

# LEATHER SECTOR PLAN

DRAFT FOR CONSULTATION

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## Why we are consulting

The draft sector plans are our initial ideas on where we can make the most significant impact. Getting feedback early in the process from our communities, partners and stakeholders is important and your feedback is critical to the success of our sector planning approach. If you think that we have got something wrong, missed a critical opportunity or not been as transparent as possible, please let us know your thoughts.

We aim to get these plans finalised in the first months of 2019 and then push on to implement them. Your views will also help to shape the prioritisation for the implementation, which will be completed following the consultation period.

The consultation is open until Friday 15 February 2019. Have your say, by completing the online consultation survey available from <https://consultation.sepa.org.uk/sector-plan/leather>



**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.**

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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. We will:

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

This draft sector plan outlines how we will do this in regulating the leather sector.

Leather production has taken place in Scotland for many years. There are many improvements in the environmental performance of the sector that have been made and many more opportunities for further enhancements.

That's why this draft sector plan is so important. It spells out ideas for how SEPA can assist the sector to solve any compliance issues and to develop actions that take it well beyond compliance standards.

This draft plan 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.

We would love to hear what you think of our draft plan. Once it's finalised, we are going to push on and implement it. So if you think we've got something wrong, missed something out or not been as transparent as possible, please let us know your thoughts. We want to get this right and then get on with it.

**Terry A'Hearn**

SEPA Chief Executive Officer

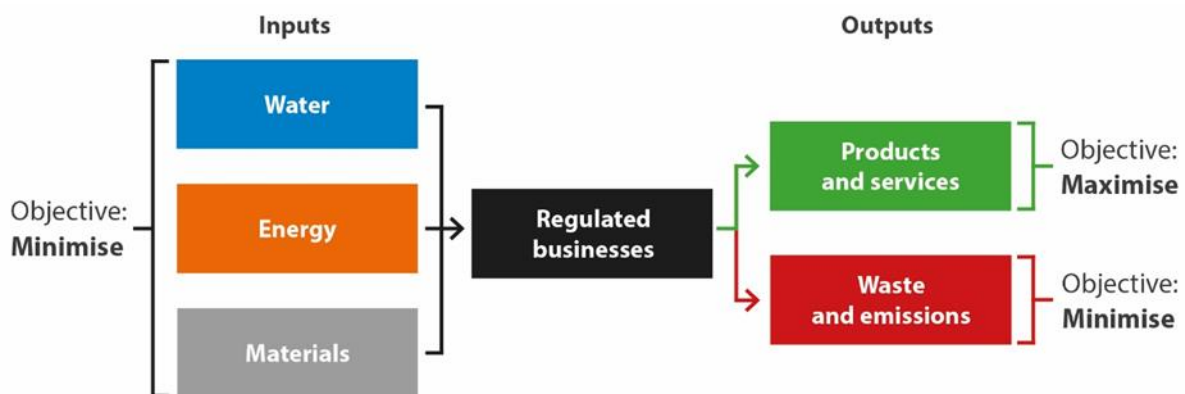
# 1. Introduction

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.

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. But mere compliance and small scale incremental change will not be enough. We want to help businesses and sectors to implement successful innovation and support them in their ambitions to do more than they are required to by regulation. We call this “moving beyond compliance”: helping already high performing businesses to do more for the environment because it makes sense for them to grow in a sustainable manner. We can also will 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).

**Environmental flows (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 leather 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 organisations that manufacture leather from bovine hides. 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.

SEPA recognises that leather production can range from manufacturers considered micro scale through to those exporting to a global market.

The Scottish leather sector is at the forefront of developing innovative processes. It pursues beyond compliance opportunities in water and waste reuse, and leads by example on producing leather with a low environmental impact for the high quality market. This plan will build on that and help drive the sector to pursue environmental excellence in the way it operates and develops.

