.g. 31 days in a >2°C scenario versus seven days in a 1.5°C scenario).
<b>Total potential financial impact of climate-related risks</b>					<b>£80-286 million*</b>

## Climate-related opportunities and their potential financial impact illustrated in our climate scenario analysis

Climate-related opportunity	Type	Time horizon	Likelihood		Potential financial impact as indicated by reference to climate scenarios and our analysis
			1.5°C scenario	>2°C scenario	
 <b>Growth in demand for sustainable packaging</b>	Products and services	Short term	•••••	•••	£420-637 million potential increase in revenue owed to production growth, which would likely be greater in a 1.5°C scenario as society demands more sustainable products and services.
 <b>Greater resource efficiency</b>	Resource efficiency	Short term	•••••	•	£12-37 million potential cost saving as a result of resource efficiency (reduced energy consumption), which would likely be greater in a 1.5°C scenario as more resource efficiency opportunities are exploited.
 <b>Use of lower-emission energy sources</b>	Energy source	Medium - long term	•••••	•	Zero-£77 million potential cost saving as a result of use of lower-emission energy sources, which would likely be greater in a 1.5°C scenario as more lower-emission energy sources are exploited.
<b>Total potential financial impact of climate-related opportunities</b>					<b>£432-751 million*</b>

••••• Greater likelihood • Lesser likelihood

\* Climate scenarios are used, alongside other tools, to assess vulnerability to climate change and are intended to represent plausible future states to assist learning and aid decision-making rather than to present future projections or forecasts. The values presented have changed compared to last year owed to changes in revenues, costs, currency exchange rates and emission values used for the analysis. The values are illustrative and estimated within the context set out by each reference scenario and then adapted to fit DS Smith. This is based on a single financial metric, without considering the implications of secondary impacts. For example, there may be a cost associated with damage to reputation that could occur as a result of business interruption owing to climate change.



## AMBITION - FOUNDATIONS

# Business model and value chain *continued*

We anticipate that changes in our business model and value chain will continue towards 2050 in response to our identified climate-related risks and opportunities.

Our transition plan is intended to be flexible in adapting to how these develop.



## Upstream changes

### Changes in procurement initiatives to respond to climate change

For example, we are engaging our strategic suppliers to set science-based targets, deploying bespoke engagement mechanisms depending on supplier maturity.

→ [See more on page 21](#)

### Changes to maintain security of supply

For example, optimising make, buy or sell decisions across all regions, sourcing key paper grades to deliver and flex to rapidly changing needs when necessary.

→ [See more on page 8 and in our Annual Report](#)

### Changes to ensure adequate water supply

For example, integrating water management planning into business continuity plans, including engagement with external parties.

→ [See more on page 8 and in our Sustainability Report](#)



## Direct operations changes

### Changes in fuel and energy mix towards a greater share of renewables

For example, at Kemsley paper mill, we have transitioned c. one-third of the steam supply from gas to waste-to-energy solutions.

Kemsley is c. 14% of our carbon footprint.

→ [See more on page 16](#)

### Changes in energy generation and sales

For example, at Aschaffenburg paper mill, we are partnering with E.ON to deploy E.ON IQ Energy artificial intelligence, which utilises production, grid and commodity market intelligence to optimise the energy supply.

Aschaffenburg is c. 6% of our carbon footprint.

→ [See more on page 16](#)

### Changes in assets and technologies

For example, at Rouen paper mill, we are transitioning the coal-fired boiler to a new biomass boiler, significantly improving efficiency and reducing emissions.

Rouen is c. 5% of our carbon footprint.

→ [See more on page 16](#)

## Downstream changes



### Changes in customer interest in closed-loop recycling, resource efficiency measures and fibre traceability

For example, affirming the decision to specialise in paper-based, recyclable packaging.

→ [See more on page 17](#)

### Changes in our packaging strategies focused on circular economy, towards carbon neutral/positive packaging

For example, presenting data driven by our Circular Design Metrics to give customers indicative estimated average carbon footprint metrics to inform design decisions.

→ [See more on page 17](#)

### Changes in societal view on packaging reuse for certain applications

For example, piloting reuse innovations to complement recycling systems in real-world environments and scaling up potential solutions.

→ [See more on page 17 and in our Sustainability Report](#)



## AMBITION - FOUNDATIONS

# Key assumptions and external factors

Our transition plan looks into the future and assumptions have to be made to support decisions, often made with limited information.

There are significant external factors that we, the industry, and the wider economy depend on to transition to Net Zero.



Topic	Nature of key assumptions and external factors
<b>Policy and legal</b>	Policy and legal changes in the short, medium and long term have the potential to impact our plan. These could include future carbon taxes, the availability of subsidies and other incentives, in addition to related regulatory requirements such as packaging, deforestation and waste. Policy and legal changes could influence the attractiveness of investing in certain markets and regulatory changes that relate to recycling and recycling infrastructure could have implications on our ability to deliver our plan.
<b>Market</b>	Our plan is dependent on strong demand for recyclable packaging, including that the circular economy is an increasingly attractive proposition to our customers towards 2030 and beyond. We are dependent on our suppliers and customers decarbonising in parallel to a 1.5°C trajectory and a stable macroeconomic environment is more likely to support entire markets and sectors in transitioning to Net Zero.
<b>Physical</b>	Our climate scenario analysis and plan builds on assumptions according to a range of future scenarios in the long term to 2030, which includes a range of temperature assumptions (e.g. contrasting 1.5°C and 2°C scenarios). We assume therefore that the future may experience a range of average global temperature increases, but aim with the strategic ambition of our plan to limit warming to 1.5°C). Over a long term we evaluate changes in weather patterns, water security and impacts on assets, implementing mitigation measures accordingly.
<b>Products and services</b>	Building on our dependency on strong demand for recyclable packaging, we assume that we are able to continue to innovate and adapt our products and services offering to meet this demand. In particular, our plan and climate scenario analysis responds to the growth opportunities to capture market share as a result of greater demand for recyclable packaging, enhanced by the added value of our sustainability, innovation and circularity credentials.
<b>Resource efficiency</b>	As a part of the circular economy, we are dependent on our own abilities and the abilities of our suppliers and customers to find ways to use fewer resources (e.g. materials, energy and water). This includes through design, operational and technological developments that reduce climate impact without compromising quality. For reducing downstream emissions, we are dependent on economy-wide investment in recycling infrastructure alongside materials research and development and other interventions that increase resource efficiency.
<b>Energy sources</b>	As energy systems evolve, our plan is dependent on our ability to maximise energy efficiency measures, switch to lower-emission energy sources and adopt new technologies and innovations. These developments could be equipment based (e.g. e-boilers and carbon capture and storage), fuel-based (e.g. hydrogen biomass) or process-based (e.g. heat recovery and optimisation through digital and data technologies). Crucially, in the short, medium and long term, renewable energy sources need to be affordable and available at the scale required to meet the needs of our energy-intensive operations in a Net Zero economy.

This list is not intended to be exhaustive and our transition plan remains responsive to changes in the external environment.

This includes reacting swiftly to changes in policy, availability of subsidies and renewable energy opportunities.



## NET ZERO TRANSITION PLAN

# Action



We are prioritising our actions in the most energy and emissions intensive parts of our business operations and value chain.

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**In this section****Implementation strategy**

- Business operations
- Products and services
- Policies and conditions
- Financial planning

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**Engagement strategy**

- Engagement with value chain
- Engagement with industry and government
- Engagement with public sector, communities and civil society



## ACTION

# Implementation strategy

In order to deliver future progress towards our science-based target, we have an ambitious roadmap of initiatives that prioritise our most significant emission sources.

Reduce Scope 1, 2 and 3 greenhouse gas emissions

# 46%

by 2030 compared to 2019

We have identified three main levers that we can use to reduce our emissions, with major projects that utilise each lever underway.



## Reduce

- Reducing energy consumption
- Reducing material consumption
- Reducing waste generation



## Switch

- Switching to renewable energy



## Adopt

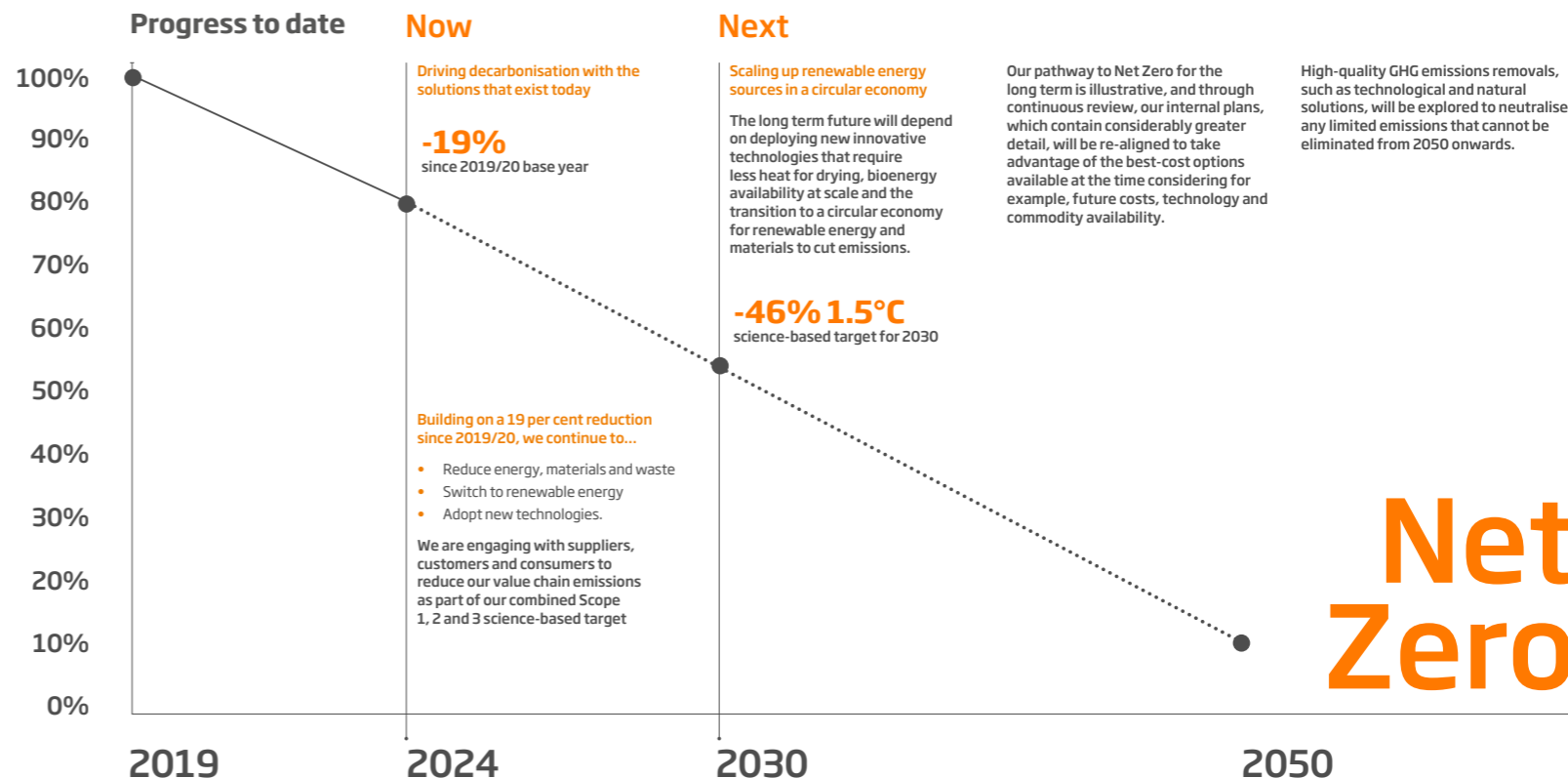
- Adopting new technologies

These levers primarily address Scopes 1 and 2 greenhouse gas emissions, although many projects also have value chain impacts that influence Scope 3 emissions.

