



SCOTCH WHISKY SECTOR PLAN

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SEPA has a strong track record of regulating to improve the Scottish environment. We are proud of what we have achieved since we were set up just over two decades ago in 1996. We know we need to do more over the next two decades to build on this success. Much more.

The mounting scientific evidence about climate change, plastics in our oceans, the pressure on our freshwater and more shows us that humanity must rise to tackle major environmental challenges. This scientific knowledge underpins SEPA's strategy for how we will regulate - One Planet Prosperity. If everyone in the world lived as we do in Scotland, we would need three planets. There is only one.

So, we will regulate to help Scotland prosper within the means of our one planet. Successful businesses in future will be those that use low amounts of water, materials and carbon-based energy and create little waste. Prosperous societies will be comprised of these businesses. This can be Scotland.

In every sector we regulate, this means we will have two simple aims:

1. we will ensure that every regulated business fully meets their compliance obligations, and
2. as many regulated businesses as possible will go beyond the compliance standards.

This sector plan outlines how we will do this in regulating the Scotch Whisky sector. It is a sector that has improved its environmental performance and achieved high levels of compliance in recent years. We will drive this further to get all regulated Scotch Whisky businesses up to full compliance.

Even more exciting is the work we will do to help Scotch Whisky operators go beyond what the law requires. This is a progressive sector in which many companies have set voluntary targets, through their trade association, to reduce water use, waste, carbon emissions and other environmental impacts. In this plan, we set out how we will help as many Scotch Whisky operators as possible to move beyond minimum legal standards and create economic and social success for Scotland from environmental excellence.

This is ambitious. It spells out how we will use traditional environmental protection agency (EPA) regulatory tools, such as permits and enforcement, in clearer and more powerful ways. It sets out some completely new ways, such as novel partnerships, that we will develop and use to support innovation in this sector.

Terry A'Hearn
SEPA Chief Executive Officer



1. Introduction

For SEPA to help create a prosperous Scotland that lives within the means of our one planet, we need to radically change the way we work. In the past our approach to regulation has been grounded in the different set of rules we manage to protect the environment. This has helped us to deliver, for example, improvements in water quality. However, it will not enable us to make the transformational changes needed to tackle today's problems.

So, we are moving instead to ground our regulation in working across whole sectors. In this way we can systematically identify the compliance issues that need to be tackled by the sector. We can also identify where the biggest opportunities are for us to help the sector to go beyond compliance. In both ways this will help regulated businesses operate successfully within the means of one planet.

All businesses that we regulate in a sector use water, energy and raw materials to produce the products and services they sell. In doing so, they also create waste and emissions. We can think of these as environmental flows that need to be managed by the business (Figure 1).

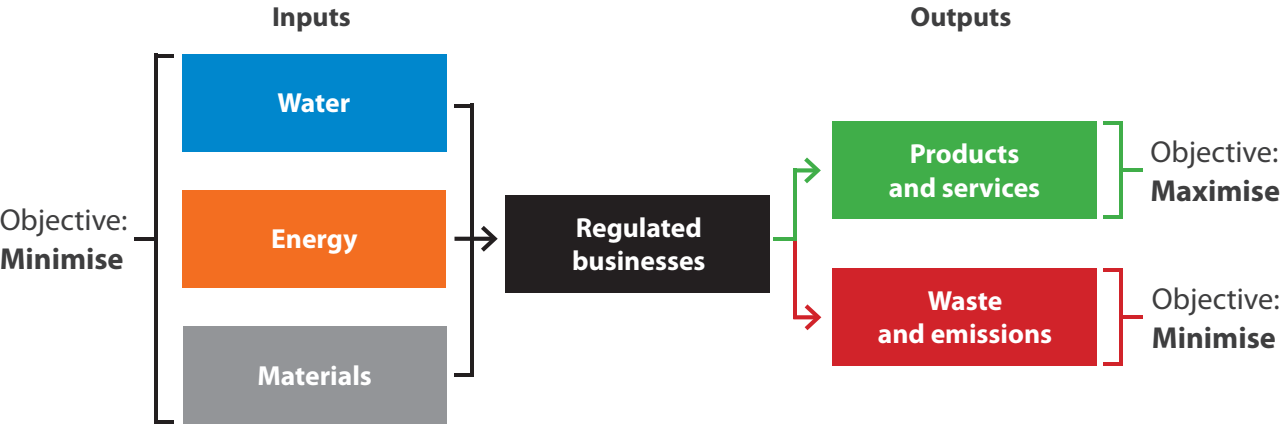
We want to help as many businesses as possible to manage these flows effectively and reduce their use of natural resources and creation of waste in ways that enable them to meet their legal obligations, drive further improvements and operate their business successfully. To do this, we are preparing sector plans for every sector that we regulate.

Sector plans are at the heart of everything we do, shaping the interactions with every sector and the businesses in them. Through them, operators will get the relationship that their attitude and performance earns. Those that demonstrate a commitment to good environmental performance and deliver solid outcomes will receive powerful support through guidance and advice. Those that demonstrate behaviour which leads to significant or chronic non-compliance can expect SEPA to use the most appropriate enforcement tools to bring them into compliance.

This is our plan for the Scotch Whisky sector. It details how SEPA is going to regulate the sector and work with it to protect and improve the environment. The plan focuses on Scotch Whisky distillery companies. It explains how we will work directly with their sites and also includes ways in which we will work with them to use our shared influence to improve environmental performance throughout the industry supply chain.

The Scotch Whisky Association's environmental strategy is already moving many businesses in the sector in a beyond compliance direction. This plan will build on this momentum and further entrench compliance and help drive beyond compliance activity.

Environmental flows (Figure 1)





2. Our vision for the Scotch Whisky sector

The Scotch Whisky sector demonstrates that high environmental performance and prosperity are mutually dependent.

All operators in the sector are fully compliant with environmental regulations, they are actively involved in supporting their local communities and impacts on the environment are minimised as far as practicable.

The sector operates using only low carbon energy sources, all by-products are in use for as long as possible and maximum value is extracted from them while in use.