## 2. Our vision for the leather sector

Our vision for the sector is that:

- Scotland is a global leader in the production of leather with a low environmental impact.
- Where energy and raw materials are selected, preference is given to those with the lowest environmental impact.
- The leather sector has a zero waste to landfill policy, and ensures that all residues from the manufacturing process are in use for as long as possible and at as high a value as possible.
- The Scottish leather sector leads the way in the use of innovative methods associated with the production of leather with a low environmental impact.
- The leather sector is a leader in involving and engaging with its community of stakeholders.

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### Our objectives

The objectives of the Leather Sector Plan are to:

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

This is illustrated by the sector roadmap (Figure 2)

#### Sector roadmap (Figure 2)



This sector plan sets out how SEPA will work with the leather sector. For our vision and objectives to be achieved our staff will work with partners and facilitate liaison between them and the leather 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 leather sector on a pathway to becoming a 'one planet' sector.

### 3. The leather sector

Leather has been a prized material for centuries, mainly due to its strength and durability. Globally, the leather sector produces 4.8 billion square feet of leather a year which has a trade value of £78 billion<sup>1,2</sup>. In a global market that is extremely competitive, the leather sector in Scotland is known for its innovation and high quality product. For example the largest tannery group have invested in both a thermal energy and water recycling plant and an ultrafiltration plant.

In 2016, the leather sector contributed £40 million to the economy, with leather produced in Scotland being exported to over 30 countries worldwide<sup>3,4</sup>. It is used for a wide selection of products, ranging from use in the automotive and aviation industries, through to saddlery and high value bespoke apparel and accessories.

In Scotland, production is subject to the most stringent animal welfare and environmental standards, designed to meet global demand for ethically produced leather. Hides used for leather production are predominantly sourced from the UK and Ireland.

#### Facts and figures (Figure 3)<sup>5</sup>



<sup>1</sup><https://www.sciencedirect.com/science/article/pii/S0959652614011858>

<sup>2</sup>[http://cercenvic.nic.in/PDF/APR\\_JUN\\_2017.pdf](http://cercenvic.nic.in/PDF/APR_JUN_2017.pdf)

<sup>3</sup>[www2.gov.scot/Resource/0053/00537061.pdf](http://www2.gov.scot/Resource/0053/00537061.pdf)

<sup>4</sup>[www.renfrewshirechamber.com/bridge-of-weir-leather-company-limited-is-named-winner-of-queens-award-for-international-trade-for-the-fifth-time/](http://www.renfrewshirechamber.com/bridge-of-weir-leather-company-limited-is-named-winner-of-queens-award-for-international-trade-for-the-fifth-time/)

#### <sup>5</sup> Sources

[www2.gov.scot/Resource/0053/00537061.pdf](http://www2.gov.scot/Resource/0053/00537061.pdf)

[www.scottishleathergroup.com/Sustainability/Water\\_Waste.aspx](http://www.scottishleathergroup.com/Sustainability/Water_Waste.aspx)

[www.carkeys.co.uk/news/where-does-the-leather-in-your-car-seats-come-from](http://www.carkeys.co.uk/news/where-does-the-leather-in-your-car-seats-come-from)

Leather tanning involves a multi-stage process (Figure 4) which turns raw hides, which in the UK are largely a by-product of the meat and dairy industry, into a suitable leather which can be used for many purposes. On arrival at the tannery the hides are either stored and preserved with the use of salt and or refrigeration, or passed straight through into production. A typical tannery consists of several zones where different processes occur. These zones are referred to as the beamhouse, tanyard, post-tanning and finishing.

