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About this Report

This is Kingspan Group plc's ("Kingspan") fourth annual Planet Passionate report (the "Report"), which covers the period 01.01.2023 to 31.12.2023.

This Report was published in March, 2024 and it covers the same period as Kingspan's 2023 Annual Report (01.01.23 - 31.12.23). The Report covers all entities that are fully consolidated in our financial statements. The environmental performance of our offices is not included in our performance indicators because it is considered immaterial.

Kingspan is committed to collecting and presenting accurate and reliable information. To this end, the energy, waste and water data presented in the Report is reviewed on an ongoing basis by our Internal Audit function. To further strengthen the credibility and reliability of the Report, we have also sought independent, external assurance for several Key Performance Indicators, including our GHG emissions, our total energy use, and waste generation. The results of this engagement can be found in the external assurance statement (page 63). Any restatements of information will be clearly reported in the relevant sections.

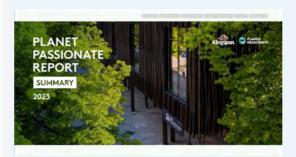
For any enquiries, comments or recommendations about the Report or any other issues pertaining to Kingspan's approach to sustainability, please contact us at planetpassionate@kingspan.com.



Additional publications

Planet Passionate Report 2023 - Summary

The Report summary presents key data and highlights and is available in four languages: English, French, German and Spanish.



Planet Passionate Communities

Our Planet Passionate partnerships and Planet Passionate Communities magazine is available



CDP Questionnaire 2023

Our latest CDP submission is available on our website. It includes detailed information on our climate risk management.



Annual Report 2023

Our 2023 Annual Report is available here.



Planet Passionate Our Journey Continues

We are delighted to present some of the progress we've made not only in 2023, but also during our Planet Passionate journey so far. To every colleague who has contributed to our journey to date thank you!



2023

base year

further reduction from

65% reduction from base year



2023 **6.8** MW

additional capacity

42 MW total capacity



2023

estimated reduction from landfill diversion projects

33% reduction in waste to landfill from 2020 base year



2023

capacity

additional

71 ML total capacity



2023

are electric forklifts

800 electric forklifts in total



2023

million bottles

3 Billion+ bottles in total



150+ **Planet Passionate** projects in 2023

PAR

80+

Planet Passionate Community projects in 2023

1: Scope 1&2 GHG emissions. Excluding biogenic emissions. Scope 2 GHG emissions calculated using market-based methodology. *equivalent no. of PET bottles by weight

A message from our CEO

It is with great pleasure that I introduce our fourth annual Planet Passionate report which covers our progress and achievements in 2023. This year, marked by ongoing humanitarian and biodiversity crises and financial constraints, we were faced with a harsh reality: the climate change crisis is getting worse as mitigation momentum is decelerating; global temperature is already 1.1 °C above preindustrial levels and is likely to reach or surpass the critical 1.5 °C tipping point by 2035. In this critical moment, we must honour our decarbonisation commitments and ensure a just and effective transition to net-zero.

The building sector has a pivotal role to play in the transition, as the buildings and construction sector is by far the largest emitter of greenhouse gases, accounting for a staggering 37% of global emissions. Transforming buildings into low-carbon, healthy environments must be high on the climate mitigation agenda. We are uniquely placed to help support the decarbonisation of the building sector via our extensive offering of high-performance, energy saving systems and solutions. In 2023, our insulation products sold globally were estimated to save 164 million tonnes of CO₂e over their lifetime.

In 2023, we continued to work closely with our key suppliers to find short- and medium-term solutions to reduce the environmental impacts of our key products whilst maintaining their highperformance. Our progress to date enabled us to launch three new lower embodied carbon products to the Irish and UK markets, with further

product launches planned in 2024. In November, we launched our first bio-based insulation board. HemKor. We will continue our bio-based materials research at our IKON Innovation Centre, with the aim of bringing additional products to market in the near future.

During the year, we made significant progress towards achieving our ambitious 2030 targets. I am proud that we completed over 150 Planet Passionate projects – our highest number yet - across our operations, including 25 new solar PV installations. We continued our investment in renewable energy and energy efficiency initiatives to reduce our direct GHG emissions, resulting in a 65% reduction versus 2020. This achievement was supported by the introduction of our internal carbon price of €70 per tonne of CO₂e in January. This powerful new tool is supporting the achievement of our net-zero carbon manufacturing target and is proving to be an integral part of our climate strategy.

Our increased focus on waste management has enabled us to stay on track with our landfill diversion target while bringing along new acquisitions in 2022 and 2023. We also continued to work with our suppliers to increase our use of recycled PET as a raw material, and have recycled the equivalent of over three billion bottles in our processes since 2020. Finally, we also installed 11 new rainwater harvesting projects across the globe, bringing our total capacity to 71 million

Through Planet Passionate Communities, the philanthropic arm of our Planet Passionate programme, we continued to work with our local communities, supporting them to implement over 80 wellbeing and environmental initiatives. As we move into the fifth year of our journey, I am incredibly proud of what has been achieved so far, but we also have a lot more that we want to accomplish by 2030. I am confident that our devoted teams across the business will strive to help us meet our goals and continue to play our role in the transition to a net-zero emissions built environment. I invite you to explore the rest of this Report and get a better understanding of our efforts and achievements in 2023, and hope you'll see that Planet Passionate is not just a set of targets; it is who we are.

Gene M. Murtagh CEO, Kingspan Group plc





At a Glance

Our mission

To accelerate a net-zero emissions future-built environment with the wellbeing of people and planet at its heart.

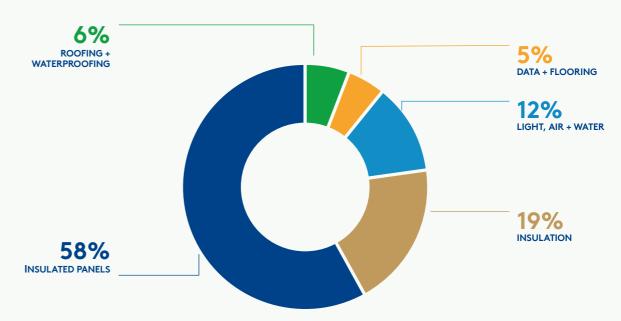
Founded and headquartered in Kingscourt, Co. Cavan, Ireland, Kingspan is a global business operating in over 80 countries and with over 22,500 employees.

Kingspan has five operating divisions: Insulated Panels, Insulation, Data + Flooring, Light, Air + Water and Roofing + Waterproofing. Our business model and strategic pillars enable the ongoing conversion to ultra-efficient building envelopes, from outdated, inefficient methods of construction. Through our continuous development of innovative and proprietary technology, we have created a portfolio of products which create value across a number of key metrics. Critically, through the differentiated thermal performance of our innovative solutions, we help design teams, architects and ultimately our customers play their part in tackling climate change. The construction and operation of buildings together account for approximately 36% of global energy use and 37% of energy related CO₂ emissions when upstream power generation is included. Action, at scale, is urgently needed.

Our culture and values

The business has been built on trust in the integrity of our people and our offering. We value this trust and recognise it as being fundamental to our ongoing success. We are entrepreneurial, collaborative, honest, and we stand behind a common cause - better buildings for a better world. We are innovative. We are the market leader in the field of high-performance building envelope solutions, which enable lifetime carbon and resource savings. We think long term. The strategy of the business is driven by long-term ambitions and not by quarterly performance. The success of this strategy can be seen in our longterm growth. This ethos is apparent in our multiyear commitments such as our 10-year Planet Passionate programme, which will drive real, positive, impact for the environment and forms a common goal across the business globally.

5 Divisions



Note: Divisional breakdown based on product sales.









Revenue €8.1bn

Manufacturing sites

224

We are Kingspan

Our vision can only be achieved with the dedication, hard work and ambition of our colleagues across the globe. Thank you to every colleague that has contributed to our Planet Passionate journey so far.

Acquisitions and integration

Acquisitive growth is an important element of expected to help us meet our ambitious targets. At the same time, acquiring new businesses has a material impact on our Planet Passionate performance. To allow for a more meaningful comparison and assessment of our progress, we against targets for both our underlying business growth) and whole business (underlying business plus acquisitions).

in 2023:

Hempflax Building Solutions: A manufacturer Germany.

Alaço: Based in Portugal, Alaço produces a full product range of single skin profiles, PIR insulated

















































































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Kingspan's development strategy. Acquisitions, all of which align with our strategic criteria, undergo extensive integration procedures and are supported by the Group Sustainability team for performance improvements post-acquisition. This extends to our Planet Passionate programme; all acquisitions are are reporting on our Planet Passionate progress (the business from our 2020 base year plus organic

Key companies that joined the Kingspan family

of hemp fiber insulation products in its facility in

panels, purlins and accessories.













How we create value

We are Planet Passionate

Our mission is to help accelerate a net-zero emissions future built environment with the wellbeing of people and planet at its heart.

Our Strategic Goals **Innovation Key inputs** Metals Chemicals **Mineral** Fibre In 2023, we operated 224 224 manufacturing sites **Energy use** Electricity **Employees**



Planet Passionate

Generate

their own

renewable

resources

Business activities

Conserve

emissions

Sustainable innovation

and embodied GHG emissions

reduce

GHG

energy and

Completing the envelope

We believe buildings should:

Φ±φψ

Harness the

power of the

environment

Innovative solutions that help to reduce operational

natural

Global

Completing The Envelope

Learn more about our Strategic Goals

Main outputs

Learn More (•••)





- Insulated panels Insulated panel building envelopes
- PowerPanel™

Insulation

- Insulation boards
- Piping and ducting insulation



3. Light, Air + Water

- Daylighting solutions
- Natural ventilation
- Smoke management solutions
- Water preservation and protection solutions
- Energy management solutions

4. Data + Flooring

• Raised access flooring and data centre airflow management systems



5. Roofing + Waterproofing

- Roof membranes and roofing components
- Single component membrane solutions and combined systems

Key outcomes

Carbon

164m tco,e

Estimated lifetime carbon savings from insulated systems sold in 2023

7.1m tco,e

Kingspan's 2023 value chain carbon footprint

Natural light

9bn lumens

The capacity to create 9 billion lumens of natural light annually through our daylighting systems sold in 2023

1m

Enough to light up 1 million homes1

Water conservation

41.3bn litres

Over 41 billion litres of rainwater could be harvested by our tanks produced in 2023²

500m +

Enough to fill over 500 million baths

Circularity

858m

In 2023 alone we recycled 858 million waste plastic bottles ³ 1,100+

Enough to fill over 1,100 football pitches

¹ Assumes 10 x 60W bulbs per home

² Assumes a 20 year product life

³ Equivalent no. of PET bottles by weight

Our approach to sustainability

For us it is clear: we must continue to decouple our business growth from negative environmental impacts.

We must meet the needs of the present while leaving the world a better place for future generations. Doing business across the world comes with important responsibilities that extend beyond running a profitable business. As we face unprecedented environmental and social challenges, we must all scale up our actions to ensure that we thrive within planetary boundaries and become a more just society in the process. The built environment has an important role to play in combating both climate change and environmental degradation, and we pledge to play our part. In practice, this means addressing our most material impacts at pace. Our scope spans across our value chain 'from raw materials to end of product use'. This value chain includes many forms of capital, from the vital natural resources needed to manufacture our products. through to the financial capital raised from the sale of these products.

We must also continue to innovate and enhance the environmental performance of our products to help support the urgent acceleration of netzero carbon buildings, both new and existing at scale. Achieving real and lasting change is only possible through the collective efforts of everyone who works at Kingspan, our partners and suppliers, NGOs, governments, local communities and other stakeholders.



Supporting the SDGs

Kingspan aims to support the UN's Sustainable Development Goals (SDGs) through our constant development of solutions which enable building owners to consume less resources. We do this whilst also driving our Planet Passionate vision, which aims to advance our environmental performance across the areas of carbon, energy, circularity and water.

Throughout this Report we demonstrate how our initiatives, and the progress we made in 2023, contributed to the SDGs that are most closely related to our activities and business model.

SDGs that are most closely linked to Kingspan's operations:



















Addressing our impacts

PASSIONATE To address our most material environmental impacts, we have designed and developed several strategies, policies, targets, and action plans. Our efforts are spearheaded by our 10-year sustainability programme, Planet Passionate (for more on the programme, see page 28). As our business grows, we aim to better identify, assess, measure and address any material negative impacts for additional environmental topics, including biodiversity and pollution.

> Through Planet Passionate Communities, the societal and philanthropic arm of Planet Passionate, we are also expanding our efforts to create value to society and the local communities where we operate. For more information, see page 46.

Also, our organisational structure and strategy is pivotal in how we manage our environmental and social impacts, including impacts from our supply chain. For more information on governance topics, see page 11.

Finally, we are in the process of identifying our material Impacts, Risks and Opportunities (IROs) through a comprehensive exercise that applies the key principles of double materiality. The results will be published in our next reporting cycle.

Partnerships and initiatives

We recognise that addressing the economic, social and environmental challenges facing our planet today will require massive mobilisation of resources, expertise and knowledge on a global scale. Thus, progress can only be achieved via harmonious cooperation between sectors, stakeholders and the creation of strategic multi-stakeholder partnerships, charters and voluntary initiatives. With this realisation and to advance our sustainability agenda, we endorse and maintain membership of a wide range of organisations, associations and initiatives, including:



TCFD

materialsCAN

























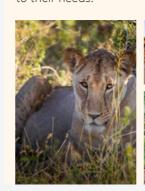
Launched in 2016. Advancing Net Zero is the World Green Buildina Council's (WorldGBC) global programme that works with national Green Building Councils to develop tools and resources to build industry capacity to deliver net-zero carbon buildings.



In 2020, Kingspan became an official programme partner of this ambitious campaign. Improving energy efficiency and performance in buildings is an essential component of the Advancing Net Zero's Whole Life Carbon vision, which aims for all new buildings to operate at net-zero emissions by 2030, with a 40% reduction in embodied carbon, and both new and existing buildings to operate at net-zero by 2050, with net-zero embodied emissions.



The Born Free Foundation is an international wildlife charity and works tirelessly to ensure that all wild animals, whether • living in captivity or in the wild, are treated with compassion and respect and are able to live their lives according to their needs.



The programmes Kingspan supports are:

- Pride of Meru
- Pride of Amboseli
- Twiga Team

To find out more visit: bornfree.org.uk



Seabin™ is an Australian founded clean tech start- and data cataloguing of up that has developed an plastics and other marine innovative hardware unit debris from waterways. and Ocean Health Data Platform.

This involves the removal

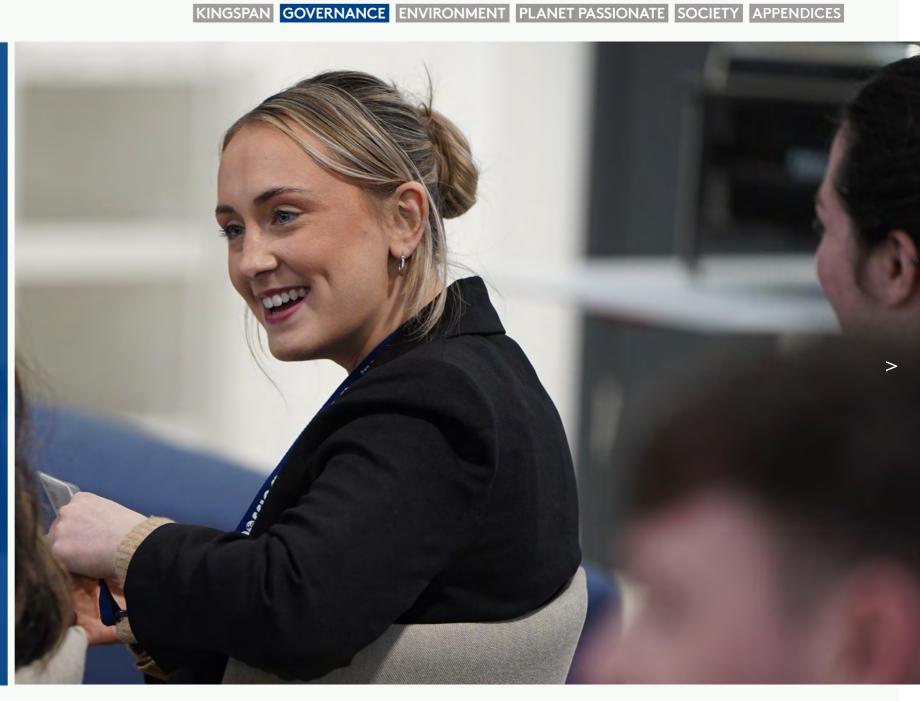
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Governance



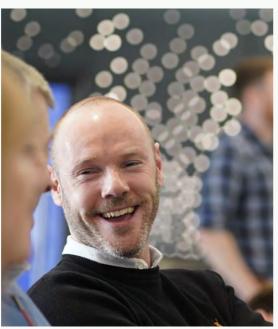
Corporate Governance

We are committed to ensuring that our longterm ambitions go hand in hand with high standards of corporate governance, as well as a Board equipped with an abundance of experience and expertise.

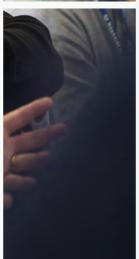
The Kingspan Board recognises that the values, integrity and behaviours that shape our culture and corporate governance are the foundation of long-term success.

Internal control

The Board of Directors has overall responsibility for the Group's system of internal control and has delegated responsibility for the implementation of this system to executive management. This delegation ensures the embedding of the system of internal control throughout the Group's operations and ensures that the organisation is capable of responding quickly to evolving business risks, and that significant internal control issues, should they arise, are reported quickly to appropriate levels of management. Such a system of internal control, by its nature, is designed to manage rather than eliminate the risk of failure to achieve business objectives, and can provide reasonable, but not absolute, assurance against material misstatement or loss. For more information, please visit our website.







Code of conduct

Kingspan expects the highest standards of integrity, honesty and compliance with the law from our employees, our directors and our partners globally. We actively encourage our employees to speak out if they experience instances that are not in keeping with the principles outlined in our Code of Conduct. All new joiners in Kingspan must complete training on our Code of Conduct. Our business success is inextricably linked to our behaviours, and our aspiration is to maintain a culture where our everyday actions are built on five core principles:

Clear, ethical and honest behaviours and communications

Compliance with the law

Respect for the safety and wellbeing of colleagues

Protection of our **Group assets**

Upholding our commitment to a more sustainable future

Learn more about our Board and **Board-level committees**



Anti-bribery and corruption

Our Anti-bribery and Corruption Policy outlines the principles we adhere to, to ensure we comply with anti-bribery and corruption laws in every jurisdiction in which we operate. Any violation could subject Kingspan, its directors and employees to severe penalties, including fines and imprisonment, and could be very damaging to Kingspan's business and its reputation.

"Kingspan's approach to bribery and corruption is very simple. Kingspan maintains a zero-tolerance policy towards bribery, and it is prohibited in any form. It is essential that Kingspan conducts its business fairly, honestly, and openly both on a domestic and international basis."

Gene M. Murtagh

CEO, Kingspan Group plc

Our Anti-bribery and Corruption Policy is available here.

Our Code of Conduct is available here.





Sustainability governance

Our Chief Executive Officer (CEO) is responsible for sustainability-related issues. This responsibility has been embedded at the top of the chain of command to ensure sustainability related issues are considered when reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, business plans and assessing progress against aoals and taraets.

The CEO is supported in this role by the Executive Directors who are responsible for ensuring that issues are monitored at divisional level and that any significant issues are reported back to the Board at the bi-monthly Board meetings.

Management oversight

Kingspan is currently broken into ten operating businesses. Managing directors within each business unit at global, regional and local level have sustainability objectives linked to their function to support the delivery of our Planet Passionate agenda. Each of these operating businesses are reviewed monthly by the senior management teams across each division, with at least two executive directors, including the CEO. These senior teams have representatives including managing directors, finance, technical, operational and commercial directors. At these business reviews, risks and opportunities that are assessed as significant can be brought to the attention of the executive directors and are assessed on a division-wide. and potentially Group-wide basis.

Sustainability structure

In 2019, Kingspan appointed a Global Head of Sustainability, reporting directly to the CEO and the Group Board annually on progress against our Planet Passionate objectives. The Global Head of Sustainability is responsible for the development, management and oversight of key environmental initiatives across the global business. The Group Sustainability team reports to the Global Head of Sustainability along with the Group Planet Passionate team which consists of 16 representatives from across the business units.

The Planet Passionate divisional representatives are responsible for driving the sustainability strategy across their division, and management of the divisional level Planet Passionate team.

Sustainability oversight & management

Highest level of governance oversight



Kingspan Group plc Board

- Approves the Planet Passionate strategy as a core part of the Group 5-year strategic plan
- Formal annual update from the Global Head of Sustainability
- Approves the Planet Passionate Report
- Considers impact of significant acquisitions on Planet Passionate strategy

Remuneration Committee

 Annual progress update versus taraets for Performance Share Plan (PSP)

Audit & Compliance Committee

 Annual full risk update across the Group. including climate change risks and strategies

Management oversight

CEO

- Formal monthly updates from the Global Head of Sustainability
- Formal monthly updates from the Head of Innovation
- Formal monthly updates from all Divisional MDs, including progress towards our Planet Passionate targets

Internal Audit

Implementation Management

क्री

Global Head of Sustainability

Head of Innovation

Global **Management Teams**

Implementation



Global Planet Passionate Team Focused Working Groups Divisional Sustainability Teams Divisional Operations Teams Group Sustainability Team Group and Divisional R&D Teams

Kingspan continues to develop its ethical and environmental strategy for procuring materials and services. We seek to build and maintain long term relationships with key suppliers and contractors to ensure that they are aligned to the same goals and standards as Kingspan, to address strategic global issues, emerging trends and ultimately our customer needs.

This approach, which has divisional and regional variances based on the local requirements and materials, is continually evolving to align with core social, ethical and environmental standards. In all cases, we aim to foster an environment of collaboration. In 2022, we adopted and published our Group Supplier Policy which sets out our expectations of suppliers in relation to:



Business practices and integrity



Anti-bribery and corruption



Ethical

employment

practices

Environmental responsibility

Our procurement teams are working in conjunction with our key supplier base on the deployment of the policy as part of our wider supplier engagement and collaboration efforts.

Supplier due diligence

Kingspan continues to evaluate our supply chain due diligence process to identify, prevent and mitigate potential human rights and environmental adverse impacts in our supply chain. In late 2023, we initiated a review of our supply chain due diligence process. We expect updates to this process to be rolled out globally throughout 2024.

ecovadis

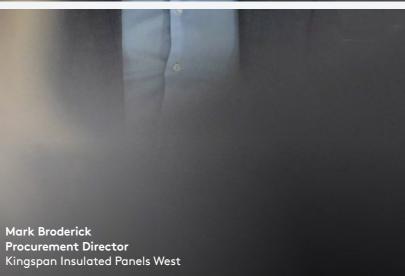
Ecovadis

In 2022, we began to roll out EcoVadis across our business to assess our supply chain network under environmental, ethics, labour and human rights and sustainable procurement criteria. To date we have received supplier questionnaires that cover 35% of our group spend; including 42 additional suppliers onboarded in 2023.