The sector influences its supply chain to drive improvements to the sustainability of cereal production, transport, bottle manufacturing and packaging.

Scotch Whisky consumers actively select brands that demonstrate strong commitment to high environmental performance.

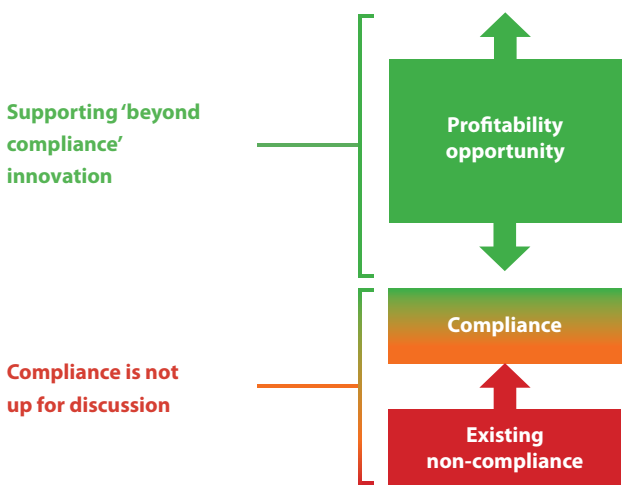
Our objectives

The objectives of the Scotch Whisky Sector Plan are to:

- ensure all operators in the sector reach and maintain full compliance with Scotland’s environment protection laws; and
- help as many operators as possible in the sector to move beyond compliance.

This is illustrated by the sector roadmap diagram (Figure 2):

Sector roadmap (Figure 2)



This sector plan sets out how SEPA will work with the Scotch Whisky sector. For our vision and objectives to be achieved our staff will work with partners and facilitate liaison between them and the Scotch Whisky sector to create opportunities that link business success with environmental success.

We want to bring together skilled, experienced and innovative people from across the sector to understand key challenges and opportunities to create innovative solutions. If we get this right, it will mean that the environment is not seen as a constraint, but a platform on which economic and social success can be built, putting the Scotch Whisky sector on a pathway to becoming a “one planet” sector.



3. The Scotch Whisky sector

Scotch Whisky is made entirely in Scotland from cereals, water and yeast. It is a product synonymous with Scotland and is an important sector of the Scottish economy. A pristine environment is critical to its success.

Scotch Whisky is the UK's largest food and drink sector and accounts for 80% of Scotland's food and drink exports, worth over £4bn per year. Whisky directly generates more than £5bn per year for the UK economy and the sector invests £1.7bn in its supply chain annually. Tourism is also a key part of the whisky industry with more than 60 distilleries accepting visitors. In 2016 there were 1.7 million visits to Scottish distilleries with visitors spending £53 million.¹

Scotch Whisky is directly exported to 182 countries. Established markets exist in Europe and North America (around £2.5bn), but major emerging markets are likely to grow significantly. India for example is the world's largest "whisky" market, but Scotch Whisky represents just 1% of the spirits market there. India is therefore the industry's top global priority² alongside developing the major growth markets of China and Brazil and fast growing markets such as Kenya and Nigeria. 31% of trade is with the European Union, which, as the UK leaves the EU will present a challenge for the sector.

Uncertainties about the UK's future trade deals with other nations and the potential emergence of a more protective trade stance in the US may also present both challenges and opportunities.

Facts and figures (Figure 3)



20 million

Number of oak casks lying maturing in Scotland



126

Number of distilleries in Scotland, 7 of which are grain distilleries



40,000

Jobs across the UK supported by the industry



40

Distilleries currently at various states of planning and development



15

Number of distilleries opened since 2013



19

Spirits bottling halls in Scotland



10

Number of new distilleries set to open in 2018



10,000

People directly employed in the industry, 70% in rural areas of Scotland



90%

Barley sourced from UK farms

¹ <http://www.scotch-whisky.org.uk/news-publications/news/scotch-whisky-tourism-more-popular-than-ever/#.WfivqZVprcs>
² http://bfff.co.uk/wp-content/uploads/2018/03/BFFF_Scotch-Whisky-Graeme-Littlejohn.pdf

The sector is diverse in size and includes companies that operate a single distillery to large multinational organisations with several distilleries and associated support facilities such as bottling halls and bonded warehousing. Scotland has five distinct whisky regions: Highland, Speyside, Lowland, Islay and Campbeltown, each of which produces Scotch Whisky with a character and flavour unique to that region. Recently, the traditional distilleries have been supplemented by a growing number of small, independent, micro-distilleries, often in areas not associated with the production of Scotch Whisky.

There are three trade organisations, which represent the majority of the industry. These are the Scotch Whisky Association (SWA), the Malt Distillers Association of Scotland (MDAS) and the Scottish Distillers Association (SDA).

A good quality, sustainable water supply is critical for Scotch Whisky production. The majority of

