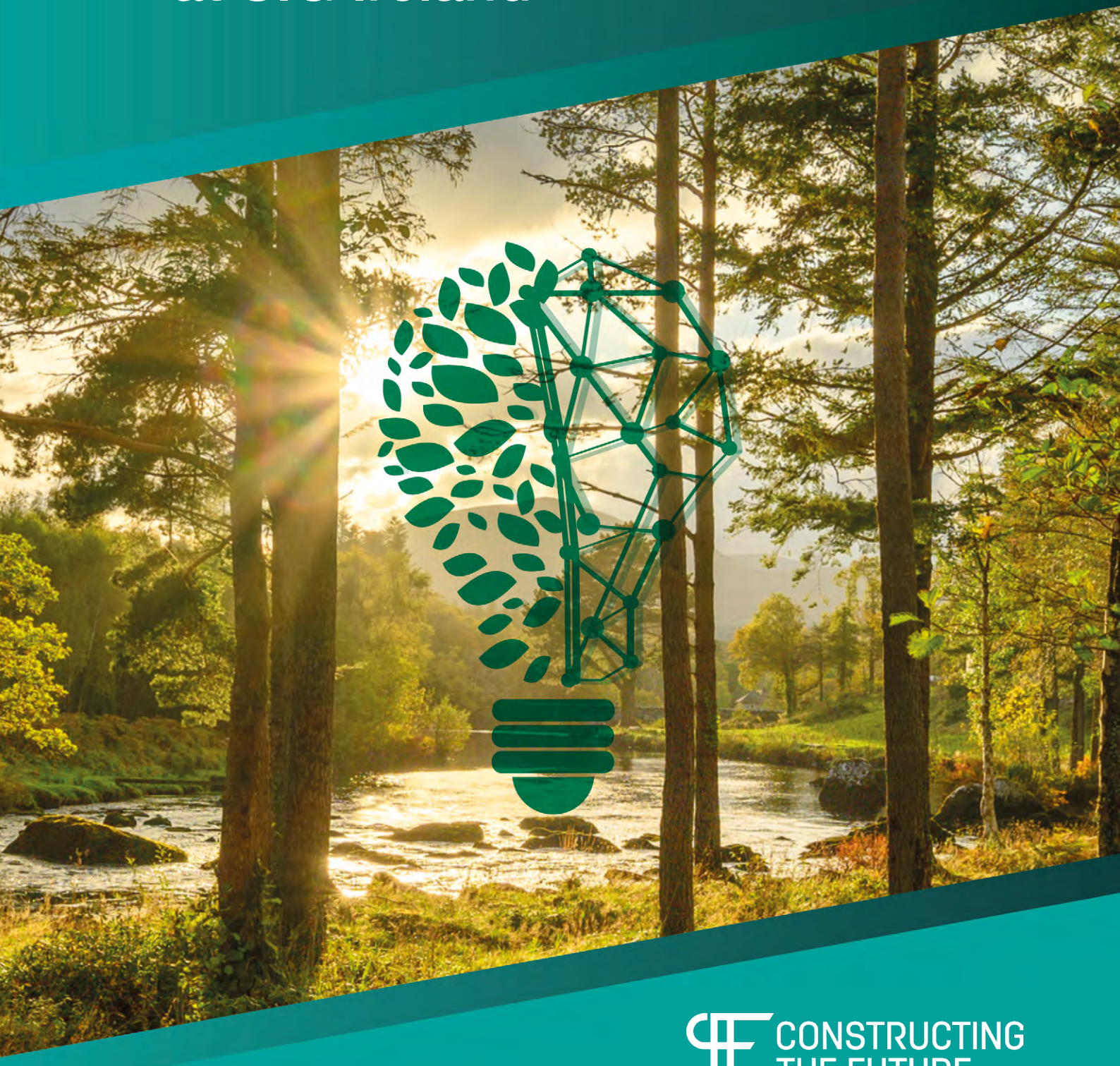
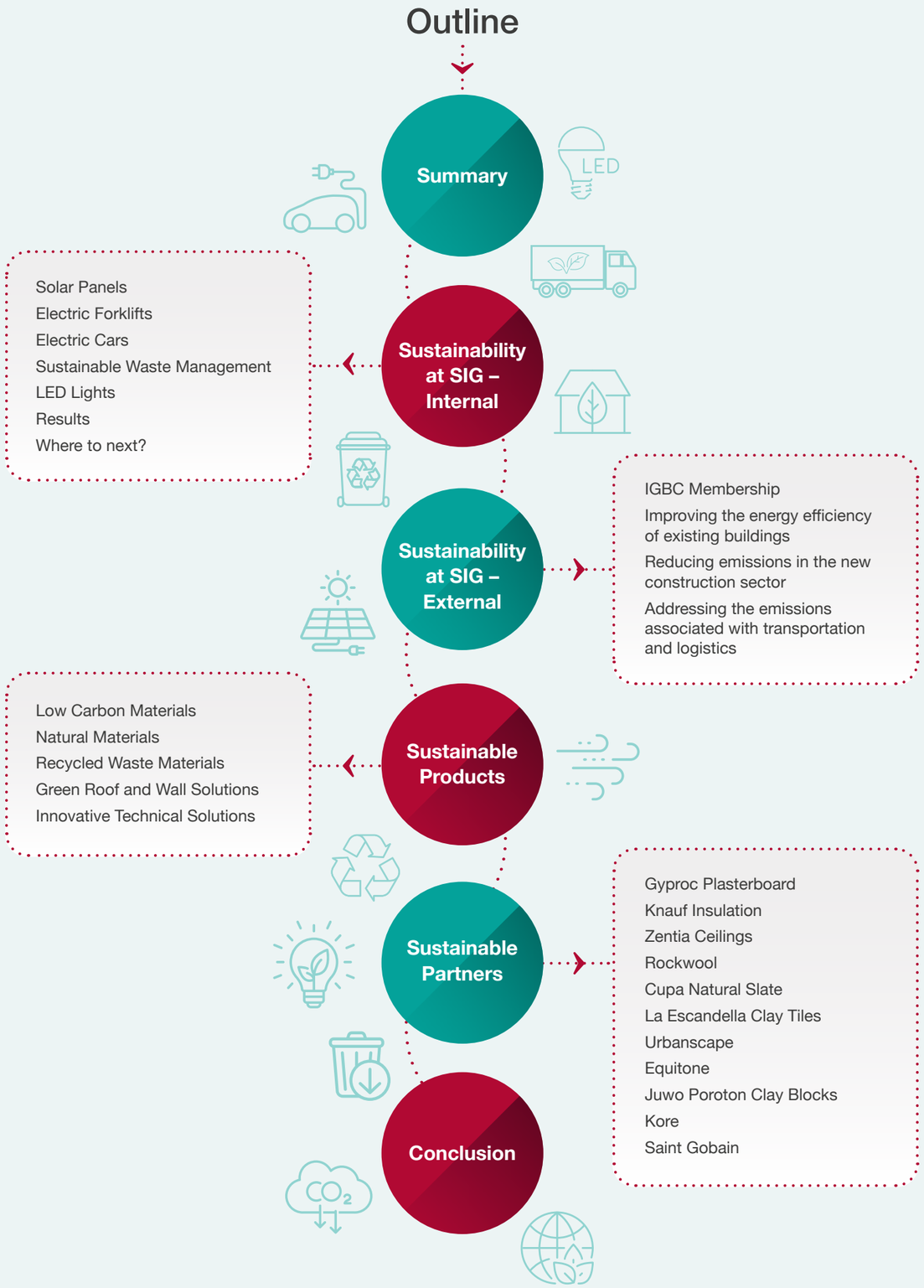
Sustainability Progress at SIG Ireland