Annual Supplier Forum

In November 2023, we held our annual Supplier Forum with suppliers mainly based in the Americas. Suppliers were given an overview on how we are progressing towards our sustainability targets and we held one-to-one meetings with all attending suppliers, resulting in joint initiatives that will support the delivery of our target for a 50% reduction in product CO2e intensity from our primary supply partners by 2030. We continue to strengthen our supplier relationships and look for ways to accelerate our progress to meet our targets.



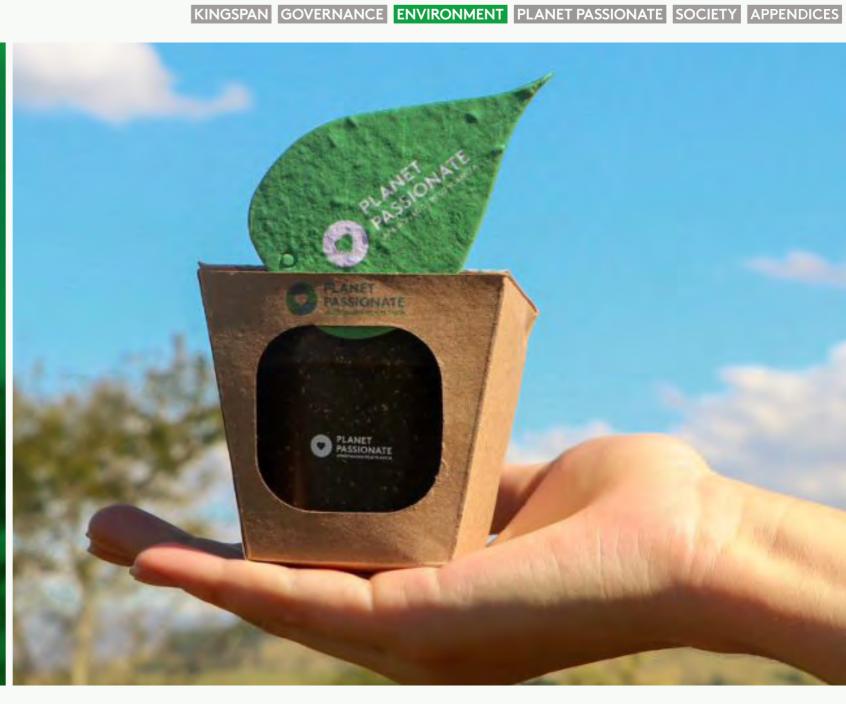


OUR SUPPLIER ENGAGEMENT STRATEGY GIVES US THE OPPORTUNITY TO PARTNER WITH ORGANISATIONS THAT SUPPORT DELIVERY OF OUR TARGET FOR A 50% REDUCTION IN PRODUCT CO2 INTENSITY BY 2030. THOUGH WE HAVE MADE MUCH PROGRESS IN LAYING THE GROUNDWORK TO ACHIEVE OUR TARGETS, WE MUST DO MORE AND WE MUST ACT MUCH FASTER."

Mark Broderick

Procurement Director Kingspan Insulated Panels West





Carbon and energy Introduction













As climate change intensifies, it presents an urgent and multifaceted challenge. The escalating frequency of extreme weather events, rising sea levels, and environmental degradation threatens both the environment and human wellbeing. This not only jeopardises advancement towards meeting the UN SDGs, but also highlights the critical need for immediate global action to mitigate its far-reaching impacts.

While the Paris Agreement underscores the pressing need for immediate measures to limit global temperature increase at 1.5°C above preindustrial levels, the journey towards achieving a net-zero world will not take the trajectory originally anticipated. Our transition back to the "new normal" post-pandemic is challenged by an energy supply crisis, a cost-of-living crisis, a food supply crisis, rising inflation and the prolonged war in Ukraine. These pressures have decelerated the momentum for climate action, highlighting a dangerous disconnect between the urgency expressed by the scientific community and the current pace of climate change mitigation. The latest commitments made by the G7 private sector point to an increase of 2.7°C by 2050, significantly higher than the Paris Agreement goals¹.

Climate change and energy

Energy is closely linked with climate change, as non-renewable energy production greatly contributes to global warming. As a result, energy must be a central focus of the climate action agenda to achieve net-zero emissions by 2050. Even though so much depends on sustainable, accessible and affordable energy systems, governments and politicians find it increasingly difficult to balance long-term commitments and short-term needs. A multilateral agreement to phase out fossil fuels has not been reached and the multiple crises facing the world make it difficult for energy-importing countries to invest in more renewable energy sources. The EU spent at least €50 billion on fossil fuel infrastructure and supplies, and some countries restarted coal power stations¹.

Climate action urgency

To prevent irreversible consequences and avert a climate catastrophe, immediate and stronger action is needed across all sectors. Achieving absolute emissions reductions must be the pillar of all mitigation efforts globally.

Buildings and construction are responsible for 37% of energy-related carbon dioxide (CO₂) emissions globally², a fact that highlights the importance of the sector in the transition to a net-zero emission pathway.

Our company mission is to help accelerate a net-zero emissions future built environment.

with the wellbeing of people and planet at its heart. Climate change risks and opportunities are deeply embedded in our strategy, R&D investment, products and business model. Kingspan's core strategy is structured around the manufacture and delivery of a wide range of high-performance and energy- and resourceefficient solutions.

Concurrently, we continue our efforts to increase energy efficiency, our direct use of renewable energy and on-site generation. We are on a journey to decouple our growth from fossil fuels, while improving our energy security and resilience against price fluctuations.

We take our role seriously in the fight against climate change and the largest impact we can have is to help enable the decarbonisation of both new and existing buildings around the world.

World Economic Forum, Global Risks Report 2023

² United Nations Environment Programme, & Yale Center for Ecosystems + Architecture (2023). Building Materials and the Climate: Constructing a New





2.7°C

The latest commitments made by the G7 private sector point to an increase of 2.7°C by 2050.





Carbon and energy Our strategy

37% of the world's energy-related emissions stem from the building and construction sector¹. This year, the Intergovernmental Panel on Climate Change (IPCC) issued its 'final reminder' urgently calling for global efforts to expand upon existing solutions, paving the way for a future that is decarbonised, sustainable and able to withstand environmental challenges.

Our climate strategy

Minimise our environmental impacts across our value chain



Lower embodied carbon raw materials

Procuring lower embodied carbon raw materials is a key part of our strategy, as it will enable us to offer lower embodied carbon products to our customers and reduce our scope 3 GHG emissions.

Net-zero carbon manufacturing by 2030

We are also aiming to achieve net-zero carbon in our manufacturing operations and have committed to a 90% absolute reduction in scope 1 & 2 GHG emissions by 2030.

Offer lower embodied carbon, high-performance solutions



Investing in R&D is a fundamental aspect of our business model (€63.5m in 2023) as it enables us to continually enhance Kingspan's position as a market leader in energy- and resource-efficient systems and solutions. We are actively working on a wide range of projects that will deliver even more value, and support our customers to reduce emissions from their buildings.

2023 impact



The estimated lifetime carbon savings of our insulation systems sold in 2023 are expected to be more than 23 times higher than our 2023 value chain carbon footprint.

164mtco,e

Estimated lifetime carbon savings from insulation systems sold in 2023

90%

Absolute reduction in scope 1 & 2 GHG emissions by 2030

€63.5m

Investment in R&D in 2023, driving Kingspan's position as a market leader

7.1m_{tCO₂e</sup>}

Kingspan 2023 value chain carbon footprint

¹ United Nations Environment Programme, & Yale Center for Ecosystems + Architecture (2023). Building Materials and the Climate: Constructing a New

Carbon and energy Our decarbonisation strategy

We have set ambitious Scope 1, 2 and 3 GHG emission reduction targets aligned with a 1.5 °C future. In 2023, we achieved a 65% reduction in scope 1 &2 GHG emissions from base year, through a combination of initiatives and solutions, including: phasing out the use of high GWP blowing agents, implementing energy efficiency projects and generating and procuring more renewable energy.

Over 88% of our value chain impact is from purchased goods and services and this year, further engagement with our suppliers has allowed us to provide more accurate and complete scope 3 emissions. Collaboration with key supply partners to decouple our business growth from emissions is critical to achieve our 2030 scope 3 absolute and key raw material carbon intensity reduction targets.

We acquired 9 businesses in 2023, which have been "re-baselined" into our prior year emissions, and we intend to bring them along our decarbonisation journey.



Risk management

Climate change risks and opportunities are managed through a multi-disciplinary, companywide risk management process. We are using the recommendations and guidance from the Task Force on Climate-Related Financial Disclosures (TCFD) to not only assess price climate-related risks and opportunities, but to also use scenario analysis that help us manage our strategy resilience. Various risk types are included in our climate-related risk assessment, including current and emerging regulation, technology and market. Availability and further development of lower emission products was both a significant climate risk and opportunity for our business, highlighting once more why the offering of lower embodied carbon, high-performance solutions are an integral part of our business model. For more information on our TCFD disclosures, including more information on our risk management process and our key risks and opportunities please see page 56.

Our top 3 climate-related risks







Our top 3 climate-related opportunities







Tracking and disclosure

We have endeavoured to develop and maintain robust tracking and reporting procedures across our Group and build our climate strategy on clear, consistent, and auditable data. Our scope 3 GHG emissions include all applicable categories, regardless of their materiality to our overall footprint. We disclose GHG emissions data over time, whilst also performing recalculations when the reporting boundary changes in a material way, to allow for meaningful comparisons. Please see page 51, for our detailed carbon footprint and page 63 for our external assurance statement.





Targets

Our climate ambition is aligned with a 1.5°C trajectory and places increased emphasis on emission reductions over offsetting (please see "Carbon credits and offsetting" for more information on offsets). Attesting to this fact are our science-based targets which were approved by the Science Based Targets initiative (SBTi) in June 2021.

Scope 1 & 2

Kingspan commits to reduce absolute scope 1 & 2 GHG emissions by 90% by 2030 from a 2020 base year.*

Scope 3

Kingspan commits to reduce absolute scope 3 GHG emissions from purchased goods and services, use of sold products and end-of-life treatment of sold products 42% within the same timeframe.

We consider these as interim targets on our journey to net-zero emissions, and we will set a science-based net-zero emissions target in the near future.

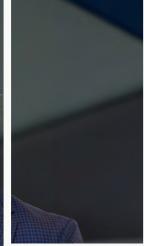
* The target boundary includes biogenic emissions and removals from bioenergy feedstocks.

GHG emissions mitigation

We aim to achieve our ambitious emission reduction targets by designing and implementing a wide range of decarbonisation measures across our business.



s North America



Internal carbon charge

In January 2023, we officially introduced an internal carbon charge across our global business. The starting price is 70€/tCO₂e (scope 1&2 GHG emissions, excluding process and biogenic emissions) and will be adjusted as required to ensure progress against our targets align to and relevant developments in this field.

The implementation of the internal carbon charge has helped to further incentivise the rapid deployment of decarbonisation projects to support the achievement of our net-zero carbon manufacturing target including renewable energy contract conversions and forklift fleet decarbonisation, while facilitating increased focus across the business on our decarbonisation. strategy.



Addressing our upstream emissions

As a global leader in high-performance insulation and building envelope solutions, we rely on a global network of suppliers, from raw materials to the transportation companies that deliver our products. We know that to enable real change we must proactively reduce GHG emissions across our value chain. We must find solutions to help address our upstream emissions, in particular, emissions from our purchased goods and services, which account for over 88% of our total value chain emissions.

The majority of our upstream value chain emissions are attributable to three key raw material categories - metals, chemicals and mineral fibre. Reducing the emissions from these categories will in turn allow us to reduce the embodied carbon of some of our key products and help support the delivery of a net-zero carbon built environment. We manage the embodied carbon of the raw materials we purchase by focusing our efforts around the three following workstreams:

WE KNOW THAT TO ENABLE **REAL CHANGE WE MUST** PROACTIVELY REDUCE GHG **EMISSIONS ACROSS OUR** VALUE CHAIN.

Supplier Engagement:

- We actively engage with our key raw material suppliers on climate change and emission reduction activities with a specific focus on their roadmaps and timelines to reduce the embodied carbon of the raw materials that we purchase from them.
- Throughout 2023, we had bi-weekly internal and external cross functional meetings related to our supply chain decarbonisation strategy.

Data Tracking:

- We collect, collate and analyse supplier specific data annually to support our scope 3 reporting.
- We track our suppliers' progression against their emission reduction goals and targets annually.

Collaboration:

- We seek to identify areas of opportunity to collaborate and share knowledge, resources, and expertise on emission reduction projects with our key suppliers.
- We have successfully developed lower embodied carbon variants of products with the support of our suppliers.

Process emission reductions

Process GHG emissions from the use of foam blowing agents constitute most of our scope 1 GHG emissions, and as such we have placed a special focus on reducing them. We have ongoing mitigation plans in place and aim to continually reduce, substitute, or where possible eliminate the use of high GWP blowing agents.



Energy efficiency

Energy efficiency is a well-established discipline embedded in our Group. Investment in energy efficiency projects not only helps reduce our carbon footprint, but also results in financial savings. Our divisions are investing in a plethora of energy efficiency solutions, including lighting, refurbishment and/or replacement of equipment and vehicles with more energy efficient models.

Renewable energy

Major investment in renewable energy is needed globally to accelerate the mitigation of GHG emissions and transition to cleaner, affordable and resilient energy systems. A key focus of the Planet Passionate programme is to increase our direct use (energy we consume to manufacture our products) of renewable energy.

While we have made good progress to date, we must continue to scale our ambitions in line with company growth. Being a global manufacturer of a wide range of systems and solutions for the construction sector, our production processes and energy requirements vary greatly across the business. Our renewable energy strategy has two parts – renewable procurement and on-site renewable energy generation.

1. Renewable energy procurement

In 2023, our energy demand was approximately 64% fuels and 36% electricity. Therefore, to meet our 2030 target of 60% direct renewable energy, we must find viable and scalable renewable electricity and fuel options.

Electricity

Renewable electricity is becoming more widely available and where possible, we are procuring renewable electricity directly from our utility providers. In 2023, we expanded our procurement of direct renewable electricity in North America and Australia, regions which have previously had limited availability of such electricity products.

Fuels

Given that the renewable fuels market is not yet as developed as the renewable electricity market, it is more challenging. Nevertheless, we are exploring initiatives that will help us achieve our targets. To this end, we are actively investigating options to purchase certified renewable fuels directly from our utility providers with initial agreements in place to procure biofuels in Ireland and Belgium.

We are also investigating Power Purchase Agreements (PPAs) for both renewable electricity and fuels, particularly in regions where other renewable energy procurement options are not yet available or do not meet our standards. There are a variety of PPA options available, which we are reviewing to determine if they may be suitable to support our targets.





"AT VICWEST, OUR EMPLOYEES" ARE VERY PROUD TO BE PART OF THE GLOBAL PLANET PASSIONATE TEAM. WE REALISE THE IMPORTANCE OF RENEWABLE ENERGY IN THE FIGHT AGAINST CLIMATE CHANGE AND ENSURING A SUSTAINABLE, CLEANER FUTURE FOR GENERATIONS TO COME."

Bernard Lewis

Vice President of Operations **Vicwest**





Increasing on-site renewable energy generation capacity at our manufacturing sites is a priority for our business as we seek to increase our energy self-reliance, the use of renewable energy, and reduce both direct GHG emissions and long-term operational costs.

We are deploying options to generate both renewable electricity and heat.

Electricity

In 2023, we increased our on-site electricity generation capacity by 6.8 MW, with the installation and expansion of solar PV systems. As we have multiple manufacturing processes, we must assess each site individually and investigate the feasibility of potential onsite electricity generation options based on location, cost and viable technologies.

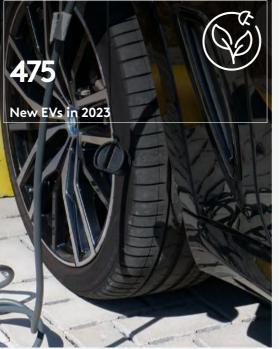
Renewable fuels

In 2023, our energy demand was approximately 64% fuels and 36% electricity. This means that to meet our 2030 targets we must find viable and scalable renewable fuel options. Given that the renewable fuels market is not yet as developed as the renewable electricity market, we expect this to be challenging. Nevertheless, we must explore and seek out initiatives that will help us achieve our targets. To this end, we are actively investigating options for onsite generation of heat and electricity such as heat pumps, combined heat and power plants and other ways of utilising biofuels onsite.









Zero emission company cars

As part of the European Green Deal, the EU has committed to put light duty vehicles on a pathway towards zero emission mobility after 2025. To support the acceleration of low carbon transport and our goal to minimise our carbon footprint, we aim to accelerate our company car fleet conversion to zero emissions by 2025. Kingspan defines a 'zero emissions car' as a vehicle with zero tailpipe emissions. The boundary does not include the energy used to power the vehicle or the embodied emissions from manufacturing.

Each year we will convert a percentage of our company cars to zero emissions when due for replacement, ramping up to 100% of replacement cars annually from 2025.

To achieve this target, our strategy is based on:

• Research & engagement

Actively engaging with car manufacturers and leasing companies to understand the availability and suitability of their electric vehicle offering across the countries where we operate.

Internal taskforce

We formed a multi-functional taskforce to support the implementation of the car target throughout our business. The team includes colleagues from sustainability, operations, finance, HR and procurement. The team meets on a quarterly basis.

Infrastructure

Investing in EV charging infrastructure across our operations and introducing supporting schemes for our employees to enable at home EV charaina.

Carbon credits and offsetting

We follow the most updated guidance and requirements from several authoritative institutions, we do not procure carbon credits to count as reductions towards meeting our carbon targets and do not include carbon credits in our carbon disclosures. Our focus is instead on decarbonisation within our operations and value chain. We aim to procure carbon credits towards the end of the decade, but we will only use them to neutralise residual GHG emissions after we have met our science-based absolute GHG emission reduction targets.

We will only procure credible, high-quality carbon credits that will demonstrate and ensure additionality and permanence. Nature-based solutions, such as reforestation, cannot guarantee the permanence needed so we will continue to closely monitor the market and invest in the most suitable solution in the coming years.

Avoided emissions

We calculate the avoided emissions of our products (see page 7) as these metrics demonstrate the positive impacts of our products and showcase our capacity to contribute to more resilient and sustainable infrastructure.

Nevertheless, we do not count these savings towards our targets and do not include them in our carbon footprint. Avoided emissions occur outside of a product's lifecycle and fall under a different accounting system from corporate emission reporting, and therefore should not count as reduction, of a company's GHG inventory.

As an industry leader, we encourage other corporates to avoid using avoided emissions in their headline climate pledges or counting them towards their climate targets. Aligning corporate reporting with scientific and industry consensus will help increase the transparency and reliability of corporate GHG reporting.







Challenges and strategies to tackle

As we are progressing towards our decarbonisation goals, we have identified some key challenges that are likely to affect our ability to meet carbon targets. These include but are not limited to:

Challenges

Raw materials

- Lower embodied carbon raw material options that can meet the technical performance criteria required to maintain (or enhance) current product performance attributes.
- Volume supply of lower embodied carbon raw materials that will enable us to make significant progress towards our Planet Passionate and science-based scope 3 targets by 2030.

Renewable energy

 The availability (and cost) of higher quality renewable electricity and fuel procurement options in regions such as North America and Australasia.

Technology maturity

 Potential new manufacturing technologies are in their infancy and not proven at scale and may not be feasible to deploy within the business by 2030.

• Scope 3 carbon accounting

 Availability of detailed, global standardised frameworks, guidance, and case studies for accounting of carbon emission reductions of raw materials.

Our strategies to help tackle these challenges include:

Raw materials

- Continuous supplier engagement including cross departmental meetings, site visits, etc.
- Annual tracking and updating supplier decarbonisation roadmaps as they progress their strategies and supplier specific data is available.
- Early-stage material testing of all potential new raw material options to determine which meet all necessary technical and performance criteria and merit further investigation.

• Renewable energy

- Ongoing research and dialogue with our energy providers and consultants to better understand the short and mediumterm options that will become available up to 2030.
- Development of large-scale renewable energy generation projects in key regions and countries such as North America, Poland, and Spain.



Carbon and energy Product innovation

One of the overarching goals of our Planet Passionate programme is to further enhance the environmental benefits of our key products. We are focused on reducing the embodied carbon of our key products and bringing new solutions to market at pace.

Research & Development

IKON is our global innovation centre located in Ireland. It is both a place of research and a living research project where we ask the big questions that will lead us to a more sustainable and healthy future, while delivering enhanced value to our customers.

The IKON team is researching the development of a bio-based insulations to complement our current range of solutions. We are examining materials that align to our Planet Passionate goals and will enable us to bring new solutions to market to support tackling the climate crisis. See the Circularity, Lean Design for Circularity section for further detail.

New product development

Our sustainability, innovation and procurement teams work collaboratively to find and test lower embodied carbon raw materials that can maintain the product's technical performance attributes (such as thermal performance, strength, etc.). Through our ambitious supply

chain target, we aim to achieve a 42% absolute scope 3 GHG emissions reduction by 2030 from a 2020 baseline. To do this, we engage proactively with our suppliers to inform our decarbonisation roadmap, and to identify new raw material sources available today with the potential to increase availability in the medium term. Through our work to date, we have identified several potential options that have the potential to reduce the embodied carbon of our insulation boards and panels, raised access floors and daylighting products. We have several new product development projects underway and aim to launch new products to the market throughout 2024.

Environmental Product Declarations

Our product embodied carbon data is available via our third party verified EN 15804 Environmental Product Declarations (EPDs). This information helps enable whole building level calculations and inform decision making. Kingspan product EPDs are available via the following links:

www.kingspan.com www.ecoplatform.org www.greenbooklive.com www.epd-australasia.com www.environdec.com





"The introduction of our new Kingspan RMG600+ highlights a significant milestone in our journey to decarbonisation. Completing an independent verification and Environmental Product Declaration assessment was a key step in demonstrating our commitment to lower carbon solutions. In addition, our customers are confident in specifying the ultimate raised access floor solution from an environmental. performance and safety perspective. Working in close collaboration, together we are future proofing the commercial office sector and net-zero carbon emissions environment."

Debra Smith

Divisional Sustainability Manager Kingspan Data + Flooring

For more information on our lowest ever embodied carbon raised access floor: **CLICK HERE**

Circularity Introduction

The take-make-waste economic system that is prevalent in most economies is pushing us towards environmental, social and economic catastrophe. How materials and products are used is becoming dangerously unsustainable. 2023 estimates reveal that only 7.2% of the world's economy is circular¹. In addition, humans consume 1.75 times the natural resources that the earth is capable of regenerating².