They all collectively respond to climate-related risks and opportunities.

[Read more about climate-related risks and opportunities in our Task Force on Climate-related Financial Disclosures \(TCFD\) on pages 60-77 of DS Smith Annual Report 2024](#)

## Our anticipated pathway to Net Zero GHG emissions



There are inevitable uncertainties relating to the precise timings of the deployment and delivery of our plan, which predominantly stem from planning far into the future. Actual future emissions are likely to vary as it is challenging to predict the future availability and cost of commodities, policy environment and timings of project delivery. We aim to prioritise projects that reduce greenhouse gas emissions urgently and cost effectively, taking into consideration the likely future availability and viability of options. We intend to use high-quality offsets only as a last resort to balance a maximum of 10 per cent of remaining 'hard-to-abate' emissions through high-quality natural climate and technological solutions. Our internal plans take into consideration assumptions relating to future growth, which will impact emissions.



## ACTION - IMPLEMENTATION STRATEGY

## Business operations

In our own operations (Scopes 1 and 2)

 Reduce

The objective of this lever is to continuously identify and pursue opportunities to reduce energy, material and waste in our processes, through specific interventions designed to promote efficiency. This helps to reduce our carbon footprint by ensuring that no more resources are used than necessary in the first place. This includes reducing material consumption and waste generation, ensuring that the circular economy plays a role in reducing emissions in our operations.

## Why we have chosen this lever

According to the International Energy Agency (IEA), at least a two per cent improvement in energy efficiency is needed for the Pulp and Paper industry to be on track for 2030. There are opportunities to increase energy efficiency through operational, technological and behavioural changes that also have the potential to reduce energy cost. Reducing waste is an opportunity to obtain higher levels of resource efficiency, leading to improved yields.

## We are committed to

Maintaining ISO 50001(2018) energy management system certification at 100 per cent of our in-scope sites (covering c. 90 per cent of our energy consumption).

This enables a continuous improvement approach to specific energy efficiency, ensuring that energy is used efficiently per unit of production.

## Responding to climate-related risk



Increased cost of raw material or threat to supply

## Responding to climate-related opportunities



Growth in demand for sustainable packaging



Greater resource efficiency



## Reducing energy with energy efficiency 'deep dive' studies

As part of our energy programme, our 'deep dive' studies continue to reveal opportunities for our sites to reduce their energy consumption with a range of interventions, from simple behavioural changes to deeper process changes.

Our packaging plants have begun to develop action plans to achieve improvements each year to 2030, and we continue to deploy ISO 50001(2018) certification at 100 per cent of our in-scope sites (covering c. 90 per cent of our energy consumption). This is supported by training on best practices.



## Reducing material consumption through fibre optimisation

We optimise fibres to ensure that we use no more material than necessary.

This involves optimising materials for efficiency, driving savings through small improvements to dimensions and shape that can be multiplied over thousands of units, reducing energy and water consumption, and waste generation.

Supported by the use of our Circular Design Principles, fibre optimised solutions are designed for our customers' unique supply chains, ensuring their products remain safe and protected whilst on the move but with lower impact.

2023/24

In 2023/24, we conducted 'deep dives' across 23 locations, documenting significant energy sources, flows, opportunities for metering and future reductions.

We met our internal efficiency target improvements, including a 2 per cent improvement compared to last year at our packaging plants.

2024/25

For 2024/25, we plan to equip Energy Champions across the business with new training materials and updated standards to drive improvements.

We aim to complete our waste stream mapping to better evaluate waste reduction opportunities and aim to refresh our waste reduction plan.

2025/26

We anticipate that by 2025/26, all of our most energy-intensive sites will have action plans in place following their 'deep dive' studies.



## ACTION - IMPLEMENTATION STRATEGY

Business operations *continued*

In our own operations (Scopes 1 and 2)



## Switch

The objective of this lever is to gradually transition from fossil fuels to renewable or intermediate lower carbon sources of energy, generated from bioenergy, solar, wind or other renewable sources. By introducing more renewables, we aim to decouple emissions and growth by ensuring that our future energy demand is met by low-emission energy sources. This includes switching to renewable electricity tariffs, as well as consuming electricity and steam generated from renewable fuels, either within our own generation facilities or from third parties.

**Why we have chosen this lever**

According to Our World in Data, around one seventh of the world's primary energy is sourced from renewables, and this is expected to increase to 2050, with almost 3,700 GW of new renewable capacity expected to come online by 2028 (IEA).

We are continuing to investigate the feasibility of acquiring renewable energy in the most carbon-intensive markets in which we operate to secure long-term access to affordable and clean energy.

**We are committed to**

Continuing to identify and evaluate opportunities to transition from fossil fuels to renewable energy sources, aiming to continue to increase the proportion of renewable energy in our overall fuel and energy mix.

**Responding to climate-related risk**

Increased spend on carbon taxes

**Responding to climate-related opportunities**

Growth in demand for sustainable packaging



Use of lower-emission energy sources

**€90 million coal to biomass transition at Rouen paper mill**

In partnership with Engie, the coal-fired boiler at Rouen is being replaced with a new biomass boiler. It is anticipated that the boiler will be fuelled by c. 30 per cent by-products (pulper waste) and c. 70 per cent waste wood (e.g. furniture and demolition waste).

By 2025/26, this aims to reduce emissions by c. 99,000 tonnes.

The project is supported by a €15 million subsidy from the French Agency for Ecological Transition (ADEME).

**From solar to hydrogen: the energy sources of the future**

A range of opportunities to switch to lower carbon energy sources is being explored for our packaging plants, including assessing the viability of over 100 solar installations to reduce c. 25,000 tonnes CO<sub>2</sub>e to 2030.

An even more novel fuel switch may come from green hydrogen, which could play an important role in our transition, particularly beyond 2030. An innovative trial has begun at our Lockerbie packaging plant, investigating how a blend of hydrogen with natural gas could produce steam at the corrugating site.

2023/24

In 2023/24, we deployed two new solar installations in Portugal, accompanying a 50,000MWh renewable electricity power purchase agreement (PPA) for Iberia.

We undertook more feasibility studies to identify new viable locations for additional solar installations.

2024/25

For 2024/25, we plan to begin the installation of an additional 20 solar installations in the first year of our solar roll-out programme.

We anticipate that the green hydrogen investigation at Lockerbie will complete.

2025/26

We anticipate that by 2025/26, the biomass boiler at Rouen paper mill will be fully operational.



## ACTION - IMPLEMENTATION STRATEGY

Business operations *continued*

In our own operations (Scopes 1 and 2)

 **Adopt**

The objective of this lever is to adopt new technologies that modernise how we generate and consume energy, reducing our overall energy consumption and greenhouse gas emissions. By introducing modern corrugators, boilers and other machinery that consume less energy as part of our asset renewal strategies, we aim to take advantage of the latest technological innovations. This includes adopting more efficient combined heat and power (CHP) plants and waste-to-energy solutions, in collaboration with world class energy transition partners.

**Why we have chosen this lever**

According to McKinsey, there is a \$4-6 billion industry opportunity for pulp and paper digital technologies\*, with top new innovations including alternative fibres, recycling technologies and robotics, which all present opportunities to reduce emissions.

As part of our digital and innovation strategy, we are exploring the role of data in our decarbonisation plans. For example, at Aschaffenburg, where artificial intelligence is optimising the CHP plant in real time, balancing efficient and flexible supply based on production, grid and commodity market data.

**We are committed to**

Continuing to explore new technologies and where feasible adopting the best cost solutions that maximise carbon reduction within our existing organic investment programme.

\* McKinsey (2021) Tapping digital's full potential in pulp and paper process optimisation

**Responding to climate-related risk**

Increased spend on carbon taxes

**Responding to climate-related opportunities**

Growth in demand for sustainable packaging



Use of lower-emission energy sources

**£48 million upgrade to Kemsley's fibre preparation line**

As part of our organic investment programme, this multi-year initiative is set to deploy a state-of-the-art drum pulping and screening system that efficiently separates contaminants from fibre, such as plastics and barrier coatings.

This system maximises material recovery in the recycling process, reducing energy consumption with anticipated savings of c. 6,000 tonnes CO<sub>2</sub>e.

Anticipated water savings of c. 50,000m<sup>3</sup> and waste reduction of c. 39,000 tonnes demonstrate an example of new technology with a range of benefits.

**A waste-to-energy transition for Aschaffenburg**

In partnership with E.ON, a significant upgrade at Aschaffenburg is underway to supplement natural gas with the incineration of materials that are collected for recycling but cannot be used for papermaking.

The upgrade features a modern waste-to-energy boiler, a new fuel handling and storage system, a new back-pressure steam turbine and two updated gas-fired boilers, with added 'future-proofing' for later introduction of biofuels. It is expected to reduce natural gas by c. 25 per cent and c. 50,000 tonnes CO<sub>2</sub>e.

2023/24

In 2023/24, the Kemsley K3 (waste-to-energy) and K4 (a modernised, more efficient CHP) became fully operational, with waste heat recovery and an upgraded fibre preparation line to come.

2024/25

For 2024/25, it is expected that the plans for the new fibre preparation line at Kemsley will be progressed.

2025/26

We anticipate that by 2025/26, the waste-to-energy facility at Aschaffenburg will be operational.



## ACTION - IMPLEMENTATION STRATEGY

Business operations *continued*

## Practical considerations for our transition plan

Our plan has been designed to address the most significant emission sources first, prioritising our paper mills, which use large amounts of energy to dry paper in the recycling process. Our internal assessments and studies consider practical factors such as the availability of biomass and renewable certificates to meet our energy needs. We have evaluated local issues such as physical space availability, permitting and the impact on site operations, such as increased traffic. Assumptions have been made relating to discount rates, investment years and technical lifetimes, as well as costs (e.g. carbon and commodity forecast prices).

## Delivered...

## Underway...

## Future...



## Kemsley paper mill

Began delivery in 2020/21

Since 2020/21, around one third of the steam supplied to Kemsley mill has been generated from waste-to-energy.

In 2022/23, a state-of-the-art combined heat and power plant started up, producing a c. 7 per cent improvement in thermal and electrical efficiency compared to its predecessor.

Kemsley paper mill contributes c. 14 per cent of the Scope 1 and 2 emissions in the 2019/20 base year.



## Viana paper mill

Progressing since 2022/23

In 2022/23, we announced an investment programme comprising a range of upgrades with a new state-of-the-art boiler and paper machine, including the lime kiln.

Since its upgrade in October, the new lime kiln has already begun to deliver benefits by substituting fuel oil with natural gas, which is expected to save c. 10,500 tonnes CO<sub>2</sub>e.

Viana paper mill contributes c. 14 per cent of the Scope 1 and 2 emissions in the 2019/20 base year.