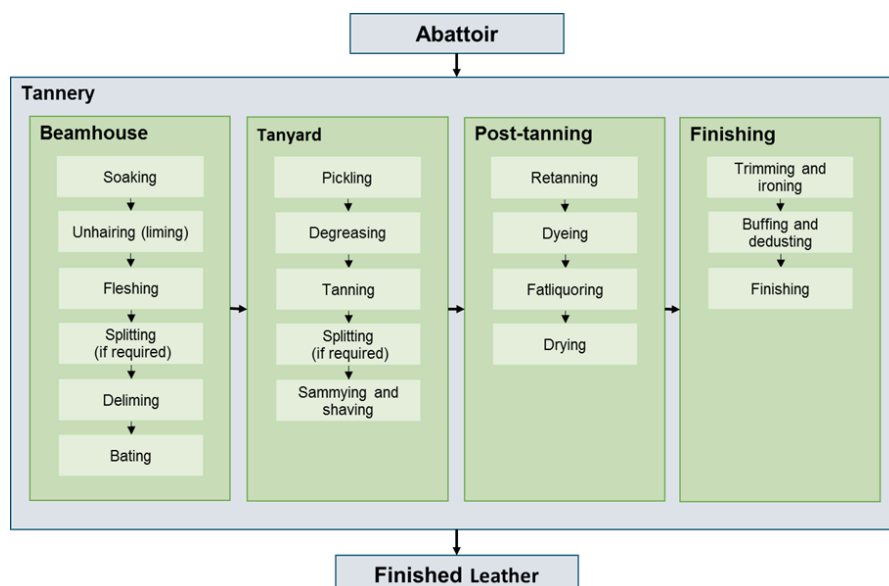
In the beamhouse, the hides are prepared for tanning by soaking to remove any gross debris, and to increase the moisture content which will make the hides more susceptible to the tanning process. They are then limed which helps remove the hair before the excess material, such as fat, is removed in a fleshing machine. The splitting phase then splits the hides into the required thickness and any remaining hair is removed using enzymes during bating. Fats and greaves are removed and passed on for further processing in a side process which results in a grease like substance which is used as a raw material in other industries (e.g. biofuel manufacture).

The hide is now ready for tanning. In the tanyard it is treated with tanning agents, the most common of which is chromium sulphate, however vegetable tannins can also be used. The tanning agents stabilise the proteins in the hide, protecting it from decomposition. Sammying then reduces the water content of the leather and shaving produces a leather of an even thickness.

The leather now enters the post-tanning phase where it is re-tanned, dyed, lubricated with oils, dried and trimmed before it is ready for finishing. During finishing a wide range of mechanical processes including polishing, buffing and conditioning enhance the appearance and physical characteristics of the leather before finally a surface coat is added. Once this is complete the leather is ready to be turned into various consumer products.

Throughout each stage of the processes, energy is used and liquid effluent will be produced. This liquid effluent, depending on the nature and scale of the manufacture process, can be either partly treated on site prior to its discharge to the public sewer or directly discharged to the public sewer for treatment at the sewage undertakers waste water treatment works.

#### Leather manufacturing process (Figure 4)



## SEPA licenced sites

Over time the landscape of the Scottish leather sector has changed significantly with a steady reduction in the number of leather manufacturers. Competition has grown in the form of alternative and synthetic textile development, foreign market development and the increasing change in consumer fashion trends. Historically there would have been over 120 sites<sup>6</sup>. Currently there are only five regulated sites and a number of smaller leather manufacturers who fall below the PPC regulatory threshold.

The five regulated sites are located within the southwest of Scotland and are all operated by the largest leather producer within the UK, employing over 600 people<sup>7</sup>.

### Location of leather sites (Figure 5)



<sup>6</sup> [www.electricscotland.com/history/industrial/industry16.htm](http://www.electricscotland.com/history/industrial/industry16.htm)