The construction industry is the largest consumer of raw materials, with building and infrastructure accounting for 38.8 billion tonnes annually³. With urban areas growing rapidly, the construction sector will continue to have a significant impact and an important role to play – in how the world's resources are managed and used.

The circular economy offers an alternative solution to the current take-make-waste approach: an economic model based on resource efficiency, waste minimisation and value retention and creation. Ultimately, it promises to decouple economic growth from resource use.

In addition to the challenges posed by a linear economy, supply chain disruptions in tandem with increased resource scarcity that in turn leads to price volatility, will ultimately force organisations to rethink and redesign their supply chain models and methods of value creation. It is essential that we keep valuable resources in use for as long as possible, build more resilient and closed-looped supply chains and maximise the embedded value of products and materials.

Yet, the circular economy is a challenging and complex concept, which is urging industries to rethink the way they operate. It requires a systemic change; from the way we view materials and design our processes to the way we engage and interact with our key stakeholders and industry.

At Kingspan, we aim to reduce our material negative impacts while also contributing to the transition of the built environment from linear to circular. We are introducing circularity principles and considerations to the way we do business and interact with our stakeholders.











38.8 billion

The construction industry is the largest consumer of raw materials, with building and infrastructure accounting for 38.8 billion tonnes annually³



2023 estimates reveal that only 7.2% of the world's economy is circular1



Circularity

Our management approach

We aim to help accelerate the transition towards a circular economy within the built environment. As a global product manufacturer, we want to play our part to help embed more circularity practices within our industry. While upcoming policy and legislative frameworks aim to incentivise the transition to a circular economy, the infrastructure to enable this via business models within the built environment - including reuse, refurbishment, and reverse logistics - do not yet exist. This is crucial to enable circularity at scale in our industry. Moving forward, we will actively work with industry partners with the intention of addressing these issues and will continue to adapt our approach as the topic evolves.

We are still at the beginning of our circularity journey, but we are keen to progress the agenda within our business at pace. To transition our business to support a circular economy, we aim to embed circularity principles at every level of our organisation which will help co-ordinate and accelerate circularity projects across our global business and develop future KPIs. In addition, there are now Circular Economy training modules and resources available on the Sustainability Training Hub which are made available to all employees.

Waste management

Our efforts to meet our zero company waste to landfill target are focused on the three key principles of reduce, reuse and recycle. Reducing waste whilst we grow as a business is an ongoing challenge; we have nevertheless made significant progress with waste segregation, and we are continually improving our waste data collection systems and processes. This will allow for increased visibility on material flows and highlight areas for improvement.

We strive to achieve the highest possible efficiency in factory processes. When production waste cannot be reintroduced back into our manufacturing processes, we seek to repurpose and recycle it into other products, thanks to established partnerships with other industry stakeholders.

In 2022, we extended our external assurance scope to include waste generation data, aiming to increase confidence in our waste-related disclosures.

Landfill diversion projects completed in 2023









The use of recycled, bio-based and recyclable input materials that are responsibly sourced is an important element of our circularity strategy. We are currently assessing the sources of the materials that go into our products and how they affect the potential end of life options of products. As an initial step, we are working to increase our use of recycled materials whilst also exploring potential bio-based raw material (that are responsibly sourced and accredited) options for future products. We have several ongoing projects within the divisions, as well as with our key raw material suppliers.

In 2023, we continued to work with our business partners to increase our use of recycled PET as a raw material. In line with our Planet Passionate target, in 2023 we used the equivalent of 858 million recycled PET bottles in our manufacturing processes.

Our procurement and sustainability teams are actively working to find recycled raw material options for our key raw material categories. Steel has been one of the key focus areas this year as it significantly contributes to the embodied carbon of our insulated panel products. In 2021, we invested in H2 Green Steel, with the objective of securing future supply of green steel with higher recycled content and lower embodied carbon.



Circularity

Our LIFECycle Product Circularity Framework

As a manufacturing business, key focus must be on enhancing the circularity performance of our products. Our LIFECycle Product Circularity Framework will enable us to embed circularity principles and benchmark our performance under five key themes:



"As we drive down the impact of our raw materials, our products end of life impacts are ever more important to address. Having a structured approach and interrogating each stage of a products life-cycle enables us to improve our existing ranges and deliver new innovations that support the circular economy."

Lizzie Young

Divisional Head of Sustainability Kingspan Insulated Panels West

Lean design for circularity:

Embedding resource efficiency and circularity principles into new and existing development processes.

Input materials:

Assessing the source of our materials and how their use can affect the end-of-life options of the products.

Factory processes:

Working to improve our resource efficiency by reducing or eliminating waste creation within our manufacturing processes and reducing the quantity of raw materials needed to make our products.

Extended life models & reuse:

Working to help to extend the in-use phase of products and enabling reuse programmes by supporting industry initiatives and pilot projects.

Cycling:

Developing a range of options to help keep materials and products that reach the end of their service life and cannot be reused, circulating within the economy. We aim to do this through regional and local partnerships and the deployment of in-house mechanical and chemical recycling facilities.





Water





Access to water is a basic human right and at the heart of all aspects of sustainable development. Climate change, rising urbanisation, and growing population density are exacerbating water stress and contaminating water supplies.

We recognise that water scarcity and misuse are a global pressing concern and as a global manufacturer, reducing our negative impacts on the world's water resources and water-related ecosystems is a priority.



Rainwater harvesting

As a global manufacturer, conserving water to lessen our impact on the world's water resources is a priority. We have set a target of harvesting 100 million litres of rainwater annually on our sites by 2030, to help reduce our impacts on the water supplies that we share with local communities and water-related ecosystems. We aim to conserve water and reduce our use of mains water and rainwater/stormwater runoff. All harvested water will be either used by Kingspan in our operations, sold or donated to local communities.



Ocean plastic pollution

Plastic is a highly valuable material in modern life which can have a very positive environmental impact in the right applications, but as with all materials it must be properly managed. More than 17 million metric tonnes of plastic entered the ocean in 2021, constituting 85% of marine litter. In addition, climate change, pollution, resource depletion and acidification are putting stress on marine ecosystems, threatening not only the sustainability of global fisheries and biodiversity but also the livelihoods and wellbeing of people who depend on the oceans.

At Kingspan, being Planet Passionate is not just about enabling change within our own business but also addressing some of the environmental challenges that we now face. We are mindful of the need to clean-up our oceans, removing tonnes of man-made debris and plastic waste and are committed to both helping raise awareness of this need, while also supporting river and ocean clean-ups.

We have committed to supporting five ocean clean-up projects to help play a part in tackling this issue. In 2023, we announced our fourth partnership with 4ocean. We are currently exploring more partnership options close to our facilities worldwide and aim to bring more online in 2024.

Biodiversity & Pollution

Biodiversity

Increasing trends of forest loss, land degradation and the extinction of species have far-reaching consequences and present a catastrophic threat to planetary health.

Kingspan is in the process of analysing and understanding its impacts on biodiversity and ecosystems for both its operations and its key suppliers. The analysis will help us better understand our impacts and dependencies on biodiversity, including how we contribute to the drivers of land degradation and habitat loss. We will be able to communicate the results, along with all relevant strategies, targets and metrics pertaining to biodiversity in our next report.

Pollution

Pollution, together with climate change and biodiversity loss, poses a significant threat to both society and economic systems. Failure to address these pressures could lead to another set of crises including public health emergencies, further ecosystem degradation, natural disasters and increased inequalities.

In 2023, we continued our analysis of our pollutionrelated impacts, risks and opportunities aiming to gain a holistic understanding of how our operations affect pollution of air, water and soil. In next year's report we will present both our management approach and strategy and more detailed Key Performance Indicators and metrics.







Our 10-year global sustainability programme aims to help tackle three big global challenges:

- Climate change
- Circularity
- Protection of the natural world

We pledge to play our part and believe advanced materials, building systems and digital technologies can play an important role in helping to address these global issues. Working in partnership with industry, and through IKON, our Global Innovation Centre, we are confident that we can help support and accelerate the transition to a clean energy, resource-efficient future.





Our approach

We recognise that our Planet Passionate targets are ambitious and will be challenging to achieve. During 2023 we further developed our detailed programme roadmap, which includes targetspecific strategies and timelines to manage and track progress.

Management

Our approach to the general management of the programme builds on strong internal procedures and processes that were developed throughout the years. Our Planet Passionate team consists of 16 divisional representatives from all business units. Each business unit has a primary representative on the Global Review Team, as well as divisional micro-teams to champion the Planet Passionate strategy across the business.

The Global Planet Passionate team meets on a quarterly basis to discuss progress and to facilitate peer-to-peer learning. We have also developed multiple working groups to help address specific challenges related to our targets, including renewable heat, waste and zero emission car rollout.

Green Finance

In September 2020, Kingspan entered a €750m sustainability-linked Private Placement ("Green PP") with a syndicate of predominantly US institutional investors. The Green PP had a weighted average maturity of 9.7 years when executed. At the time, this was the largest Green private placement ever arranged globally.

In June 2021, Kingspan entered a €700m

(subsequently extended to €800m) sustainability-linked Revolving Credit Facility ("Green RCF") with 10 international banks. The Green RCF matures in May 2026 with the option to extend to May 2028.

Both the Green PP and Green RCF have embedded pricing mechanisms which reduce the cost of borrowing where Kingspan achieves sustainability targets specified in its Planet Passionate strategy. Kingspan's performance against these sustainability targets are subject to independent audit.

Remuneration

In 2021, Kingspan Group introduced an additional ESG measure in its Performance Share Plan (PSP) framework, recognising the importance of non-financial measures to both short- and long-term performance. The measure is based on 9 of the Planet Passionate targets against 10% of the annual PSP award. Kingspan has set internal annual targets at Group level to help keep the business on track to achieve our ambitious Planet Passionate 2025 and 2030 targets.

Internal engagement

Sustainability is a topic that is important to our employees, and we want to enable them to be Planet Passionate both at work and at home. To help continually educate and keep our colleagues up to date, we are developing a suite of educational e-learning modules on Planet Passionate related topics such a Climate Change, Carbon, and our Sustainability Strategy. As a first step, we have developed a Planet Passionate Employee Guide E-learning

module, which has been circulated to all employees.

In 2023, more than 2,700 employees completed the training across our Group. The internal response has been very positive, and we fully believe in our people to help us to fulfil our vision. In addition, our divisional Communication Champions help to facilitate the communication of any updates about our Planet Passionate initiatives to all departments within the Group. During 2023, our employees conducted Planet Passionate related projects at our locations around the world including waste workshops, local clean-up projects, tree planting events, and deployment of beehive sanctuaries. Please find more information about our Planet Passionate Communities initiatives on page 47.













'ACHIEVING THE GOALS SET OUT IN THE PLANET PASSIONATE PROGRAM DEMANDS A COLLECTIVE EFFORT. ONLY BY COLLABORATION AND COOPERATION OF INDIVIDUALS, CAN WE REALISE OUR AMBITIONS."

Timothy Drew

Divisional Sustainability Engineer, Kingspan Insulated Panels West

WHOLE BUSINESS²

3.4

69

34.1

8.8

49.6

56.7

2023 Planet Passionate

Target Progress

UNDER	I VINIC	DIICIN	JECC1
OINDER	CLING	DUSII	AE33

	Target	Target Year	2020	2021	2022	2023	Progress towards target
	Net Zero Carbon Manufacturing (scope 1 & 2 GHG emissions ³ - tCO ₂ e)	2030	409,7834	388,509 ⁴	243,954 ⁴	111,977	73%
	50% reduction in product CO2e intensity from primary supply partners (% reduction)	2030	-	2.0 4	3.2 4	3.4	7%
CARBON	Zero emissions company funded cars - annual replacement (%)	2025	11	29	60	70	70%
	60% Direct Renewable Energy (%)	2030	19.5	25.94	34.6 ⁴	38.0	63%
	20% on-site renewable energy generation (%)	2030	4.9	5.1	7.4 4	9.9	50%
ENERGY	Solar PV systems on all wholly owned sites (%)	2030	20.9 4	29.5 4	40.6 4	54.1	54%
	Zero company waste to landfill (tonnes)	2030	18,640 4	16,0894	9,819 4	8,282	56%
QP,	Recycle 1 billion PET bottles into our manufacturing processes annually (million bottles)	2025	573	843	803	858	86%
CIRCULARITY	$\label{eq:QuadCore} \text{QuadCore}^{\text{TM}} \text{ products utilising recycled PET (no. of sites)}$	2025	1	1	3	8	42%
<u> </u>	Harvest 100 million litres of rainwater annually (million litres)	2030	20.1	20.5	27.3 ⁴	56.3	56%
WATER	Support 5 ocean clean-up projects (no. of projects)	2025	1	2	3	4	80%

2020	2021	2022	2023	Intensity Indicators
515,813 ^{4,5}	516,580 ^{4,5}	387,581 ^{4,5}	178,682 5	Carbon

3.2 4

58

33.7 4

7.3 4

35.2

2.0 4

29

25.0 4

4.9

25.5 4

20.5

11

19.5

4.9

20.9 4

Carbon intensity1 tCO₂e/€m

dicators

Reduction

Reduction

from 2020

Energy intensity (MWh/€m)

Reduction

18,640 4 16,9124 11,584 4 12,407 803 573 858 3 8

27.4 4

3

Landfill waste intensity (t/€m)

Reduction

20.1

Water intensity (million lt/€m) Increase

Note: the intensity indicators were calculated based on absolute figures (2023 business) and 2023 revenue was used as the denominator to calculate the ratio.

^{1:} Underlying Business includes manufacturing, assembly and R&D sites within the Kingspan Group in 2020 plus all organic growth.

2: Whole Business included all manufacturing, assembly and R&D sites within the Kingspan Group, including acquisitions since 2020 prior to cut off of september 50th 2023.

3: Excluding biogenic emissions. Scope 2 GHG emissions calculated using market-based methodology.

^{4.} Restoad figures due to improved data collection, change in calculation methodologies and site disposal.

5. GHG emisons were recalculated due to acquisitions that occurred in 2012, 1020 £ 6/205 before 30th september.

6: Kingspon defines a "sero emissions car" as a vehicle with zero talipipe emissions. The boundary does not include the energy used to power the vehicle or the embodied emissions from manufacturation.

Scope 1 and 2 carbon intensity by revenue (tCO,e/€)

63.9

2022

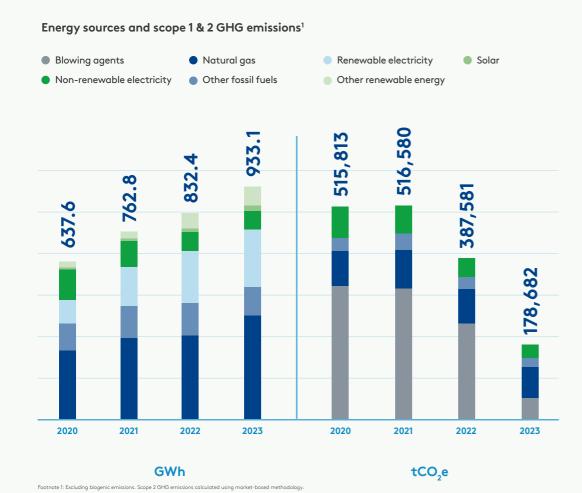
41.1

21.8

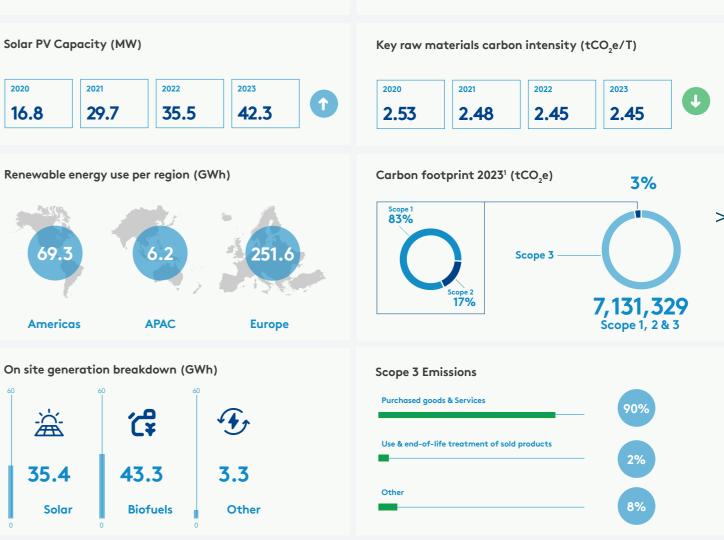
Carbon and energy

2023 Key metrics and performance indicators

The following carbon and energy indicators showcase the progress we made in 2023







89.6

Carbon and energy 2023 project highlights



SOLAR PV



In line with Kingspan's Planet Passionate sustainability programme, Kingspan Light, Air + Water devised and delivered a plan through our Strategic Projects team to enhance the building efficiency of our Daylighting Centre of Excellence (DCOE) facility located in Kingscourt, Ireland.

In April 2023, 1,440 PV modules were installed to capture energy from the sun, and to then convert it into electricity. Based on the size of the facility, the panels cover an area of 2,343 m² of the DCOE roof.



Vicwest's Edmonton facility completed their solar PV system in March 2023. This system is comprised of 504 solar panels that can generate up to 235kWp. This energy generation will provide 94% of the electricity requirements for the facility. This will significantly reduce the energy consumption from the local grid and reduce carbon emissions by an estimated 250 tonnes of tCO₂e annually.

The installation of the solar PV system in Edmonton was much faster than Stratford's project due to less regulations and checkpoints.

In May of 2023, in an effort to contribute to the Planet Passionate initiative and reduce energy consumption, we recently installed PV panels in our factory in Mielec, at Onduline, Poland. This factory specialises in producing roofing sheets and accessories made from recycled fibers, such as ridges and edges, now has 121 solar PV modules installed with a total capacity of 49.61 kW. Our production site will directly consume all the electricity this small installation produces.

"This factory specialised in the production of roofing sheets and accessories made from recycled fibers is now equipped with 121 panels with a total capacity of 49.6 kW. Although it represents approximately 1% of our total energy consumption, this initiative is our first contribution towards our goal of equipping all Onduline sites with PV panels and renewable energy sources."

Christophe Rohart Industrial & R&D Director Kingspan Roofing + Waterproofing

540 kWp

System capacity

Carbon and energy 2023 project highlights



These five electric vehicles help Kingspan to meet its EV cars target and contribute to the overall fleet conversion to electric vehicles.

System capacity

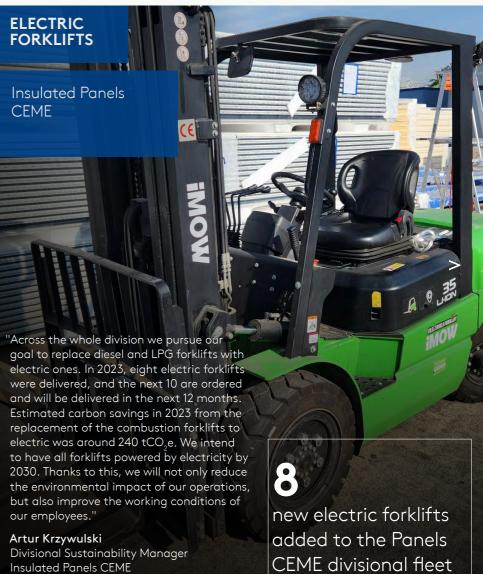
ΕV

CHARGERS

Kingscourt Kingspan Insulated Panels West

A carport with solar panels on the roof combines functionality and sustainability. Harnessing solar energy, it provides a shaded parking space while generating clean electricity. This innovative solution not only protects vehicles from the elements but also contributes to reducing carbon footprints.





on a single charge

Hyundai in the UAE.

Kingspan insulation has taken

another step towards it's electric

of five Kona Electric vehicles from

Juma Al Majid Est., distributor for

vehicle target, with the delivery

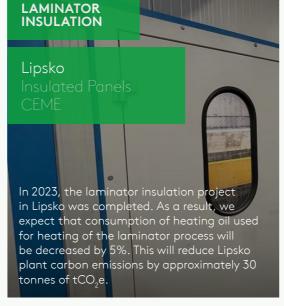
Carbon and energy 2023 project highlights

ENERGY EFFICIENCY

A key element of our energy and decarbonisation strategy is to reduce the energy intensity of our operations, whilst also increasing generation and procurement of renewable energy. In 2023, Kingspan has completed over 39 energy efficiency projects across the business. These projects, with an estimated impact of over 4.3 GWh of energy savings, included a number of sites converted to LED lighting systems.

Within our manufacturing processes, the use of air compressors can be very energy intensive and in 2023, 7 projects have been completed including the replacement of an air compressor in Hull in our Data + Flooring division. Other related projects, include leak testing and upgrades of compressors to reduce overall energy intensity.









FUEL SWITCH & BIOMASS BOILER

In 2023, approximately 64% of our energy use is from the use of fossil fuels. Natural gas and liquid fossil fuels are also the largest contributor of remaining direct energyrelated carbon emissions. A key element of our decarbonisation strategy is reduction in the use of fossil fuels in our own operations.

In 2023, we completed 11 projects to reduce our use of fossil fuels, including 7 new renewable gas and biolpg contracts, 2 space heating conversion projects and 2 process electrification projects.

FUEL SWITCH

endesa

Saint Priest Kingspan Light, Air + Water

Since January 2023, Kingspan Light, Air + Water, St.Priest site has a contract with Endesa which sells and supplies natural gas and biomethane injected into the French network. The contract comes with a Guarantee of Origin which guarantees the traceability of the energy purchased. The total natural gas use in St.Priest in 2022 was 1.1 GWh. By switching to biogas, the site will see an estimated emissions reduction of 206 tCO₂e.

BIOMASS BOILER

Hull Kingspan Data + Flooring

Tom Smith EHS Specialist

Kingspan Data + Flooring





Circularity

2023 Key metrics and performance indicators

The selection of performance indicators below demonstrate some of the progress we made in 2023

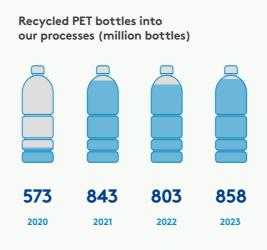


Waste generation by disposal type (tonnes)



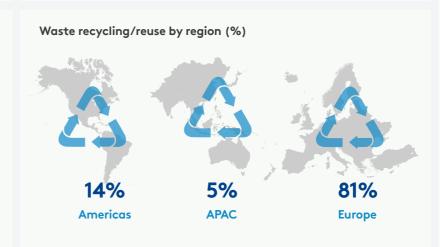
Waste generation by waste fraction (tonnes)

56,878	Steel
13,569	Municipal
25,164	Insulation board & panel waste
53,122	Other



2020
2021
2022
2023









24 additional waste streams added



Circularity 2023 project highlights



WASTE **MANAGEMENT** Vacaville



Our Brazilian business has developed a new product called EcoPIR, using remanufactured production waste from the insulated panel process. This significantly reduces waste sent to landfill. Due to the introduction of this new process, our site at Araquari has recently achieved zero waste to landfill certification from the Zero Waste International Alliance

PIR insulation foam is used in the high-performance insulated panels manufactured by Kingspan Isoeste in Brazil. These PIR insulated panels offer superior thermal efficiency

when compared with other insulation cores such as mineral fibre.