## Rouen paper mill

Transitioning Rouen paper mill from coal to biomass is anticipated to reduce emissions by c. 99,000 tonnes CO<sub>2</sub>e (read more on page 14).

In addition to the biomass boiler, two new gas-fired boilers (2 x 34 t/h of steam) will complete the back-up boiler fleet already consisting of an existing gas-fired boiler (34 t/h of steam).

Engie Solutions will operate the boilers, which will allow the possibility for the future installation of a steam turbine capable of producing c. 10 MW of electricity with a maximum steam supply of 65 t/h.

Rouen paper mill contributes c. 5 per cent of the Scope 1 and 2 emissions in the 2019/20 base year.



## Aschaffenburg paper mill

In partnership with E.ON, the energy supply at Aschaffenburg is being significantly upgraded to supplement natural gas with the incineration of materials that are collected for recycling but cannot be used for papermaking.

It is expected that this will reduce reliance on natural gas by c. 25 per cent, reducing emissions by c. 50,000 tonnes CO<sub>2</sub>e.

Aschaffenburg paper mill contributes c. 6 per cent of the Scope 1 and 2 emissions in the 2019/20 base year.



## Investigating projects

Progressing to 2030 and beyond

We look to the long term with a range of feasibility studies to evaluate future opportunities, such as:

- Switching from natural gas to hydrogen, ammonia and/or bioenergy fuel sources
- Installing boilers powered by renewables
- Utilising high-pressure heat pumps
- Deploying carbon capture, utilisation and storage

As we develop our plan, we will explore the best ways to utilise future technologies, aiming to reduce emissions urgently and cost effectively, taking into consideration future options.



## ACTION - IMPLEMENTATION STRATEGY

## Products and services

## Products for the circular economy


We anticipate that demand for recyclable packaging will continue to increase as consumers are more conscious of their impact on the planet, necessitating greater recycling. We are adapting our product and services strategies in response to this, with key actions including:

- Supporting our design and innovation community with the tools they need to design for the circular economy
- Investing in R&D (recently doubled to a £100 million package to deliver over five years) to create new breakthrough technologies in materials and design
- Identifying new plastic replacement opportunities, having replaced over 1.2 billion pieces of plastic over the past four years.


We work with our customers across a range of sustainability topics related to climate change, particularly packaging design and the circular economy.

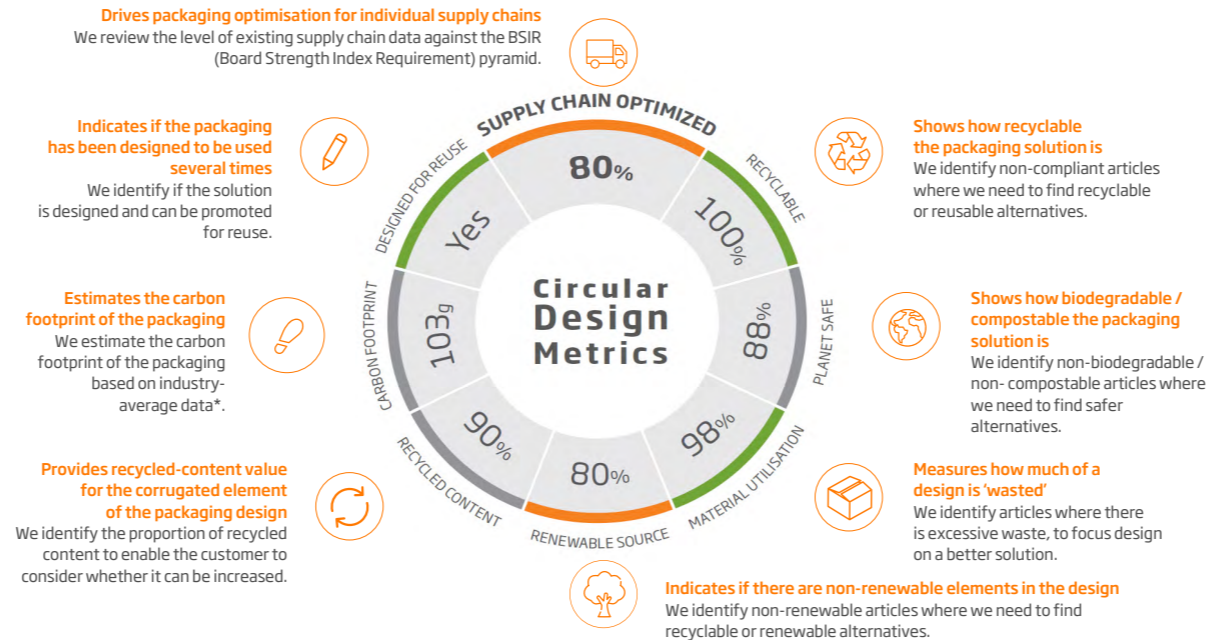


## Responding to climate-related opportunity

 Growth in demand for sustainable packaging

## Circular Design Metrics

 Watch our video to learn about our Circular Design Metrics



## Estimating the indicative impact of packaging design specifications

Our Circular Design Metrics make it easy for our customers to compare the sustainability performance of different packaging designs, seeing the indicative impact of design decisions across eight useful metrics. Our customers are using the metrics to measure and compare the circularity of different solutions at a glance, helping them to select the best solution based on their priorities, including its estimated indicative carbon footprint\*. Feeding the analysis behind the metrics is customer, operational and industry data that supports the assessment of existing and new packaging solutions. The metrics are supported by our Circular Design Principles, utilised by our expert design and innovation community to ensure that supply chain conditions are integrated into the design process. This results in leaner packaging whilst maintaining strength, resilience and recyclability.

\* Carbon footprint calculation is based on industry-average data from the FEFCO cradle to grave life cycle assessment. The life cycle inventory data and methodology can be obtained from [www.fefco.org/lca](http://www.fefco.org/lca).



Packaging design and recyclability case study

## 'LiftUp', a fully recyclable plastic replacement

We collaborated with Coca Cola HBC Austria, and other parties in the packaging industry, to replace plastic shrink wraps for 1.5 litre soft drink multipacks with cardboard outer-packaging. Our innovative packaging solution, 'LiftUp', is a 100 per cent recyclable corrugated handle that improves functionality for consumers and is designed to contribute, together with other partners, to the cardboard-based solution that reduces c. 200 tonnes of plastic each year. The solution, designed in partnership with Krones using our Circular Design Metrics, utilises the least amount of material possible.



**"Collaboration with our partners Coca-Cola HBC and Krones is key to reducing single-use plastics and delivering innovative change at scale. We hold circular design at the heart of what we do, and this is a shining example."**

**Stefano Rossi**  
Packaging CEO, DS Smith



## ACTION - IMPLEMENTATION STRATEGY

# Policies and conditions

We have a range of policies in place that promote the necessary conditions to guide decision-making and actions that support the implementation of our transition plan.

Topic	Scope	Description	Expected contribution to Net Zero
Sustainability policies, including energy management	All operations	A collection of policies covering sustainability issues: <ul style="list-style-type: none"> <li>• Carbon and Energy Efficiency</li> <li>• Water Management</li> <li>• Zero Waste to Landfill</li> </ul>	Consistent action towards effective energy, water and waste management that contributes to emissions reduction.
Forest management	Owned forest and timber supply chain	A policy covering Sustainable Forest Management and Fibre Sourcing. Includes commitments to sustainable forest management certifications (e.g. FSC®) and sourcing only recycled or chain of custody certified papers.	Sustainable forest management helps to preserve the function of forests as natural forms of carbon storage, while preventing deforestation and degradation in certified forests.
Human rights and labour	Whole value chain	A collection of measures including our Human Rights Policy, risk assessment, stakeholder engagement and grievance mechanisms. This includes in our procurement practices, for example, for timber from areas where indigenous rights are violated or from high conservation value forests.	Our commitment to respect and support human rights contributes to promoting a 'just' transition, reaching Net Zero in a way that is fair and inclusive.
Procurement	Supply chain	A collection of measures including our Global Supplier Standards and Supplier Management Policy, which outlines minimum expectations and how suppliers are managed in accordance with sustainability targets and assessments.	A basis for forming deep collaborative engagements towards encouraging our strategic suppliers to adopt science-based targets and decarbonise the supply chains.
Capital decisions	All operations	Climate-related matters serve as an input into our financial planning processes, including budgeting, capital investment and insurance decisions. This includes, for example, the replacement of capital equipment such as boilers with more efficient and therefore lower emission upgrades.	Resource requirements for reaching Net Zero are reflected in our Corporate Plan and Capital Plan processes.
Risk	All operations	Climate-related matters are integrated into our overall enterprise risk management framework, captured in our regular risk reviews and treated as systemic implications that thread into our identified principal risks.	Integration of climate change into the prioritised principal risks to enable well-informed decisions.

📍 [A comprehensive list of policies can be found on the DS Smith website.](#)

📍 [DS Smith Sustainability Report 2024 includes more information on other climate-related topics, such as sustainable forest management, human rights and procurement.](#)





## ACTION - IMPLEMENTATION STRATEGY

# Financial planning

## Our transition plan, financial resources, position and performance

Our plan is embedded into our existing annual budget reviews and corporate and capital planning processes, within the short-term (three-year) planning cycle.

We consider the impact of climate change in preparing our consolidated financial statements, including the effect upon the application of our accounting policies, judgements, estimates and assumptions.

In making our assessment of the impact, we consider climate-related risks and opportunities identified through our risk management processes as set out in our Task Force on Climate-related Financial Disclosures (TCFD) disclosures (see DS Smith Annual Report 2024, pages 60-77) and our Now & Next Sustainability Strategy (see DS Smith Sustainability Report 2024).

These considerations, which are core to our strategy, do not have a material impact on:

- any accounting estimates and judgements
- the estimated future cash flows used in the impairment assessment of goodwill
- the assessment of residual values and useful economic lives of property, plant and equipment, or the adequacy of provisions for liabilities.

As we continue to identify the actions proposed to take to achieve our 2030 1.5°C science-based target, we will identify the capital projects, investments and other decarbonisation levers needed to achieve the strategic ambition of the transition plan.

These projects are considered over the time periods referred to on page 8 and will be prioritised with consideration for a range of factors, including asset retirement, technology availability and investment cost.

These factors are evaluated through annual budget reviews, informed by the corporate and capital planning processes. Any capital expenditure or project costs are anticipated to be funded through the existing or similar replacement financing structures of the Group.


### Green Finance Framework

In 2023/24, we successfully issued €1.5 billion inaugural green bonds, significantly extending our debt maturity profile at attractive terms.

An amount equal to the net proceeds of the issuance will be used to finance or refinance eligible activities in accordance with our Green Finance Framework. Aligned to our Now & Next Sustainability Strategy and the Sustainable Development Goals (SDGs), the framework recognises projects aligned to:

- Circular economy adapted products, production technologies and processes, and/or eco-efficient products
- Environmentally sustainable management of living natural resources and land use

Our Green Finance Report demonstrates the role of green finance towards achieving the aspirations set out as part of our Now & Next Sustainability Strategy and the transition plan, as well as the contribution these proceeds make to the SDGs.

 [Our Green Finance Framework can be obtained from the DS Smith Investor Relations webpage](#)



**“We were delighted by the response from investors to our green bond issuance. The transaction reflected the Group’s prospects, sustainability focus and investment grade credit metrics, providing long-term, attractive financing for the business.”**

**Richard Pike**  
Group Finance Director



## ACTION

# Engagement strategy

## Engagement with our value chain

Almost two-thirds of our total greenhouse gas emissions are Scope 3 emissions, meaning that they are 'indirect' value chain emissions.