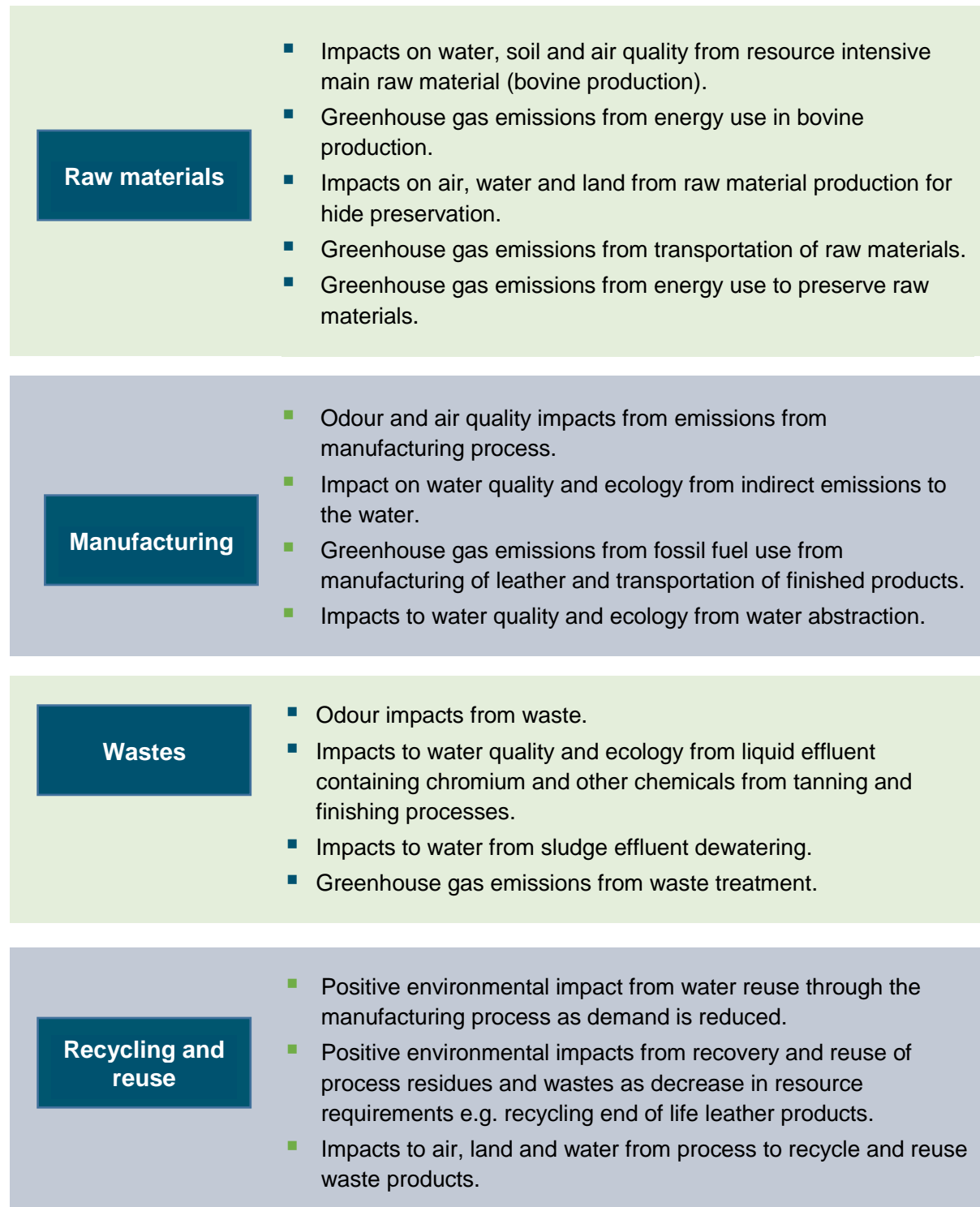
<sup>7</sup> <https://beta.companieshouse.gov.uk/company/SC042020/filing-history>

## 4. Environmental impacts and how we manage them

### Environmental impacts throughout the supply chain

The diagram below describes the impacts leather manufacturing has on the environment:

#### Environmental impacts (Figure 6)



## **Environmental regulation of the leather sector**

There are a number of different leather tanning and finishing establishments across Scotland. The production of leather falls within the regulatory scope of The Pollution Prevention and Control (Scotland) Regulations 2012 (PPC Regulations). These regulations cover all environmental aspects and impacts associated with the processing and manufacturing of leather.

Under the volume thresholds within the PPC Regulations only those that manufacture leather in large volumes require a permit to do so.

Where the industry abstracts water to use within their process this is regulated under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (referred to as CAR).

The Energy Savings Opportunity Scheme Regulations 2014 (referred to as ESOS) affects all UK organisations. Should the organisation employ 250 or more people, have an annual turnover in excess of €50 million, and a balance sheet in excess of €43 million then the organisation will have to comply with the ESOS requirements. Part of the requirements include energy audits which should identify energy saving opportunities.