In October 2023, in efforts to improve waste management and segregation, our Vacaville site within the AWIP division conducted waste diversion training.

As part of this training employees were put into teams to take part in a 'Waste Diversion Relay Race'. The event was structured in the following way. Firstly, each of the team's sorted the waste, they then had waste training which detailed where each of the different waste streams should be deposed of throughout the site. Colour coded bins were also implemented for each waste stream. Finally, they did a final sort of the waste after

training was complete. This was a fun interactive way of getting employees educated on good waste management practices.

'Waste Diversion Relay Race'

As part of this training employees were put into teams to take part in a 'Waste Diversion Relay Race'. As part of our circularity commitment, Vicwest is implementing a segregated waste program at each facility. Each facility will have a mixed recycling, paper/cardboard recycling, compost, waste, scrap wood, and scrap metal stream.

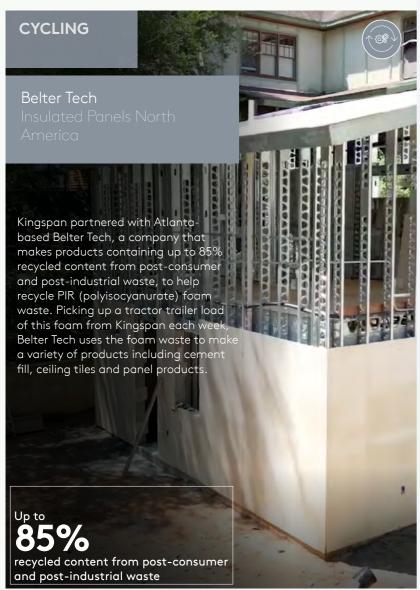
The segregated waste program will ensure that all eligible waste is being diverted from landfills. This will decrease the company's waste to landfill and contribute to our target of zero waste to landfill by 2030.

One delay we have had is that some of our facilities are in somewhat remote locations where they cannot get a composting service. We are working with Waste Solutions to gather options regarding compost service.

"WASTE SEGREGATION PROMOTES ENVIRONMENTAL STEWARDSHIP. BY SORTING WASTE INTO SEVERAL MATERIAL STREAMS WE CAN **DIRECT MORE QUANTITIES** TOWARDS RECYCLING AND COMPOSTING, WE MINIMISE LANDFILL, CONSERVE **RESOURCES AND EFFECTIVELY** MANAGE OUR WASTE MORE CONSCIOUSLY"

Mark McIntosh Sustainability Coordinator Vicwest

Circularity 2023 project highlights



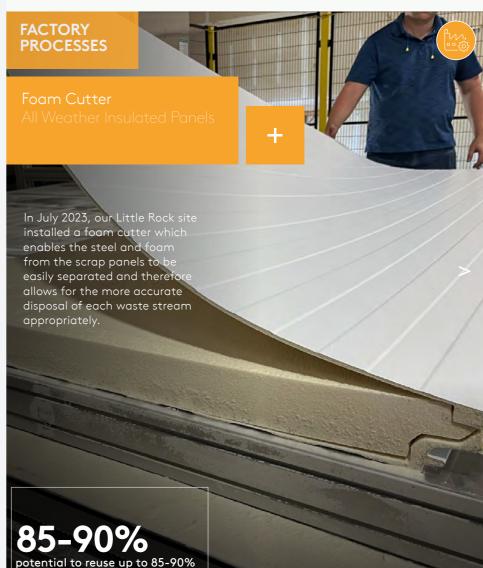


In 2023, Kingspan launched HemKor, its first bio-based insulation product largely made of hemp. HemKor represents a significant step forward in Kingspan's strategy to combine advanced material science, bio-based products and product innovations which can help to reduce embodied carbon emissions in buildings. Buildings and construction are responsible for 37% of energy-related carbon dioxide (CO₂) emissions globally, therefore addressing emissions

from the built environment is crucial in the race to limit global temperature rise to 1.5°C by the end of this century.

Offering a full spectrum of insulation solutions that can meet the challenging requirements facing the built environment is core to Kingspan's strategy.



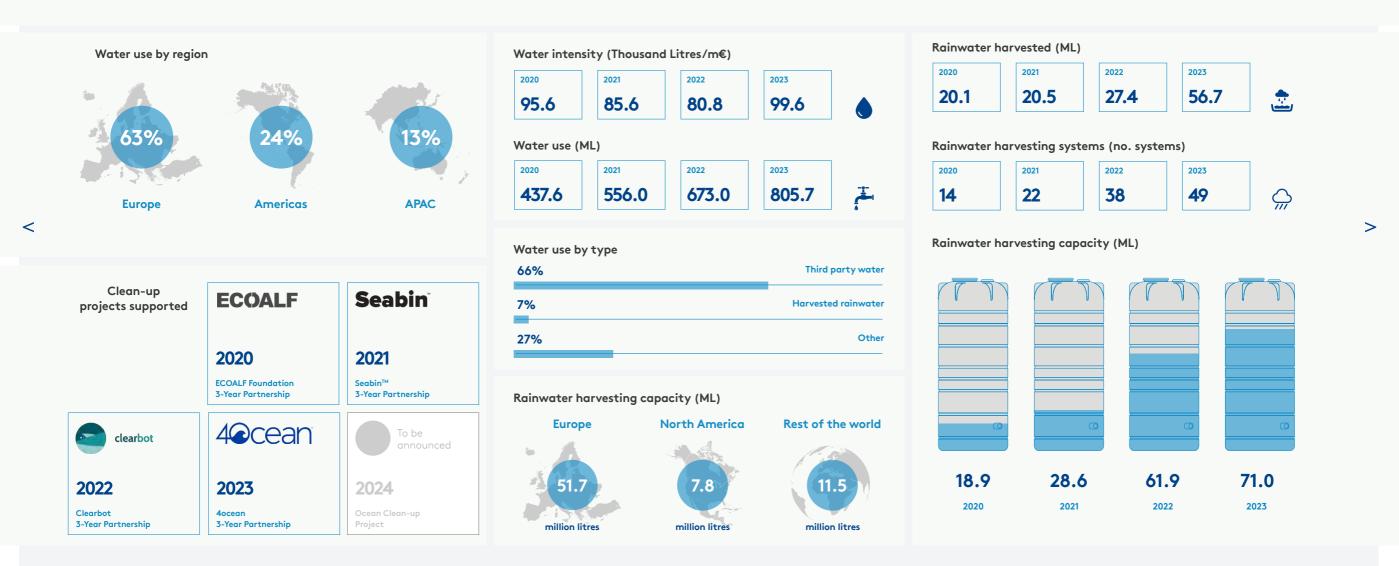


of foam scrap as packaging

9-13 tonnes of CO₂ per hectare harvested

Water

2023 performance metrics



Water 2023 project highlights



The Stratford Rainwater harvesting system has been collecting rainwater since January 2023. The collected rainwater is used to supply the facility's toilets, reducing to sterilize the water. This ensures consumption from the city water system.

The harvesting tank has a 24,500-litre capacity. To harvest rainwater, we installed multiple drains on the roof of our facility. Each of these drains collects rainwater and directs it to the main rainwater. We expect to harvest intake line. The intake line then empties into the harvesting tank.

rainwater harvesting regulations, the harvesting system uses a prefilter, UV radiation, and chlorine the harvested rainwater is fit to be used in our facility restrooms. The sterilization metrics are monitored daily to ensure no bacteria or algae grows in the tank or supply lines.

In compliance with Ontario

Since January, we have harvested and used over 500,000 litres of 600,000 litres by the end of 2023.

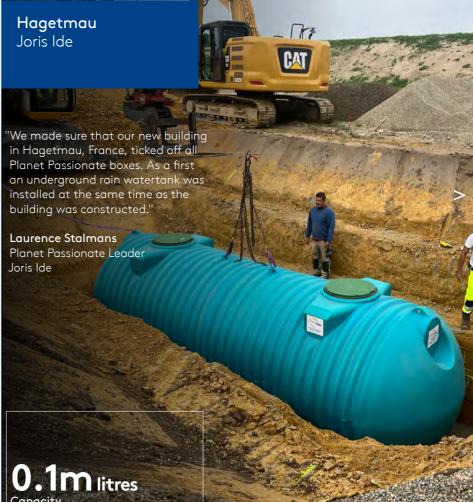


In April 2023, Kingspan Insulated Panels North America installed a rainwater harvesting system. Spanning 33,000 sq. ft pf the roof the system has the potential to process 1.2 million gallons per year.

At present DeLand is using roughly 200,000 gal/year of water to flush toilets and feed the sprinkler system which is now being supplied by rainwater.







0.5m litres Capacity



0.75m litres

Water 2023 project highlights





groundbreaking partnership between 4ocean and Kingspan Group, a global leader in building materials. This collaboration reflects our shared commitment to addressing the urgent issue of ocean plastic pollution. By combining 4ocean's expertise in ocean cleanup with Kingspan's Planet Passionate commitments, we aim to make a tangible impact on both cleaning up existing plastic and preventing further pollution through sustainable practices.

Tony Ernst

Director of Cleanup Operations

"We are excited to announce a

Tate Dublin has installed a 10,000 litres rainwater harvester supplied by Kingspan Light, Air + Water. As the roof downpipes were located internally, footprint and headspace were a concern. The tank effectively utilised the space available ensuring minimal disruption. The tank captures rain from a roof area of 200m² giving the tank the potential to capture 200,000 litres annually. Initially the RWH supplied water solely to the toilets on site.

"Installing a rainwater harvester has not only massively reduced our need for mains water, but it also fosters a real interest in water management. It makes us much more conscious of the water we collect. how it is consumed and drives a passion for water conservation". **Daniel Bohan** Project Engineer

Kingspan Data

+ Flooring

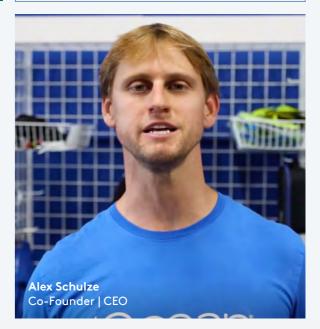
Kingspan launches its fourth ocean cleanup initiative in partnership with 4ocean, the premier ocean cleanup company. Under the partnership, Kingspan becomes an Official Certified Cleanup Partner. Kingspan's boom which launched on November 29, 2023 is expected to help remove up to 150,000 pounds of plastic and trash from the Sungai Yeh Kuning river in the Jembrana region of Bali, Indonesia.

The world has produced an estimated 18.3 trillion pounds of plastic since the 1950s, with an estimated 79% of plastic waste accumulating in the environment -including in our oceans, putting significant stress on marine ecosystems. As global plastic production looks set to triple by 2050, it is critical that collective efforts are made to address plastic pollution both in the short-term and through long-term preventative measures to protect marine wildlife and the livelihoods and wellbeing of communities that depend on the oceans.

ABOUT 40CEAN

4ocean is an ocean cleanup company that's dedicated to ending the ocean plastic crisis. As a Public Benefit Corporation and Certified B Corp, they harness the power of business to fund a global cleanup operation that recovers millions of pounds of plastic and other debris from the world's oceans. rivers, and coastlines each year.

Since 2017, 4ocean's professional, full-time captains and crews have removed more than 34 million pounds of plastic waste and other manmade debris from the world's oceans, rivers, and coastlines. Through this partnership, Kingspan becomes one of 4ocean's Certified Cleanup Partners and will play a critical role in bolstering 4ocean's efforts to help end the ocean plastic crisis.





Whilst our Planet Passionate strategy spearheads our efforts to curb our environmental impacts and thus contribute to the environmental dimension of sustainable development, we are also making efforts to manage our social impacts.

We aim to adhere to all applicable laws and regulations in all countries we operate in and to align with the needs and expectations of our stakeholders as a priority. Simultaneously, we understand that cooperation with our stakeholders is of paramount importance to reach our business objectives, grow as a business and contribute to sustainable development. At Kingspan, we define stakeholders as individuals or groups that have interests that are affected or could be affected by our activities. Maintaining an open dialogue has allowed us to build strong relationships in our value chain and local communities, as well as across the construction industry.



THIS CHAPTER
SHOWCASES HOW
WE INTERACTED WITH
OUR KEY STAKEHOLDER
GROUPS AND KEY
PROGRAMMES,
INITIATIVES AND
MEMBERSHIPS DURING
THE REPORTING PERIOD.



Investors

Kingspan is committed to interacting with the international financial community to ensure a full understating of the Group's strategic plans and its performance against these plans. During the year, the executive management and investor team hosted a Capital Markets Day at our Light, Air + Water facility in Lyon, conducted 818 institutional one-on-one and group meetings, including presenting at 14 capital market conferences.



Employees

People Passionate programme

At Kingspan, we have always been passionate about our people. Towards the end of the year, we were very happy to announce the launch of People Passionate, our new Group-wide programme, designed to support this ethos. Like Planet Passionate, People Passionate is a Groupwide programme designed to make a significant contribution to the success and sustainability of our people and the Group. Through the enhancement of employee experience, the aim is for our employees to be able to experience, among others, an increased focus on their careers, an improved engagement culture and stronger policy and process foundations.

More information on the programme will be shared in next year's report



NUMBER OF EMPLOYEES :	2023:
22,500+ MALE	79%
FEMALE	21%

What has been achieved at Kingspan would not have been possible without the people that work hard every day to drive the company forward. A dynamic and motivated workforce is key to delivering the future growth strategy of the business. For this reason, talent is at the heart of future planning at Kingspan. This is why we uphold high labour standards in all countries where we operate, we invest in employee training and development, and we offer a safe, inclusive and productive working environment across our operations.

Health, safety & wellbeing

We regard Health & Safety (H&S) as an obligation, a fundamental human right and a decisive indicator of sustainable development. In addition, we acknowledge that by providing employees a safe and healthy working environment, organisations build trust and strengthen their relationship with them, which eventually leads to increased performance and retention rates.

Health & Safety at work involves both the prevention of harm, and the promotion of health and wellbeing.

Health & Safety KPIs | injury frequency rate (p/100k hours)

	2020	2021	2022	2023
LTIFR	1.2	1.2	1.0	1.1
Falalities	1	1	0	1

Kingspan takes the safety of our employees incredibly seriously. The Group aims to record and review all accidents, as well as near misses.

H&S is under on-going review at a facility and divisional level and a Group H&S Committee sits at least twice a year. It is an opportunity for all divisions to share best practice and discuss operational experiences that could help improve the welfare of all our employees.

We are deeply saddened to report that during the year, a fatal accident occurred while an employee was undertaking repairs on a sewage treatment plant in Roeselare, Belgium. An investigation is underway to discover the circumstances leading up to the tragedy. Policies and training will be updated to reflect any learnings.

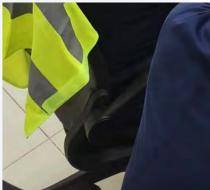
Hazard identification processes include (but are not limited to):

- all near misses are assessed and processes are updated
- employees are encouraged to make suggestions for process improvements
- safety walks by responsible persons
- periodic workplace inspections
- risk assessment on new machines at installation

H&S investment initiatives implemented in 2023 Initiatives implemented in 2023 include:

- afety animation movie developed for external truck drivers in Zwevezele, Belgium.
- All new employees for Data + Flooring in the United States, are required to complete 10 hours of OSHA (Occupational Safety and Health Administration) training.





Health & Safety Forum

Kingspan hosted a Health & Safety Forum in IKON in September 2023. It was attended by over 20 Health & Safety professionals from across the global business. There were a number of presentations made during the Forum, covering topics such as OH&S management systems, learnings from serious incidents, best practice commissioning of new machinery, and employee training. We are always striving to advance our H&S culture and sustain a safe working environment for our employees.

Equal opportunities, employee rights and diversity

We see diversity and inclusiveness as an essential part of our productivity, creativity and innovation. Kingspan is committed to providing equal opportunities from recruitment and appointment, training and development to appraisal and promotion opportunities for a wide range of people, free from discrimination or harassment and in which all decisions are based on work criteria and individual performance. During 2023 we established a Group D&I Forum to further advance our programme of work.

We are proud of the wide variety of skills, abilities, genders, backgrounds, experiences and perspectives represented by employees across our Group. Discrimination and other unfair practices in the conduct of our day-to-day business are absolutely prohibited.

Talent retention

At Kingspan, we use multiple tools to drive talent retention. These include traditional motivational tools such as reviews and objective setting, but there is also the opportunity to join a network of

people across the company to drive real change through innovation and engagement with our Planet Passionate initiatives. We are building a network of Planet Passionate Champions to help scale local action at our sites across the globe. Kingspan's Internal Career Portal which provides an open and transparent forum for Kingspan employees to learn, search and apply for career opportunities across all of our businesses worldwide. It has a wealth of information about the types of roles and skills that are in demand to deliver on our strategic objectives.

People are at the heart of everything we do. We unlock the potential of our employees and through them make a difference in the world. Leadership Development is a key bridge builder across all businesses worldwide. It is aligned with our strategic objectives and succession plans, which are reviewed bi-annually across the Group. We have an integrated talent management strategy which ensures that our talent and succession pipelines are robust.

to equip our people with the skills to drive the business towards the achievement of our mission to accelerate a net-zero emissions future-built environment, with the wellbeing of people and planet at its heart. For the first time, we partnered with DDI a global learning and development organisation to design and develop three new programmes at key career transitions.



During 2023, Kingspan continued to invest in developing leader capability and strengthening and deepening our talent pipelines to support workforce sustainability. Our people play a critical role in delivering our purpose and strategy, aligned to our values. Customer centricity is at the heart of our leadership development, underpinned by our focus on high-performance and continuous innovation. We encourage our leaders to grow their careers in line with the growth of the Group. At Kingspan, we are more than aware of the key role leaders play in achieving our strategy including our Planet Passionate targets. Our formal leadership development programmes are designed

Yours to Shape **Graduate Attraction and Development**

Developing Talent Programme

Developing Leaders as Coaches

Programme for Executive Acceleration in Kingspan

Kingspan Executive Development Programme, in partnership with INSEAD











Customers

As a strategic foundation for improving Kingspan's Customer Experience, harvesting the right insights is absolutely key to success. Through an elaborate and complex voice of our customer programme, we are gauging our performance with our different customers across the globe, throughout the year.

We want to know exactly what our different customers think and what drives them, so we know what we can do to act and improve the experience we deliver. As customer experience becomes more important in a digital world, our feedback programme gives us a means to hear what our customers have to say about their experience with us, keeping our finger on the pulse and providing us with the insights to develop and drive new digital technologies to help make meaningful change

A key step in the Customer Experience programme has been assigning CX Programme Leads across the group which is enabling us to drive an ambitious improvement roadmap for operational excellence.

Building Information Modelling (BIM) & Digital Innovation

At Kingspan, we are passionately driven by improving the living environment of people around the globe. We also recognise that the industry is embracing digitalisation. This adoption is a key factor to enabling more efficiency and sustainability in manufacturing, delivery, construction and operations of our built environment. Our digital innovation research and development concentrates on the ongoing digitalisation of the construction industry. Utilising technologies such as generative design, simulation, augmented reality, virtual reality and digital twins as well as digital applications to

improve decision making, product selection and workflows for our customers.

The increase in computer processing power has enabled improved functionality and has seen the increased adoption of BIM and Digital Project Delivery as a methodology for digital project delivery. Coupled with this process, we are introducing a wide variety of digital tools to aid in design, detailing, specification, construction and operations.

Our 2023 BIM & Digital Innovation Programme drove the enhancement and introduction of several tools to improve the workflows of our customers. These tools empower customers and partners with tailored digital solutions. Our 2023 Digital milestones include:

- New 3 Viewer 2.0 Developed and launched in UK, Ireland, North
- America, Morin, AWIP. Averaging 1300 Monthly Active Users of the new Viewer (Usage has Quadrupled from the Previous Viewer)
- Completed development of complementary in field mobile app for 3D Viewer
- Completed new Panel & Fastener calculator for our engineering teams available in UK Ireland and North America
- Digital 3D Detailing of 216 Projects that are also Model to Manufacture ready.
- Added 5 more apps to our Devleo application platform incorporating IAAS.

We also continued to grow our architectural communities though our BIM 360 and BIM Bundle initiative. We offer best in class BIM content over multiple levels of detail which are curated exactly as per our customers project requirements.

Currently, 1,678 companies with 2,439 members are actively using Autodesk BIM360. Additionally, 40 internal businesses are now live on Autodesk BIM 360, with 30,000 individual families available for use with Revit across all businesses. We achieved over 9,000 downloads of Kingspan Group companies content, collaborating with designers and engineers on their projects.

GOAL - Sayri Molina Wing Project, Puerto Cortés Hospital, Honduras



In collaboration with GOAL, our BIM team participated in the Honduras Project. Together, Kingspan and GOAL are building a new 12-bed hospital extension BIM model in Honduras. The project was meticulously detailed using Autodesk Revit with products from KIP NA and KIP UK Cleanroom businesses.

Internally, the project involved close collaboration with the KIP NA technical team. As of now, we anticipate its opening date in early 2024. A site visit in November created an AR study and experience for those working on the build.



Planet Passionate Communities

Autumn 2021 saw us launch Planet Passionate Communities, the philanthropic arm of our ambitious 10-year sustainability programme, Planet Passionate. This initiative is designed to give people and communities around the world the support they need to implement environmental and wellbeing projects, ultimately enriching life in the community.

At the heart of Planet Passionate Communities is an ambition to create a positive legacy and a better world, and it is already having a real impact, both locally and globally. Locally, our businesses are devoting their time and resources to support community projects. The idea: to build a world that is powered by renewable energy, has net-zero carbon, manages water sustainably and protects the Earth's valuable resources by reducing, re-using and recycling.

On a global level, we have joined forces with GOAL, the international humanitarian response agency, in a five-year partnership that will make the lives better for some of the world's most vulnerable people. Over those five years, we will be providing them with the expertise, products and financial contributions they desperately need in their rapid responses to complex global issues. Our joint aim is to develop critical infrastructure in healthcare and education with sustainability at its core.

Planet Passionate Communities projects completed in 2023

GOAL

In November 2021, Kingspan and GOAL began a five-year partnership that will support GOAL's transformative work by providing expertise and products, supported by financial contributions -all combining to a €1.5 million commitment to develop critical infrastructure with sustainability















More about GOAL

Humanitarian aid agency GOAL was founded in 1977 and is headquartered in Dublin. Over the last four decades, you will find GOAL responding to major humanitarian crisis after crisis. Today, it is working with vulnerable communities in 13 countries to help those facing poverty, conflict, hunger and climate change. GOAL brings emergency food and shelter when a crisis strikes; expertise and resources to strengthen health care systems; training leading to meaningful work and income; and education and support to fight hunger.