CONSTRUCTING THE FUTURE

Outline



Summary

SIG Ireland is the largest provider of specialist building products and technical expertise to the construction industry on the island of Ireland. We are a subsidiary of SIG Group plc and employ over 300 people on 15 sites in both the Republic of Ireland and Northern Ireland.

SIG Ireland has been working hard to reduce the carbon footprint of our operations on the island of Ireland. By the end of 2023, the initiatives we have implemented in our businesses will have reduced our carbon footprint by over 1,200 tonnes.

In addition to our internal sustainability efforts, SIG also supports architects, specifiers, consultants, and contractors in sourcing sustainable materials and manufacturers for their construction projects.

Our Technical Building Solutions division provides impartial product advice and cost-effective, regulatory-compliant, and sustainable solutions to the construction industry.

Sustainability at SIG – Internal

At the end of 2021, the management team in SIG Ireland devised a plan to reduce the carbon footprint of their operations on the island of Ireland.

This plan involved 5 initiatives:

Installing solar panels on the roofs of our premises

Replacing our gas-powered forklifts with electric forklifts

Replacing our petrol and diesel company cars with electric cars

Implementing sustainable waste management systems on all our sites

Replacing all the lighting in our offices and warehouses with LED lights

In addition to coming up with a sustainability plan for the first time in 2021, we also started measuring our carbon footprint as well (see below), with our 12 months to the end of September 2022 recording a figure of 1,634 tonnes (excluding business travel and waste which are not included in our figures at present).

The 5 initiatives in our plan are expected to reduce our annual carbon footprint by over 1,200 tonnes when completed. The figures below to September 2022 reflect c100 tonnes of that reduction as most of the initiatives only started being implemented during 2022.

We have made great progress on these initiatives in 2022 and we hope to have them largely completed by the end of 2023.

	2022 MT CO2e
Scope 1 – Direct	
Road vehicle fuel	433
Plant vehicle fuel	278
Natural gas	48
Coal/coke	–
Heating fuels	–
Total	**760**

	2022 MT CO2e
Scope 2 – Indirect	
Electricity	439
Total	**439**

	2022 MT CO2e
Scope 3 – Indirect	
Business travel	N/A
Third party Diesel	434
Total	**434**

Overall total	**1,634**

Note: Business travel is not captured.

1 SOLAR PANELS

We have partnered with UrbanVolt for this initiative. They provide a turnkey solution which involves managing the planning process, installation, and commissioning of the solar panels. We are then required to sign up for a fixed-term contract to purchase solar-generated electricity from Urban Volt, which is significantly cheaper than the standard rate we currently pay.

The process for this initiative can take a number of months, due to the requirement for planning permission and the landlord's consent, however, we hope to have all of our qualifying sites operational by the end of 2023.

Once complete, this initiative will reduce our annual carbon footprint by 186 tonnes.

2 ELECTRIC FORKLIFTS

To ensure that operating costs did not become a barrier, we decided to implement this change over a couple of years in line with the expiry of existing leases. As it happened, the forklifts on our largest site, the Regional Distribution Centre (RDC) in Ballymount, Dublin, were all up for renewal in 2022, so we took the opportunity to replace them with new electric forklifts.

We took this project on ourselves and to say there was a learning curve involved would be an understatement. Ordering the electric forklifts was the easy bit, despite the long lead times from manufacturers. The most complicated element of the Dublin RDC project was the electricity supply. This was because of the large number of forklifts that were operating on site, which meant that we had to arrange a significant increase in the power allocation from the ESB to the site to facilitate the charging requirements of the fleet.

On top of this, the point on the site at which the power supply could be provided meant that we had

Drone photo of solar panels on our Head Office in Ballymount

to take down racking and rearrange where stock could be stored. This meant that there were many months of communication with the ESB, electrical contractors, building contractors and racking contractors before we finally got all of the charging stations operational on site.

In 2023, we will be replacing the forklifts on our other sites. Thankfully, this will be less complicated than the RDC due to the smaller site size. When the full transition to an electric fleet is completed, this initiative will have reduced our annual carbon footprint by over 200 tonnes.

3 ELECTRIC CARS

Our transition to an electric car fleet commenced in 2022 when we replaced 5 diesel cars with electric cars. We are managing this initiative in the same way as the forklifts, in that we will move them when the individual lease agreements expire. We will move the other 60 cars in our fleet to electric over the next 3 years.

When the full transition to an electric fleet is completed, this initiative will have reduced our annual carbon footprint by over 400 tonnes.

