



# A REVIEW ONE YEAR ON

## **SUSTAINABLE GROWTH AGREEMENT** SUPERGLASS AND SCOTTISH ENVIRONMENT PROTECTION AGENCY

Your insulation team  
**Superglass**  
A TECHNICOL COMPANY

**SEPA**  
Scottish Environment  
Protection Agency  
Buidheann Dion  
Àrainneachd na h-Alba

**MAY 2018**

# SUSTAINABLE GROWTH AGREEMENT A REVIEW - ONE YEAR ON

## SUPERGLASS AND SCOTTISH ENVIRONMENT PROTECTION AGENCY

### Between:

#### Superglass

Superglass Insulation Ltd  
Thistle Industrial Estate  
Kerse Road  
Stirling  
FK7 7QQ  
Tel: 01786 451170

### And

#### Scottish Environment Protection Agency ("SEPA")

Corporate Office  
Strathallan House  
Castle Business Park  
Stirling FK9 4TZ

May 2018

## FOREWORD SEPA

People in Scotland have been talking about 'Sustainable Development', 'Ecologically Sustainable Development' or 'Sustainability' since the 1970s.

A massive amount has been written about these concepts.

We now don't need more words. We need more action.

That's why SEPA has adopted a One Planet Prosperity strategy for the way we will regulate. The challenge for all nations is to work out how their societies can prosper within the means of the one planet we have.

It's why we were delighted to sign Scotland's first Sustainable Growth Agreement (SGA) with Superglass. We are now even more delighted to be able to jointly report on the success achieved during the first year of implementation.

In the pages that follow, you will read about reductions in water use, energy use and waste, among other concrete achievements. These are real reductions, flowing from real actions. There are tangible benefits that are environmental, economic and social. This is sustainability in action and outcomes.

Superglass is to be congratulated on delivering against the SGA commitments. This is exactly what Scotland needs – businesses which understand that commercial success will be enhanced by a clear focus on environmental excellence.

I am pleased that SEPA has been able to play our role in supporting Superglass' strong performance and look forward to our continued partnership work in the next year of implementing this SGA.



Terry A'Hearn  
**SEPA Chief Executive Officer**



## FOREWORD SUPERGLASS

I am delighted to mark the one-year anniversary of Superglass signing Scotland's first ever Sustainable Growth Agreement.

We were proud to sign this agreement with our colleagues in SEPA. Superglass' core purpose is to improve the energy efficiency, and therefore reduce the carbon emissions, of homes and businesses across the country. Therefore, it is critical that our own environmental performance lives up to that purpose.

Part of that process has been to engage proactively with compliance bodies. Terry and his team at SEPA have been partners with us throughout this journey, and I want to pay tribute to them. Their professionalism, knowledge and support have been invaluable – testament to the benefits of engaging fully, and putting improving environmental standards at the heart of a business plan.

The journey continues. We know that good environmental performance and commercial success are fundamentally connected. The Sustainable Growth Agreement shows that we have achieved both.

Over the next year, we will move further beyond compliance. As we rebuild our production facility to double capacity and gear for growth, we will also be installing even more energy-efficient equipment and adopting even leaner manufacturing techniques. Once again, environmental performance will help drive the business forward.

Here's to the next 12 months...



Ken Munro  
**CEO**



## WHAT ARE SUSTAINABLE GROWTH AGREEMENTS?

Currently, Scotland needs approximately three planets to sustain its current way of living<sup>1</sup>, however, we only have one.

All parts of our communities, businesses and government have key roles to play to enable Scotland to tackle the challenge of creating social and economic success within planetary constraints. In terms of environmental regulation, this effectively means that SEPA needs to:

1. Get all those it regulates to meet their legal obligations and reach compliance.
2. Help as many regulated entities as possible move beyond compliance.

Sustainable Growth Agreements are one way of helping achieve this. Sustainable Growth Agreements are voluntary, non-legally binding, formal agreements through which an organisation (or organisations) and SEPA can explore new and innovative ways to improve environmental performance and focus on practical actions that deliver environmental, social and economic success.

## THE FIRST SUSTAINABLE GROWTH AGREEMENT

In March 2017, SEPA's first Sustainable Growth Agreement was signed with Superglass, a manufacturer of glass-mineral wool insulation products based in Stirling. While these products use more than 80% recycled glass and can save 300 times the energy required to make them, their production can have impacts on the environment.

In 2012, new management at Superglass committed to investing in the factory at Thistle Industrial Estate and fully engaging with SEPA to improve their environmental performance.

Between 2013 and 2017, Superglass responded to the clear message delivered by SEPA that it must fix its non-compliance issues to achieve a fully compliant plant. Impressed at their determination to achieve compliance, SEPA was excited to enter into this Sustainable Growth Agreement to help them on their journey to 'beyond compliance'.

Signing the Sustainable Growth Agreement committed both Superglass and SEPA to work collaboratively to achieve a set of commitments over four years to move the business towards long-term environmental, social and economic prosperity.

Superglass have made outstanding progress towards achieving the outcomes of the Sustainable Growth Agreement. The achievements are detailed in this publication show progress across all six commitments (Table 1).