The Sayri Molina Ward Project

Together, Kingspan and GOAL are building a new 12-bed ward beside the Puerto Cortés Hospital in Honduras.

The new wing will provide the hospital with increased capacity to provide critical care for patients in a community that has been greatly affected by Covid-19.

The extension will be named in memory of Sayri Molina, a GOAL employee who sadly lost her life to the pandemic and will be remembered for her hard work and selfless commitment to GOAL.



FIND OUT MORE ABOUT THE PROJECT AND WHAT IT MEANS TO KINGSPAN AND GOAL IN **OUR PLANET PASSIONATE** MAGAZINE 2023

Planet Passionate Communities | Local action



KINGSPAN INSULATED PANELS 10KG HONEY GATHERED FROM **ON-SITE BEEHIVE**



KINGSPAN INSULATED PANELS LANGLEY SITE BEEHIVE HOMES 22,500 BEES



KINGSPAN INSULATED PANELS REPLANTING **COASTAL WOODLAND AREAS**



KINGSPAN INSULATED PANELS PICKING UP 283KG OF RUBBISH ON COLOMBUS STREETS



KINGSPAN INSULATED PANELS TREE PLANTING FOR LOCAL SCHOOL



KINGSPAN DATA + FLOORING EMPLOYEES AND DOGS HELP TO CLEAN THE STREETS IN **HAIBACH**



KINGSPAN DATA + FLOORING TATE CHIP IN FOR CLEAN THE BAY DAY



KINGSPAN LIGHT + AIR 39KG COLLECTED IN CALIFORNIA CLEAN UP



JORIS IDE GROUP SUPPLYING SUSTAINABLE MATERIALS TO MOUNTAIN RESCUE SERVICE



JORIS IDE GROUP EASTER **CIRCULARITY WORKSHOP FOR** 200 CHILDREN



JORIS IDE GROUP OVER 400 TREES PLANTED FOR EARTH DAY



KINGSPAN INSULATION & **INSULATED PANELS A TREE** PLANTED FOR EVERY VISITOR



KINGSPAN INSULATION 8 LOCATIONS WORK TOGETHER TO **CLEAN UP 872KG RUBBISH**



KINGSPAN WATER + ENERGY **BUILDING HOUSES FOR BEES AT EKOLOGICZNE INTEGRACJE**

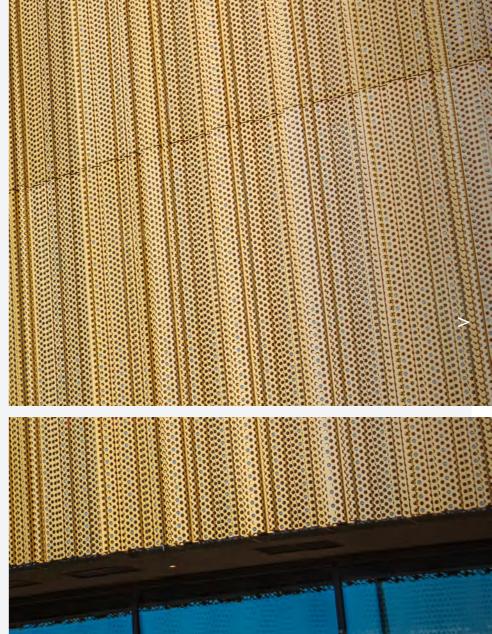


FOR EACH QUADCORE ORDER, TREE PLANTED IN KINGSPAN INSULATED PANELS AUSTRIA



KIP CZECH REPUBLIC HANDED OVER THE MONEY FROM ITS **CHARITY KINGSPAN RUN** AGAINST CANCER TO THE **ONCOLOGY CLINIC**





Kingspan Planet Passionate Report 2023

Appendix 1: Planet Passionate metrics

Planet Passion	nate Targets	Underlying Target Year Business				Whole I	Business			
			2020	2020 2021	2022	2023	2020	2021	2022	2023
	Net Zero Carbon Manufacturing - scope 1 & 23 GHG emissions (tCO2e)	2030	409,783 4	388,509 4	243,954 4	111,977	515,813 ^{4,5}	516,580 ^{4,5}	387,581 ^{4,5}	178,6825
	50% reduction in product CO2e intensity from primary supply chain partners (%)	2030	-	2.0 4	3.2 4	3.4	-	2.0 4	3.2 4	3.4
	Scope 1 & 2 Rebaselined		-	-	-	-	106,303	101,181	44,851	2,122
Carbon	Scope 3 Key raw materials		2.53	2.48	2.45	2.45	2.53	2.48	2.45	2.45
	Zero emission company cars 6(annual replacement %)	2025	11	29	60	70	11	29	58	69
	No. of replacement cars (annual conversion)		296	695	683	538	296	717	745	692
	No. of electric cars (annual conversion)		32	202	411	374	32	204	435	475
	60% Direct renewable energy (%)	2030	19.5	25.94	34.6 4	38.0	19.5	25.0⁴	33.7 4	34.1
	20% On-site renewable energy generation (%)	2030	4.9	5.1	7.4 4	9.9	4.9	4.9	7.3 4	8.8
	Solar PV systems on all wholly owned facilities (%)	2030	20.9 4	29.5 4	40.6 4	54.1	20.9 4	25.5⁴	35.2	49.6
	Renewable Energy Purchased and Used (GWh)		97.8	159.7	198.7	195.0	97.8	162.9	233.8	252.0
Energy	Onsite renewable energy generated and consumed (GWh)		26.3	27.4	36.9	48.2	26.3	27.8	46.7	66.4
	Onsite renewable energy generated (GWh)		31.1	37.1	50.6	63.3	31.1	37.4	60.5	82.0
	Total Energy Use (GWh)		637.6	723.1	681.6	639.3	637.6	762.8	832.4	933.1
	No. of wholly owned sites		91	95	96	98	91	110	125	135
	Wholly owned sites with Solar PV		19	28	39	53	19	28	44	67
	Zero Company waste to landfill (tonnes)	2030	18,640 4	16,0894	9,819 4	8,282	18,640 4	16,912 4	11,584 4	12,407
Circularity	Recycle 1 billion PET bottles into our manufacturing processes (million bottles)	2025	n/a	n/a	n/a	n/a	573	843	803	858
	QuadCore™ products utilising recycled PET (sites)	2025	1	1	3	8	1	1	3	8
\A/	Harvest 100 million litres of rainwater (ML)	2030	20.1	20.5	27.3 4	56.3	20.1	20.5	27.4 4	56.7
Water	Support 5 Ocean Clean-Up projects (No. of projects)	2025	n/a	n/a	n/a	n/a	1	2	3	4

^{1:} Underlying Business includes manufacturing, assembly and R&D sites within the Kingspan Group in 2020 plus all organic growth.

2: Whole Business includes all manufacturing, assembly and R&D sites within the Kingspan Group, including acquisitions since 2020 prior to cut off af september 30th 2023.

3: Excluding biogenic emissions. Scope 2 GHG emissions calculated using market-based methodology.

4: Restated figures due to improved data callection, change in calculation methodologies and site disposal.

5: GHG emissions were recalculated due to acquisitions that occurred in 2021, 2022 & 2023 before 30th september. 6: Kingspan defines a 'zero emissions car' as a vehicle with zero tailpipe emissions. The boundary does not include the energy used to power the vehicle or the embodied emissions from manufacturing

Planet Passion	ate targets	
Category	Target	Definition
	Net Zero Carbon Manufacturing	Minimum 90% absolute reduction in absolute scope 1 & 2 (market-based methodology) greenhouse gas (GHG) emissions (excluding biogenic emissions) with any residual GHG emissions (maximum 10%) neutralised. Only hard-to-abate GHG emissions will be neutralised with the use of high-quality credits that lead to an additional climate impact that is permanent and accurately quantified.
Carbon	50% reduction in product CO ₂ e from key supply partners	We aim to achieve a 50% reduction in the carbon (CO_2 e) intensity of the primary raw materials supplied to Kingspan by 2030.
	Zero emissions company cars	Definition of a zero emissions car is a car with zero emissions at the tailpipe/in use, in line with Regulation (EU) 2019/631. The target boundary included all employee cars provided and funded by the company (car allowances). The reported annual renewals vehicles converted to electric vehicles does not include car allowances as these vehicles may not be converted annually. Kingspan defines a 'zero emissions car' as a vehicle with zero tailpipe emissions. The boundary does not include the energy used to power the vehicle or the embodied emissions from manufacturing.
	60% Direct renewable energy	Energy is classed as 'direct renewable energy' if used to directly power our manufacturing processes (i.e. on-site renewable energy generation consumed) or via a purchase of renewable energy products from energy suppliers. This target includes purchased "Direct renewable energy" and renewable energy generated and consumed on-site.
Energy	20% On-site renewable energy generation	Renewable energy generated on-site, both consumed and exported, calculated as an equivalent percentage of total energy consumption.
3,	Solar PV systems on wholly owned sites	Percentage of all sites that are wholly owned by the Kingspan Group (both land and buildings) that have rooftop solar PV systems installed.
	Net Zero Energy	Net Zero Energy by matching 100% of our operational energy use through the use of renewable energy and the purchase of renewable energy certificates to offset any remaining non-renewable energy use. Target retired at the end of 2022.
	Zero Company waste to landfill	Minimum 99% landfill diversion of wastes generated in Kingspan manufacturing, R&D and assembly facilities.
Circularity	Recycle 1 billion PET bottles into our manufacturing processes	Target to incorporate recycled PET to the equivalent weight of 1 billion PET bottles into our manufacturing processes annually by 2025
	QuadCore™ products utilising recycled PET	The completion of pre-certification testing for QuadCore™ products that utilising recycled PET polyol at 19 QuadCoreTM manufacturing sites across the Group.
Make a	Harvest 100 million litres of rainwater	Capacity to harvest 100 million litres of rainwater per annum on Kingspan sites, with onwards use for all harvested water e.g consumed, sold or donated.
Water	Support 5 Ocean clean-up projects	Support five ocean clean-up projects by 2025 to help reduce marine pollution across the world's oceans.

Appendix 2: Environmental and Social indicators†

	2020	2021	2022	2023
Energy	637.6*	762.8*	832.4*	933.1
Electricity	229.2*	270.8*	305.6*	329.8
Non-Renewable - procured	122.1	103.2	77.6	76.1
Renewable	107.2	167.6	228	253.7
Procured electricity	96.3	155.9*	210.6*	230.2
Onsite Generation and Consumed	10.9	11.7	17.4	23.5
Fuel	404.2	485.0	516.6	592.1
Non-Renewable	385.8	462.8	464.3	526.8
Direct stationary & mobile combustion	364.8*	433.9*	439.2*	510.4
Onsite fuels for heat generation	21	29	25.1	16.4
Renewable	18.4	22.2	52.3	65.3
Direct stationary & mobile combustion	0.1	3.5	16.7*	13.0
Biofuels/Biomass	0.1	3.5	16.7*	13.0
Onsite fuels for heat generation	14.2	13.9	28.3	45.4
Onsite fuels for electricity generation	4.1	4.8	7.3	6.9
Heat	4.2	7.0	10.2	11.2
Non-Renewable District Heating	2.7	3.0	3.4	3.2
Renewable	1.5	4.0	6.8	8.0
District Heating	1.5	3.5	5.9	6.7
Onsite Generation and Consumed	0	0.5	0.9	1.3
Onsite generation	42.1	52.6	73.5	90.5
Electricity - Renewable	19.0*	24.6*	35.3*	43.5
Onsite Generation and Exported	4.8	9.7	13.7*	15.5
Generated and consumed	14.2	14.9	21.5*	28.0
Solar PV	8.3	10.6	15.9*	21.9
Wind	2.3	1.1	1.4	1.4
Other	3.6	3.2	4.3	4.7
Heat	23.1	28.0	38.2	47.0
Non-renewable	11.0	15.1	13.0	8.6
Renewable	12.1	12.9	25.2	38.4
Generated and consumed	12.1	12.9	25.2	38.4
Biomass/Biogas	12.1	12.4	24.3	37.1
Other	0.0	0.5	0.9	1.3
Losses from onsite fuel use for energy generation	12.9	16.4	18.3	17.3

	2020	2021	2022	2023
Carbon				
Scope 1 GHG emissions (tCO ₂ e)	437,072 1,2	446,917 ^{1,2}	341,767 ^{1,2}	147,637 ²
Biogenic GHG emissions (tCO ₂ e)	18,962 1,2	24,5411,2	21,4561,2	12,495 ²
Scope 2 GHG emissions (market-based) (tCO ₂ e)	78,741 ^{1,2}	69,663 ^{1,2}	45,815 1,2	31,045²
Scope 2 GHG emissions (location-based) (tCO ₂ e)	99,496 ^{1,2}	99,9831,2	90,353 1,2	85,666 ²
GHG emissions intensity (tCO₂e/€m of revenue) ³	89.6	63.9	41.1	21.8
Scope 3 (tCO ₂ e)	8,024,8331,2	9,019,768 ^{1,2}	7,987,508 ^{1,2}	6,952,647
Purchased Goods and Services	6,812,422	7,638,450	6,983,0341,2	6,260,7112
Capital Goods	37,427	47,971	81,264	151,765
Fuel and Energy related activities	34,001 ^{1,2}	48,179 1,2	50,518 ^{1,2}	48,143 ²
Upstream transportation and distribution	139,623	202,559	153,404	253,385
Waste Generation in operations	4,874 ^{1,2}	7,512 ^{1,2}	5,592 1,2	5,491 ²
Business travel	23,917	31,100	54,207	68,014
Employee commuting	20,669	25,410	26,001	26,796
Downstream transportation and distribution ⁴	-	-	-	-
Use of Sold Products	497,975 1,2	529,956 ^{1,2}	329,629 ^{1,2}	54,978
End of life treatment of sold products	453,925 1,2	488,631 1,2	303,859	83,364
Non-HFC process emissions (not included in Scope 1) (tCO,e)	7,038¹	8,1401	10,5101	12,407

Note1: GHG emissions calculations only include manufacturing, assembly and R&D sites on the basis that the amounts excluded are not believed to be material; emissions are estimated at less than 0.5% of overall scope 1 and 2 emissions (market-based).

Note 2: Gases include CO₂, CH₂, N₂O, HFCs. PFCs and SF₄. Emission factor sources: the emission factor set for each site is decided based on the location in which the site is based. Sources include, among others: DEFRA, US EPA, IEA, GHG Protocol. GWP source: IPPC, AR4 and AR5. Consolidation approach: financial control.

¹ Restated figures due to improved data collection & change in calculation methodologies.

^{2:} GHG emissions were recalculated due to acquisitions that occurred in 2021, 2022 & 2023 before 30th september.

³ GHG emissions intensity ratio includes scope 182 (market-based) GHG emissions (not including biogenic emissions)

^{4:} We report outbound transportation and distribution services that we purchase under category 4 (Upstream transportation and distribution) instead of category 9. This is in line with the Greenhouse Gas Protocol's guidance.

 $[\]dagger$ Boundary for environmental data: Whole business - manufacturing, assembly, and R&D sites. Whole Business includes all manufacturing, assembly and R&D sites within the Kingspan Group, including acquisitions since 2020 prior to cut off of september 30th 2023.

^{*:} Restated figures due to improved data collection & change in calculation methodologies.

	2020	2021	2022	2023
Circularity				
Waste generated (t)	94,253*	112,960*	138,276*	148,733
Non-hazardous waste (t)	87,400	105,241	128,348	141,195
Hazardous waste (t)	6,852	7,718	9,928	7,538
Waste generated by disposal type				
Recycling & reuse	64,168	74,747	89,059	94,973
Incineration & Recovery, including energy recovery	11,363	20,323	30,372	32,267
Landfill	18,640*	16,912*	11,584*	12,407
Rest	81	978	7,262	9,086
Water				
Total water withdrawal (m³)	437,587*	556,039*	672,967*	805,731
Third-party water (m³)	345,521*	415,196*	468,286*	533,301
Ground Water (m³)	71,991*	120,305*	177,239*	215,779
Harvested rainwater (m³)	20,075	20,529*	27,442*	56,652
Air emissions				
NOx (t)	n/a	240	263	280
SOx (t)	n/a	28	23	17
Our ratings				
CDP	A+	A-	Α	Α
MSCI	AA	AA	AA	AA
SUSTAINALYTICS	Low risk/	Low risk/	Low risk/	Low risk/
	ESG score:	ESG score:	ESG score:	ESG score:
	17.3	17.9	17.1	19.8
ISS ESG	Prime	Prime	B-	B-
DJSI constituent	no	no	no	yes

	2020	2021	2022	2023
Sites with ISO certifications ¹				
Number of sites with ISO 9001	75	88	91	144
Number of sites with ISO 14001	66	78	83	113
Number of sites with ISO 18001/45001	64	76	82	111
Number of sites with ISO 50001	20	23	37	46
Number of sites with ISO 37301	-	9	26	70
Employee data ^{1,2}				
Number of employees	15,757	19,384	22,015	22,688
Female	19%	20%	21%	21%
Male	81%	80%	79%	79%
Western & Southern Europe	7,898	8,845	9,577	9,688
Central & Northern Europe	3,970	5,861	6,827	7,140
Americas	2,786	3,411	3,884	4,029
Rest of World	1,103	1,267	1,728	1,831
Health and Safety ¹				
Health & Safety Investment (€)	4,825,148	7,010,859	8,570,444	12,867,421
Total Recordable Incident Rate (TRIR) ³	2.43	2.37	2.0	2.3
Injury Frequency Rate (p/100k hours)	1.2	1.2	1.0	1.1
Fatalities	1	1	0	1

[†] Boundary for environmental data: Whole business - manufacturing, assembly, and R&D sites. Whole Business includes all manufacturing, assembly and R&D sites within the Kingspan Group, including acquisitions since 2020 prior to cut off of september 30th 2023.

*: Restated figures due to improved data collection & change in calculation methodologies.

¹ Boundary: Whole business, which includes all businesses owned by Kingspan at the end of 2023, including acquisitions.

² Employee numbers are expressed as head count.

³ Calculated based on both full-time and contract employees.

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Appendix 3: Reporting with reference to the GRI Standards

Statement of use	Kingspan has reported the information cited in this GRI content index for the period 01.01.2023 to 31.12.23 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI Standard	Disclosure	Location
GRI 2: General Disclosures 2021	2-1 Organizational details	Pages 5-7
GRI 2: General Disclosures 2021	2-3 Reporting period, frequency and contact point	Page 2
GRI 2: General Disclosures 2021	2-4 Restatements of information	A note has been added to all cases where a restatement has been provided
GRI 2: General Disclosures 2021	2-5 External assurance	Page 63
GRI 2: General Disclosures 2021	2-9 Governance structure and composition	Page 11
GRI 2: General Disclosures 2021	2-22 Statement on sustainable development strategy	Page 4
GRI 2: General Disclosures 2021	2-28 Membership associations	Page 9
GRI 302: Energy 2016	302-1 Energy consumption within the organisation	Page 51
GRI 302: Energy 2016	302-3 Energy intensity	Page 51
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Page 52
GRI 305: Emissions 2016	305-2 Energy indirect (Scope 2) GHG emissions	Page 52
GRI 305: Emissions 2016	305-3 Other indirect (Scope 3) GHG emissions	Page 52
GRI 305: Emissions 2016	305-4 GHG emissions intensity	Page 52
GRI 306: Waste 2020	306-3 Waste generated	Page 53

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Topic	Accounting metric	Section	Comment	Code
	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	-	This indicator is not applicable. Kingspan is not covered under emissions- limiting regulations.	EM-CM-110a.1
Greenhouse Gas Emissions	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Environnent - Carbon and energy, pages 16-17	Long-term and short-term carbon strategy and targets to manage Scope 1 emissions are outlined in the "Environment - Carbon and energy" section of this Report.	EM-CM-110a.2
Air Quality	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) particulate matter (PM10), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs), and (7) heavy metals	Appendix 2	We're currently working on collecting all necessary data and we're hoping to be able to report on this metric in our next report.	EM-CM-120a.1
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative, (4) percentage renewable	Appendix 2	-	EM-CM-130a.1
Water Management	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Appendix 2	30.4% of our total water use is in regions with High or Extremely High Baseline Water Stress.	EM-CM-140a.1
Waste Management	Amount of waste generated, percentage hazardous, percentage recycled	Appendix 2	-	EM-CM-150a.1
Biodiversity	Description of environmental management policies and practices for active sites	-	See Kingspan's environmental policy	EM-CM-160a.1
Impacts	Terrestrial acreage disturbed, percentage of impacted area restored	-	This indicator is not applicable to Kingspan. Kingspan does not operate any quarries.	EM-CM-160a.2

KINGSPAN GOVERNANCE ENVIRONMENT PLANET PASSIONATE SOCIETY APPENDICES

Appendix 4: SASB (Continued)

Topic	Accounting metric	Section	Comment	Code
Workforce	(1) Total recordable incident rate (TRIR) and (2) near miss frequency rate (NMFR) for (a) fulltime employees and (b) contract employees	Appendix 2	Near miss data is recorded at divisional level and we will report on this metric at Group level in the next report.	EM-CM-320a.1
Health & Safety	Number of reported cases of silicosis.	-	This indicator is not applicable to Kingspan. Employees and workers are not exposed to large amounts of crystalline silica dust.	EM-CM-320a.2
Product	Percentage of products that qualify for credits in sustainable building design and construction certifications.		59% of Kingspan's product revenue contributes directly or indirectly to resource efficiency, such as, lowering carbon emissions or mains water withdrawal.	EM-CM-410a.1
Innovation	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production.	-	A 2016 report from Deloitte estimated the Global Insulation Market generated \$18.8bn in revenue.	EM-CM-410a.2
Pricing Integrity & Transparency	Total amount of monetary losses as a result of legal proceedings associated with cartel activities, price fixing, and anti-trust activities.	-	Kingspan did not receive any fines or sanctions in relation to cartel activities, price fixing, and anti-trust activities.	EM-CM-520a.1

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Appendix 5: Climate-related disclosures

Climate Governance

Kingspan's Group Chief Executive Officer (CEO) is the individual on the board responsible for climate related issues. Climate related issues are addressed through our Planet Passionate strategy. As a manufacturer of climate-related solutions, Kingspan has identified Planet Passionate as one of the four core pillars of our strategy. Our Planet Passionate strategy and progress towards our goals is therefore overseen by the Kingspan Board in its entirety. The Board will get a formal update from our Global Head of Sustainability at least annually and will approve Kingspan's annual Planet Passionate report. The Kingspan CEO, who sits on the Board, is the person at the top of the chain of command specifically managing information on climate-related issues and making decisions about what the company will do and adapting those decisions based on climate-related information.