Although we are not directly responsible for generating these emissions, they reveal opportunities to influence decarbonisation, for example through engagement with our suppliers, customers and policy-makers towards decarbonising on a 1.5°C trajectory.

Our engagement activities focus on the greatest emission sources, prioritising strategic suppliers\* with energy-intensive manufacturing processes and customers, such as the largest global FMCG brands, that have significant consumer reach.

The greenhouse gas protocol describes 15 categories of Scope 3 emissions. We have identified the top six Scope 3 categories where we can collaborate with our stakeholders, predominantly suppliers, customers and consumers on the most meaningful actions to reduce emissions.

## Upstream emissions - suppliers

### Purchased goods and services (Category 1)

These emissions are generated from the manufacture of goods/services procured, particularly energy-intensive goods, such as paper and starch, with c. 76 per cent of emissions concentrated in our strategic suppliers. We are encouraging 100 per cent of our strategic suppliers to set science-based targets by 2027.

### Fuel and energy-related activities (Category 3)

These emissions are generated from the production of fuels and energy, such as emissions from the drilling, extraction and delivery of natural gas. We are reducing energy consumption, switching to renewable energy sources and adopting new technologies to decrease these emissions.

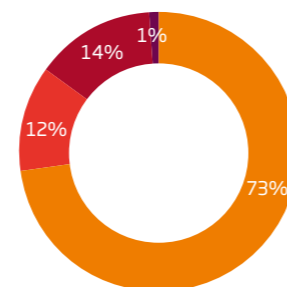
### Transportation and distribution (Categories 4 and 9)

These emissions are generated from delivering goods to and from our sites. We are partnering with our logistics suppliers to optimise transportation and distribution, increase truck-fill, improve mileage and switch to low emission fuels.

### Waste generated in operations (Category 5)

These emissions are generated from treating waste that leaves our sites, particularly the non-fibre materials that enter waste streams received by our paper mills. We are working with suppliers to divert materials to recycling, extracting energy from waste and keeping materials in use for longer.

## Scope 3 emissions split by stakeholder (%)



- Suppliers
- Customers
- Consumers
- Remainder

**'Suppliers'** includes Scope 3 Categories 1, 2, 3, 4, 5, 6 and 9

**'Customers'** includes Scope 3 Category 10

**'Consumers'** includes Scope 3 Category 12

**'Remainder'** includes Scope 3 Categories 7, 8 and 15

## Downstream emissions - Customers and consumers

### Processing of sold products (Category 10)

These emissions are generated from the intermediate processing of paper for recycling into paper and paper into packaging by third parties from products sold to other paper mills and packaging plants. We are helping our customers to identify reduction opportunities, increasing recyclability, optimising fibre for individual supply chains and promoting science-based targets.

### End-of-life treatment of sold products (Category 12)

These emissions are generated from the treatment of packaging and paper at the end of its useful life - whether recycled, incinerated or landfilled. We will promote recycling towards 90 per cent average recycling rate for 2030, advocating for source segregation, consistent collections and greater clarity to enable consumers to recycle more.

These priority areas cover over 95 per cent of our Scope 3 emissions, with remaining less significant categories reported on page 27. All 100 per cent of our Scope 3 emissions are included within the scope of our science-based target.

\* We define 'strategic suppliers' as companies with whom we have a long-term, mutually cooperative relationship with mutual commitment where significant and ongoing value is accrued to both parties through operational capabilities. In 2023/24, we categorised 110 of our suppliers as strategic. Within our current Scope 3 inventory, we estimate that these companies generate c. 76 per cent of emissions in Scope 3 Category 1: Purchased Goods and Services. This figure may change as we adopt supplier-specific emission factors in our inventory.



## Encouraging the adoption of science-based targets

We estimate that c. 76 per cent of our purchased goods and services emissions are generated by our strategic suppliers, with whom we are actively creating opportunities to exchange knowledge. In 2023/24, we estimate that c. 42 per cent of Category 1 emissions were generated by strategic suppliers with validated (or in the process of validating) science-based targets.



## Engaging consumers and policymakers on recycling

We estimate that c. 14 per cent of our Scope 3 emissions are generated downstream from the consumer disposal of used packaging. Our study, 'Wasted Paper', delves into recycling rates across Europe and the opportunity to achieve an aspirational 90 per cent recycling rate, which would reduce emissions from the end of life treatment of sold products. 'Wasted Paper: A Path to Better Recycling' can be downloaded from the DS Smith website.



## ACTION - ENGAGEMENT STRATEGY

# Engagement with value chain

## In our upstream value chain, engaging suppliers

The objective of working with our suppliers towards Net Zero is to deliver Scope 3 emission reductions to contribute towards the strategic ambition of our transition plan, which is to reduce Scope 1, 2 and 3 greenhouse gas emissions by 46 per cent by 2030 compared to 2019.

We expect that a decarbonised supply chain is more resilient, limiting climate-related disruption that could take hold owed to shifts in market dynamics as a result of climate change.

### Why we have chosen to engage with this stakeholder

Purchased goods and services account for c. 48 per cent of our Scope 3 greenhouse gas emissions. As a part of our wider supplier engagement programme on sustainability, we have a considerable opportunity to engage our suppliers to set our supply chain on a 1.5°C trajectory.

### We are committed to

Engaging 100 per cent of our strategic suppliers to set their own science-based targets by 2027

#### Responding to climate-related risks



Increased cost of raw materials or threat to supply



Increased severity of extreme weather events

#### Responding to climate-related opportunities



Growth in demand for sustainable packaging



Greater resource efficiency



Use of lower-emission energy sources



### Engage 100 per cent of our strategic suppliers to set their own science-based targets by 2027

We engage our strategic suppliers to set science-based targets, deploying bespoke engagement mechanisms depending on supplier maturity, towards delivering our Now & Next target, 'By 2027, encourage 100 per cent of our strategic suppliers to set their own science-based targets'\*.

We estimate that in 2023/24, 42 per cent of our Scope 3 Category 1 (purchased goods and services) emissions were generated by suppliers who have set, or are in the process of setting, their own science-based target (2022/23: 32 per cent).

We prioritise 'strategic suppliers', which we define as the suppliers with whom we hold a long-term, mutually cooperative relationship with mutual commitment, where significant and ongoing value is accrued to both parties through operational capabilities. In 2023/24, we categorised 110 of our suppliers as strategic. We typically have a strong relationship with these suppliers, meaning we have a great degree of leverage to influence actions.

Given that our strategic paper suppliers generate our greatest source of upstream emissions, our Paper Sourcing team regularly meets with suppliers to review their decarbonisation progress, discuss their plans and identify opportunities to share knowledge.

We engage less mature suppliers through the Supplier Leadership on Climate Transition initiative, founded by some of our customers, to encourage them to calculate their carbon footprint, set a science-based target and reduce emissions.

For 2024/25, we intend to engage a greater number of suppliers as a member of the CDP Supply Chain programme, having completed our first CDP cycle in 2023. This enables us to collect data to measure the progress made in our supply chain.

We continue to assess the sustainability practices of our suppliers annually, using EcoVadis, in addition to requiring that our suppliers adhere to our Global Supplier Standards. In line with our Supplier Management Policy, we aim to retain and engage suppliers in instances where the engagement does not lead to desired changes. In extreme cases, non-adherence can result in exiting a relationship with a supplier.

### Contribution to the Net Zero Transition Plan

It is difficult to accurately quantify the expected principal contributions of these activities towards achieving the strategic ambition of the transition plan.

If we were to achieve our target to encourage 100 per cent of our strategic suppliers to set their own science-based targets, which resulted in c. 76 per cent of our Scope 3 Category 1 emissions decarbonising in accordance with a 1.5°C trajectory, this would reflect a significant contribution to our overall 2030 target.

\* Within our base year Scope 3 inventory, we estimate that these companies generate c. 76 per cent of emissions in Scope 3 Category 1: purchased goods and services. This figure may change as we adopt supplier-specific emission factors in our emissions inventory.

2023/24

In 2023/24, we completed our first year of our new supplier engagement programme and undertook deep analysis of the results, using insights obtained from CDP.

We held meetings with suppliers to discuss their plans and assess the extent to which they are aligned with our own.

2024/25

For 2024/25, we intend to extend the programme to reach more suppliers during the next CDP and Supplier Leadership on Climate Transition initiative seasons.

2025/26

By 2025/26, we intend to have continued to develop insights obtained from our suppliers, in addition to developing the methodologies used to calculate supply chain emissions.



## ACTION - ENGAGEMENT STRATEGY

## Engagement with value chain *continued*

### In our downstream value chain, engaging customers and consumers

The objective of working with customers and consumers towards Net Zero is to deliver Scope 3 emission reductions to contribute towards the strategic ambition of our transition plan, which is to reduce Scope 1, 2 and 3 greenhouse gas emissions by 46 per cent by 2030 compared to 2019.

We expect that engaging with customers and consumers in the context of Net Zero is an opportunity to capitalise on climate-related opportunities, such as growth in demand for sustainable packaging and the use of lower-emission energy sources.

#### Why we have chosen to engage with this stakeholder

Processing of sold products and end-of-life treatment of sold products account for c. 26 per cent of our Scope 3 greenhouse gas emissions.

Engaging and influencing our value chain means setting our downstream, as well as upstream, emissions on a 1.5°C trajectory.

Our industry is significantly interconnected, meaning that a lot of our peers are both suppliers and customers. As the industry as a whole decarbonises, we anticipate that benefits will be accrued in both upstream and downstream emissions, for example for a papermaker who both sells paper to our packaging plants and buys paper for recycling from our recycling business.

#### We are committed to

Continuing to collaborate with our customers to contribute to achieving their decarbonisation and sustainable packaging strategies, and encouraging recycling to improve recycling rates and reduce emissions from end-of-life treatment.

#### Responding to climate-related opportunities



Growth in demand for sustainable packaging



Use of lower-emission energy sources



#### Engaging with customers to scale the Net Zero transition

We engage with our customers on a range of climate-related topics, including transition plans, life cycle assessments and bespoke carbon data requests.

These engagements tend to prioritise our largest global FMCG brands that are typically pan-European with significantly integrated and interdependent value chains that work with us as their packaging strategists and circularity experts.

Prioritising these engagements increases the degree of leverage to influence large scale impact in our operations and our customers' operations.



#### Challenges with measuring value chain emissions

It is not uncommon to have to make assumptions when estimating value chain emissions. Data quality and consistency can vary widely, making it difficult to measure changes in emissions over time as methodologies develop alongside the need to take urgent action against climate change.

During 2023/24, as part of our Scope 3 methodology roadmap, we began to apply more up-to-date emission factors and replaced a single assumed recycling rate with regional recycling rates, reflecting an improvement in data quality to better target our actions.

2023/24

In 2023/24, engagement on climate change with our customers deepened. This included, for example, purchasing more renewable electricity via Energy Attribute Certificates (EACs) estimated to represent the electricity consumption associated with the production of packaging supplied to a global FMCG customer in certain markets.

2024/25

For 2024/25, we expect an even greater level of engagement on climate change.

We are building capacity within our teams with tools, guidance and a greater investment in human resources to support our customers with their sustainability requests.