<sup>1</sup> [www.footprintnetwork.org/en/index.php/GFN/](http://www.footprintnetwork.org/en/index.php/GFN/)

## 40% DECREASE IN WATER USE

After a range of trials, Superglass implemented a programme to improve the use of recycled water from their onsite effluent capture and recirculation system. This has helped Superglass reduce fresh water use by 40% exceeding their original target of 20%.

## 60% LESS WASTE EFFLUENT PRODUCED

A programme of water recycling has reduced effluent production by 60% without compromising production performance. This has reduced the cost of effluent disposal and taken Superglass beyond compliance compared to Scottish Water's trade effluent standards.

## ENVIRONMENTAL MANAGEMENT

Superglass achieved ISO14001, an international standard for an effective environmental management system.

## INVESTING IN INNOVATION

A new research and development (R&D) laboratory has been installed and a joint Sheffield University project is progressing to factory trials later this year.

A new staff member is working with the Furnace & Technology Manager alongside a university partner to develop new resin technologies.

The SGA was also used by Superglass to support the internal investment.

## POSITIVE COMMUNITY ENGAGEMENT

Superglass are working with Braehead Community Council to discuss how to support new council initiatives such as sponsoring the development of a local play park.

Superglass are also discussing the supply of insulation to Launchpad, a charity providing housing for homeless veterans.

## REDUCING NOX EMISSIONS

The New Horizon project is an investment in new technologies to take Superglass beyond compliance using best available techniques (BAT)<sup>2</sup>. This project aims to reduce nitrogen oxide emissions to 30% below European limits.

## REDUCING ENERGY USE

Superglass are anticipating a saving of 47.5 million kWh of energy per year through the installation of 'best in class' furnace and forehearth designs as part of the New Horizon project.

## SEPA'S CONTRIBUTION

SEPA supported Superglass to obtain significant funding from Scottish Enterprise towards the New Horizon project. SEPA will continue to highlight collaborative opportunities with other organisations with shared environmental and socioeconomic ambitions.

**Table 1: Outline of what progress has been made against the Sustainable Growth Agreement commitments**

Commitment	Actions	Target Outcomes	Progress
<b>1. Superglass will proactively seek innovative solutions to reduce water use and waste production and to maximise the opportunity to reuse, recover or recycle effluents and wastes that are produced.</b>	To reduce the volume of effluent produced by the effluent treatment plant.	20% reduction in water use and effluent discharge by end of December 2017 using 2016 as a benchmark.	An improvement programme has led to a: <ul style="list-style-type: none"> <li>■ 40% reduction in fresh water use; and</li> <li>■ 58% reduction in effluent discharge.</li> </ul>
	Produce by 2020 a Zero Waste to Landfill plan.	20% reduction of waste going to landfill by 2018 using data from 2015 as a benchmark.	<ul style="list-style-type: none"> <li>■ A local construction company and Zero Waste Scotland are exploring circular economy opportunities for the reuse of waste currently going to landfill.</li> </ul>
	Investigate potential use of waste glass wool in the manufacturing process.	Ongoing reductions to landfill.	<ul style="list-style-type: none"> <li>■ Following innovation trials, the use of waste glass wool has been discounted due to risks to the furnace.</li> <li>■ The New Horizon project aims to reduce waste by 9,000 tonnes per year.</li> </ul>

<sup>2</sup> 'Best available techniques' (BAT) means the available techniques which are the best for preventing or minimising emissions and impacts on the environment. <https://www.gov.uk/guidance/best-available-techniques-environmental-permits>

Commitment	Actions	Target Outcomes	Progress
<b>2. To continue to explore opportunities for innovation, trials and the development of new products that will enhance the range of products Superglass manufactures.</b>	Enhance the performance of and increase the range of applications for glass wool insulation products.	Maximise the opportunity for Superglass customers to save heat and reduce energy use through the use of glass wool insulation.	<ul style="list-style-type: none"> <li>■ The <a href="#">ACERMI</a> quality certification of thermal insulation materials has now been achieved.</li> <li>■ A joint University of Sheffield project to improve the performance of fibres is now progressing to factory trials.</li> </ul>
	Achieve ISO 14001 accreditation by 2017.	Superglass to be on the stocking list of major retailers as a result of higher environmental credentials and innovative products.	<ul style="list-style-type: none"> <li>■ ISO 14001 accreditation achieved in June 2017 (EMS 646508).</li> </ul>
	SEPA will facilitate trials that help to improve environmental outcomes including the investigation of alternative resin technology.	The establishment of a culture that encourages innovation in manufacturing that will focus on economic and environmental success.	<ul style="list-style-type: none"> <li>■ A new R&amp;D facility has been installed.</li> <li>■ A project exploring alternative resin technologies is underway.</li> <li>■ Trials are underway to assess the compatibility of a new resin with current production methods.</li> </ul>