Climate-related risks and opportunities: Time horizons:

We use a short term (2022 - 2025) horizon for assessing climate-related risks and opportunities, given the rate of business growth and OPEX and CAPEX considerations. We also consider a medium horizon (2026 - 2033) for assessing climaterelated risks and opportunities up to 2033;

we define anything over 3 years, but still within our planning phase, as mediumterm. We also consider a long term (2033 - 2050) horizon to 2050. We conduct internal horizon planning and encompass strategies to mitigate risks and address opportunities beyond the 10 year time horizon.

Risks and opportunities:

We define substantive financial or strategic impact on our business, as follows:

- Financial: Kingspan considers any risk, including climate-related risks, which have the potential to impact group trading profit (EBITA) by 5% or more as substantive. In 2022, for example, that would be any risk that would potentially impact group trading profit (EBITA) by €42 million.
- Operational:Kingspan considers any operational risk which has the potential to impact operations of over 5% of the group's trading profit or manufacturing capacity as substantive. In 2022, for example, that would be any risk that would potentially impact trading profit (EBITA) by €42 million.
- Strategic: Kingspan considers any strategic risk which has the potential to impact revenues by over 5% as

substantive. In 2022, for example, that would be any risk that would potentially impact revenue by over €400m.

Reputational: : Kingspan is the market leader in high-performance building envelopes, but we also pride ourselves on our best-in-class service model. Any risk which would significantly impact our ability to deliver against this service level expectation would be considered as substantive. In addition, Kingspan has set itself challenging targets in the areas of energy, carbon, circularity and water, through our Planet Passionate initiatives. Any risk which would substantially impact our ability to deliver against those goals would be considered substantive by Kinaspan.

We consider a wide array of risk types in our climate-related risk assessments. These include current and emerging regulation, technology, legal, market, reputation and acute and chronic physical. For more information, please refer to our latest CDP response, available on our website.

Processes for identifying, assessing and responding to climate-related risks and opportunities:

There are multiple strands within the business for identifying R/O as they relate

to our value chain stages and there are formal monthly updates for escalating R/O to the Group management team, as well an annual risk review conducted by Internal Audit for the benefit of the Kingspan board's Audit & Compliance Committee. Risks and opportunities are escalated through the chain on consultation with next level management, these R/Os are assessed as to whether they are substantive, and further escalated to business unit and divisional reviews where relevant. Identified risks and opportunities are assessed for substantive financial or strategic impact (greater than our defined threshold level of €42 million on EBITA). The effect of revenue-related risks and opportunities on EBITA are estimated, and cost-related effects are calculated by multiplying specific effects by volume. After climate related R/Os have been identified and assessed, they are prioritised according to impact, likelihood and potential influence on net sales. There are different ways to treat risks:

- 1. Avoid risks with a high likelihood and high impact by stopping specific activities.
- 2. Reduce risks with a high likelihood but low impact by mitigation measures.
- 3. Transfer risks with low likelihood but high impact by insurance, outsourcing, etc.

4. Accept risk with low likelihood and low impact, if the cost to mitigate risk is higher than cost to bear the risk.

Kingspan has identified and invested in mitigation strategies where it leads to a more resilient business and a more sustainable product offering for our customers.

Risks:

1. Decreased revenues due to reduced demand for products and services: Kingspan's product portfolio consists of products which make a positive impact on resource efficiency, particularly in relation to in-use energy and carbon saving benefits. The embodied carbon of our insulation products is insignificant relative to the impact of carbon saved through our products' lifetime in use. For example, we estimate that Kingspan insulation products sold in 2023, will save 164 million tCO2e over their lifetime, which compares to 7.1 million tCO2e of Scope 1, 2 and 3 emissions emitted due to their manufacture. However, we recognise the need to minimise the carbon produced due to the manufacture our products, much of which comes from the raw materials. To be a market leader in carbon efficient solutions, we have targets to realise

Appendix 5: Climate-related disclosures

significant carbon reductions in both our manufacturing process and via our primary raw material supply partners. We see this risk as having a Mediumlow impact for Kingspan given the decarbonisation commitments across our value chain. We believe the level of interest in lower embodied carbon products will grow in the short-term.

- 2. Emerging regulation carbon pricing mechanisms: As a global leader in high-performance insulation and building envelope solutions, we rely on a global network of suppliers, from raw material to the transportation companies that deliver our products to our customers. Any carbon related policy changes affecting our suppliers could affect our cost of production if the suppliers pass through a percentage of the (increased) carbon price to Kingspan. Purchased good and services account for 82% of our total value chain GHG emissions footprint, with the largest proportion attributable to the metals materials category.
- 3. Technology Substitution of existing products and services with lower emissions options: Failure to innovate ahead of our competitors is a risk to our business

- model. We invest approximately one per cent of revenue annually in research and development and digital transformation, which gives us significant scale in innovation versus our peers. Should a competitor bring a higher performing insulation technology - in terms of thermal performance to market, it could impact revenue in that product range. Kingspan's energy efficient insulation products and ancillaries account for over 80% of revenue.
- 4. Water scarcity: Kingspan manufactures and sells a plethora of products and as a result its operations across the globe are diverse. This diverse nature can also be seen in our facilities use of water. The importance of water quantity for our operations varies from vital for some of our sites (meaning that production could be compromised, and output and finances affected at the divisional level, if the water supply was insufficient) to not important at all (i.e., water is not a key component of operations directly or indirectly and water quantities are of less concern). In addition, robust water management practices are important for brand reputation with customers and the general public. Water issues may help to

- maintain a social license to operate in regions of increasing water stress.
- Emerging regulation carbon pricing mechanisms: Emerging regulation can have varied and wide-ranging impacts for Kingspan, both in our own operations, and upstream/downstream. An example of an emerging regulation which will impact Kingspan is the development of the EU ETS II, an expansion of the current EU Emissions Trading System (ETS) to incorporate buildings and transport. We see the risk as having a low impact to Kingspan given the considerable mitigation efforts we have in place to reduce carbon emissions from our operations.

Opportunities:

- 1. Use of public sector incentives: Only 3% of buildings in Europe were classed as highly energy efficient by a BPIE study (2017) indicating the extensive level of renovation that will be required across Europe. Aligned with the ambition of the Renovation Wave initiative, a revision of the Energy Performance of Buildings Directive (EPBD) is currently underway which will review specific aspects such as the phased introduction of mandatory minimum energy performance
- standards for all types of buildings (public and private), an update of the framework for Energy Performance Certificates, the introduction of Building Renovation Passports and the introduction of a 'deep renovation' standard in the context of financing and building decarbonisation objectives. A key facet within the renovation wave is to improve the energy efficiency of the building envelope. Kingspan's world class, ultra-performance insulation products are ideally suited for renovation given that dimension can be a key constraint in refurbishment. We have published several reports on how investment in premium insulation an immediate and significant return can have when dimension is considered. Kingspan's advanced insulation offers significant thermal outperformance versus fibre type insulation materials, thereby offering an enhanced dimension solution for the refurbishment market.
- 2. Access to new markets: Kingspan recently invested in new territories including Iberia, Latin America and India. Fach of these markets is at a much earlier stage than Kingspan's more developed markets in terms of adoption of high-performance

- insulation materials. We have opened a new facility annually in Brazil since entering the market in 2017. Over time, Kingspan will help to develop these markets and to educate building owners and regulators to the benefits of highperformance insulation and thermally efficient building envelopes.
- 3. Development of new products or services through R&D and innovation: Innovation is a key facet to our strategy and Kingspan has market leading products, particularly in the field of building insulation. Kingspan strives to be the market leader with the most advanced solutions. We invest approximately 1% of revenue annually in research and development and digital transformation which gives us significant scale in innovation versus our peers. Kingspan's innovation effort has led to breakthrough products such as QuadCore and Kooltherm. These innovative products and future innovative products, such as QuadCore Lower Embodied Carbon will continue to differentiate Kingspan from our competitors and help to drive adoption of advanced materials to bring down the energy consumption of buildings. Kingspan targets each of QuadCore and Kooltherm to be 50% of their

Appendix 5: Climate-related disclosures

relative portfolios within the next 4 years. Kingspan continues to invest in R&D to create technologies which combat climate-change, we expect innovation to increment revenue in the future.

- 4. Development of climate adaptation, resilience and insurance risk solutions: Our strategy is to convert construction methods from inefficient, traditional technologies to high-performance, energy efficient technologies. We help regulators, building owners, architects and design teams to understand not only the considerable efficiency pay back from an investment in thermal performance, but also the strategic importance of positioning yourself as a responsible business with your stakeholders, similar aims, we can expect renovation policies and support measures to be in focus. The conversion to high performance, energy efficient building envelopes, from traditional construction methods, has been a successful strategy for Kingspan for decades. This strategy has helped to drive a Compounded Annual Growth Rate (CAGR) of over 17% in revenue since 1994, well in advance of construction macro growth. Kingspan's current balance of products and
- markets, coupled with increasing regulation, offer significant opportunity for this conversion strategy to continue to deliver organic growth above market growth.
- 5. Participation in renewable energy programs and adoption of energyefficiency measures: At Kingspan we understand that the built environment has an important part to play in tackling climate change, and we pledge to lead by example in both our products and our operations. Through its 10year Planet Passionate programme, Kingspan aims to futureproof its operations by significantly reducing the company's carbon footprint by continuing to reduce its energy demand through energy efficiency and rapidly increasing its use of renewable energy (both from the grid and from on-site generation). Kingspan, via its Planet Passionate 2030 energy targets, aims to increase direct renewable energy use to 60% of total energy use, to generate the equivalent of 20% of total energy demand on-site and to install solar PV systems on all wholly owned sites.

How climate-related risks and opportunities have influenced our strategy:

- Products and services: Kingspan recognises both risks and opportunities from the development of products which enable our customers to design, build or own buildings which minimise the contribution to operational and embodied carbon emissions. To be a market leader in carbon efficient solutions, we took the strategic decision to transform our Net Zero Energy strategy to become our Planet Passionate strategy which sets targets and strategies to realise significant carbon reductions in both our manufacturing process and via our primary raw material supply partners. We have been engaging with our supply chain on an ongoing basis since the launch of this strategy. A direct result of this engagement has been the development of QuadCore lower embodied carbon (LEC), which is an insulated panel product with over 20% lower embodied carbon than our market leading QuadCore insulated panel.
- Supply chain: We recognise the need to minimise the carbon emitted due to

- the manufacture of our products, much of which comes from raw materials in our value chain. Mitigation activities include establishing a Kingspan Group Sustainability Team to monitor emissions and implement projects to reduce Scope 1, 2 & 3 emissions; engagement with our supply partners at the highest level; and ongoing R&D projects with new and existing suppliers with a view to reducing Scope 3 emissions. A substantial outcome of these mitigation activities has been the investment by Kingspan in H2 Green Steel (H2GS).
- Investment in R&D: Climate-related risks and opportunities are core elements of Kingspan's Research and Development (R&D) investment strategy. Innovation is one of Kingspan's key strategic pillars. As a manufacturer of climate-mitigating low-carbon technologies, our innovation agenda is centred around creating products which reduce the carbon emissions of the built environment. We recognise Innovation both as a risk and an opportunity in the short-, medium- and the longterm. Kingspan invests approximately 1% of revenue annually on R&D and digital transformation which gives us significant scale advantage in

- innovation versus our peers. The most substantial strategic decision taken to date has been to invest in a global centre of excellence for innovation, IKON, at Kingspan's Group Headquarters in Ireland. This centres innovation as a groupwide function with a Global Head of Innovation reporting directly to the CEO.
- **Operations:** Strategy in Kingspan business operations has been influenced by climate change risk planning, predominantly as it relates to mitigating against climate change to reduce risks of direct and indirect operational cost increases related to the cost of energy and/or carbon taxes over the medium-term. Many of the countries in which Kingspan operates have already implemented carbon pricing mechanisms, with more countries expected to implement carbon taxes or pricing mechanisms in the future. In addition, in line with meeting the objectives of the Paris Accord, we expect increases to the current carbon taxes or pricing mechanisms.

Appendix 6: TCFD – Recommendations and supporting recommended disclosures

Governance Disclose the organization's governance around climate-related risks and opportunitie							
Recommended Disclosure	Section	Page					
a) Describe the board's oversight of climate-related risks and opportunities	Appendix 5	56					
b) Describe management's role in assessing and managing climate-related risks and opportunities.	Appendix 5	56					
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such	information is material.						
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Appendix 5	56					
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Appendix 5	56					
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Appendix 5	56					
Risk Management Disclose how the organization identifies, assesses, and manages climate-related risks.							
a) Describe the organization's processes for identifying and assessing climate-related risks.	Appendix 5	56					
b) Describe the organization's processes for managing climate-related risks.	Appendix 5	56					
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Appendix 5	56					
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.							
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Appendices 2 and 5	51 & 56					
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Appendix 2	51					
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Carbon and energy, Planet Passionate	17 & 30					

Kingspan is a global supplier of highperformance building envelope solutions. The Taxonomy Regulation (2020/852/ EU) establishes an EU framework for the classification of environmentally sustainable economic activities and requires, under Article 8, Kingspan to disclose information on how and to what extent its activities are associated with environmentally sustainable economic activities. These disclosures are based upon what we believe are reasonable assumptions but, as there is no established practice for reporting under the Taxonomy Regulation and the nature of the relevant disclosure obligations is novel, these disclosures are, by their nature, subject to uncertainties.

Taxonomy Eligible and Aligned Turnover

Numerator: Included in the numerator for taxonomy eligible and aligned activities2 are activities under Annex I – 3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings. The difference between eligible and aligned turnover reflects products for which there is no technical hurdle defined, or products which don't meet the requisite technical hurdle.

Key assumptions:

 Insulated pipework for district heating has been included under Annex I. 3.5.

Denominator: Kingspan's total revenue as disclosed in our 2023 preliminary results and in Note 2 of our 2023 Annual Report¹.

Taxonomy Eligible and Aligned Capital **Expenditure**

Numerator: Items in the denominator relating to taxonomy eligible and aligned activities.

Denominator: Direct non-capitalised costs that relate to research and development, building renovation measures, maintenance, and repair. Other direct expenditures relating to day-to-day servicing of assets of property, plant and equipment are not included as they are not recorded separately, cannot be readily approximated and are not considered material. The difference between eligible and aligned operating expenditure reflects expenditure related to products or services for which there is no technical hurdle defined, or which don't meet the requisite technical hurdle.

Operating expenditures are included in 'Cost of sales' and 'Operating costs excluding intangible amortisation' as per the Consolidated Income Statement in our Annual Report¹ with detail on the total R&D expense of €63.5m in Note 6 of our 2023 Annual Report¹.

Taxonomy Eligible and Aligned Capital **Expenditure**

Numerator: Items in the denominator relating to taxonomy eligible and aligned activities.

Denominator: Additions to tangible, including IFRS 16 Right of Use Assets, and intangible assets during the financial year considered before depreciation, amortisation, and any re-measurements, including those resulting from revaluations and impairments, for the relevant financial year and excluding fair value changes (Notes 11, 12 and 17 of the 2022 Annual Report¹). The denominator shall also cover additions to tangible and intangible assets resulting from business combinations as defined in Note 23 of our 2023 Annual Report¹. Goodwill is not included in the denominator. The difference between eligible and aligned capital expenditure reflects expenditure related to products or services for which there is no technical hurdle defined, or which don't meet the requisite technical hurdle.

¹ https://annual-report.kingspan.com/ ² As defined by REGULATION (EU) 2020/852 OF THE EUROPEANPARLIAMENT AND OF THE COUNCIL of 18 June 2020,

DO NOT SIGNIFICANT HARM

DNSH to 'Climate change mitigation'

Kingspan makes a substantial contribution to climate mitigation, primarily through the manufacture and sale of insulating products used in the construction of buildings. Insulation systems manufactured by Kingspan in 2023 will save an estimated 164 million tonnes of CO₂e over their lifetime.

DNSH to 'Climate change adaptation'

Kingspan makes a substantial contribution to climate mitigation, primarily through the manufacture and sale of insulating products used in the construction of buildings. Insulation systems manufactured by Kingspan in 2023 will save an estimated 164 million tonnes of CO₂e over their lifetime.

DNSH to Biodiversity

Kingspan bases its development on the respect for people and the environment. As a global provider of systems and solutions for the construction sector, Kingspan is aware of the potential impact of human activities on the planet and recognises climate change as a considerable threat to

biodiversity globally. We are in the process of understanding and assessing our material impacts and dependencies on biodiversity for all our manufacturing locations and our key suppliers. We will publish the results of this analysis in our next report.

DNSH to Water Resources

Due to the nature of Kingspan's business, water does not constitute a material input for most of our manufacturing sites. Nevertheless, recognising the importance of this precious resource, we aim to manage it in the most responsible manner possible. We aim to maximise water conservation using rainwater harvesting and other water saving initiatives such as sensor systems and water-flow regulators. Kingspan monitors water consumption to identify areas for improvement and continues to develop procedures and investigate technologies that will help minimise the withdrawal of ground water on site and water from municipal water supplies, as well as mitigating the impact of wastewater released from sites. In 2023, we conducted a water scarcity assessment covering all of our manufacturing facilities. The assessment determined that 67 manufacturing, assembly and research and development sites were located in areas of high or extremely high-water stress. These facilities represent 30.4% of our water use.

We have rainwater harvesting systems installed in 49 of our 224 sites (22%). We will continue to prioritise working with affected facilities to implement water efficiency improvements and rainwater harvesting where possible.

DNSH to 'Pollution prevention and control regarding use and presence of chemicals'

In the manufacturing activities that Kingspan undertakes and which fulfil the criteria set in the Taxonomy regulation as to mitigating climate change - under activity listed as manufacturing of energy efficiency technologies for buildings chapter 3.5 - our activity complies with the above listed criteria for Do No Significant Harm. Our manufacturing activity does not use or produce any substances listed in the regulations under points (a) to (d). Regarding the REACH regulation, substances used by Kingspan are currently not restricted as per Annex XVII dossier or required to be authorised as per Annex XIV - points (e) and (f). Point (g) of Annex XIV refers to the criteria set in REACH article 57 on how to identify a substance of very high concern.

Formaldehyde is classified as CMR, and is in the process of being restricted in consumer products, whereas industrial

products are covered by worker protection rules. There are exposure limits for workers set at EU level. Formaldehyde is used in the manufacture of phenolic resins which subsequently form phenolic foams (e.g. Kooltherm). In the final product there is very little residual formaldehyde left and hazard thresholds are not breached. Additionally, the Taxonomy regulation Annex 1 itself refers to formaldehyde emissions from the final product in buildings under the activity of renovation of existing buildings 7.2, stating that Do No Significant Harm requires: Building components and materials used in the building renovation that may come into contact with occupiers² emit less than 0,06 mg of formaldehyde per m³ of material or component upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories1A and 1B carcinogenic volatile organic compounds per m³ of material or component, upon testing in accordance with CEN/EN 16516 or ISO 16000-3:2011³ or other equivalent standardised test conditions and determination methods.

Methylene diphenyl diisocyanate (MDI) is similarly a building block for polyurethane (PU) and polyisocyanurate (PIR) foams. It is both a skin and respiratory sensitiser and products where MDI is present above a certain limit need to have a warning text and come with protective gloves. This level is not reached in foam products manufactured by Kingspan. Kingspan products comply with the limits as described in Annex XVII. As such, Kingspan concludes it does no significant harm as it relates to point (a) regarding the use of formaldehyde and MDI.

"Kingspan manufactures and sells Expanded Polystyrene beads and pearls for a variety of thermal insulation and other applications. Some of these uses may be in industrial settings but many will also reach commercial and residential environments. In the case of the latter, cavity wall insulation is a typical use and most materials used in this application are fused to form a solid mass. However, some bead/pearl losses may be unavoidable for some applications. For this reason, these applications are not totally derogated from coverage under Annex XVII of REACH through Articles 4 & 5 of the relevant Restriction (EC Reg. 2023/2055). Accordingly, Kingspan seeks to report them here."

DNSH to Circular Economy

Kingspan is embedding circularity principles throughout its operations and product development processes. We are also working on several strategies to further

develop circularity principles within our products at manufacture stage and at end of life. The majority of our product portfolio is durable and long-lasting. Some products can be easily disassembled and contain high quantities of recycled materials. As part of our Planet Passionate programme, we have set three circularity targets, aiming to reduce our waste to landfill and increase our use of recycled materials. We have reduced our waste to landfill by 33% from a 2020 base year.

Minimum Safeguards

Kingspan is fully committed to the highest standards as it relates to human and labour rights, bribery, taxation and fair competition. In late 2021 we subscribed to EcoVadis as a supplier management platform, to help us monitor and track the environmental, social and governance performance of our suppliers. To date we have received scorecards which cover 35% of our key suppliers by spend. For those suppliers which may not have the resource to complete an EcoVadis review, we are developing a due diligence process, in line with OECD and UN guidelines for multinational enterprises. We expect this due diligence process to be rolled out globally through 2024. In 2023, we completed a global Human Rights Risk Assessment. On the back of this work we

have introduced a new Human Rights Policy and are in the process of rolling out frameworks to enable compliance with this Policy. As these processes are underway rather than complete, we have taken the decision to declare zero percent EU Taxonomy alignment for Kingspan for Financial Year 2023, with the expectation that our alignment percentage will move towards our eligibility percentage in Financial Year 2024.

References

- ¹ Having carcinogenic, mutagenic or reprotoxic properties.
- ² Applying to paints and varnishes, ceiling tiles, floor coverings (including associated adhesives and sealants), internal insulation and interior surface treatments (such as to treat damp and
- ³ ISO 16000-3:2011, Indoor air Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method (version of [adoption date]: https://www.iso.org/standard/51812.html). ⁴ The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.

Appendix 7: The FU Taxonomy (Continued)

Appendix 7: The EU Taxonomy (Continued)		Contr	ibution	Do No Significant Harm									
Proportion of Revenue, OpEx and CapEx from products or services a Taxonomy-aligned economic activities – disclosure covering year 202				Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change ad- aptation		Circular economy	Pollution	Biodiversity and ecosys- tems	Minimum safeguards	Taxonomy aligned proportion (%)
Taxonomy Eligible Activities													
Revenue	Comment	€m	Proportion of total revenue (%)	Weighting (%)	Weighting (%)								
Total		8,090.6											
3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings	Eligible and meets the technical criteria for alignment.	3,438.7	42	100	0	Y	Y	N	Υ	Y	N	N	0
3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings	Eligible but not aligned as technical hurdle not met or not yet established for this revenue set.	1,258.1	16	100	0	Y	Y	N	Y	Y	N	N	0
Орех	Comment	€m	Proportion of total revenue (%)	Weighting (%)									
Total		158.5											
3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings	Eligible and meets the technical criteria for alignment.	105.5	67	100		Y	Y	N	Υ	Y	N	N	
3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings	Eligible but not aligned as technical hurdle not met or not yet established for this revenue set.	10.3	6	100		Y	Y	N	Y	Y	N	N	
СарЕх	Comment	€m	Proportion of total revenue (%)	Weighting (%)									
Total		352.4											
3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings	Eligible and meets the technical criteria for alignment.	138.7	39	100		Y	Y	N	Y	Y	N	N	
3.5. Manufacturing of energy efficiency equipment for buildings, 3.6. Manufacture of other low carbon technologies, 7.1. Construction of new buildings and 7.2 Renovation of existing buildings	Eligible but not aligned as technical hurdle not met or not yet established for this revenue set.	47.1	14	100		Y	Y	N	N	Y	N	N	

Substantial



LRQA Independent Assurance Statement

Relating to Kingspan Holdings (Irl) Limited's Environmental Data Assertion for the calendar year 2023

This Assurance Statement has been prepared for Kingspan Holdings (Irl) Limited in accordance with our contract but is intended for the readers of this Report.