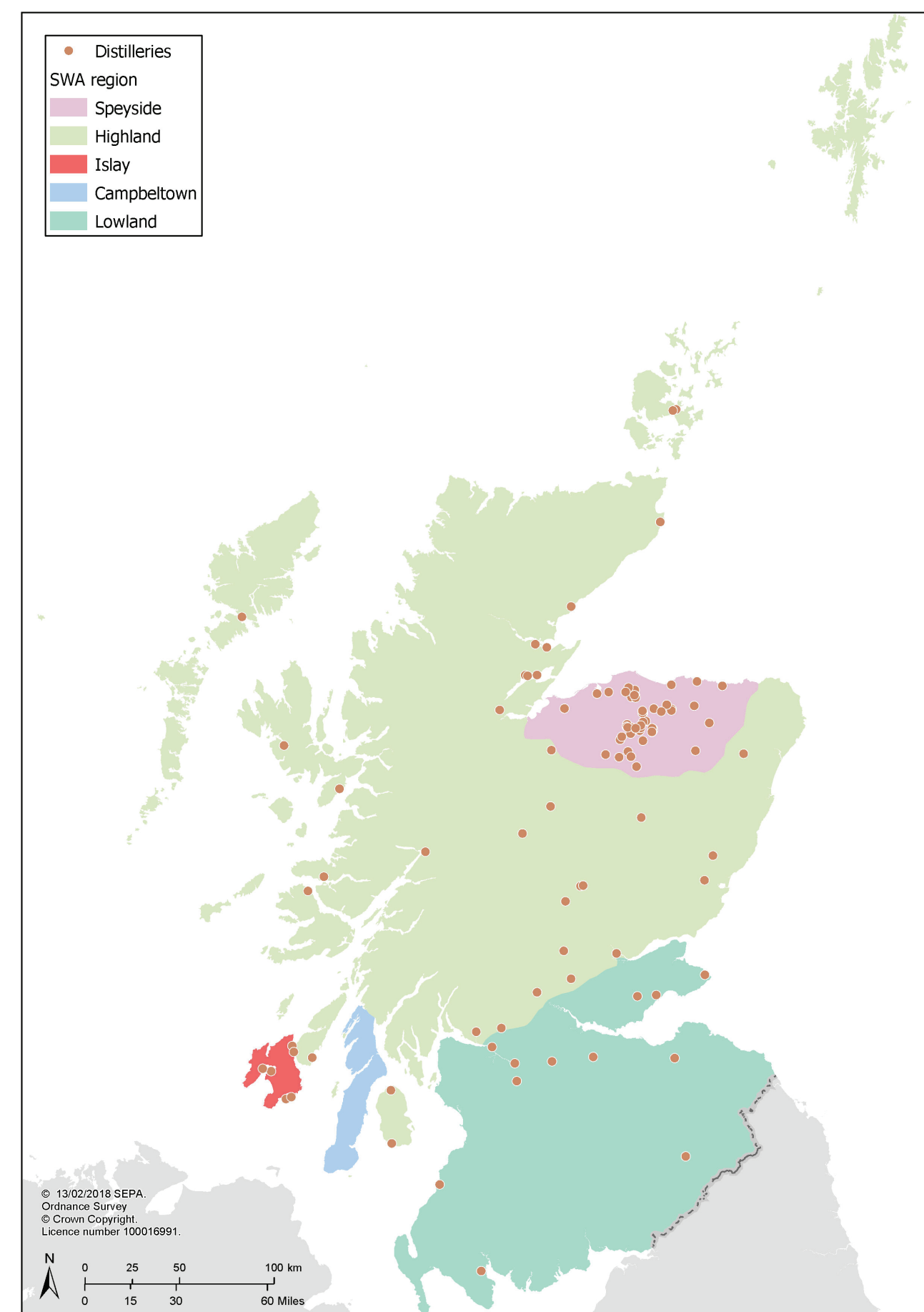
water is used for cooling during production and then returned to the water environment. Water is also used as part of the final product. Peat plays an important role in the production of Scotch Whisky by providing a distinctive flavour. It is used in the malting process where the peat is burned to generate smoke to be infused into the malted barley.

Distinctive packaging of Scotch Whisky is important to brand identity. Scotland is home to two glass bottle manufacturing plants which supply some of the whisky bottles. Many of the distilleries, glass manufacturers and bottling plants have to be registered with SEPA under the Producers Responsibility Regulations, a market driven scheme to encourage packaging recycling.

The Scotch Whisky sector produces a number of by-products that are highly valued and can be spread on land, fed to cattle or used to make energy.



SEPA licensed sites (Figure 4)