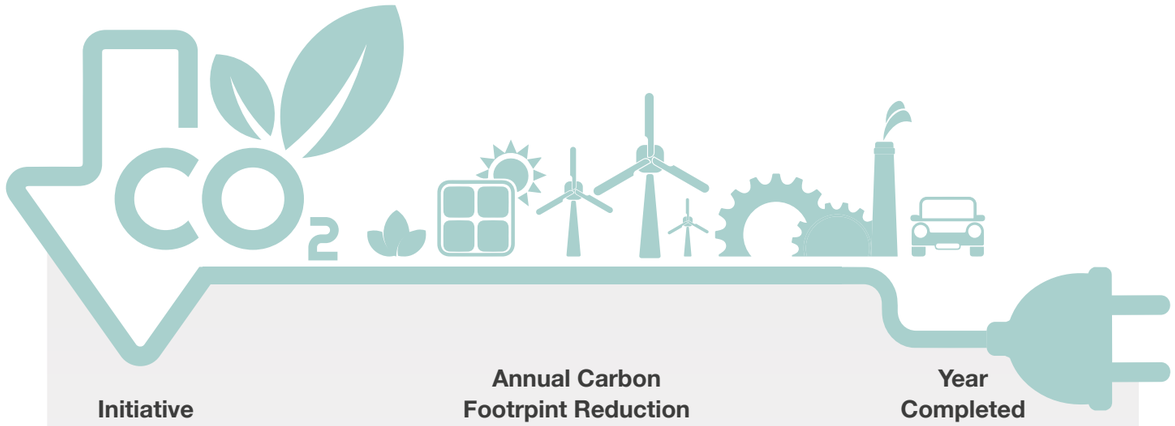
4 SUSTAINABLE WASTE MANAGEMENT

We have partnered with Envirogreen and Ancove for this initiative. Envirogreen is a recycling company that does waste management, as opposed to the opposite way around. Envirogreen carried out an assessment of all of our sites and has recommended a tailored waste management solution for each of them. Ancove provides the equipment under a leasing arrangement.

The aim of the initiative is to increase our recycling levels and eliminate waste going to landfill. We expect to complete this initiative in 2023 and we estimate that it will reduce our annual carbon footprint by over 200 tonnes.

5 LED LIGHTS

We have partnered with UrbanVolt for this initiative. The lighting in 7 of our 15 sites had been replaced by the end of 2022, which included all our largest sites. The remaining sites will be completed in the first half of 2023. This initiative will reduce our annual carbon footprint by 289 tonnes when it is completed.



Initiative	Annual Carbon Footprint Reduction	Year Completed
Solar Panels	186 tonnes	2023
Electric Forklifts	200 tonnes	2023
Electric Cars	400 tonnes	2025
Waste Management	200 tonnes	2023
LED Lights	289 tonnes	2023

Results

Our progress on the 5 initiatives up to the end of March 2023 has resulted in an estimated reduction in our carbon footprint on an annualised basis of over 400 tonnes. These figures are based on a combination of internal calculations and external calculations provided by our partners:

LED Lights and Solar Panels Predicted Reductions

Facility Home & Location	Lighting Upgrade		Solar Installation		Combined Benefit	
	Electricity Reduction	Carbon Reduction	Electricity Reduction	Carbon Reduction	Electricity Reduction	Carbon Reduction
	kWh	CO2	kWh	CO2 Kg	kWh	CO2 Kg
SIG-Dublin – Head Office – Ballymount	47,332	33,464	66,000	46,662	113,332	80,126
SIG-Dublin – RDC-2-22 Turnpike Rd	107,320	75,875	74,600	53,000	181,920	128,875
SIG-Dublin – Workplace warehouse – Unit 12	2,000	1,414			2,000	1,414
SIG-Cork – Unit 1, Doughcloyne Industrial	24,561	17,365			24,561	17,365
SIG-Omagh – 3 Killybrack Rd, Omagh BT79	26,850	18,983	7,000	4,949	33,850	23,932
SIG-Belfast – 8 Balmoral Road	51,857	36,663	10,000	7,070	61,857	43,733
SIG-Limerick	29,237	20,671			29,237	20,671
Total	289,157	204,434	157,600	111,681	446,757	316,115

Completed *In process with Landlord*

Future Projects Forecast						
HHI-Newtonabbey – Unit 8	22,761	16,092	4,840	3,422	27,601	19,514
HHI-Bangar – Unit 19	15,608	11,035	21,804	15,415	37,412	26,450
HHI-Castlereagh Belfast – Unit 11	6,503	4,598	11,453	8,097	17,956	12,695
HHI-Coleraine – Unit 6B	20,810	14,713	15,187	10,737	35,997	25,450
HHI-Lisburn – Unit 3	18,209	12,874	16,367	11,571	34,576	24,445
HHI – TBC	0	0				
JS McCarthy-Cork-Curraghconway South	13,262	9,376	6,287	4,445	19,549	13,821
HHI Newtonabbey Flagship Showroom	2,601	1,839	5,176	3,659	7,777	5,498
HHI Kitchen Warehouse Ormonde Avenue	5,203	3,679	12,219	8,638	17,422	12,317
HHI Bathroom warehouse Ormonde Avenue	14,307	10,115	12,219	8,638	26,526	18,754
Total	119,264	84,320	105,550	74,624	224,814	158,943

As the 12 months to September 2022 was the first year in which we started to accurately record our carbon output, we can only estimate the level of the reduction that we saw from the initiatives that is included in this figure. We should get a clearer picture of the benefits as we move forward; however we are satisfied that the initiatives will deliver the expected reductions.