Terms of engagement

LRQA was commissioned by Kingspan Holdings (Irl) Limited (Kingspan) to provide independent assurance on its environmental data assertion ("Assertion") against the assurance criteria below to a limited level of assurance and materiality using ISO 14064 - Part 3 for greenhouse gas data.

Our assurance engagement covered Kingspan's operations and activities under its financial control and specifically the following requirements:

- Verifying conformance with:
 - World Resources Institute / World Business Council for Sustainable Development Greenhouse Gas Protocol: A corporate accounting and reporting standard, revised edition (otherwise referred to as the WRI/WBCSD Protocol) for the GHG data¹
- Evaluating the accuracy and reliability of data and information for only the selected indicators listed below: 2
- Direct (Scope 1) including biogenic emissions, Energy Indirect (Scope 2) and Other Indirect (Scope 3) GHG
- Total energy use
- Percentage of wholly owned facilities with installed solar PV systems On-site renewable energy generation
- Water withdrawal
- Rainwater harvested
- Waste generation and waste to landfill
- Annual conversion of company replacement cars to Electric Vehicles (EV)
- PET bottles recycled into Kingspan's manufacturing processes.

Our assurance engagement excluded the data and information of Kingspan's suppliers, contractors and any third-parties mentioned in the Assertion.

LRQA's responsibility is only to Kingspan. LRQA disclaims any liability or responsibility to others as explained in the end footnote. Kingspan's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of Kingspan.



LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that Kingspan has not, in all material respects:

Disclosed accurate and reliable performance data and information as summarised in Table 1 below.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been



Table 1. Summary of Kingspan's Assertion for CY 2023:

Type	Quantity	Units		
Scope 1 GHG emissions ²	147,637	Tonnes CO ₂ e		
Biogenic Scope 1 GHG emissions ²	12,495	Tonnes CO ₂ e		
Scope 2 GHG emissions (Location-based) ^{1,2}	85,666	Tonnes CO ₂ e		
Scope 2 GHG emissions (Market-based) ^{1,2}	31,045	Tonnes CO ₂ e		
Scope 3 GHG Emission Categories ² :				
C1: Purchased goods & services	C1: 6,260,711			
C2: Capital goods	C2: 151,765			
C3: Fuel & energy related	C3: 48,143			
C4: Upstream transport & distribution	C4: 253,385	Tonnes		
CS: Waste generated in operations	CS: 5,491	CO ₂ e		
C6: Business travel	C6: 68,014			
C7: Employee commuting	C7: 26,796			
C11: Use of sold products	C11: 54,978			
C12: End-of-life treatment of sold products	C12: 83,364			
Non-HFC Process Emissions (not included in Scope 1 emissions)	12,407	Tonnes CO ₂ e		
Total Energy Use	933	GWh		
On-site renewable energy generation	82	GWh		
% of wholly owned facilities with installed solar PV systems	49.6	%		
Water withdrawal	805,731	m ³		
Rainwater harvested and consumed	56,652	m ³		
Waste generation	148,733	Tonnes		
Waste to landfill	12,407	Tonnes		
Annual conversion of company replacement cars to Electric Vehicles (EV)	69	%		
PET bottles recycled into Kingspan's manufacturing processes	858,265,816	-		
Note 1: Scope 2, Location-based and Scope 2, Market-based are defined in the GRIG Protocol Scope 2 Guidance, 2015 Note 2: GRIG emissions were calculated using Global Warming Potentials from IPCC ARA. Note 3: Scope 3 is defined in the GRIG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard, 2011				



LRQA's approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- reviewing processes related to the control of environmental data and records,

- interviewing relevant employees of the organization responsible for managing environmental data and records; auditing Kingspan's data management systems to confirm that there were no significant errors, omissions or misstatements in the Assertion, and
- verifying historical environmental and records at an aggregated level for the calendar year 2023.

Further observations and findings, made during the assurance engagement, are:

- Materiality
- We are not aware of any material issues concerning Kingspan's Assertion that have been excluded from the

Data management systems are considered to be well-defined, but implementation was slightly variable at a non-material level. This suggests an opportunity to review internal audit of data flows.

I POA's standards, competence and independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity assessment - Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

Graham Colebeck

Dated: 08 February 2024

acolopadi

On behalf of LRQA Group Limited, 1 Trinity Park, Bickenhill Lane, Birmingham, B37 7ES

LROA reference: LRO00003522/5900454

¹ http://www.ghgprotocol.org/

KINGSPAN GOVERNANCE ENVIRONMENT PLANET PASSIONATE SOCIETY APPENDICES

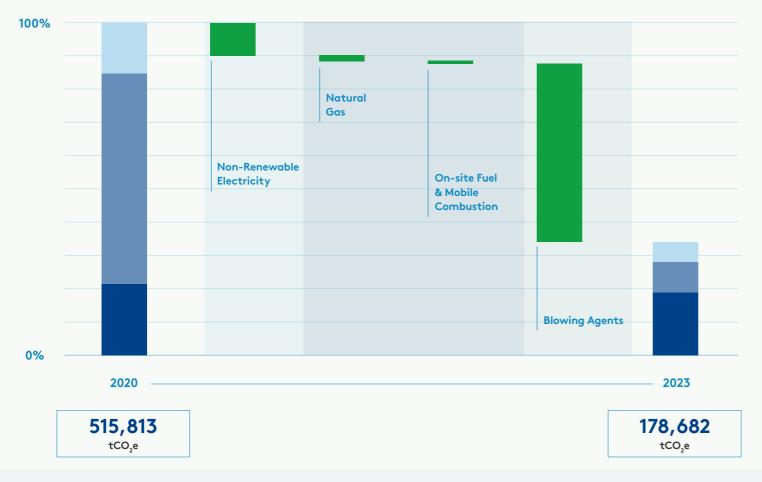
Interactive PopUps

X

Progress to Date

In 2023, Kingspan has already acheieved over 65% reductions in total annual carbon emissions when compared to 2020 which is our base year. The below diagram provides further detail on the Scope 1 and 2 emissions reductions since 2020.

Scope 1 and 2 Decarbonisation



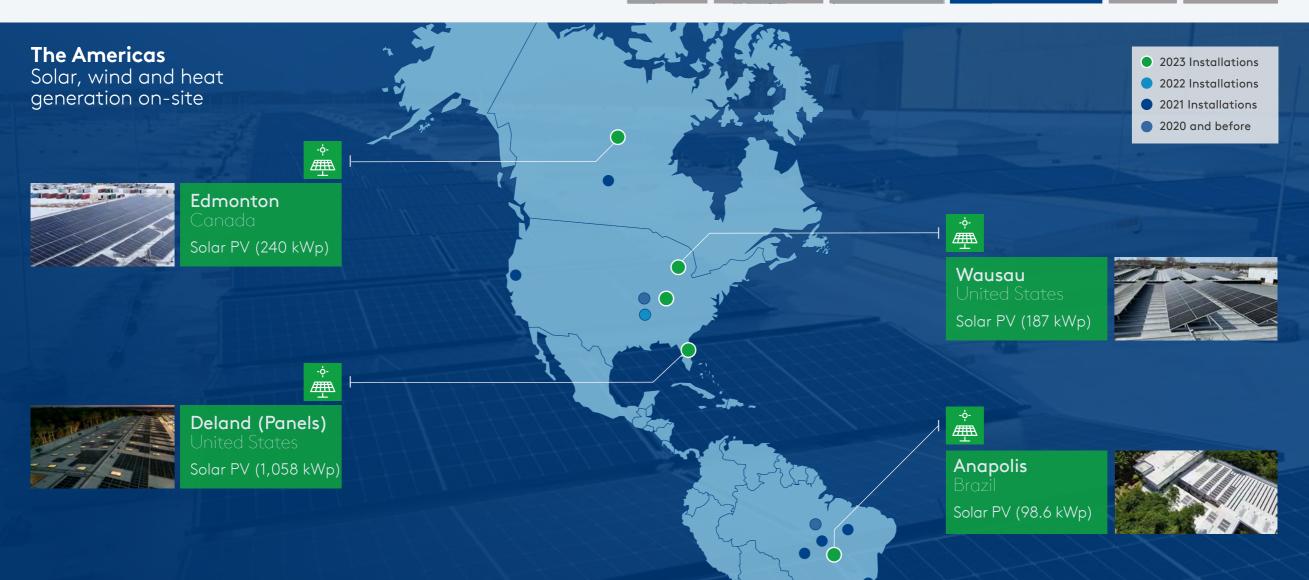
Key

- Reduction
- Scope 2
- Scope 1 Process
- Scope 1 Energy

Scope 3 decarbonisation

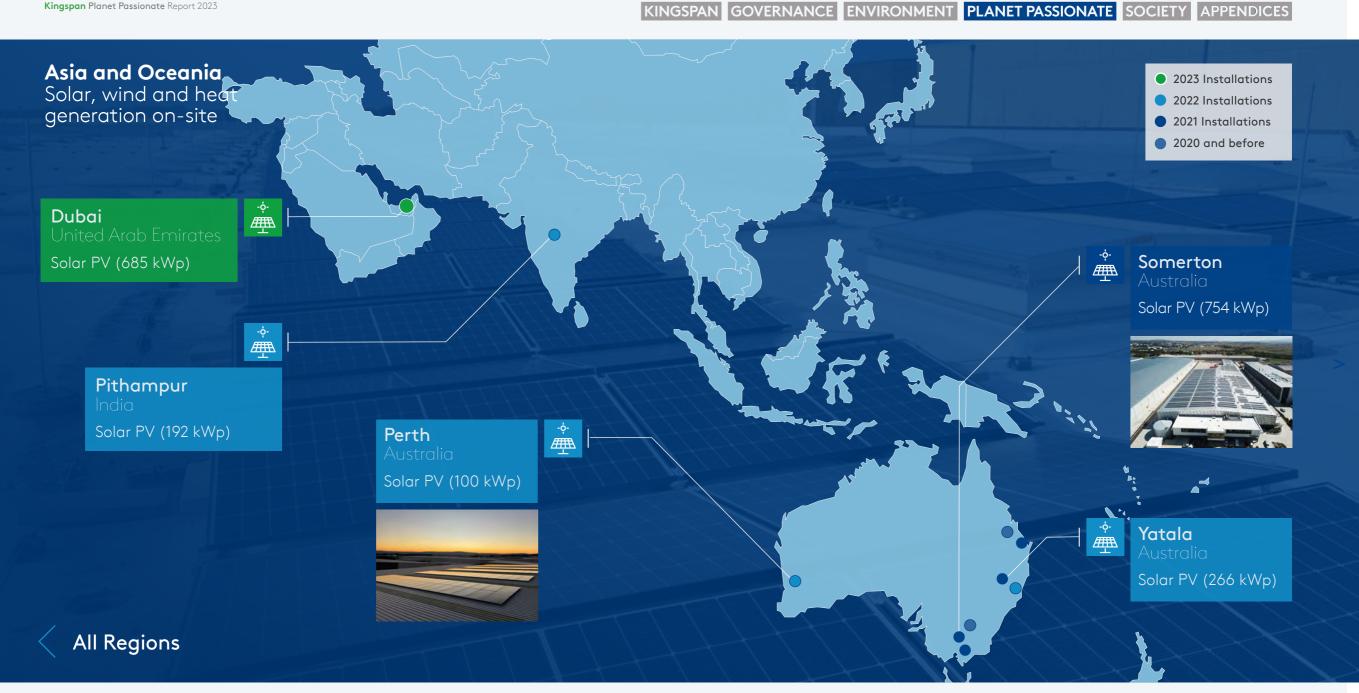
In 2023, Scope 3 emissions are responsible for over 97% of Kingspan's total annual carbon emissions. 90% of these Scope 3 emissions are from the purchase of raw materials which are used to manufacture our products.

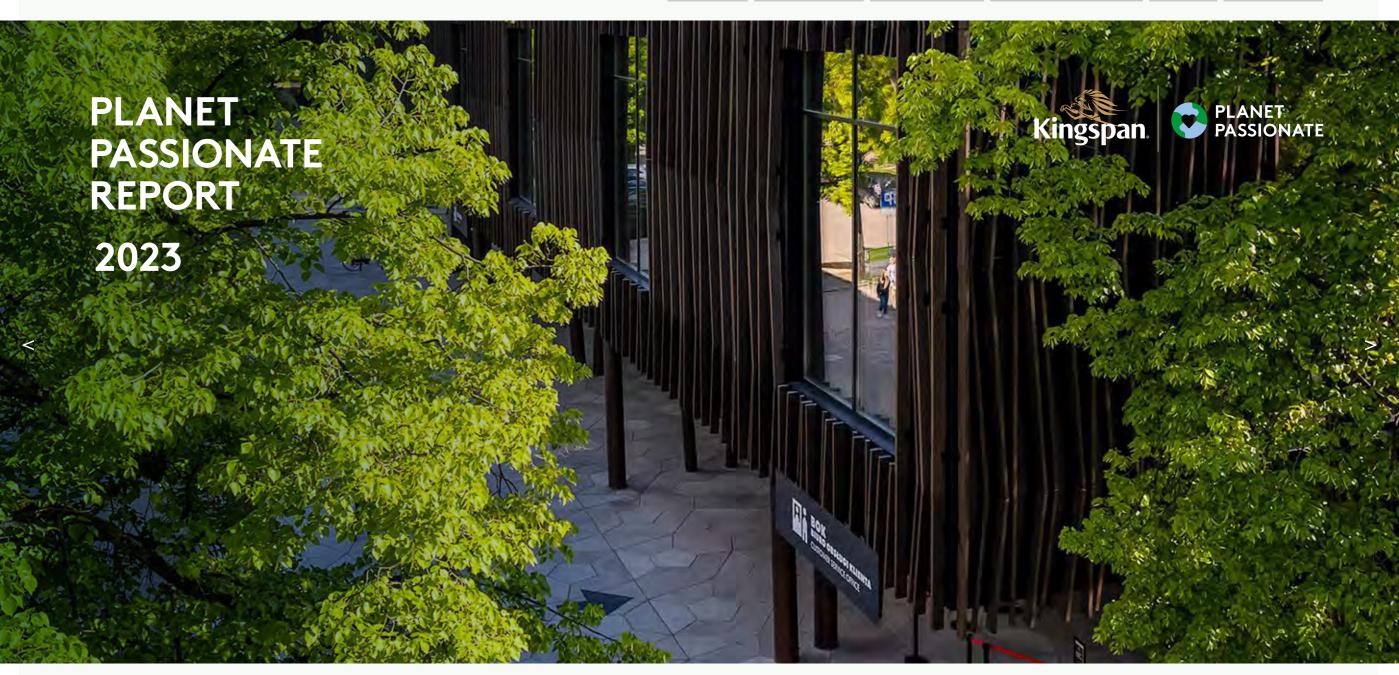
In 2023, we have reported an 13% reduction in Scope 3 emissions. These reductions can be attributed to the removal of high GWP blowing agent from our products, fluctuations in procured material volumes and reductions in the carbon intensity of our key raw materials.











KINGSPAN GOVERNANCE ENVIRONMENT PLANET PASSIONATE SOCIETY APPENDICES

Static Pop-Ups





Insulated Panels:

Kingspan Insulated Panels is the world's largest and leading manufacturer of high-performance insulated panel building envelopes. Powered by Kingspan's proprietary and differentiated insulation core technologies, a Kingspan panelised envelope provides building owners with consistently superior build quality and lifetime thermal performance compared with built-up constructions using traditional insulation.

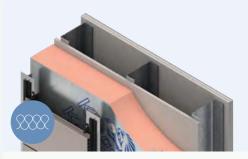
PowerPanel™ is part of our Insulated Panels division. It is an engineering innovation from Kingspan which has integrated our QuadCore™ insulated panel with solar technology, enabling a single fix installation of high-performance insulated panel with solar power generation. We expect to launch PowerPanel™ during 2024.

Revenue:

€4,722m

Scope 1&2 energy emissions¹:

36,655 tCO₂e



Insulation:

Kingspan is a world leader in rigid insulation boards. Our advanced insulation technologies deliver superior thermal performance and air-tightness when compared with traditional insulation, resulting in thinner solutions that offer multiple advantages including more internal floorspace and daylight.

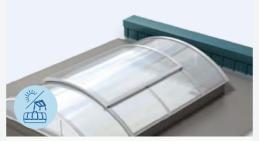
Kingspan has innovative and ultra-performance products in both piping and ducting insulation and we service the district heating segment through supplying pre-insulated piping through our LOGSTOR business. Industrial insulation is a segment which contains significant opportunity for Kingspan to expand in the future.



€1,528m

Scope 1&2 energy emissions¹:

43,504 tCO2e



Light, Air + Water:

Kingspan Light, Air + Water is established as a global leader providing a full suite of daylighting solutions, as well as natural ventilation and smoke management solutions, which complement our existing building envelope technologies. Thermal comfort, indoor air quality and natural daylighting are widely recognised as the most important factors affecting occupant wellbeing in buildings. Sustainable water management is rapidly becoming one of the greatest challenges of our time. We manufacture and support pioneering new technologies to preserve and protect water, such as rainwater harvesting systems and wastewater treatment systems. Kingspan is also a market leading manufacturer of innovative energy management solutions.

Revenue:

€967m

Scope 1&2 energy emissions¹:

8,773 tCO₂e



Data + Flooring:

Kingspan is the world's largest supplier of raised access flooring and data centre airflow management systems. Our raised access flooring systems have many benefits including optimising overall building height, achieving faster construction with greater design flexibility, enabling easier reconfiguration of a workspace, and improving indoor air quality. Our airflow management systems enable data centres to optimise cooling energy requirements while also protecting expensive equipment such as servers and storage devices.



Roofing + Waterproofing:

Kingspan has a long established interest in developing a roofing and waterproofing segment to complement our insulation board offering. Roofing membrane and roofing components are essential elements for the energy efficiency and water protection of a building envelope. Through the acquisitions of Ondura Group and Derbigum in 2022, and CaPlast in May 2023, Kingspan has an annual revenue run rate in this segment of over €500m. Going forward we expect to offer single component membrane solutions and to also offer roof systems incorporating membrane and insulation, giving our customers increased warranty protection from a single trusted supplier.

Revenue:

€380m

Scope 1&2 energy emissions¹:

3,013 tCO₂e

Revenue:

€493m

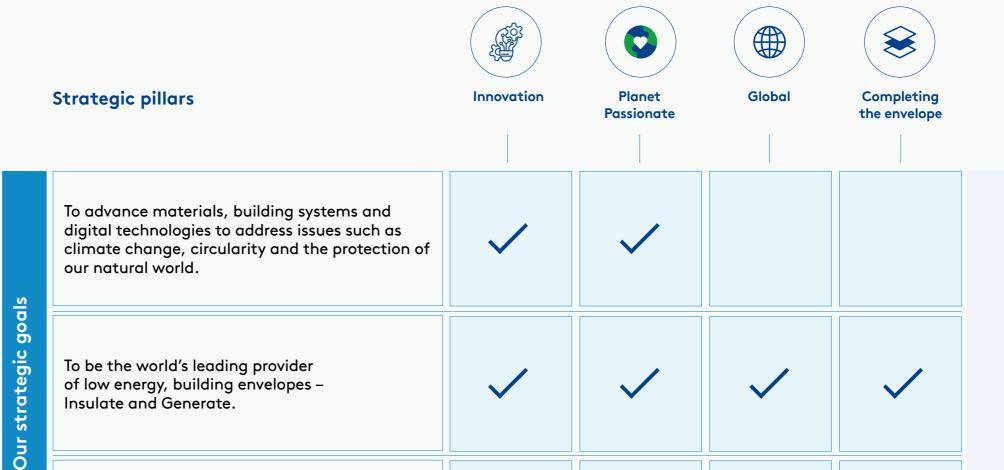
Scope 1&2 energy emissions¹:

36,417 tCO₂e

Strategic Goals

Our mission is to accelerate a net-zero emissions future built environment with people and planet at its heart.

Our core values of honesty, integrity and compliance with the law, are the foundations upon which our strategic pillars sit.



To expand globally, bringing high-

building methods.

performance building envelope solutions

to markets which are at an earlier stage in

the evolution of sustainable and efficient

PARTNERSHIPS AND INITIATIVES

World Green Building Council



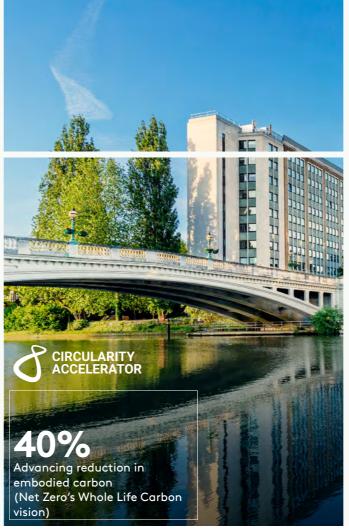


Launched in 2016, Advancing Net Zero is the World Green Building Council's (WorldGBC) global programme that works with national Green Building Councils to develop tools and resources to build industry capacity to deliver net-zero carbon buildings.

In 2020, Kingspan became an official programme partner of this ambitious campaign. Improving energy efficiency and performance in buildings is an essential component of the Advancing Net Zero's Whole Life Carbon vision, which aims for all new buildings to operate at net-zero emissions by 2030, with a 40% reduction in embodied carbon, and both new and existing buildings to operate at net-zero by 2050, with net-zero embodied emissions.

We are committed to promoting an energy efficiency first approach and supporting the industry's development of innovative solutions towards decarbonisation. We appreciate that this requires systemic change in the way products are manufactured, used and transported around the world, as well as inspiring others to take action and collectively working to remove implementation barriers.

Kingspan is also a signatory to the WorldGBC's Net Zero Carbon Buildings Commitment. The Commitment challenges signatories to achieve net-zero on all operational emissions for their building portfolio by 2030 and advocates for all buildings.





Kingspan is part of the WorldGBC Circularity Accelerator Programme, which in 2023 launched two flagship publications highlighting the industry leadership in implementing circular economy principles in the built environment: The Circular Built Environment Playbook and Building a Water-Resilient Future. The Circularity Accelerator is also part of the Circular Buildings Coalition, where we all work together with organisations such as Circle Economy, the Ellen Macarthur Foundation and the World Business Council for Sustainable Development, among others.