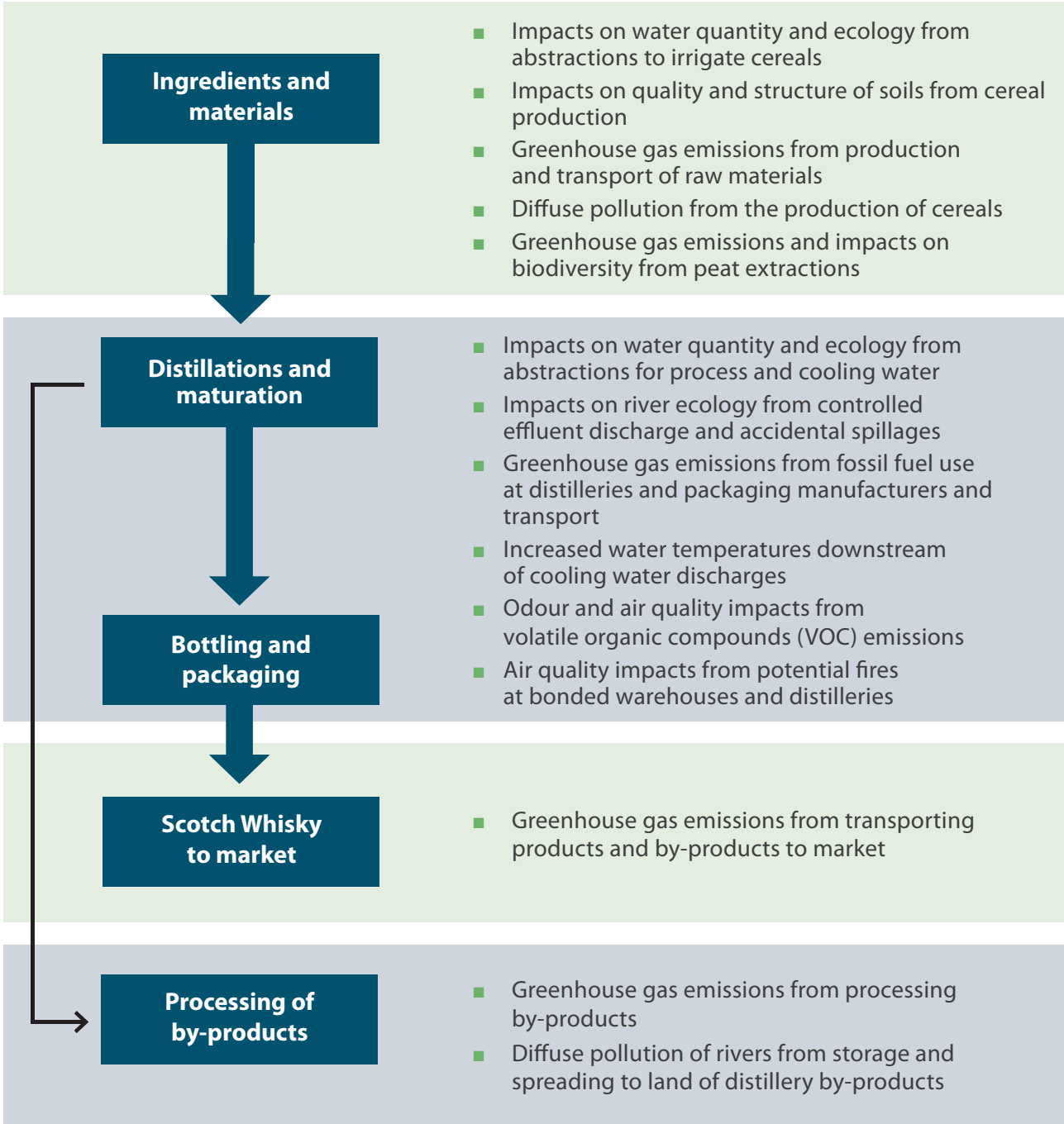


4. Environmental impacts and how we manage them

Environmental impacts throughout the supply chain

The flow diagram below highlights the key environmental impacts at the various stages of the supply chain of Scotch Whisky production (Figure 5).

Environmental impacts (Figure 5)



Environmental regulation of Scotch Whisky distilling

Whisky distillers are largely regulated under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) for the abstraction of water from, and the discharge of effluent to, the water environment. Larger grain distilleries can also be covered by the Pollution Prevention & Control Regulations (Scotland) 2012 (PPC). PPC regulates all environmental impacts associated with the processing and manufacturing of Scotch Whisky at large sites. In 2016, there were 218 CAR licences and seven PPC permits for Scotch Whisky distilleries.

Due to the flammable nature of whisky, some distilleries (depending on volumes of ethanol held on site) fall under the Control of Major Accident Hazards (COMAH) Regulations. The operators of these sites must take all measures necessary to prevent major accidents and to limit their consequences for human health and the environment.

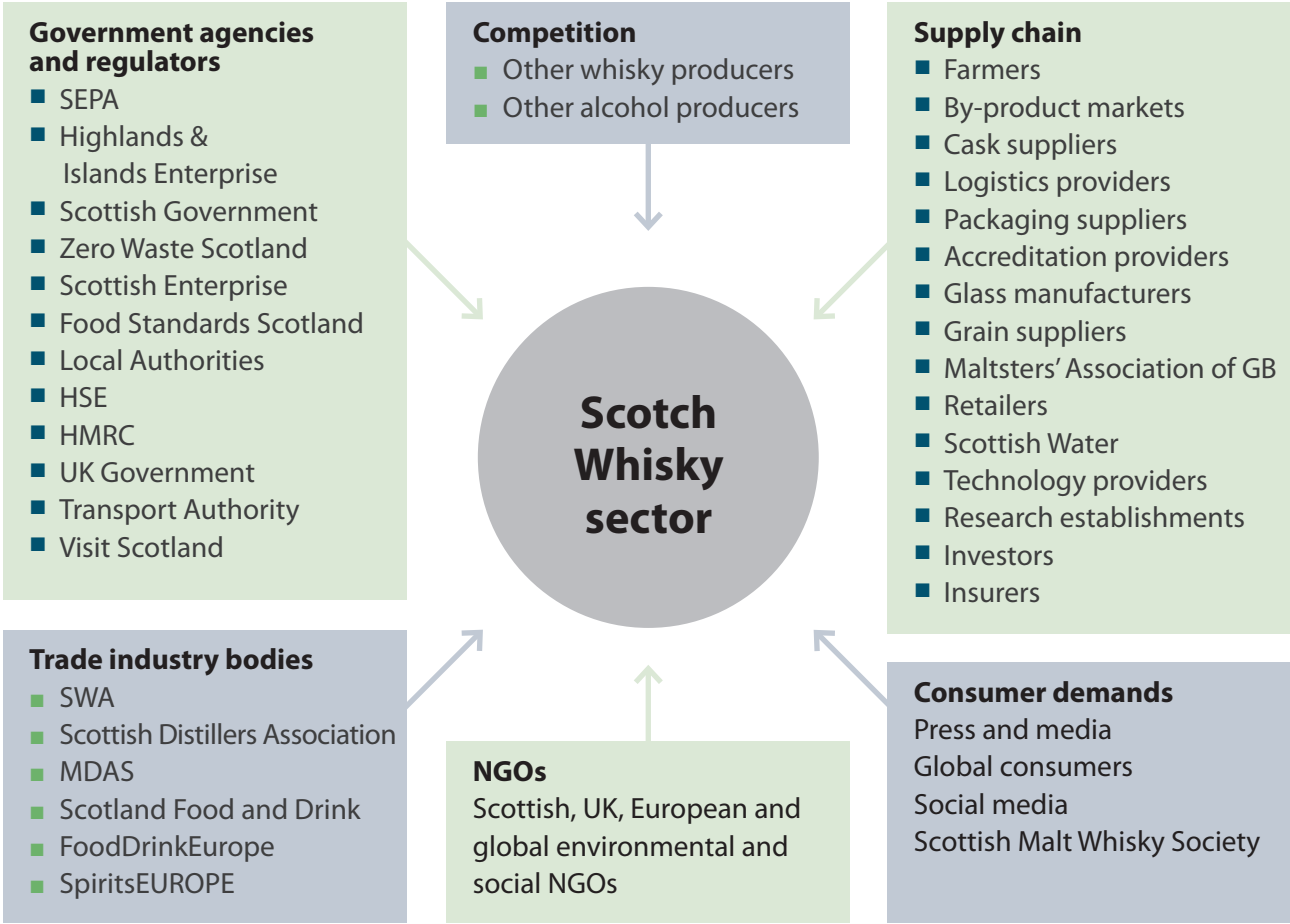
New distilleries and major developments at distilleries are subject to control through the planning system in Scotland. Planning authorities are responsible for making planning decisions and SEPA is a statutory consultee in this process.