2025/26

We anticipate that increasingly our customers will demand deep engagement on climate change and comfort in our ability to help them to deliver their own Scope 3 reduction strategies and plans.



## ACTION - ENGAGEMENT STRATEGY

# Engagement with industry and government

## Engagement with industry

Our transition plan cannot be delivered alone and the challenges we face are experienced by the industry as a whole. We engage with industry peers predominantly through our trade association memberships.

These industry platforms provide an appropriate engagement mechanism as they tend to involve industry counterparts, and other relevant adjacent industries, in well-governed, collaborative and consensus-driven environments. This includes participating and/or chairing committees, sub-committees and working groups on specific topics.

Engagement activities are prioritised based on the perceived opportunity to build capacity and transfer knowledge (either to/from us and industry counterparts, within the industry and/or associated industries), build consensus and develop mutually beneficial capabilities that contribute towards achieving the strategic ambition of our plan.

## Current and planned engagement activities

Our current and planned engagement activities include engagements with:

- FEFCO (European Federation of Corrugated Board Manufacturers),
- Capi (Confederation of European Paper Industries),
- EUROPEN (The European Organisation for Packaging and the Environment),
- 4evergreen.

We also engage through national trade associations, including:

- CPI (The Confederation of Paper Industries),
- The Packaging Federation,
- The Recycling Association.

Driven by significant issues from circularity to carbon, technical experts from across our business are involved in providing inputs to these engagements, aiming to actively influence climate change-related policy and related activities.

For example, 4evergreen, a cross-industry initiative to drive the recycling rate of paper products in Europe to 90 per cent by 2030, is a significant opportunity to reduce downstream (Category 12) Scope 3 greenhouse gas emissions.

Our Government Affairs function coordinates our approach to trade associations, monitoring that contributions and outcomes are in accordance with a 1.5°C future and that the engagements maintain alignment with the goals of the transition plan.

This includes monthly briefings, policy monitoring and factsheets, disseminated to a wide cross-functional group, whose responsibilities are linked to the deployment of this plan.

## Engagement with government

Our engagement activities with policy-makers are prioritised based on the perceived opportunity to influence policy towards a favourable legislative and policy landscape for the success of the Company, including our ability to deliver our transition plan.

This includes positively progressing and securing significant policy issues in the UK and the EU that involve the key assumptions and external factors listed on page 10, such as enabling greater recycling and decarbonising our industry in a predictable policy environment, ensuring a successful and smooth transition to Net Zero.

Crucially for the deployment of the transition plan, we call upon policymakers to remove uncertainty through a predictable policy environment that enables long-term planning and investment to achieve the aim of the Paris Agreement under the United Nations Framework Convention on Climate Change.

## Policy priorities

Our policy priorities include:



### Decarbonisation of heat

We call on governments to provide increased support for low carbon energy sources and to set out clear deployment timelines to enable industry to plan and invest for the future timely and efficiently.



### Reuse and recycling

We call on policymakers to promote packaging solutions that deliver the best outcome for the environment based on transparent and robust scientific evidence, whereby in a circular economy, both multi-use and recyclable single-use packaging have a role.



### Extended producer responsibility

We call on extended producer responsibility (EPR) systems to fund improvements in recycling infrastructure and investment in separate waste collection to achieve increased recycling rates.

Our strategic engagement and advocacy in these priority areas are helping to minimise risk and amplify opportunities in these areas for our business, maximising their contribution towards achieving the strategic ambition of our transition plan.

## Current and planned engagement activities

Our current and planned engagement activities include ensuring support and incentives for the decarbonisation of our industry, campaigning for high-quality recycling infrastructure and raising our profile amongst prominent politicians in the United Kingdom and the European Union.

Specific policies, laws and regulations include:

- Revision of the Packaging and Packaging Waste Directive (via trade associations FEFCO and Capi, and direct engagement),
- Delegated acts supplementing the EU Deforestation Regulation (via trade association Capi),
- Revision of the Emissions Trading System Directive (via trade association Capi),
- Revision of the EU Carbon Border Adjustment Mechanism (via trade association Capi),
- Implementation of the UK Packaging Waste Regulations, including UK EPR (via trade associations CPI and Packaging Federation),
- Proposal for a UK Carbon Border Adjustment Mechanism (CBAM) (via trade association CPI)



## ACTION - ENGAGEMENT STRATEGY

# Engagement with public sector, communities and civil society

## Engagement with the public sector, communities and civil society

We engage with a range of public sector, communities and civil society stakeholders. One of our most prominent stakeholder relationships is with the Ellen MacArthur Foundation (EMF), of whom we are a strategic partner.

The EMF aims to promote the circular economy to eliminate waste and pollution, regenerate nature, minimise new resources and create an economy that benefits all.

## Current and planned engagement activities

Significant areas of engagement activity with the EMF include initiatives relating to:

### Product design

We have worked together to develop our Circular Design Principles and Circular Design Metrics with experts in circular design from the Ellen MacArthur Foundation.

### Policy events

We have collaborated with the Ellen MacArthur Foundation to educate EU policy audiences on the circular economy and design for circularity at key events.

### Policy goals

We have contributed to the development of EMF's universal circular economy policy goals, enabling governments and businesses to benefit from the circular economy.

## Wider communities and civil society

Our engagements with communities and civil society tend to be highly localised and context-specific. We are committed to engaging with our communities and civil society, particularly in instances where the deployment of our plan impacts these stakeholders.

It is difficult to quantify the expected principal contributions of this type of engagement as these engagements tend to address long-term, systemic issues. If left unaddressed, issues of a systemic nature could present risk to the delivery of our transition plan.

We therefore use our engagement to influence significant actors in government, parliamentary bodies, public sector, communities and civil society to help create the optimal external conditions in which to deliver our transition plan.

See pages 64-65 of DS Smith Sustainability Report 2024 for further examples of how we engage with our stakeholders on a range of sustainability topics, including climate change and net zero.





NET ZERO TRANSITION PLAN

# Accountability

We have put robust accountability mechanisms in place to ensure efficient deployment of our transition plan and strong reporting on progress.

## In this section

### Metrics and targets

- GHG metrics and targets
- Operational and financial metrics and targets
- Performance analysis and analysis of trends
- Carbon credits

### Governance

- Board oversight and reporting
- Management roles, responsibility and accountability
- Culture
- Skills, competencies and training
- Climate-related incentives and remuneration



## ACCOUNTABILITY

# Metrics and targets

Our transition plan includes clear metrics and targets that our teams are accountable for delivering.

## GHG metrics and targets

All of our operational and financial targets relating to Net Zero are intended to contribute to our near-term target for 2030, introduced on page 6. Our target is a 'combined', 'absolute emissions' 1.5°C-aligned validated science-based target.

The official target wording as set by the Science Based Targets initiative is:

**DS Smith commits to reduce absolute scope 1, 2\* and 3 GHG emissions 46.2% by FY2030 from a FY 2019 base year. DS Smith commits that 76% of its suppliers by emissions covering purchased goods and services will have science-based targets by FY2027.**

The actions outlined in our implementation strategy on pages 12-19 and our engagement strategy on pages 20-24 are intended to contribute to this target.

Typically, the implementation strategy addresses Scopes 1 and 2, and the engagement strategy Scope 3, but there is a degree of overlap. For example, reducing waste can lead to reduced energy consumption in our own operations (Scopes 1 and 2), whilst reducing the waste streams handled by third-party waste management companies (Scope 3).

The metric used to set and monitor progress towards the science-based target is 'Total GHG emissions' (metric tonnes CO<sub>2</sub>e). The target applies to our entire business, as consolidated under a financial control boundary.

### Target validation and its scientific basis

As a validated 1.5°C-aligned science-based target, the ambition-level, including the timeliness of the target, is informed by the Paris Agreement, as underpinned by the IPCC Sixth Assessment Report (AR6) and the IPCC Special Report on Global Warming of 1.5°C (SR1.5). We regularly refresh our double materiality assessment to ensure that our Now & Next Sustainability Strategy captures changes in the prioritisation of issues, as well as emerging issues. This includes reviewing climate-related issues and commitments, and we are committed to voluntarily maintaining ambitious and competitive targets in line with climate science and market expectation.

\*The target boundary includes land-related emissions and removals from bioenergy feedstocks.

### Scope 3 emissions screening

We conducted a screening exercise to determine significant sources of value chain emissions, considering factors such as our ability to influence. All of the greenhouse gas protocol Scope 3 categories are included in our inventory, with the exception of:

- Use of sold products - judged irrelevant as although we sell some machinery (e.g. forming and case sealing machines), it is difficult to calculate these emissions, which are not expected to contribute significantly to our total Scope 3 emissions. Our primary product is packaging, which does not consume energy when in use
- Downstream leased assets - judged irrelevant as although we lease some assets (e.g. recycling balers), it is difficult to calculate these emissions, which are not expected to contribute significantly to our total Scope 3 emissions
- Franchises - judged irrelevant as we do not operate franchises as our business model.

We regularly review our Scope 3 methodology, including whether the above exclusions remain appropriate. Our Basis of Preparation, which may be obtained from the ESG Reporting Hub on the DS Smith website, sets out our approach to changing our methodology in light of significant changes to business model, structure or activities.

There have been no revisions to our current target since it was validated in 2022.

### Operational metrics and targets

Alongside all of our operations working towards internal productivity, quality and safety targets, many of which contribute to process improvements that reduce emissions, our internal operational metrics and targets include those relating to energy reduction.

All of our packaging plants have been challenged to deliver a 2 per cent annual improvement in thermal and electrical energy efficiency up to 2030.

The metrics used to measure progress against this operational target are thermal efficiency (MWh per unit production) and electrical efficiency (MWh per unit production).

Supporting this are energy efficiency initiatives such as those described on page 13.

### Financial metrics and targets

Financial metrics and targets tend to be applied on an ad-hoc, project-by-project basis.

For example, we use internal carbon pricing as a decision-making tool to assess and manage climate-related risks and opportunities, as well as in the assessment of projects. With this technique, we apply a range of prices to arrive at the best-cost solution, balancing financial and non-financial outcomes.

In our strategic assessment to achieve Net Zero, we modelled growth and investment phasing over 30 years to tackle our greatest emission sources. The analysis applied a range of historic and forecast prices ranging from €0-140 per tonne of carbon.





## ACCOUNTABILITY - METRICS AND TARGETS

# GHG metrics and targets

## GHG metrics and targets performance

**By 2030, reduce Scope 1, 2 and 3 GHG emissions by 46 per cent compared to 2019**

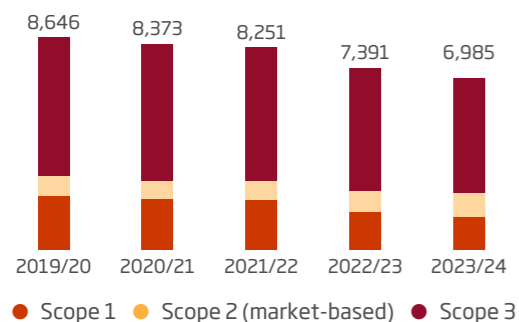
In 2023/24, our total GHG emissions were 6,985,269 tonnes CO<sub>2</sub>e (2022/23: 7,391,418 tonnes CO<sub>2</sub>e), which is a reduction of 19 per cent compared to the 2019/20 base year and 5 per cent compared to last year.

We are proud of the progress that we have made to date and consider our performance to be 'on track' for delivering the 1.5°C science-based target for 2030.