PARTNERSHIPS AND INITIATIVES

Born Free Foundation

Kingspan.

an Seffet

Pride of Amboseli and Twiga Team are two of the new programmes that Kingspan will support in the renewed 2023 partnership.

Pride of Meru

The Meru Conservation Area covers over 5,000km². It is the second largest complex of protected areas in Kenya and encompasses Kora and Meru National Parks and Bisinadi and Mwingi National Reserves.

The programme aims to safeguard the crucial lion population within Meru National Park which suffers from:

- Habitat loss
- Retaliatory killing due to humancarnivore conflict
- Reduction of prey base

Kingspan's donation supports the Born Free Foundation's activities which tackle these issues in various ways.

Twiga team

The Twiga team patrols along snare hotspots within the western and northern parts of Meru National Park in collaboration with the Kenya Wildlife Service security teams. The aim is to reduce the impact of illegal snares on giraffes and other wild animals. Guided by hotspot maps, last year the team conducted 121 foot patrols covering 517 km and removing 667 snares. This translated to 1.3 snares removed for every km covered.

Pride of Amboseli

In the Amboseli Ecosystem, most of the community members (~75%) depend on livestock as the main source of livelihood.

Kingspan's donation enables Born Free to introduce protective measures in these communities such as predator proof bomas to lessen animal-lion attacks and reduce human-wildlife conflict overall.

The Solutions

When lions attack livestock, aggrieved community members may retaliate, threatening the lion population. Born Free has introduced the following solutions to help reduce this human-wildlife conflict:

Predator Deterrent Lights

These flashing lights are put up around the periphery of bomas to deter lions and other carnivores from attacking the people's animals at night.

The Eye-Cow Technique

Painting eyes on the rumps of cattle means lions are less likely to attack as they think that they are being watched. This keeps the cattle safe from predation.

Kick-To-Conserve

Born Free has also been bringing people from communities bordering the national park together through football, creating opportunities to collaborate and share conservation messaging in what is called the 'Kickto-Conserve' initiative.







PARTNERSHIPS AND INITIATIVES

Seabin™



Seabin

Seabin Smart City Program, Los Angeles wrap-up

In July 2022, after the great success of our partnership in Sydney, Kingspan signed on as Seabin's first corporate sponsor as part of their Smart City Programme LA Pilot. The Smart City programme aims to have a Seabin operational in 100 cities by 2050. This pilot ran from July 2022 – August 2023 and has now concluded, the world-first data sets obtained from this project are crucial to highlighting the major microplstics problem and Kingspan are proud to have supported the LA City Program.

"SeabinTM is extremely grateful for the continued support from Kingspan and we are looking forward to the next year of our partnership. Kingspan are now sponsoring three units in Sydney Harbour including two new 6.0 models. Collectively the Kingspan sponsored units filter up to 1.2 Billion litres of water and capture up to 4.2 tonnes of marine waste. Thank you Kingspan for your ongoing support, it is a pleasure to partner with like minded businesses like you."

Hannah Mitchell,

Senior Partnerships Manager, Seabin $^{\text{TM}}$.

LA Pilot Programme figures

240.3M litres of water filtered

904 kgs
total capture
of marine litter

2,115,203
Estimated plastic items captured

Kingspan | Seabin in 2024

2024 Seabin Sydney locations:

- Jones Bay Wharf
- Dalbora Marina
- Cruising Yacht Club Australia









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Governance

The Kingspan Board recognises that the values, integrity and behaviours that shape our culture and corporate governance are the foundation of long-term success. Our Board strives to continue to enhance our corporate governance practices to ensure we not only meet the standards expected of us but, more importantly, promote the success of the business for all of our stakeholders. At the heart of those efforts is an entrepreneurial Board that adheres to high standards of governance.

The Board

The Board is responsible for the effective leadership and the long-term success of the Group, generating value for shareholders and contributing to wider society. It shapes the ethos and values of the Group, oversees the implementation of strategy and ensures good corporate governance practices are in place.

The Board currently comprises seven male and four female directors (including the Senior Independent Director) with female directors representing 36% of the Board (2022: 25%). The Board values diversity in all its forms and recognises the role it can play in contributing to the Board's perspective and decision making. The Board adopted a Board Diversity Policy in 2022 which supports the recommendations set out in the Hampton-Alexander Review on gender diversity.

Leadership

The Board meets formally at least six times during the year, as well as informally as and when required. The Board reserves for itself a formal schedule of matters on which it takes the ultimate decision. These include adopting the Group's rolling five year strategic plan, approving investment proposals in line with capital expenditure thresholds and oversight of the Group's internal controls. Certain other matters are delegated to the Board committees.

Full details of the Company's compliance with the UK Corporate Governance Code (June 2018), as enhanced by the Irish Corporate Governance Annex is set out in the Company's Annual Report.



Board-level committees

Audit & Compliance

The Board has established an Audit & Compliance Committee to monitor the integrity of the Company's financial statements and the effectiveness of the Company's internal financial controls. The members of the Audit & Compliance Committee bring considerable financial and accounting experience to the committee's work. In particular the chairman of the Audit & Compliance Committee, Michael Cawley, has appropriate recent and relevant financial experience. The Board considers that the combined qualifications and experience of the members give the committee collectively the financial expertise necessary to discharge its responsibilities.

Remuneration

The Remuneration Committee has responsibility for setting remuneration for all executive directors and for the Chairman, including pension contributions and any compensation payments. The committee also monitors the level and structure of remuneration for senior management.

Nominations

The Nominations Committee assists the Board in ensuring that the composition of the Board and its committees is appropriate for the needs of the Group. The committee meets at least once a year, and additionally if required, to consider the Board's membership, to identify any additional skills or experience which might benefit the Board's performance and recommend appointments to or, where necessary, removals from the Board.





SOLAR PV

Daylighting Centre Centre of Excellence Kingspan Light, Air + Water

In line with Kingspan's Planet Passionate sustainability programme, Kingspan Light, Air + Water devised and delivered a plan through our Strategic Projects team to enhance the building efficiency of our Daylighting Centre of Excellence (DCOE) facility located in Kingscourt, Ireland.

In April 2023, 1,440 PV modules were installed to capture energy from the sun, and to then convert it into electricity. The panels cover an area of 2,343 m² of the DCOE roof.

The highly efficient PV panel system is on track to generate 429 MWh/year of electricity on-site, accounting for 6-7% of the facility's overall energy consumption.

Implementing the PV panel system has helped progress the Kingspan Light, Air + Water Division, while also contributing towards Kingspan's Group-wide objective to increase our on-site generation of renewable energy to 20% by 2030. It will also contribute towards our Group-wide Planet Passionate objective to increase our on-site generation of renewable energy to 20% by 2030.

"We are delighted to now be able to generate our own renewable energy for direct use in the DCOE. This is a major step towards achieving our Planet Passionate targets. We are proud of our accomplishment, but this is just the first step, and we plan to install PV panel systems across all Kingspan Light, Air + Water sites."









540 kWp

ENERGY EFFICIENCY

HullAir Compressor

Airleader Software + Air Leak Surveys

The three air compressors we have on site are linked through software called Airleader. This software had been available from 2018 but not used to its full potential. The software allows the following benefits:

- Real-time display of air and energy consumption of compressors
- Ability to control compressors (set timers, prioritise which compressor runs, etc.)
- Identify leaks through spikes in compress air usage data.

When production confirmed that the factory was not operating over the weekends, timers were set using the software to turn off the compressors. The estimated saving is the compressors were turned off every weekend is £31,198 per annum.

The savings were combined with identifying and fixing of air leaks across the site. These were detected by 6 monthly air leak surveys; each leak was identified with a tag so the maintenance team could easily locate and fix the leak.

Line Isolation

After the leaks had been fixed, the Airleader software showed that the site was still losing air through micro leaks. This project portions off the compressed air loop into sections to allow individual areas to be isolated when not in use.

Scope

Eight valves have been placed around the site on the compressed air circuit. The estimated time to complete the works was eight full days which were completed over four weekends. The site must be fully isolated and depressurised for the work to be carried out.

Benefits

The main benefit is the cost saving due to the reduced air consumption and in turn electricity used by the compressors. Assuming line 1 runs 24 hours a day and line 2 and 3 run eight hours a day, the calculated saving is £35.385.

Another benefit is the reduction in noise in the areas as the leaks will be stopped due to the isolation.

Challenges

The main challenge has been providing access for the contractor as they

require no production to take place for isolating and an engineer on site to issue permits and assist. This has meant the completion of the project was stretched out over a longer period of time than originally thought.



"Through a combination of air leak surveys and compressor monitoring, the Hull site have been able to identify and fix air leaks at our Hull site.. This has led to a reduction in electricity consumption. A further optimisation of the project was the capability to isolate individual sections of the factory depending on lines running to further reduce air consumption."

Jack Jenkins

Manufacturing Project Engineer Kingspan Data + Flooring

ENERGY EFFICIENCY

StratfordSolatubes

Vicwest Stratford has installed eight Solatubes in the boardroom to decrease energy usage. The daylighting system reduces electricity consumption by using natural light to light the boardroom. Since installing the SolaTubes, the electric lights are rarely turned on. Seeing the performance of the Solatubes in the boardroom inspired us to utilise this daylighting system in our office spaces.

Phase two of the Solatube project will see 34 Solatubes installed in the Stratford offices. 16 Solatubes will be installed on the second floor and 18 will be installed on the main floor. This will significantly reduce electricity consumption due to electric lighting and provide natural daylight to employees without windows in their offices. Exposure to natural light has been shown to increase productivity and improve the moods of employees. The light is also less harsh and has a more natural hue which is better for our eyes.







ENERGY EFFICIENCY

TroldtektHeat Recovery



In a pilot project, Troldtekt is exploring the potential of recovering heat from the drying process. Initial results indicate significant energy reductions.

When Troldtekt acoustic panels move through the long drying ovens during production, process heat from Troldtekt's own biomass boiler is used. In a new pilot project supported by the Danish Energy Agency, Troldtekt is testing the possibility of recovering

moist waste heat from the drying process. Preliminary calculations have shown the potential for a significant reduction in heat consumption, and initial results indicate that the calculations are correct.

In practice, a large heat exchanger has been installed on the roof over sections of one of Troldtekt's two drying ovens. The heat exchanger works in such a way that warm and moist exhaust air from the drying ovens meets cold supply air from outside. When this happens, a large amount of heat is transferred from the exhaust to the supply air.

In addition to heat recovery, the project is also investigating the potential for condensing the moisture from the hot exhaust air into water, which can be included in the casting process at the factory.

If the pilot project is as successful as expected, Troldtekt will also install heat exchangers on all other oven sections in production.



"The challenge so far has been to find a heat exchanger that can withstand the cement dust from Troldtekt panels during production. But now we have found a solution that can be cleaned, making it possible to keep the heat inside production instead of discharging it outside,"

Ole Busk Sørensen Technical Manager Kingspan Insulation

BIOMASS BOILER

Hull Kingspan Data + Flooring

KDF Hull operated three biomass boilers fed from the sawdust created by normal site operations, as well as a natural gas heating system. It was highlighted that the biomass boilers could heat the full site, including the factory and offices, with no requirement for natural gas usage as the primary heating source. The natural gas was switched off, though has been kept in operational order as a backup system and for when the biomass boilers require maintenance to ensure heating capability throughout.

Project Challenges:

Challenge 1: The biomass boilers were not reliable to operate and maintain. They had previously failed their emissions testing which had been reported and appropriately managed environmentally. The challenge for the site engineering department was to improve the reliability of the biomass boilers, their emissions and the filtration systems.

Challenge 2: Once the natural gas was turned off, the gas heaters were not maintained and went out of service. When the biomass boilers were switched off for maintenance. there was no heating medium for the factory. This was overcome by service and maintenance of these gas heaters demonstrated on the Hull site when which are now kept in operational order to ensure a backup system is always available.

Challenge 3: The Hull site consists of the main site as well as the Hedon road warehouse and two other leased units. The three are all-natural gas supplied and separate to the main site, though this is more difficult as we do not own them. Alternative heating mediums are required for these units which comply with the fire risk assessment and policies for the site.

Challenge 4: If one of the three boilers is down for service, maintenance or repair, the area that is heated by that biomass boiler cannot be heated by another because there is no duty or standby option. A second phase of this project is exploring the feasibility of combining two or all three of the biomass boilers to heat the full site in a duty standby format.

Project Benefits:

The significant decrease in fossil fuel usage/reliance, as well as the reduction in scope emissions, is a huge benefit to the site, and the division. The target to reduce scope 1 and 2 carbon emissions by 2030 can be the biomass boilers are operating.

"The biomass boilers are a good primary heating medium for the site, providing a significant reduction in scope 1 and 2 emissions. With a serviced natural gas backup for essential maintenance. The next step is to combine the biomass boilers into one closed loop system to be fully reliant on the biomass system year-round."

Tom Smith EHS Specialist Kingspan Data + Flooring



ZERO WASTE TO LANDFILL

ECOPIRKingspan Isoeste

Our Brazilian business has developed a new product called EcoPIR, using remanufactured production waste from the insulated panel process. This significantly reduces waste sent to landfill. Due to the introduction of this new process, our site at Araquari has recently achieved zero waste to landfill certification from the Zero Waste International Alliance.

PIR insulation foam is used in the high-performance insulated panels manufactured by Kingspan Isoeste in Brazil.

Today, PIR waste from

production and building demolition processes typically goes to either landfill or incineration. Around the world at Kingspan, we have several initiatives using PIR production waste as a proxy, that demonstrate potential uses in new products for this material.

The new EcoPIR product in Kingspan Isoeste is one such initiative, where production waste from our Araquari plant in the state of Santa Catarina goes through a process to separate the steel liners from the PIR foam. The steel is then purchased by companies that can recycle the steel.

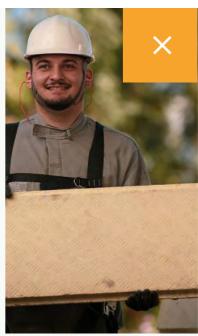
Siegfried Wagner Jorge, Marketing Director of Kingspan Isoeste, said: "We take the PIR and grind it into small particles that we mix with a bonding agent to create the final EcoPIR product through a compression process to achieve the desired result.

The finished EcoPIR product can then be used to support concrete floor slabs in multi-floor buildings, in turn replacing EPS block and ceramic block along with precast slab and precast EPS.

"There are multiple benefits deriving from this process. The main one being we no longer have PIR waste in the manufacturing process as we are now able to use 100% of the material that would have been sent to landfill. Through this initiative, we have shown that it is possible to remanufacture production waste and take it through a new process to provide a valid route and new product life."

As an organisation, Kingspan is actively researching a range of options to help keep materials and products that reach the end of their service life and cannot be reused, circulating within the built environment economy. We aim to do this through regional and local partnerships and the deployment of in-house mechanical and chemical recycling facilities. This is just one of many initiatives that we have in progress which are helping us to better understand potential onwards uses for PIR materials.







INPUT MATERIALS

HemKor™



In 2023, Kingspan launched HemKor, its first bio-based insulation product largely made of hemp. HemKor represents a significant step forward in Kingspan's strategy to combine advanced material science. bio-based products and product innovations which can help to reduce embodied carbon emissions in buildings. Buildings and construction are responsible for 37% of energy-related carbon dioxide (CO2) emissions globally, therefore addressing emissions from the built environment is crucial in the race to limit global temperature rise to 1.5°C by the end of this century.

Offering a full spectrum of insulation solutions that can meet The HemKor Pure product, with the challenging requirements facing the built environment is core to Kingspan's strategy. HemKor represents the latest product innovations to come out of its dedicated innovation centre (IKON) as part of its fullspectrum insulation solutions innovation programme. In early 2023 Kingspan also launched its LEC (Lower Embodied Carbon) range of insulated panel solutions in the UK and Republic of Ireland.

The HemKor product range was developed to help reduce the embodied and operational GHG emissions footprint of buildings. Hemp is a fast-growing biomaterial. It is a circulation crop and grows from seed to maturity in 4-5 months. Hemp can absorb between 9 and 13 tonnes of CO2 per hectare harvested. The HemKor product range has three products: Jute Blend, Pure and Padding. The HemKor Jute Blend product, with a biobased content of at least 80%, combines hemp with recycled jute bags and has a thermal

performance of 0.040 W/mK. a bio-based content of over 95%. has a thermal performance of 0.043 W/mK. Both products have been tested according to the NCS 16785 standard for bio-based products.



"Pioneering sustainability in construction products has never been more important. We believe advanced material science and bio-based products hold the key to solving one of the industry's greatest challenges, cutting building emissions and reducing embodied carbon. We're applying our scale and our know-how to accelerate the development of a new generation of bio-based building materials, and HemKor marks a huge step on this journey as our first product range to include bio-based products."

Sandra Del Bove Group Head of Innovation Kingspan Group

FACTORY PROCESSES

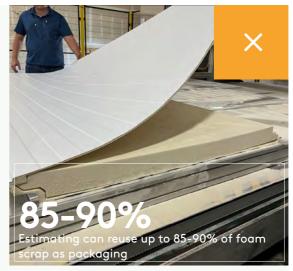


In July 2023, our Little Rock site installed For the remainder of foam that a foam cutter which enables the steel and foam from the scrap panels to be easily separated and therefore allows for the more accurate disposal of each waste stream appropriately. Previously, there were safety issues with extraction and removal of the steel from the foam, We have completed a number of which has now been eliminated with the introduction of the foam cutter machine. It is estimated that 85-90% of with foam - they have been more rigid foam scrap can be reused as packaging which results in the foam waste being diverted from landfill.

"It is estimated that 85-90% of foam scrap can be reused as packaging which results in the foam waste being diverted from landfill."

cannot be used as packaging, we have partnered with a company that will collect and use the foam. We are considering logistics and the best way to store and transport this waste.

successful quality trials, and all have been successful in transporting panels with less dust and less break-off. As a next step, we will explore the possibility of reusing foam blocks returned by customers, however the logistics and feasibility of this will need to be carefully considered.





RAINWATER HARVESTING

Dublin Kingspan Data + Flooring

Tate Dublin has installed a 10.000 litre rainwater harvester supplied by Kingspan Water & Energy. As the roof downpipes were located internally, footprint and headspace were a concern. The tank effectively utilised the space available ensuring minimal disruption. The tank captures rain from a roof area of 200m² giving the tank the potential to capture 200,000 litres annually. Initially the harvested rainwater supplied water solely to the toilets on site.

In March 2023, an additional 350 litre header tank was installed at the powder coating production line, allowing harvested rainwater to be used for pre-treating steel. This increased the site's percentage of consumed water that comes from harvested rainwater to 40% on average. This project has significantly reduced the burden on mains water, provided greater transparency over water consumption, and helped mitigate against surface flooding.

"Installing a rainwater harvester has not only massively reduced our need for mains water, but it also fosters a real interest in water management. It makes us much more conscious of the water we collect, how it is consumed and drives a passion for water conservation."

200,000 litres

"At Tate, we are committed to Planet Passionate and reducing the environmental impact of our operations. Driving efficiencies on site and reducing our use of energy and water is a huge part of our sustainability commitments. We continuously enhance and upgrade our sites and the addition of a rainwater harvesting system in 2022 is testament to these commitments. Feeding our bathroom facilities and our powder coating machine, the system reduces our reliance on mains waters and helps us conserve this precious resource" Daniel Bohan Project Engineer Kingspan Data +

Flooring



40% Increase in harvested rainwater usage

Yours to Shape - Graduate Attraction and Developments

To continue to build leadership pipelines Kingspan continued to invest in our global graduate attraction and development programme called 'Yours to Shape'. Over 250 graduates have completed the programme since it was launched in its current format. The programme's objective is to support the successful transition of graduates from university to Kingspan Group, create an international collaborative network within the Group and develop their capabilities to drive their career in Kingspan forward. It is clear from the attraction campaign that Graduates are consistently attracted to Kingspan for the Groups active and practical focus on sustainability.

The Yours to Shape programme is a key pillar for Kingspan's leadership development strategy. As talented people continue to join and develop fulfilling careers the longer-term high performance of the Group is safequarded.

Developing Talent Programme

The Developing Talent Programme, is an early careers programme aimed at developing participants to realise their full potential, now and into the future, and enabling them to add even more value to the business.

The design of the programme is based on four key principles, ownership of personal and career development, building self-awareness and confidence, developing and embedding good learning habits and context-specific content and activities.

Participants receive exposure to a range of development experiences which will help them clarify their future personal and career direction. The programme allows participants to identify and develop critical skills and capabilities during the programme to maximise their impact and contribution to the business. All while creating a supportive peer network and broadening their exposure to the wider Kingspan business.

Developing Leadership Coaching Capability

The Developing Leadership Coaching Capability Programme (DLCC) is a cross divisional coaching programme aimed at mid-level managers. The aim of the programme is to develop leaders' coaching capability with the outcome of being more effective in critical people conversations enabling them to have more impactful conversations in order to develop, motivate and retain their teams.

This is an international programme hosting participants from Ireland, UK and throughout Europe to date. DLCC ensures the ongoing development of formal coaching skills and consistency of practice globally.

Programme for Executive Acceleration in Kingspan – PEAK

The High Impact Leadership Development PEAK (Programme for Executive Acceleration in Kingspan) was launched in 2018 and continues each year.

This is an accelerated development programme focused on supporting the transition to a more senior leadership position. The core objective of the programme is to scale and sustain Kingspan's leadership capability in line with our growth ambitions and Planet Passionate Commitments. PEAK strengthens cross divisional relationships, as well as enabling further integration of executive talent from recent acquisitions.

The programme is delivered through a blend of online and in-person modules and is underpinned by individual coaching. Each workshop includes insights and exposure to subject matter experts. An executive business sponsor partners with participants during the programme, sharing leadership challenges and encouraging open discussion to learn together. Participants work in small groups for peer-to-peer coaching to apply the module learning, engage with leaders from Kingspan Group in a dialogue about topics of strategic relevance and deliver a strategic project that will practically impact on the performance of the business.

Kingspan Executive Development Programme, in partnership with INSEAD

This Programme was launched in partnership with INSEAD's executive business school in France, one of the world's leading and largest business schools. This is a specific leadership development programme for senior executive leaders which runs every two years.

The programme supports
Kingspan's senior leaders to engage
with enterprise level goals in a
collaborative way while transforming
their leadership capabilities to drive
significant long-term growth.



The first learning event being a five-day intensive in-person residential module which facilitates participants to learn more about topics such as Innovation, Digitalisation, Customer Centricity, Leadership Transition, Sustainability and Circularity to name but a few. As well as the formal learning, a key benefit of this module is to develop friendships, as well as a strong global network.

Following this is the online module on Innovation in the Age of Disruption. An Action Learning Project (ALP) is also completed in parallel with the online module. This ALP is supported by an INSEAD coach, line manager and Kingspan mentor.