Wider influences on environmental performance of the Scotch Whisky sector

Full compliance with environmental regulations will not, by itself deliver the transformational change required to secure our One Planet Prosperity objectives. The Scotch Whisky Sector Plan needs to unlock the potential for businesses to gain strengths in resource efficiency and environmental innovation that will help them to succeed in their markets. We need therefore to combine the actions that we can take to influence the behaviour of a business through our regulatory role with all the other influences. Doing this will be the most effective way to secure full compliance and to help as many businesses as possible to move beyond compliance.

Working with the sector, we will place this more sophisticated way of operating at the heart of our work. Figure 6 summarises the main organisations that influence and are influenced by operators in the Scotch Whisky sector and identifies those that we are likely to work with in both the short and longer term. As we implement the plan we will consider the opportunities these relationships provide and how we would like them to develop.

Key influences on Scotch Whisky sector (Figure 6)





5. Tackling non-compliance and opportunities to go beyond

Compliance in the sector

Compliance³ with environmental law is non-negotiable and regulated distilleries in the sector need to comply. The Scotch Whisky sector as a whole has an excellent compliance record but there are some isolated remaining compliance issues.

Non-compliance in 2017 was mainly due to three factors:

- effluent failing to meet required environmental standards;
- over abstraction of water; and
- non submission of required reports;

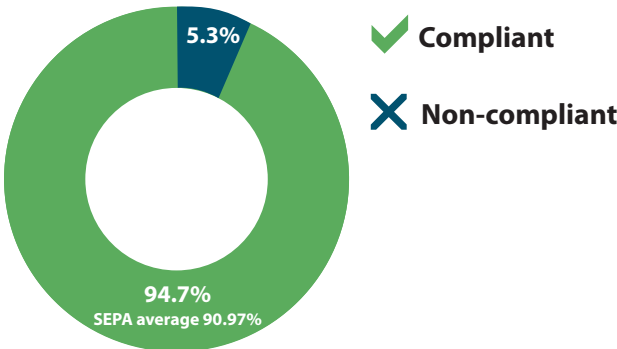
Although rare, pollution incidents associated with distilleries do occur and have impacted on the environment. The collaborative working relationship between SEPA and the sector means that when these incidents do occur they are usually dealt with quickly.

These incidents are usually associated with two issues:

Plant failure - Poorly maintained and ageing plant can lead to failures that cause interruptions to production and uncontrolled spillages to the environment. The majority of environmental incidents at whisky distilleries recently have been leaks which have caused water pollution.

Drainage issues - Lack of accurate drainage plans and cross connections can exacerbate on site spillages.

Figure 7



Key issues contributing to non compliance

- Effluent quality failures
- Failure to meet reporting requirements
- Over abstraction of water

³ Compliance with environmental authorisations is currently measured by our Compliance Assessment Scheme. This scheme is currently being reviewed.



How will we work with the sector to fix these issues?

We will undertake the following actions (Figure 8) to enable the Scotch Whisky sector to achieve 100% compliance with environmental licences and permits by 31 March 2020.

Where are the opportunities to go further?

The majority of the Scotch Whisky sector companies are already working towards the challenging beyond compliance environmental targets that are set out in the Scotch Whisky Association's Environmental Strategy. SEPA supports these targets and will continue to work with the industry to help facilitate their achievement.

Compliance (Figure 8)

Compliance outcome	Action
Clarity on regulatory requirements	<ul style="list-style-type: none">■ Review conditions in all permits in the sector to ensure they are fit for purpose.■ Provide evidence that helps businesses to understand the key environmental risks and compliance issues in the sector.■ Invest in our staff so that they are well informed about the sector and can provide knowledgeable, consistent and pragmatic support.■ Use scientific evidence to prioritise water body improvement measures and ensure the Scotch Whisky sector meets its obligations.■ Continue to review supporting data to establish confidence in the identified measures. This review may lead to actions for SEPA to identify and prioritise further investigative work for these catchments.■ Review and audit the data about distilleries that is held on SEPA systems and ensure it is up to date, accessible and relevant.■ Work with distillery operators to identify and implement actions in whisky distillery catchments to help to bring water-bodies to 'Good' ecological status.■ Develop and implement an enhanced compliance assessment scheme which applies most focus to those issues which have the biggest environmental impact.■ We will work with distillery operators and contractors to ensure that only the right distillery materials are spread to land in the right place and at the right time.
Prevent environmental incidents	<ul style="list-style-type: none">■ Collaborate with the sector to improve proactive maintenance of critical plant and ensure operators update drainage plans to eliminate cross connections.■ Implement campaigns which focus on key environmental risks and compliance issues.■ Undertake appropriate enforcement action where there are significant failures to comply with licence conditions or environmental incidents.