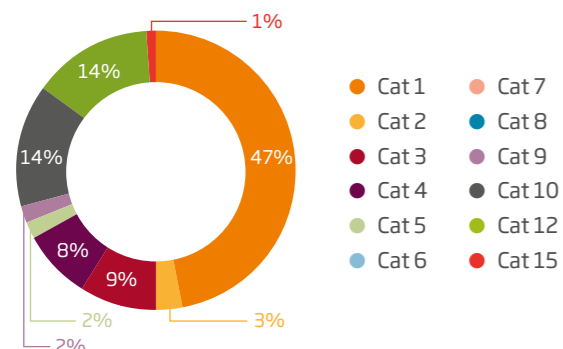
We monitor our emissions progress with a monthly Carbon Forecast, which is reviewed by our Health, Safety and Sustainability (HSES) Committee on a quarterly basis.

We report annually in DS Smith Annual Report and DS Smith Sustainability Report.

## Group greenhouse gas (GHG) emissions split by scope (Kt CO<sub>2</sub>e)



## Scope 3 greenhouse gas (GHG) emissions



## Group greenhouse gas (GHG) emissions

Metric	Unit of measure	2023/24	2022/23	2019/20 (base year)	Compared to last year	Compared to base year
Direct (Scope 1) GHG emissions	tonnes CO <sub>2</sub> e	<b>1,340,272*</b>	1,542,250*	2,181,890	-13%	-39%
Indirect (Scope 2 market-based) GHG emissions	tonnes CO <sub>2</sub> e	<b>944,921*</b>	833,759*	792,275	13%	19%
Indirect (Scope 2 location-based) GHG emissions	tonnes CO <sub>2</sub> e	<b>922,923*</b>	891,267*	875,544*	4%	5%
Indirect (Scope 3) GHG emissions	tonnes CO <sub>2</sub> e	<b>4,700,076</b>	5,015,409	5,671,528	-6%	-17%
Total GHG emissions	tonnes CO <sub>2</sub> e	<b>6,985,269</b>	7,391,418	8,645,693	-5%	-19%
Gross Scope 1 and 2 (market) GHG emissions	tonnes CO <sub>2</sub> e	<b>2,285,193*</b>	2,376,009*	2,974,165	-4%	-23%
GHG emissions from energy export	tonnes CO <sub>2</sub> e	<b>488,604*</b>	529,699*	791,810	-8%	-38%
Net Scope 1 and 2 (market) GHG emissions	tonnes CO <sub>2</sub> e	<b>1,796,589*</b>	1,846,310*	2,182,355	-3%	-18%
Energy consumption	MWh	<b>14,058,435*</b>	14,407,601*	15,707,667	-2%	-10%
Energy exported	MWh	<b>1,525,376*</b>	1,739,186*	1,977,616	-12%	-23%
Total production	tonnes	<b>9,874,853*</b>	10,164,657*	10,222,065	-3%	-3%
GHG emissions (net) per tonne of production	kg CO <sub>2</sub> e / t nsp	<b>182*</b>	182*	213	0%	-15%
Outside of scopes GHG emissions	tonnes CO <sub>2</sub> e	<b>1,022,400*</b>	1,018,232*	911,659	0%	12%

## Group Indirect (Scope 3) value chain greenhouse gas (GHG) emissions

Scope 3 category	Unit of measure	2023/24	2022/23	2019/20 (base year)	Compared to last year	Compared to base year
1: Purchased goods and services	tonnes CO <sub>2</sub> e	<b>2,233,164</b>	2,341,614	2,562,626	-5%	-13%
2: Capital goods	tonnes CO <sub>2</sub> e	<b>141,634</b>	161,217	96,891	-12%	46%
3: Fuel- and energy-related activities	tonnes CO <sub>2</sub> e	<b>480,239*</b>	471,063	425,243	2%	13%
4: Upstream transportation and distribution	tonnes CO <sub>2</sub> e	<b>363,900</b>	377,052	407,883	-3%	-11%
5: Waste generated in operations	tonnes CO <sub>2</sub> e	<b>101,192*</b>	119,671*	252,834	-15%	-60%
6: Business travel	tonnes CO <sub>2</sub> e	<b>3,102</b>	3,912	4,173	-21%	-26%
7: Employee commuting	tonnes CO <sub>2</sub> e	<b>4,903</b>	5,390	7,992	-9%	-39%
8: Upstream leased assets	tonnes CO <sub>2</sub> e	<b>4,037</b>	4,110	4,507	-2%	-10%
9: Downstream transportation and distribution	tonnes CO <sub>2</sub> e	<b>104,621</b>	109,260	109,381	-4%	-4%
10: Processing of sold products	tonnes CO <sub>2</sub> e	<b>581,463*</b>	693,418	943,600	-16%	-38%
12: End of life treatment of sold products	tonnes CO <sub>2</sub> e	<b>654,726*</b>	693,027	780,090	-6%	-16%
15: Investments	tonnes CO <sub>2</sub> e	<b>27,095</b>	35,675	76,308	-24%	-64%
<b>Total Indirect (Scope 3) GHG emissions</b>	<b>tonnes CO<sub>2</sub>e</b>	<b>4,700,076</b>	<b>5,015,409</b>	<b>5,671,528</b>	<b>-6%</b>	<b>-17%</b>

\* Independent Assurance has been obtained for the metrics marked with an asterisk '\*\*' - see Assurance Statement on page 33.

Refer to page 35 and our Basis of Preparation for our greenhouse gas emissions reporting methodology.



## ACCOUNTABILITY - METRICS AND TARGETS

# GHG metrics and targets *continued*

## Performance analysis

In 2023/24, GHG emissions across all three scopes totalled 6,985,269 tonnes CO<sub>2</sub>e (2022/23: 7,391,418 tonnes CO<sub>2</sub>e), which is a 5 per cent reduction compared to last year and 19 per cent compared to the base year (2019/20: 8,645,693 tonnes CO<sub>2</sub>e).

A 4 per cent reduction in Scope 1 and 2 (market-based) compared to last year was primarily a result of changes made in preparation for the new waste-to-energy facility at Aschaffenburg, alongside other smaller projects, and a strengthened focus on energy efficiency initiatives. A 6 per cent reduction in Scope 3 was primarily the result of methodology development.

In contrast to last year, changes in like-for-like production volumes did not have a significant impact in 2023/24, other than the closure of Pazardzhik (Trakia) paper mill during the period and several other smaller non-core operations resulting in an emissions reduction of c. 50,000 tonnes CO<sub>2</sub>e.

## Decarbonisation at our paper mills

A reduction of c. 14,000 tonnes CO<sub>2</sub>e was delivered during the period resulting from the first phase of upgrading the energy supply at Aschaffenburg, achieved from ceasing excess electricity generation, instead only importing the electricity requirement from E.ON. Once fully operational, the new waste-to-energy facility will supplement natural gas with the incineration of materials that are collected for recycling but cannot be used for papermaking, with an anticipated emission reduction of c. 50,000 tonnes CO<sub>2</sub>e. Further initiatives at Belisce, Dueñas, Kemsley, Lucca, Reading and Viana contributed c. 23,000 tonnes CO<sub>2</sub>e reduction. An additional c. 4,000 tonnes CO<sub>2</sub>e was found in biogas improvements at Zarnesti. Several projects progressed, including the transition from coal to biomass at Rouen, anticipated to contribute a 99,000 tonne CO<sub>2</sub>e reduction. We continued to develop our roadmap, assessing future projects and optimising the plan for best cost solutions.

## Decarbonisation at our packaging plants and recycling depots

Our organic investment programme continued to reduce emissions, with upgrades such as new corrugator machines, boilers and LED lighting contributing reductions. We progressed our energy efficiency efforts and ISO 50001:2018 certification, with the most energy-intensive plants undertaking 'deep dives' to investigate savings opportunities. Our packaging plants and recycling depots tend to be more exposed to changes in the fuel mix for imported grid electricity compared to our paper mills, and during the period c. 6,000 tonnes CO<sub>2</sub>e increase in emissions resulted from worsening fossil intensity of purchased electricity. Alongside several renewable electricity contracts ending, adverse impact was mitigated by reductions in electricity consumption because of efficiency projects and volumes. Several new investments were announced, including upgraded machinery bringing thermal efficiency improvements at packaging plants including Ghimbav and Columbia, with energy savings created through steam optimisation and energy recovery technologies. We continued to develop opportunities to utilise solar power at our packaging plants.

## Decarbonisation in our value chain

In 2023/24, we completed the first year of our engagement programme, prioritising our most energy-intensive (e.g. paper) strategic suppliers through the CDP supply chain programme and with less mature suppliers, the Supplier Leadership on Climate Transition initiative. We estimate that in 2023/24, c. 42 per cent of our purchased goods and services emissions were from suppliers who have set, or are in the process of setting, a science-based target (2022/23: 32 per cent). Some changes in performance resulted in emission reductions, such as waste to landfill decreasing 19 per cent, owed to exceptional events in the prior period.

We implemented a range of methodology improvements to account for supplier emissions more accurately, including applying CDP (2023) sector-average emission factors to purchased goods and services emissions and switching from a single average to country-level recycling rates to capture the end-of-life treatment emissions more accurately across our markets in Europe.

## Reach Net Zero by 2050

We remain committed to reaching Net Zero greenhouse gas emissions by 2050. We have begun the process to respond to the Science Based Targets initiative (SBTi)'s updated requirements for Net Zero Validation, including the requirement for our industry to set a target to decarbonise 'FLAG' (Forest, Land and Agriculture) emissions and set a no deforestation commitment, which we aim to complete in 2025.

## Analysis of trends

Over the past five years, since the 2019/20 base year of our science-based target, there are several examples of trends that have contributed to changes in emissions.

- Production: during the Covid-19 pandemic, demand for packaging increased significantly owed predominantly to growth in ecommerce, which has since declined from a peak in 2020/21, influencing emissions from both volume and product mix,
- Renewables: because of the war in Ukraine, demand/supply of renewable certificates and an inflationary macroeconomic environment, the fuel mix of grid electricity and availability of renewable electricity is changing, influencing emissions from purchased grid electricity,
- Partnerships: we have entered contracts to purchase steam and electricity from third-party owned and operated combined heat and power (CHP) plants, influencing emissions that were previously accounted for as Scope 1 emissions that are now indirect Scope 2 emissions, with reductions owed to changes in the electricity export model.

These are just some examples of factors that we have learned influence the general direction in which our emissions have changed over recent years.

## Carbon credits

We do not presently apply any carbon credits in our emissions inventory given that at this stage of deployment, we are focused primarily on emissions reduction at source. We intend to use high-quality offsets only as a last resort to balance a maximum of 10 per cent of remaining 'hard-to-abate' emissions through high-quality natural climate and technological solutions. We are monitoring the development of these solutions, including carbon capture, usage and storage (CCUS), and the role they may play in our transition plan.





## ACCOUNTABILITY

# Governance

## Board oversight and reporting

The Board and the Audit Committee maintain oversight of climate-related risks and opportunities when reviewing and guiding strategy, budgets and business plans.

Annual updates on risk assessments, mitigation and progress are reviewed by the Board, and the Board makes significant strategic decisions, for example, the adoption of the science-based target.

The Board considers any trade-offs associated with climate-related risks and opportunities by evaluating climate matters as part of setting the strategic direction of the Group, strategy implementation and resourcing and leadership.