Around 80% of environmental legislation in Scotland originates from the European Union. As the UK leaves the EU, changes will, where necessary, be made to domestic legislation to ensure that the standards of environmental protection we enjoy today and the principles upon which they are based are maintained. Therefore, while some of the detail of the legislation we use to regulate may change, our work to protect Scotland's environment will not. Our commitment to tackling non-compliance with environmental laws and, where necessary, taking enforcement action will not diminish as a result of the UK leaving the EU.

## **Wider influences on environmental performance of the leather sector**

Full compliance with environmental regulations will not, by itself deliver the transformational change required to secure our One Planet Prosperity objectives. The Leather 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 7 summarises the main organisations that influence and are influenced by operators in the Leather 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 leather sector (Figure 7)



## 5. Tackling non-compliance and taking opportunities to go beyond

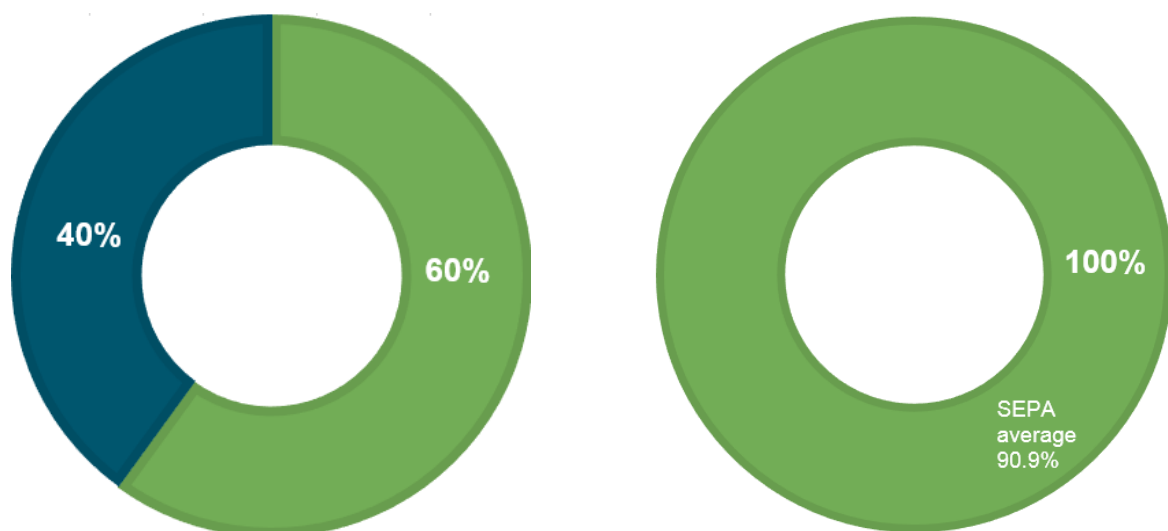
### Compliance in the sector

Compliance<sup>8</sup> with environmental law is non-negotiable and regulated businesses in the sector need to comply.

Leather manufacturing is a complex process with multiple environmental considerations that requires careful management and due diligence. Over the last seven years compliance with the PPC Permit conditions has improved significantly, with the sector having placed in a good deal of work and reinvestment. This investment in new technology and new plant has had a profound impact on the odour footprint from tanning at key locations. This has resulted in compliance for the sector improving to a point where the sector has almost achieved excellent at all regulated sites.

A large amount of odorous waste effluent is produced during the manufacturing of leather. It is either treated on-site within a biological treatment plant before being discharged to the Scottish Water sewer, or discharged directly to Scottish Water sewer under a trade effluent licence. The on-site treatment also allows for the recycling of water back into the process, reducing water supply needs. Air emissions (dust and solvents) from the finishing process are passed through abatement plant to meet the emission limits of PPC permits.

### Compliance in the leather sector for 2011 and 2017 (Figure 8)



### Key issues contributing to non-compliance (2011)

- Odour complaints
- Non-conforming air emissions

- ✓ Compliant
- ✗ Non-compliant

<sup>8</sup> Compliance with environmental authorisations is currently measured by our Compliance Assessment Scheme. This scheme is currently being reviewed.