Water

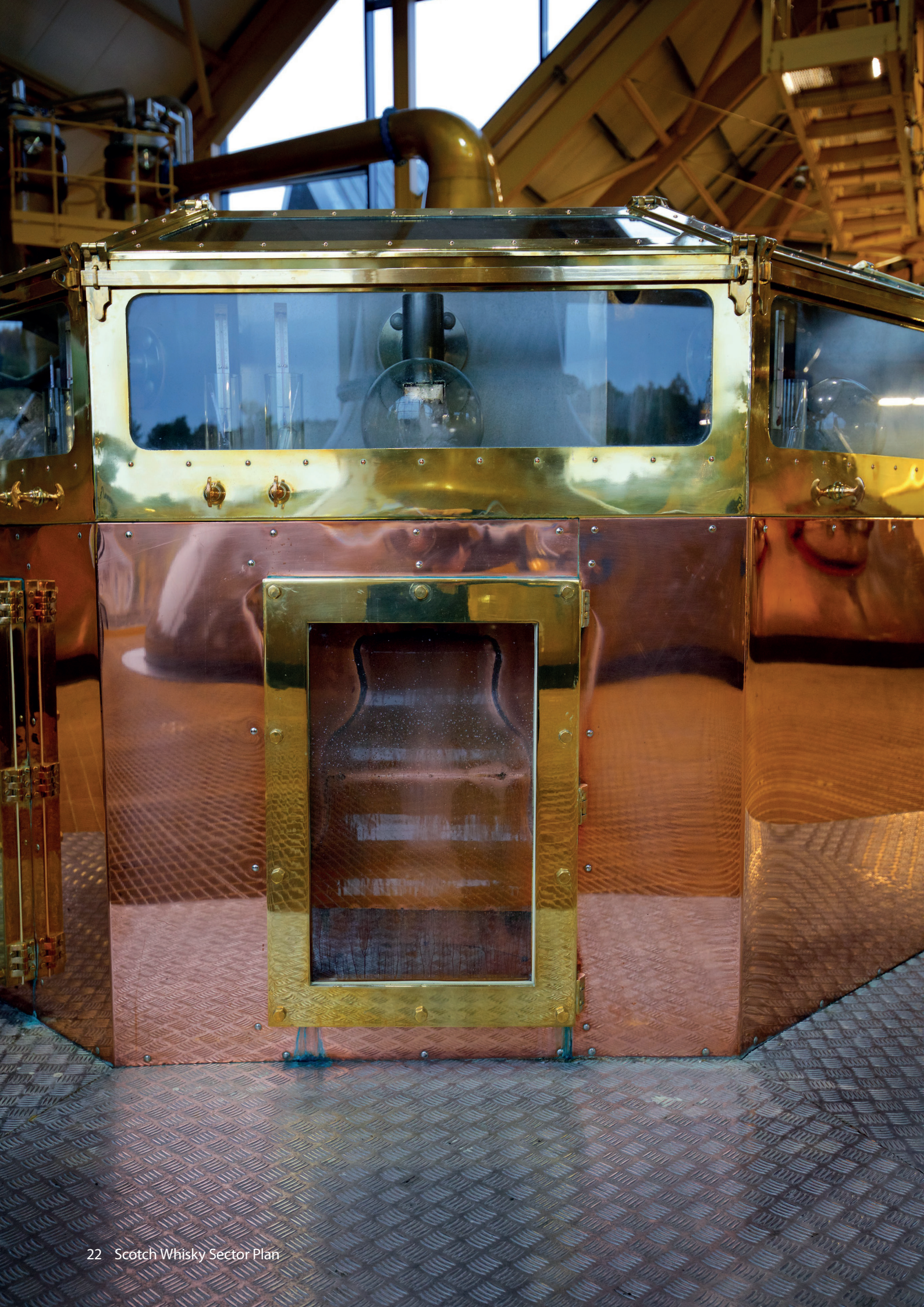
A sustainable, reliable and high quality water supply is critical for the production of Scotch Whisky, and effective water management is a high priority for the sector. We will help the sector to deliver world class practice in water management, enabling it to reduce water demand, improve water quality and build resilience to climate change. The SWA member companies are committed to improving distilling water efficiency by 10% by 2020, to exercise good water stewardship within their catchments and deliver on their commitments in River Basin Management Plans (RBMP).

SEPA will:

- work with the sector to identify partnerships with stakeholders in catchments to identify shared objectives and joint ways of working that will benefit all users of the catchments;
- bring together experts in water innovation from across all business sectors to share experience and best practice ideas with distillery operators;
- bring distillery operators together to cascade knowledge and experience of environmental practice, success stories and improvements;
- work with the sector to explore the possible alternative options for disposing of or extracting value from distillery effluents; and
- continue to encourage the sector to address RBMP pressures associated with their operations as soon as practically and economically possible.

Case study

Low impact abstraction systems where cooling water is returned upstream of the abstraction can be introduced. This means there is no reduced river flows and it saves businesses having to install and operate cooling water towers.



Energy

Fossil fuel is still the primary source of energy for distilleries. The sector recognises this needs to change. The sector is already improving energy efficiency and we will help it to innovate further and to utilise technologies that significantly reduces its use of fossil fuels and that cut emissions. The use of renewable energy and the switch from heavy fuel oil use to natural gas use are two steps to reducing emissions and SEPA will work with the sector to help achieve this. Around 85% of energy generation at a distillery is to produce heat, and the sector will be encouraged to reuse this heat wherever possible.

The SWA member companies have agreed a target of ensuring that by 2020, 20% of their primary energy requirements will be from non fossil fuel sources, with a target of 80% by 2050.

To facilitate the achievement of these objectives, SEPA will develop a sector forum for all distilleries, supply chain businesses and key stakeholders to work together to identify ways to:

- help make the sector world class in energy management;
- drive down emissions through alternative energy sources;
- work with the sector and the Scottish Government to produce heat maps which will help identify a demand for heat;
- improve energy efficiency throughout the supply chain including the reuse of heat wherever possible;
- explore opportunities with the sector for the carbon dioxide reuse;
- collaborate on research and development.