Commitment	Actions	Target Outcomes	Progress
<b>3. To continue to work with supply chains, transport and distribution companies and customers for better environmental outcomes.</b>	Reduce transport fuel use and emissions.	Increase load utilisation associated with the haulage of products and raw materials across the UK and achieve a target utilisation load of 98% by 2018.	<ul style="list-style-type: none"> <li>■ A load utilisation of 95% was achieved in 2017.</li> <li>■ The New Horizon project will develop innovative packaging, maximising the quantity of product in each lorry load.</li> </ul>
	Undertake a supply chain review to investigate whether each company within the supply chain has an environmental strategy, and identify opportunities in the supply chain to deliver positive outcomes.	Wider environmental and economic benefits associated with the holistic production of glass mineral wool.	<ul style="list-style-type: none"> <li>■ 40 to 50% of raw materials are now being transported using return loads.</li> <li>■ Superglass has moved to a UK supplier of packaging materials.</li> <li>■ A pallet repatriation scheme has been introduced to return pallets to the factory.</li> </ul>



Commitment	Actions	Target Outcomes	Progress
<b>4. To explore opportunities to reduce energy use within the entire site including the investigation of the reuse of heat produced by the furnace to the ovens and exploration of increasing the use of renewable energy sources.</b>	Undertake a factory wide review of energy usage and implement measures to reduce energy consumption.	<p>Environmental and economic benefits associated with a reduction in energy consumption:</p> <p>a) Reduction in CO<sup>2</sup> emissions associated with a 10% reduction in energy consumption by 2018.</p> <p>b) Reduction in greenhouse gases.</p> <p>c) Reduction in fossil fuel use with a target of 40% reduction in energy costs.</p> <p>d) Less embedded energy per unit of product.</p>	<ul style="list-style-type: none"> <li>■ An intelligent energy management system (<a href="#">Crowley Carbon Capture</a> ("C-cubed")) has been installed and is online.</li> <li>■ Remote monitoring, control of lighting and compressed air allows optimisation of these systems.</li> <li>■ The New Horizon project will reduce energy consumption by around 47.5 million kWh of energy each year.</li> <li>■ Stage 1 (lighting) of the Crowley Carbon project has delivered an annual energy saving of 1,853,000kWh.</li> <li>■ Stage 1 (Compressor) of the Crowley Carbon project is being validated, however, the leakage survey has already delivered a £12k annual saving.</li> </ul>

Commitment	Actions	Target Outcomes	Progress
<b>5. Develop local community engagement with an emphasis on building positive community relationships.</b>	Initiate contact with local community representatives listening and exploring opportunities for community gain but also addressing community concerns.	Greater understanding about Superglass' value to the community.	<ul style="list-style-type: none"> <li>■ Superglass are working with Launchpad (a charity providing housing for homeless veterans), with a view to supplying insulation for their care houses.</li> </ul>
	Explore the possibility of signing the Scottish Business Pledge, in order to look at opportunities for apprenticeship schemes, to work with young people from the local community and support community based social initiatives.	<p>Greater ability for Superglass to understand and respond to local community views.</p> <p>Identify opportunities for local community benefit.</p>	<p>Superglass and Braehead Community Council are collaborating to understand:</p> <ul style="list-style-type: none"> <li>■ How historical issues with the site have been addressed.</li> <li>■ How Superglass can add value to the community.</li> <li>■ The opportunities for Superglass to support new council initiatives such as sponsoring the development of a local play park.</li> </ul>

Commitment	Actions	Target Outcomes	Progress
6. To work with SEPA to identify new emerging opportunities in order to improve economic, social and environmental outcomes.	Superglass and SEPA will work together to identify new opportunities.	Focus on practical activity that delivers real economic and environmental outcomes.	<p>The New Horizon Project is an investment in the latest technologies, supported by a grant from Scottish Enterprise which was gained with support from SEPA.</p> <p>This project will help to drive Superglass beyond compliance, using best available techniques to achieve a:</p> <ul style="list-style-type: none"><li>■ 30% reduction in Nitrogen Oxide emissions compared to the BREF limit.</li><li>■ 35% reduction in energy used by the furnace.</li><li>■ 77% reduction in energy used by the forehearth.</li><li>■ Total saving of 47.5 million kWh of energy each year.</li><li>■ Reduction in waste of 9000 tonnes less each year.</li><li>■ 45% increase in production capacity.</li></ul>



Further Information

Scottish Environment Protection Agency  
[www.sepa.org.uk](http://www.sepa.org.uk)

Tel: 03000 99 66 99  
 ScottishEnvironmentProtectionAgency  
 ScottishEPA

Superglass Insulation Ltd  
Thistle Industrial Estate  
Kerse Road  
Stirling  
FK7 7QQ

Tel: 01786 451170  
 [www.facebook.com/superglassinsulationltd](http://www.facebook.com/superglassinsulationltd)  
 @superglassins

For information on accessing this document in an alternative format or language please either contact SEPA by telephone on 03000 99 66 99 or by email to [equalities@sepa.org.uk](mailto:equalities@sepa.org.uk)

If you are a user of British Sign Language (BSL) the Contact Scotland BSL service gives you access to an online interpreter enabling you to communicate with us using sign language.

<http://contactscotland-bsl.org/>