## **Key issues contributing to non-compliance**

The Scottish leather sector as a whole has a good compliance record and has been getting better over time. Over the last seven years the main items marked for non-compliance were mainly surrounding two factors:

- Substantiated odour complaints received and investigated by SEPA.
- Air emissions failing to meet the permit emission limits.

We will help responsible compliant businesses to operate by making it significantly harder and more expensive for those who persistently fail to comply with environmental regulation to operate. We will achieve this by increasing scrutiny, prescription, fees and the use of enforcement and monetary penalties for those who fail to comply.

SEPA will:

- continue to explore odour management with both the sector and partner organisation;
- continue to review site permits to ensure they are fit for purpose;
- provide appropriate support to those within the sector who pro-actively engage with community groups.

## **Where are the opportunities to go further?**

We believe that those societies and economies that are low resource use, low energy use, low water use and low waste will be the most successful in the 21st century. Businesses that are the most innovative will best rise to the challenges of our time, such as over use of resources and climate change and create sustainable economic growth.

To do this, every business must reach full compliance with environmental laws. But mere compliance and small scale incremental change will not be enough. At SEPA we want to help businesses and sectors to implement successful innovation and support them in their ambitions to do more than they are required to by regulation.

We call this 'moving beyond compliance': helping already high performing businesses to do more for the environment because it makes sense for them to grow in a sustainable manner.

## Water

**Water in the right place, in the right amount and of the right quality underpins our society and economy. We need water to drink, wash, grow food, supply power, build things and maintain the benefits we all receive from a healthy functioning natural environment. Scotland's water resources vary by orders of magnitude in time and space and uncontrolled exploitation of water can affect its availability for other uses. This may be by increasing flood risk, reducing water availability, polluting water supplies or introducing invasive species into rivers, lochs and groundwater. All of these risks may be further enhanced as our climate changes and it is important that sector plans take account of risks from and to water resources. Water quality is important to the sector so that the process of tanning and finishing can be achieved in a consistent manner, and to a high standard.**

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SEPA is developing a Flood Strategy which will consider themes of future change, social impact and extended engagement in defining our ambition and outcomes to deliver effective flood risk management now and in the future. Early and strong links between this sector plan and flooding will strengthen opportunities for co-outcome delivery.

SEPA's aspirations are:

- Work with the sector to identify partnerships with stakeholders on shared objectives to improve water management.
- Bring together experts in water innovation from across all business sectors to share experience and best practice ideas.
- With sector partner organisations, ensure the sector is resilient to climatic changes, especially around flood risk and water scarcity issues.

## Energy

**Energy is an essential resource that enables social and economic development, however while energy is fundamental to the economy, electricity and heat production, transmission, storage and use can have significant environmental impacts.**

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How we use and manage our energy resources is central to our ability to live within the resources of our planet. Energy is one of the most important aspects of the transition to a sustainable low carbon economy and there are often cost savings and other benefits for businesses associated with improving their energy efficiency and making use of alternative sources of energy.

SEPA's aspirations are:

- With partners and the sector, explore potential efficiency savings and innovative ways to produce leather whilst reducing the environmental impact.

- Help business to recognise the opportunities available to utilise low carbon, environmentally sensitive energy sources not only in their own processes but also in their supply chain.
- Work with partners and business to identify where opportunities might exist to minimise environmental impacts associated with energy use.
- Use our partnership opportunities to help business access advice and guidance and use our regulatory levers to drive behaviours that support low carbon energy use.

## Materials

**SEPA views the circular economy as a game-changing opportunity to manage resources within planetary limits, reduce the harms associated with waste management and create economic opportunities. We must dramatically cut waste production across the leather sector, recover more and dispose of only the very minimum. Where waste leather and by-products are produced, we will always seek to facilitate the productive use to help achieve the outcome of SEPA's Waste to Resources Framework and strong environmental protection.**

**Not only can resource efficiency improve productivity, and the bottom line for the leather sector, it can bring environmental improvements and reduce our reliance on virgin raw materials.**

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SEPA's aspirations are:

- Initiate discussions surrounding zero waste with partners from related sector plans and our key influence map.
- Work with the leather sector and others to explore the reduction in chemical use within leather manufacture.