Where to next?

Firstly, we want to fully implement the existing 5 initiatives that are currently in progress. As outlined above, all of them apart from the electric cars should be completed by the end of 2023.

Secondly, we then want to look at what new initiatives we can introduce to reduce our carbon footprint even further. The largest area that remains to be tackled is the diesel usage of our third-party transport fleet. We will be looking into alternative sources of fuel like HVO and alternative vehicle types like electric trucks, to see if they can provide a credible commercial alternative to our current operations.

Thirdly and finally, we will be looking at the carbon offset options that are available, however we want to make sure that we have exhausted all the potential actions we can take to reduce our carbon output before we go down that road.

Sustainability at SIG – External

At SIG, our sustainability strategy prioritises the creation of modern, safe, sustainable living and working environments in the communities where we operate, as well as driving meaningful environmental change within the construction industry.

We are not just driving down our own carbon output, we are also committed to partnering with our customers and manufacturers to help reach their net zero carbon goals.

IGBC Membership

SIG is a proud member of the Irish Green Building Council (IGBC). Through IGBC, construction companies are encouraged to participate in 'Building a ZeroCarbon Ireland' and endorse a roadmap committing to 3 sector-specific actions:

IGBC
SILVER MEMBERSHIP | 2022

Improving the energy efficiency of existing buildings

SIG's technical Building Solutions Team provides free impartial advice on energy saving construction products and guidance on building regulation compliance.

Reducing emissions in the new construction sector

SIG has a particular focus on low-carbon materials and suppliers. We want to be part of the supply chain that helps to create sustainable energy-efficient buildings with net-zero carbon emissions.

Addressing the emissions associated with transportation and logistics

SIG is working hard to be a low-emissions construction materials distributor. We are reducing our carbon footprint in our transportation and optimising our logistics.

Sustainable Products

The construction industry is responsible for 40% of carbon emissions globally. Ireland's construction industry must halve emissions by 2030 to reach the ambitious target of a zero-carbon Ireland.

As a leading distributor of specialist building products in Ireland, SIG is actively addressing the impact that construction has on our environment by promoting sustainable building solutions to our customers.

By prioritising the use of environmentally responsible products and incorporating sustainable building practices we will help to reduce carbon emissions and the environmental impact of construction projects.

Below are 5 sustainable product innovations SIG is focusing on:

Low Carbon Materials 1

Our **Technical Team** is in discussion with architects, specifiers and our suppliers to place a greater emphasis on sustainable building products, including low carbon insulation and plasterboard that reduces carbon emissions during the manufacturing process and throughout the building's lifespan. Materials like this have a lower environmental impact and contribute to healthier indoor air quality.

Natural Materials 2

SIG is committed to sourcing natural materials like **natural slate roof tiles** and **clay tiles** that not only meet high standards of quality but also have a long lifespan, which reduces the need for frequent replacement, waste, and associated carbon emissions.

Recycled Waste Materials 3

SIG has been promoting recycled waste products like Saint Gobain's Gyproc plasterboard to the Irish construction industry. This demonstrates how we can meet the needs of the construction sector while also reducing our carbon footprint.

Green Roof and Wall Solutions 4

SIG is providing green roof and wall solutions like Knauf Urbanscape that promote biodiversity, improves air quality, and helps mitigate the urban heat island effect, while also enhancing the aesthetics and functionality of buildings.