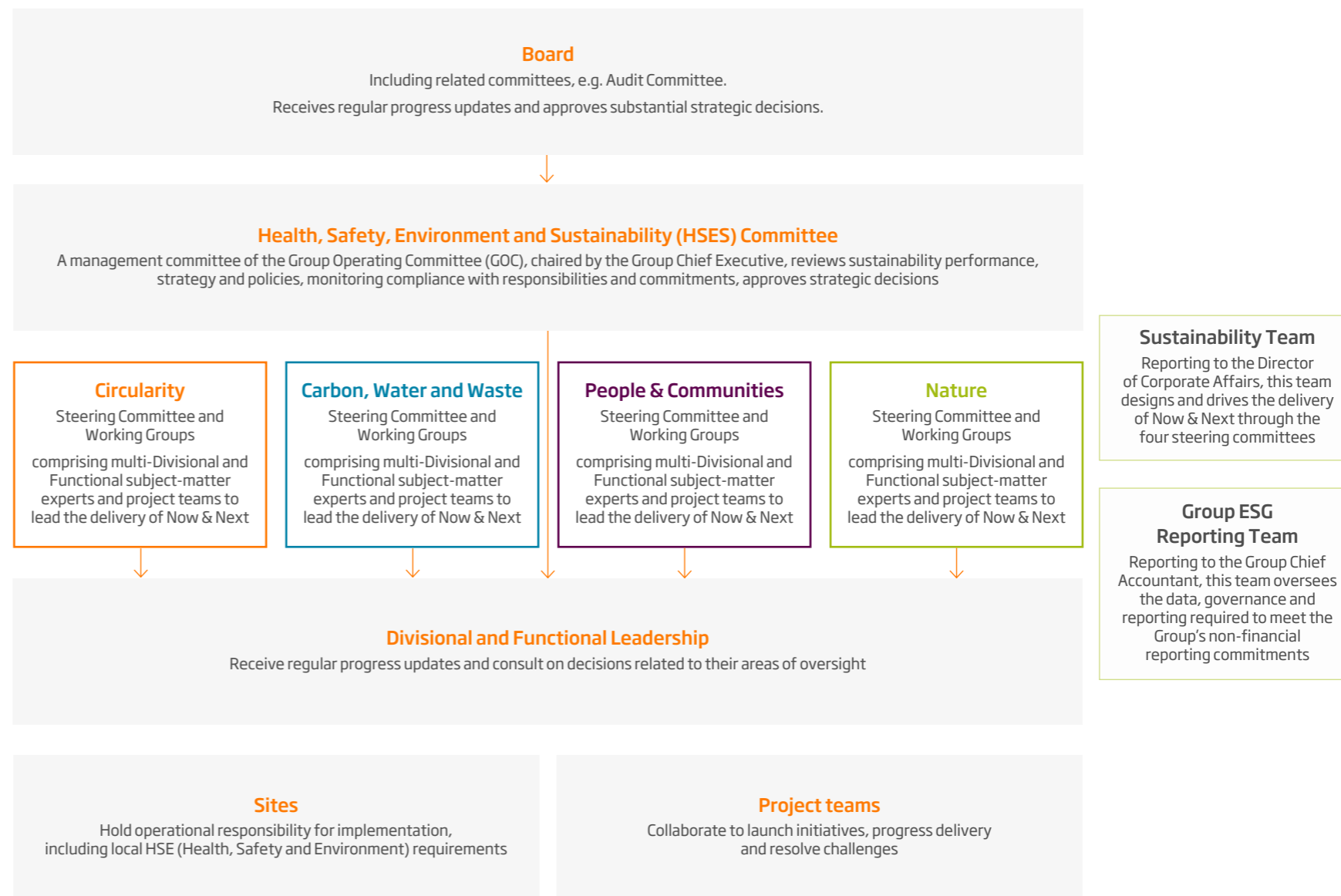
The terms of reference of the Audit Committee document the Committee responsibilities. These were updated last year to incorporate Task Force on Climate-related Financial Disclosures (TCFD) disclosures.

Upon appointment to the Board, Directors undertake an induction programme, receiving a broad range of information about the Group, including information about sustainability and climate-related matters, tailored to their previous experience.

Directors are given training and receive presentations to keep their knowledge current, including on TCFD and transition planning, and take their own responsibility for identifying and satisfying their own specific training requirements.

The Board and its Committees, members of whom have relevant ESG and sustainability experience, are updated on climate-related issues at a minimum annually. This includes the progress of our Now & Next Sustainability Strategy and other items that involve climate-related issues, such as the Corporate Plan, principal risks and uncertainties, and remuneration.

The Audit Committee is engaged on the assurance of climate-related metrics and developments in ESG reporting, including climate transition planning.





## ACCOUNTABILITY - GOVERNANCE

# Governance *continued*

## Management roles, responsibility and accountability

Members of the Health, Safety, Environment and Sustainability (HSES) Committee, chaired by the Group Chief Executive, assess and manage climate-related risks and opportunities.

This Committee meets monthly, having met 12 times during 2023/24 to discuss, amongst other topics:

- GHG emissions forecasts,
- Plans to deliver the science-based target,
- Progress on climate-related opportunities, such as plastic replacement.

Climate-related risks are monitored as part of our standard operating procedures to ensure that appropriate mitigation is in place and are regularly reviewed by management.

Management is supported by the Carbon, Water and Waste Steering Committee, which is the primary thematic steering committee handling climate-related matters, including the delivery of the science-based target.

Comprising leaders from across the business, the committee maintains a portfolio of projects to allocate resources, coordinate delivery and propose solutions to critical trade-offs related to addressing climate-related risks and opportunities.

These committees draw on subject matter experts from the Risk and Insurance, Strategy, Sustainability, Finance and Procurement teams. They report progress updates and escalate decisions to executive management on an ongoing basis.

Project deployment and the maintenance of Net Zero roadmaps is maintained by a technical sustainability delivery team. This team is responsible for driving carbon/energy, water and waste reduction and coordinating, through the steering committee, the design, planning and implementation to reach Net Zero.

Climate-related metrics are discussed at least monthly by management teams. Senior management teams review within-year performance, forecasts and longer-term progress against our targets, in addition to challenges, trends and opportunities for addressing climate-related issues monthly, and this is monitored by the HSES Committee on a quarterly basis, with progress presented to the Board annually.





## ACCOUNTABILITY - GOVERNANCE

# Governance *continued*

## Culture

Our people and culture support the delivery of our transition plan, particularly by enabling and rewarding the required behaviours and new ways of working, meaningfully engaging the workforce and prospective employees.

## Our Purpose and culture

### Redefining Packaging for a Changing World

Our people actively contribute to our Purpose of 'Redefining Packaging for a Changing World', moving the Group towards its vision of being the 'leading supplier of sustainable packaging solutions'. Our clear Purpose and strategic goal, 'to lead the way in sustainability', affirm the connection between the transition plan, the Purpose of the Group, strategic goals and vision. In doing so, the ambition to reach Net Zero is placed at the heart of our business, uniting our functions, divisions, sites and teams across Europe and North America.

## Skills, competencies and training

Our annual Individual Development Plan (IDP) process is designed to give our people the best chance to progress their careers, skills and knowledge. This includes identifying skill gaps, setting actionable development items involving on-the-job training, coaching or e-Learning, amongst other activities.

DS Smith e-Learning contains learning resources relating to climate change and Net Zero, supplementing our Now & Next target to engage 100 per cent of our people on the circular economy by 2025. Our training activities aim to equip people to lead change individually, as well as with our customers.

The development of the transition plan has highlighted the need for specialist skills, ranging from engineering to environmental science and management. We manage the demand for these skills through our recruitment channels, aiming to acquire the best talent in the market to meet the business needs associated with the plan.



## Smithies, employee recognition and engagement

Our employee recognition programme, The Smithies, helps to engage and celebrate all of our employees by recognising their incredible achievements and contributions.

Alongside the 'leading the way in sustainability' category, we introduced a new 'energy efficiency improvement' category, recognising the achievement of individuals and teams to reduce energy consumption and emissions.

For 2022/23, nominations included an individual who led the installation of a heat exchange unit to provide residual heat to the factory, offices and canteen leading to a c. 30 per cent reduction in gas.

Another team produced 'best practice' guidance, sharing energy reduction opportunities across multiple sites, amongst many other examples of great individual and team ingenuity and effort.



## Climate-related remuneration

The importance of ESG and sustainability, including climate change, continues to be emphasised by the use of a variety of ESG considerations as an underpin to the annual bonus.

In 2023/24, the three elements of the ESG underpin were met, including the roll out of an updated Now & Next Sustainability Strategy, which includes our approach to the delivery of science-based targets.

When considering the application of discretion to override the formulaic outcome for the 2024/25 annual bonus, the Remuneration Committee will take into account, alongside other ESG factors, continued delivery of the updated Now & Next Sustainability Strategy and of progress towards our science-based targets, taking account of updated actual performance and current customer/regulatory requirements.

For more information, see DS Smith Annual Report 2024, page 119.



NET ZERO TRANSITION PLAN

# Appendices



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## In this section

### Appendices

- [Climate-related metrics and targets](#)
- [Energy and fuel data tables](#)
- [Notes, methodology and climate disclosures index](#)



## APPENDICES

## Data tables

## Climate-related metrics and targets

We use climate-related metrics and targets to drive and monitor progress towards the strategic ambition of our transition plan, as well as respond to climate-related risks and opportunities.

The climate-related metrics presented in the opposite table draw from industry-specific standards, such as the SASB (Sustainability Accounting Standards Board) industry standard (Containers and Packaging) and the UK TPT (Transition Plan Taskforce) sector summary for Pulp & Paper products.

We disclose significant quantitative information about our performance on a range of sustainability topics, including climate-related issues, in the DS Smith ESG Databook 2024, which can be downloaded from our ESG Reporting Hub.

## Independent Assurance Statement

Deloitte have provided independent third-party limited assurance in accordance with the International Standard for Assurance Engagements 3000 (ISAE 3000) and Assurance Engagements on Greenhouse Gas Statements (ISAE 3410) issued by the International Auditing and Assurance Standards Board (IAASB) over the selected information, identified with \* in the opposite table, and other selected information relating to carbon, energy, water, waste, production and employee diversity identified with \* within DS Smith Annual Report 2024, DS Smith Sustainability Report 2024, DS Smith Net Zero Transition Plan 2024 and DS Smith ESG Databook 2024.

Deloitte's full unqualified assurance opinions, which include details of the selected information assured in 2023/24, 2022/23 and 2021/22, can be found on our ESG Reporting Hub, at <https://www.dssmith.com/sustainability/reporting-hub>.

Independent third-party limited assurance of selected information for the 2019/20 base year was provided by Bureau Veritas.

## Metrics derived from public and third-party sources

Other than figures indicated with an asterisk (\*), the information contained in this plan has not been audited or assured. Some of the information and data in this plan may have been obtained from public and third-party sources and has not been independently verified by the Group and the Group makes no representation or warranty as to its quality, completeness, accuracy, fitness for a particular purpose or non-infringement of such information.