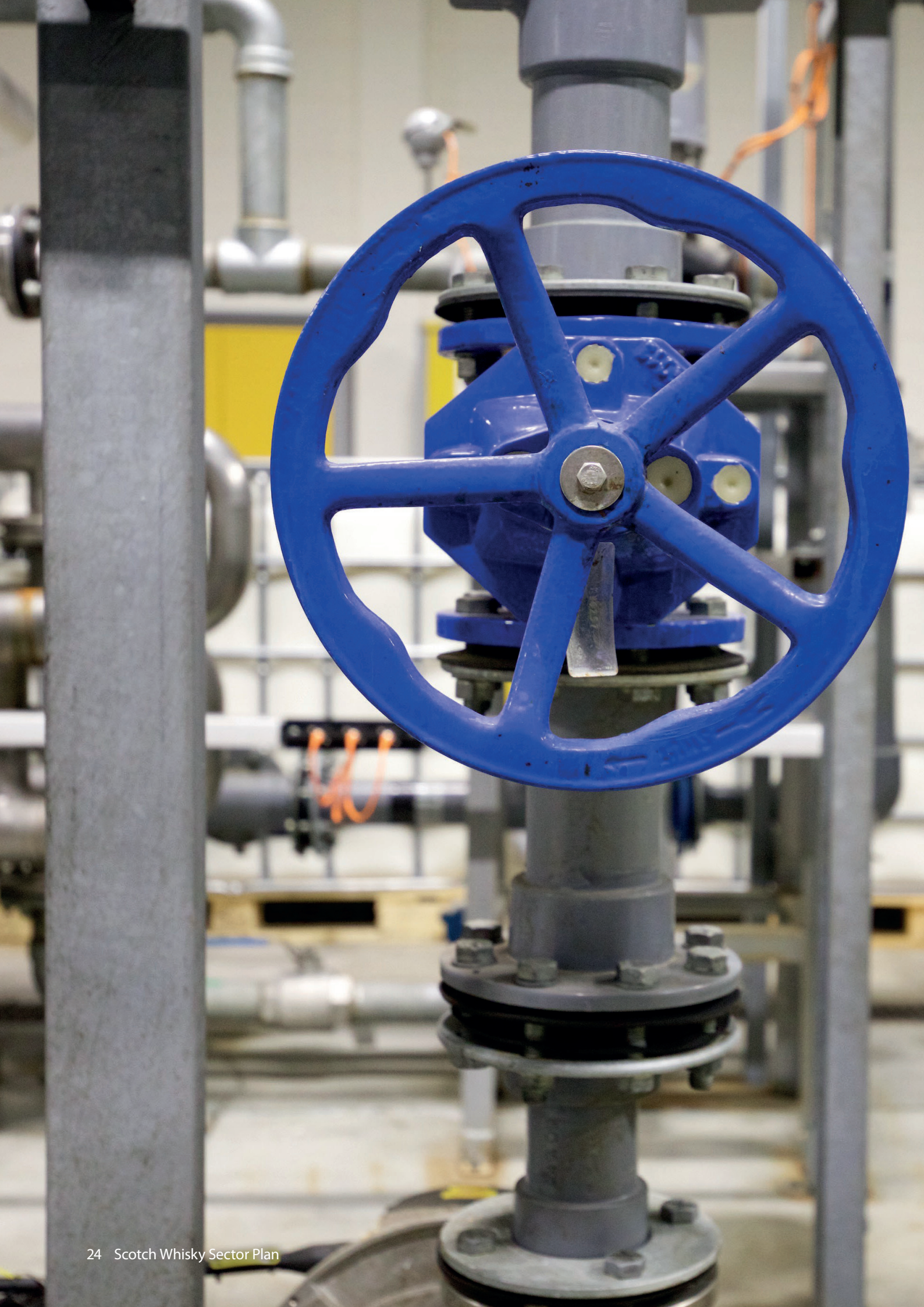
The transportation of raw materials, by-products, new make spirit and bottled product is crucial for such a dispersed industry. SEPA will work with the sector and other strategic partners to develop a sustainable transport plan aimed at minimising transport emissions through an efficient transportation network.

Case study

Examples of reducing reliance on fossil fuels already undertaken include:

- installation of solar panels on warehouses and offices;
- investment in anaerobic digestion to produce gas for onsite usage including Combined Heat and Power installations to produce electricity; and
- using wood fuelled biomass boilers at distilleries.

The installation of a new gas main in Speyside to eliminate the use of Heavy Fuel Oil (HFO) at a number of distilleries.



Materials

A circular economy approach is to use resources more efficiently, keep resources in use for as long a time as possible and to minimise waste. Packaging of a bottle of Scotch Whisky includes a glass bottle, bottle top, a label and often boxes, bags or tins.

Glass accounts for around 86% of the packaging material inputs for Scotch Whisky, and the challenge for the industry is to find ways of producing lighter bottles made from fully recycled glass. Packaging of the bottles is often in boxes or tins and the industry will be challenged to make this packaging from 100% recycled materials and fully recyclable.

By-products from Scotch Whisky distilling (draff and pot ale for example), have long been reused by the agriculture sector as a valuable animal feed and fertiliser for agricultural land. Developments in renewable technologies have recently opened up new markets for these materials to produce energy and biofuels.

Peat is extracted and used in the malting process to add the distinctive smoky flavour to the whisky. Peat extraction releases greenhouse gases and the challenge to the sector is how this can be minimised.

The SWA member companies have agreed to a target of reducing the weight of packaging materials by 10% by 2020, and ensuring by this date that 40% of product packaging will be made from recycled materials. The members have also agreed a further target that by 2020, all of the packaging waste will be recyclable and no packaging waste will be sent to landfill.