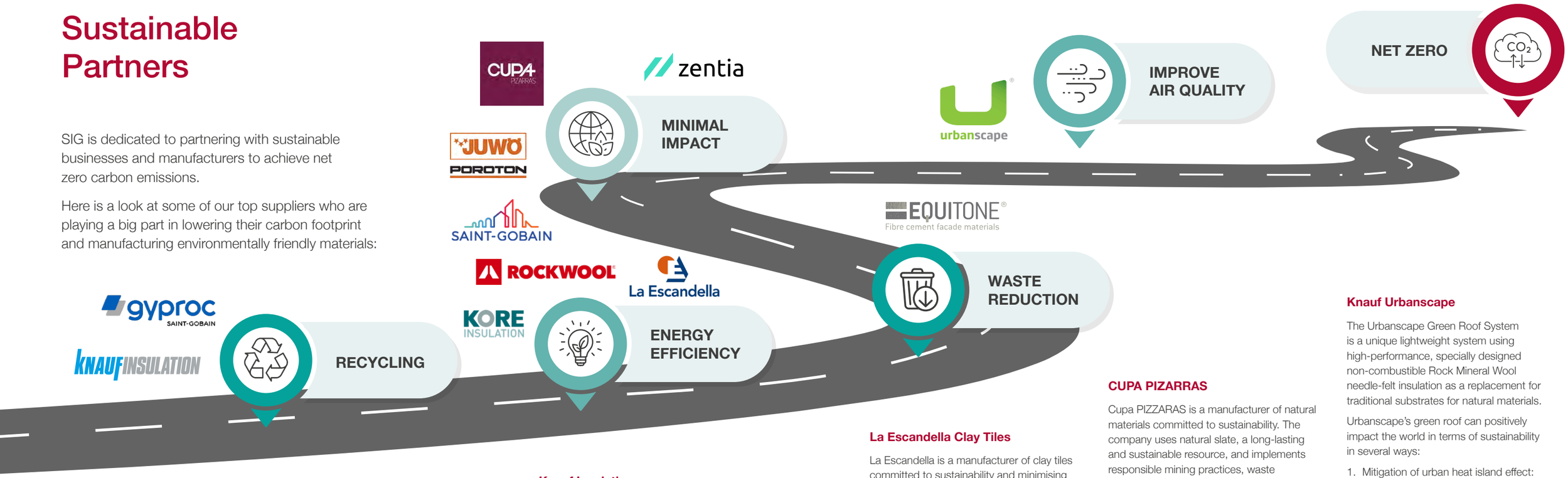
Innovative Technical Solutions 5

SIG provides innovative sustainable technical building materials like air insulation and air-crete (instead of concrete blocks). By utilising air as a key component in building materials, these solutions can reduce the carbon footprint of buildings while improving their energy efficiency and structural integrity.

Sustainable Partners

SIG is dedicated to partnering with sustainable businesses and manufacturers to achieve net zero carbon emissions.

Here is a look at some of our top suppliers who are playing a big part in lowering their carbon footprint and manufacturing environmentally friendly materials:



Gyproc Plasterboard

Gyproc is a brand of plasterboard sold by SIG that can be recycled. The recycling process involves breaking down the plasterboard into its constituent materials (gypsum, paper, and additives), which are then processed and used to create new plasterboard products.

This helps to conserve resources, reduce waste, and minimise the environmental impact of plasterboard production.

Rockwool

Rockwool is a manufacturer of insulation and acoustic solutions that is committed to sustainability. The company uses sustainable and natural raw materials, such as stone, in its products and develops products with energy conservation and low environmental impact.

Rockwool also implements sustainable manufacturing practices, including reducing energy and water usage and minimising waste, and is involved in partnerships and initiatives to promote sustainable building practices and support the transition to a low-carbon economy.

Saint Gobain

As part of its long-term sustainability strategy Saint-Gobain has invested £30m in its Yorkshire plant to produce glass using less energy with higher levels of recycling and more innovation.

Saint Gobain is a multinational corporation dedicated to sustainability and minimising its environmental impact. The company implements energy-efficient and low-waste production processes and invests in research and development to create eco-friendly building materials and products.

Juwo Poroton Clay Blocks

Juwo Poroton is a manufacturer of clay blocks that are dedicated to sustainability. The company recognises the impact of its operations on the environment and is taking steps to minimise this impact.

Juwo Poroton's sustainability initiatives include the use of natural clay as a raw material, the implementation of energy-efficient production processes, and the promotion of sustainable building practices.

Knauf Insulation

Knauf Insulation is a manufacturer of insulation material that is committed to sustainability. The company uses 80% recycled glass in its products, sourced from its on-site recycling plant, which helps to conserve resources and reduce waste. In addition, its packaging is recyclable, further reducing its environmental impact.

The company also uses bio-based binders in its insulation, which are derived from natural resources and have a lower carbon footprint compared to traditional binders.

Zentia Ceilings

Zentia Ceilings is a manufacturer of ceiling products made with 79% recycled content and are committed to sustainability and environmental responsibility.