## Industry-specific metrics and targets used to assess and manage outcomes of climate-related risks and opportunities

Climate-related risk or opportunity	Metric	Unit of measure	2023/24	2022/23	2021/22	Trend
<b>Increased spend on carbon taxes</b>	Gross global Scope 1 emissions	tonnes CO <sub>2</sub> e	<b>1,340,272*</b>	1,542,250*	2,023,278*	
	Percentage covered under emissions limiting regulations	Per cent	<b>70*</b>	73*	79	
Now & Next target: By 2030, reduce Scope 1, 2 and 3 GHG emissions by 46 per cent compared to 2019						
<b>Increased cost of raw materials or threat to supply</b>	Percentage of fibre use optimised for individual supply chains <sup>1</sup>	Per cent	<b>90</b>	64	26	
Now & Next target: By 2025, optimise fibre for individual supply chains in 100 per cent of new packaging solutions						
<b>Increased severity of extreme weather events</b>	Internal and highly localised insurance metrics (financial and non-financial), such as loss expectancy and proprietary risk scores, which can be compared within the Company and across the industry					
<b>Increased likelihood of water stress</b>	Total water withdrawals	m <sup>3</sup>	<b>52,477,496*</b>	53,802,571*	54,644,995*	
	Percentage of water withdrawn from areas at risk of water stress	Per cent	<b>29*</b>	38	31	
	Percentage of paper mills and packaging plants with a water management plan in place	Per cent	<b>10</b>	-	-	
New Now & Next target: By 2025, 100 per cent of our paper mills and packaging sites to have water management plans <sup>2</sup>						
<b>Growth in demand for sustainable packaging</b>	Number of pieces of plastics replaced	Million units	<b>Over 1.2 billion (cumulative to the end of 2023/24)</b>			
Now & Next target: By 2025, help our customers to replace one billion pieces of plastic with alternative fibre-based solutions						
<b>Greater resource efficiency</b>	Total energy consumption	MWh	<b>14,058,435*</b>	14,407,601*	15,324,120*	
	Water withdrawal per tonne of production at mills in areas at risk of water stress	m <sup>3</sup> /t nsp (tonne net saleable production)	<b>7.9*</b>	8.9*	8.1	
Now & Next target: Maintain ISO 50001:2018 certification at 100 per cent of in-scope sites, covering 90 per cent of total energy consumption						
<b>Use of lower-emission energy sources</b>	Percentage of overall energy consumption from renewable sources	Per cent	<b>29*</b>	26	21	
	Percentage of electricity consumed that was generated from renewable sources	Per cent	<b>11*</b>	15	13	
Now & Next target: Reach Net Zero GHG emissions by 2050						

Selected information marked with an asterisk (\*) has been independently assured by Deloitte - see the Independent Assurance Statement opposite. Additional non-financial metrics and methodologies can be located in our ESG Databook 2024, available from our ESG Reporting Hub online.

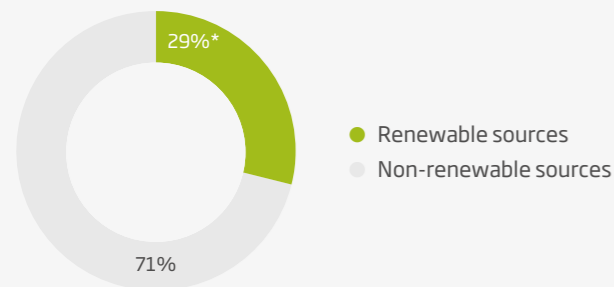
1. This figure represents c. 74 of our conventional packaging sites for which BSIR (Board Strength Index Rating) data is available. It does not capture all packaging designs and specifications and excludes board purchased externally and sheet board sales. See DS Smith Sustainability Report 2024, page 17 for more information.
2. Target updated from 'Maintain water stress mitigation plans at 100 per cent of our sites in current or future water stressed areas'. Scope includes manufacturing sites with >5,000m<sup>3</sup> annual water withdrawal.



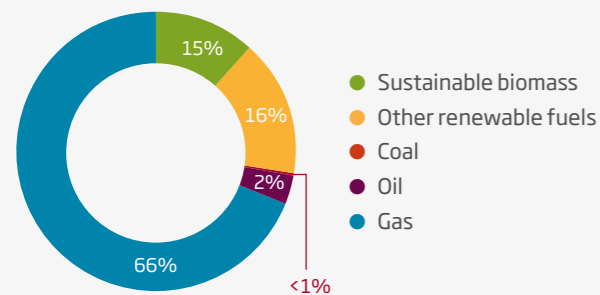
## APPENDICES

Data tables *continued*

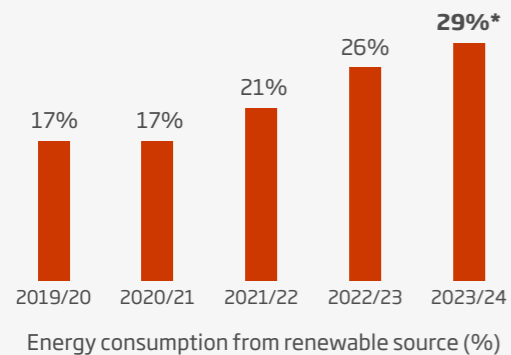
## Energy split (renewable and non-renewable) (2023/24)



## Fuel mix (2023/24)



## Energy consumption from renewable sources



## Energy and fuel (2023/24)

## Energy

	Renewable sources (MWh)	Non-renewable sources (MWh)	Total energy consumed (MWh)
Consumption of fuel (excluding feedstock)	2,953,132	6,369,598	9,322,730
Consumption of purchased or acquired electricity	186,600	2,046,380	2,232,980
Consumption of purchased or acquired steam	893,976	1,602,660	2,496,636
Consumption of self-generated non-fuel renewable energy	6,089	-	6,089
<b>Total energy consumption</b>	<b>4,039,797</b>	<b>10,018,638</b>	<b>14,058,435*</b>

## Fuel

	For self-generation of electricity (MWh)	For self-generation of heat (MWh)	For self-generation of steam (MWh)	For self-cogeneration or trigeneration (MWh)	Total fuel consumed (MWh)
Sustainable biomass	-	-	-	1,416,592	1,416,592
Other renewable fuels	-	-	-	1,536,540	1,536,540
Coal	-	34,921	-	-	34,921
Oil	-	216,690	-	-	216,690
Gas	-	14,091	1,012,910	5,090,986	6,117,987
<b>Total fuel consumption</b>	<b>-</b>	<b>265,702</b>	<b>1,012,910</b>	<b>8,044,118</b>	<b>9,322,730</b>

## Generation

	Total gross generation (MWh)	Generation that is consumed by DS Smith (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by DS Smith (MWh)
Electricity	1,556,962	370,906	491,190	118,925
Heat	14,091	14,091	-	-
Steam	4,098,013	4,098,013	2,038,579	2,038,579

## Renewables

	2023/24	2022/23	2021/22	2020/21	2019/20
Energy consumption from renewable source (%)	<b>29*</b>	26	21	17	17
Electricity from renewable source (%)	<b>11*</b>	15	13	12	11

\* Independent Assurance has been obtained for the metrics marked with an asterisk '\*\*' - see the Assurance Statement on page 33.

See page 35 and our Basis of Preparation for our energy reporting methodology.



## APPENDICES

## Notes

## Methodology

GHG emissions are reported in accordance with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (Revised), and are consolidated under a financial control boundary. Department for Business, Energy & Industrial Strategy (BEIS) 2022 emission factors are applied, unless emission factors from other sources are deemed more appropriate.


The information included in this plan may have been prepared using models, methodologies and data which are subject to certain limitations, including the limited availability of reliable data, the limited standardisation of data and future uncertainty (due, amongst other things, to changing projections relating to technological development and global and regional laws, regulations and policies, and limited historical data). ESG methodologies, metrics, targets, reporting standards and other principles are subject to rapid change and development which is beyond the Group's control and which could impact the information included in this plan.

Our climate scenario analysis models the most relevant reference points from IEA and IPCC reference scenarios and utilises financial data to assess potential future effects on financial metrics.

The primary potential financial impact figures given on page 8 are illustrative estimates, given within the context of each scenario. The analysis was updated in May 2024 and some of the estimates have changed compared to those previously disclosed in the Annual Report due to changes in the inputs to our model. For example, revenues, costs and currency exchange rates have changed compared to those used previously. For water stress, the latest version of the WRI Aqueduct tool has updated inputs to the hydrological model, providing more accurate baseline data, as well as future projection data for 2030, based on the latest climate models. The estimates provided may therefore be incomparable to those previously given.

## Basis of Preparation

Our Basis of Preparation is a technical document that sets out the reporting scope, reporting standards and definitions. It includes methodology notes detailing the consolidation approach, the choices of emission factors applied and how data is collected, aggregated and how emissions are calculated.

 For more information, see our [Basis of Preparation](#), available from our [ESG Reporting Hub](#), online.

## Climate disclosures index

This report has been prepared with reference to the recently released UK Transition Plan Taskforce disclosure framework, which aims to provide a set of recommendations for effective reporting on climate transition plans. In parallel, the International Sustainability Standards Board 'IFRS S2 Climate-related Disclosures' standard requires the disclosure of any transition plan the entity has developed. This standard integrates and is consistent with the recommended disclosures published by the Task Force on Climate-related Financial Disclosures (TCFD). In this table, 'AR' refers to DS Smith Annual Report 2024.

UK Transition Plan Taskforce (UK TPT)	International Sustainability Standards Board (ISSB) IFRS S2 Climate-related Disclosures	Task Force on Climate-related Financial Disclosures (TCFD)	Page(s) of this report	Page(s) of AR 24
<b>Ambition</b>				
<b>1. Foundations</b>			6	60, 77
1.1 Strategic ambition	Metrics and targets, Climate-related targets	Metrics and targets		
1.2 Business model and value chain	Strategy, Climate-related risks and opportunities Strategy, Business model and value chain	Strategy, Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term	7-9	62
1.3 Key assumptions and external factors			10	63
<b>Action</b>				
<b>2. Implementation strategy</b>			12	63-69
2.1 Business operations		Strategy, Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning	13-16	
2.2 Products and services			17	
2.3 Policies and conditions			18	
2.4 Financial planning	Financial position, performance and cash flows		19	
<b>3. Engagement strategy</b>			20	
3.1 Engagement with value chain	Strategy, Strategy and decision-making		21-22	
3.2 Engagement with industry			23	
3.3 Engagement with government, public sector, communities and civil society			23-24	
<b>Accountability</b>				
<b>4. Metrics and targets</b>			26-28	76-77
4.1 Governance, engagement, business and operational metrics and targets	Metrics and targets, Climate-related metrics Metrics and targets, Internal carbon prices	Metrics and targets, Describe the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process, Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets		
4.2 Financial metrics and targets				
4.3 GHG metrics and targets		Metrics and targets, Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks		
4.4 Carbon credits			28	77
<b>5. Governance</b>			29	61
5.1 Board oversight and reporting	Governance	Governance		
5.2 Management roles, responsibility and accountability	Governance, governance body(s)	Governance, Describe the Board's oversight of climate-related risks and opportunities		
5.3 Culture	Governance, management's role	Governance, Describe management's role in assessing and managing climate-related risks and opportunities	30	
5.4 Incentives and remuneration	Metrics and targets, remuneration	Metrics and targets, remuneration		
5.5 Skills, competences and training				
	Strategy, climate resilience	Strategy, Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario		70-74
	Risk management	Risk management, Describe the organisation's processes for identifying and assessing climate-related risks, Describe the organisation's processes for managing climate-related risks, Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management		74-75



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