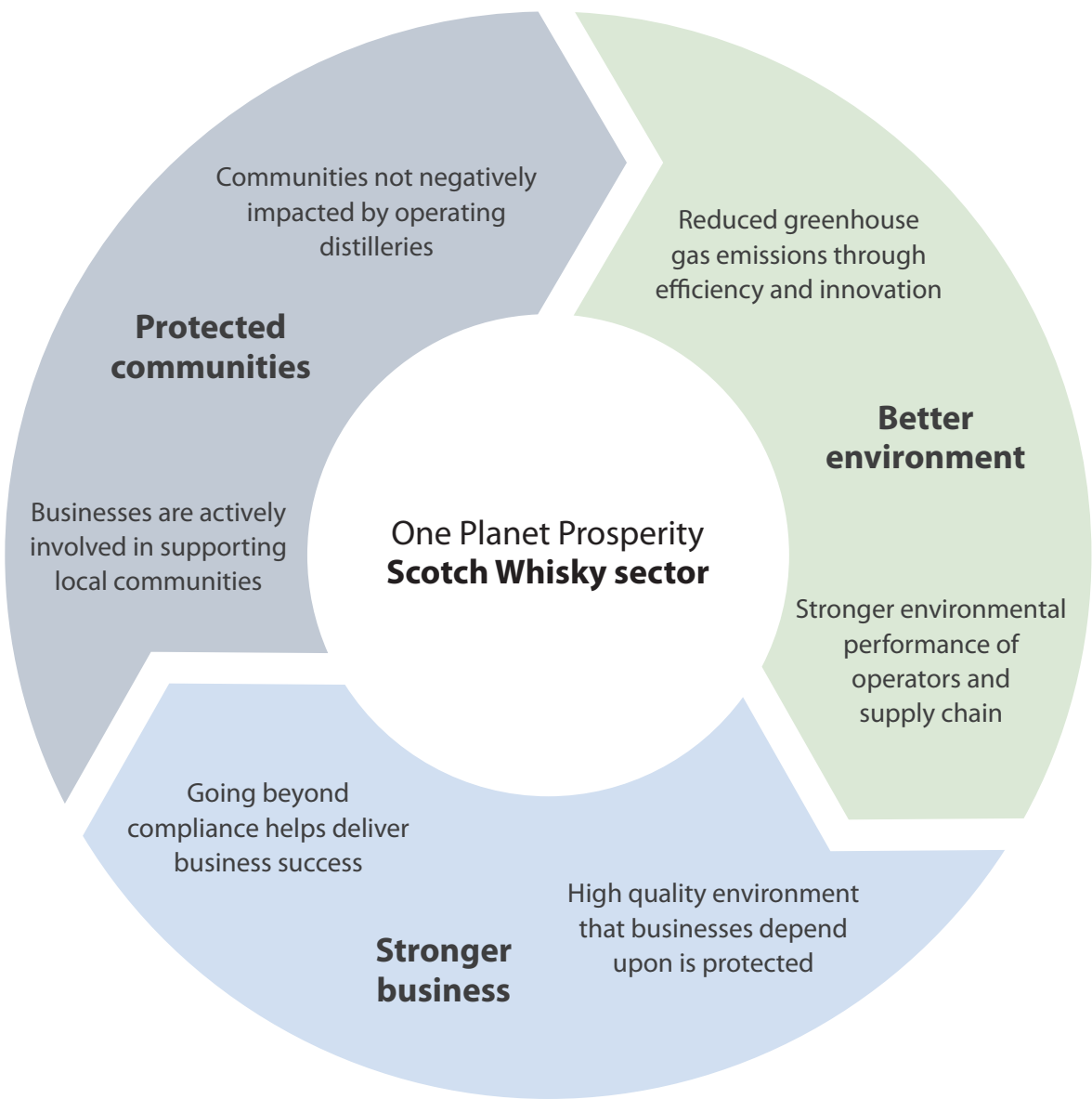
- To facilitate the achievement of these objectives, SEPA will:
- work with glass manufacturers, the distilleries and other stakeholders to help improve the quality and quantity of recyclates to ensure as much recycled glass as possible is used in the manufacturing of a Scotch Whisky bottle;
 - work with the sector and other stakeholders, including Scottish Natural Heritage, to implement Scotland's Peatland Action Plan and ensure the environmental impact of peat extraction is minimised and restoration is maximised;
 - ensure farmers within the Scotch Whisky supply chain comply with all environmental licences, and to encourage them to be members of accredited environmental bodies;
 - work with relevant stakeholders to develop a Code of Practice to support the modelling of land to accept nutrients and thereby ensuring that by-products are spread to land in a beneficial way without causing any environmental damage; and
 - explore other uses of by-products to create value.

Case study

By-products from Scotch Whisky production, such as draff and pot ale, have been used to make protein feed for salmon farming and biofuel.

6. Outcomes

If we achieve the vision we have set out in this plan, we anticipate that we will help to deliver positive outcomes that protect and improve the environment in ways that also protect communities and enable businesses to operate effectively and successfully in their markets.



7. Priority Actions for 2018-19

Our priority actions for the first year emphasise SEPA's internal systems so that we can better integrate them into our new ways of working. In subsequent years actions will focus more on partnership working to achieve beyond compliance in the sector.

- 80% of CAR distillery licences will be reviewed by 31st March 2019.
- Review and audit all distillery data held by SEPA by 31st March 2019.
- Develop and implement a programme of information events for SEPA staff (including site inspectors, scientists, planners, policy officers etc) who will be involved in implementing the Scotch Whisky Sector Plan to build up their knowledge about the sector, its supply chain and the beyond compliance activities already being undertaken.
- Implement a programme of actions to resolve issues associated with on-site drainage at distilleries. This will include meeting with operators to share experiences and discuss benefits for them of improved understanding of site drainage, training for SEPA staff and targeted distillery visits by inspectors.
- Implement a programme of actions to **review distillery licences**. Staff identify all licences and permits associated with distilleries within their team area, review the state of current licences, and prioritise licences for review. This will then ready the Permitting Team to review the licenses and create a standardised Distillery Licence Template.
- Create an easily accessible, regularly maintained, intranet page where **all current information relevant to distilleries** and distillery inspectors is held, including guidance, MoUs and a current list of company leads.
- Work with Highlands and Islands Enterprise (HIE) to bring together a number of businesses on Islay (including distilleries, tourist businesses and farmers) to share objectives and identify mutually beneficial beyond compliance opportunities that could be realised through **working in partnership**. This could pave the way for similar projects in other parts of Scotland.
- The RBMP measures database will be reviewed and data requirements to improve confidence in third cycle measures identified. High confidence measures will be promoted to the sector for early completion.
- The **background data** held by SEPA will be checked for consistency and completeness. In conjunction with the licence reviews, CLAS and other data sources will be reviewed to ensure they reflect the licence conditions, actual locations of discharges etc., WFD measures status and correct charging bands.
- Support SEPA's on-going work to assess the capacity of land to receive organic bio-solids and work with distillery operating companies and contractors to ensure this is taken into account in decisions about spreading distillery and anaerobic digestion by-products to land.

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