The company has achieved cradle-to-cradle certification, which recognises its efforts to design products that are safe for people and the environment, while also promoting a closed-loop approach to material use.

This certification ensures that the materials used in its products are responsibly sourced, manufactured, and disposed of, reducing the company's environmental impact.

La Escandella Clay Tiles

La Escandella is a manufacturer of clay tiles committed to sustainability and minimising its environmental impact. The company uses a renewable resource, clay, in its products and implements an environmentally responsible manufacturing process, which involves the use of energy-efficient kilns and waste reduction.

La Escandella also promotes the use of clay tiles as a durable alternative to other building materials and is involved in initiatives that promote sustainability and responsible resource management in the tile industry. The company's commitment to sustainability reflects its efforts to develop products and practices that support a more sustainable future.

EQUITONE

EQUITONE is a manufacturer of fibre cement architectural facades. EQUITONE uses recycled materials in their fibre cement products to reduce waste and conserve natural resources.

The company is focused on improving energy efficiency in its production processes to reduce its carbon footprint and minimise environmental impact. They also perform life cycle assessments on their products to understand the environmental impact of their products from raw material extraction to disposal.

CUPA PIZARRAS

Cupa PIZZARAS is a manufacturer of natural materials committed to sustainability. The company uses natural slate, a long-lasting and sustainable resource, and implements responsible mining practices, waste reduction, and sustainability initiatives to minimise its environmental impact.

CUPA PIZARRAS were the first company in the industry to certify their carbon neutrality and have already achieved the first milestones in their emissions reduction process.

Kore

Kore was the first company is Ireland to obtain ISO 14001:2015 Environmental Management Certification in 2016 and are committed to environmental sustainability. 98% of their products are made from air and are manufactured with sustainable and 100% renewable feed, saving fossil resources.

KORE Low Carbon Insulation has received full REDcert2 Certification. This third-party verification ensures that sustainable material flow is fulfilled and maintained from the production of raw materials to the manufacture of KORE Low Carbon Insulation Boards.

Kore prides itself on creating an insulation material that does not release gas or degrade over time and will maintain its insulation properties for the entire life of the building. You can also recycle it at the end of the building's useful life.

Knauf Urbanscape

The Urbanscape Green Roof System is a unique lightweight system using high-performance, specially designed non-combustible Rock Mineral Wool needle-felt insulation as a replacement for traditional substrates for natural materials.

Urbanscape's green roof can positively impact the world in terms of sustainability in several ways:

1. Mitigation of urban heat island effect: A green roof can reduce the temperature of a building and the surrounding area, mitigating the heat island effect in urban areas.
2. Improved air quality: Plants on green roofs absorb carbon dioxide and release oxygen, improving air quality in urban areas.
3. Stormwater management: A green roof can help to reduce stormwater runoff and manage water more sustainably by absorbing and filtering rainwater.
4. Biodiversity: Green roofs can provide a habitat for plants, insects, and wildlife, helping to increase biodiversity in urban areas.
5. Energy efficiency: A green roof can insulate a building, reducing its energy needs for heating and cooling and improving its overall energy efficiency.

Conclusion

Sustainability in construction is a crucial issue that requires the collective efforts of the entire industry. We can work towards a more sustainable and energy-efficient future by focusing on renovating existing buildings and making sure that new buildings are constructed to a high level of energy efficiency and use if sustainable products with low levels of embodied carbon.

SIG Technical Team supports architects, specifiers, consultants, and contractors in sourcing sustainable materials for their construction projects. We can provide impartial product advice and cost-effective, regulatory-compliant solutions to the construction industry.

We offer guidance on sustainable and energy-saving construction products and building regulation compliance, as well as providing unbiased access to thousands of market-leading products and solutions. With expertise in Thermal, Acoustic, Fire Protection, and Moisture Management, we ensure that projects have the optimal combination of products to deliver exceptional building performance built from materials that have a minimal environmental impact.

At SIG, we have taken great pride in our recent efforts to reduce our own carbon emissions and promote sustainable building practices. We recognise that there is still much work to be done to ensure a more sustainable future, and we remain committed to doing our part.

As we continue to prioritise the use of natural materials, low-carbon products, and sustainable building solutions, we are confident that we can make a meaningful contribution to reducing the environmental impact of construction projects. We look forward to working with our customers and suppliers to construct a more sustainable future for all.

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