## Circular economy

**Due to a globalised market single use products became the norm, however this trend is turning due to an unprecedented awareness in environmental impact. When leather products have come to the end of their life they are still a high value material. We will initiate discussion between the sector and other sector supply chains to explore end of life leather reclamation as an alternative to disposal.**

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SEPA's aspirations are:

- In partnership with others, explore the potential for a leather take back scheme.
- Work with partner organisations to explore potential leather clothing banks and the infrastructure to support this.

- Facilitate discussions on the use of leather manufacture's high protein content material residues as a raw material within the pet food industry and other sectors.

## Non-permitted leather manufacturers

**Given the nature of leather manufacture on a smaller scale, there are potentially real opportunities which could be explored which would result in a benefit to both the environment and to the organisation itself.**

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SEPA's aspirations are:

- Increase our knowledge of leather producers that are below the PPC regulatory threshold.
- Facilitate discussions between trade bodies, partner associations and those sites which we do not currently regulate.
- With partners and the sector explore potential efficiency savings and innovative ways to produce leather whilst reducing the environmental impact.

## What actions are we going to take?

The following table summarises the actions that we have described above to keep compliance in the sector and, working in partnership, help businesses take opportunities to go beyond compliance. These are described according to the key outcomes that we would like this sector plan to achieve. The actions and aspirations set out are our initial thoughts on what needs to be done to achieve the aims of this sector plan. We are at an early stage in sector plan development, and the actions that we prioritise will be informed by the findings of this consultation and further internal discussions between now and March 2019.

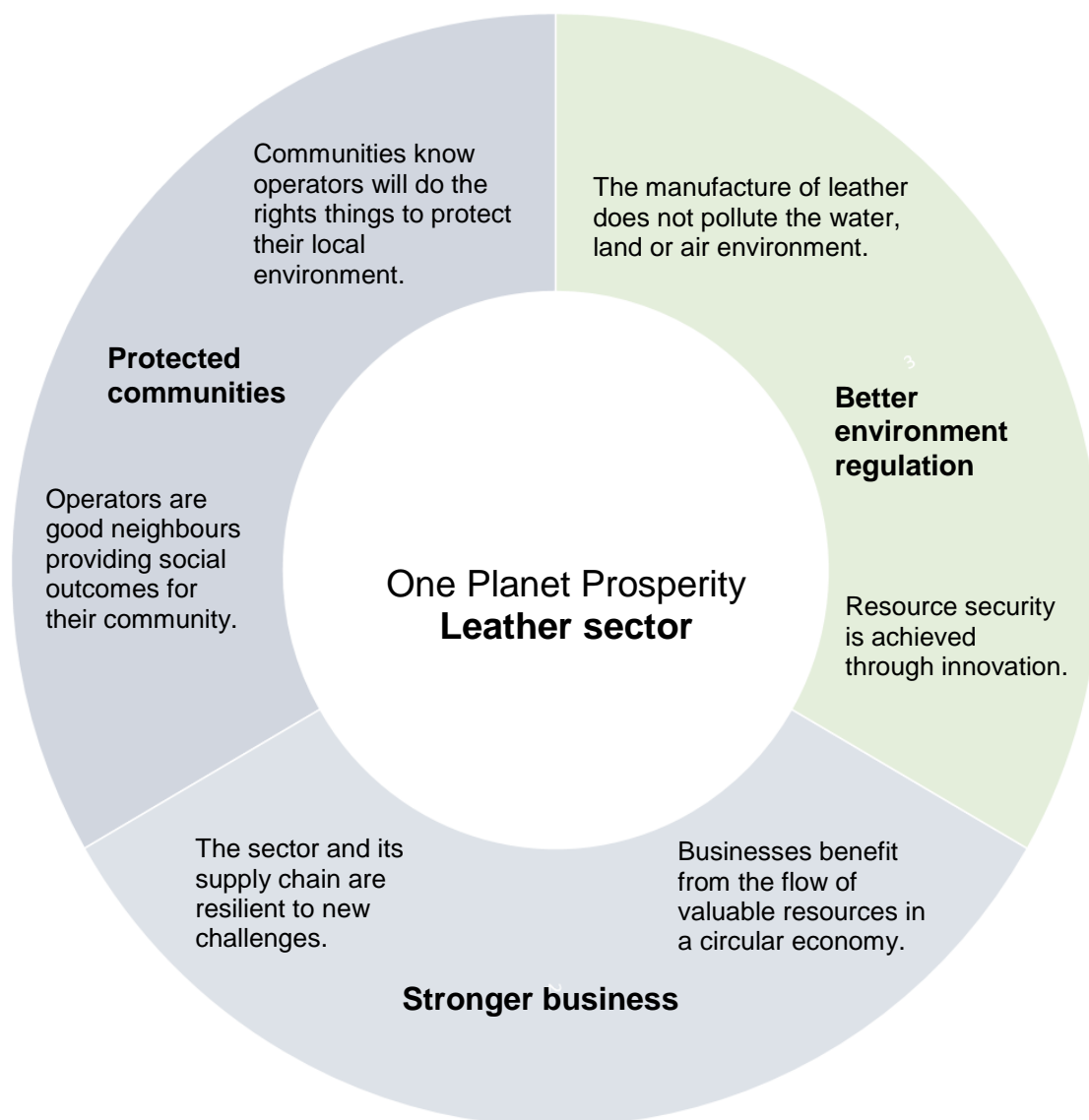
Outcome sought	Actions and aspirations
The manufacture of leather does not pollute the water, land or air environment.	<ol style="list-style-type: none"> <li>1. Continue to explore odour management with both the sector and partner organisations.</li> <li>2. Continue to review site permits to ensure they are fit for purpose.</li> <li>3. Work with the sector to identify partnerships with stakeholders on shared objectives to improve water management.</li> <li>4. Work with the leather sector and others to explore the reduction in chemical use within leather manufacture.</li> </ol>
The sector and its supply chain are resilient to new challenges.	<ol style="list-style-type: none"> <li>5. Bring together experts in water innovation from across all business sectors to share experience and best practice ideas.</li> </ol>

	<p>6. With partners and the sector explore potential efficiency savings and innovative ways to produce leather whilst reducing the environmental impact.</p> <p>7. Initiate discussions surrounding zero waste with partners from related sector plans and our key influence map.</p>
Communities know operators will do the right things to protect their local environment.	<p>8. Increase our knowledge of leather producers that are below the PPC regulatory threshold.</p> <p>9. Facilitate discussions between trade bodies, partner associations and those sites which we do not currently regulate.</p>
Operators are good neighbours, providing social outcomes for their community.	<p>10. Provide appropriate support to those within the sector who pro-actively engage with community groups.</p>
Resource security is achieved through innovation.	<p>11. With sector partner organisations, ensure the sector is resilient to climatic changes, especially around flood risk and water scarcity issues.</p> <p>12. Help business to recognise the opportunities available to utilise low carbon, environmentally sensitive energy sources not only in their own processes but also in their supply chain.</p> <p>13. Work with partners and business to identify where opportunities might exist to minimise environmental impacts associated with energy use.</p>
Businesses benefit from the flow of valuable resources in a circular economy.	<p>14. With partners and the sector explore potential efficiency savings and innovative ways to produce leather whilst reducing the environmental impact.</p> <p>15. Use our partnership opportunities to help business access advice and guidance and use our regulatory levers to drive behaviours that support low carbon energy use.</p> <p>16. In partnership with others, explore the potential for a leather take back scheme.</p> <p>17. Work with partner organisations to explore potential leather clothing banks and the infrastructure to support this.</p> <p>18. Facilitate discussions on the use of leather manufacture's high protein content material residues as a raw material within the pet food industry and other sectors.</p>

## 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 protects communities and enable businesses to operate effectively and successfully in their markets.

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

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