

STRATEGIC
INFRASTRUCTURE
(TRANSPORT AND UTILITIES)
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/strategic-infrastructure>



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. We will:

1. 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 draft sector plan outlines how we will do this in regulating the strategic infrastructure (transport and utilities) sector.

The type of infrastructure a society chooses to build says a lot about the type of future it is choosing for itself. Does a society lock in a high-carbon and resource-wasteful future? Or does it build a future that is as low as possible in using natural resources in the construction of infrastructure and in the lifestyles that this infrastructure supports?

That is why this draft sector plan for strategic transport and utilities infrastructure is so important. At SEPA, we are determined to play our role in helping Scotland develop infrastructure that creates a very different future for Scotland - infrastructure that locks in low environmental impact and, therefore, better and more lasting social and economic success.

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

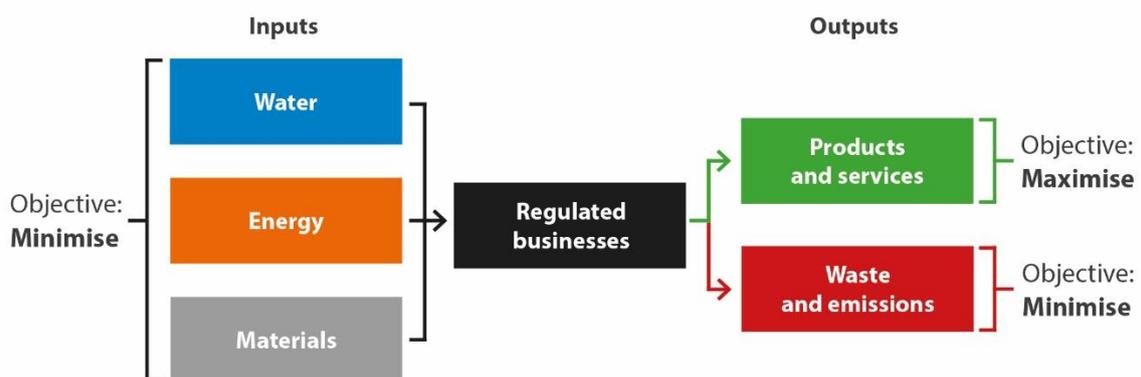
For SEPA to help create a prosperous Scotland that lives within the means of our one planet, we need to radically change the way we work. In the past our approach to regulation has been grounded in the different set of rules we manage to protect the environment. This has helped us to deliver, for example, 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 will 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.

For the Strategic Infrastructure (Transport and Utilities) Sector Plan, the terms businesses and operators should be read as all-embracing terms which refer to everyone we regulate in the sector.

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)



For this sector plan, the output is wider than a product or service for sale, as it comprises physical infrastructure assets with a long lifespan which are designed for mass public use. The above flow of resources can be translated into the following environmental impacts to minimise and outputs to maximise that are particular for this sector. This is especially true for inputs related to land use. These are:

Inputs to minimise (environmental resource consumption):

- Water: modification of rivers, wetlands and Ground Water Dependent Terrestrial Ecosystems (GWDTE) that reduces environmental capacity; increase in flood risk.
- Energy: hydrocarbon use.
- Materials: reduction and/or insensitive use of greenfield land and wilderness; peat disturbance.

Outputs to maximise (benefits):

- Renaturalised watercourses.
- Net environmental gain.
- Low carbon/active travel.
- Green infrastructure.

Outputs to minimise (waste and emissions):

- Construction and demolition waste.
- Diffuse and point source pollution of the water environment.
- Contaminated land and soils.
- Dust and noise.
- Air quality impacts (e.g. PM₁₀).

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 draft plan for the strategic infrastructure (transport and utilities) sector. It details how SEPA is going to regulate the sector and work with it to protect and improve the environment. The plan's focus is infrastructure associated with transport (trunk roads, railways, airports and ports) and utilities (energy, water, sewerage and telecommunications networks). This primarily means physical assets with high capital costs designed for mass public use. The plan considers the whole lifecycle of the infrastructure and will also cover any mitigation measures that influence the impact of processes, vehicles or materials which

use the infrastructure - for example installation of effective road drainage to reduce the discharge to rivers of heavy metals from vehicles. For the purposes of this plan, the vehicles, materials or processes themselves are not in scope. While we will look at how we might encourage measures to support a more sustainable future in the way infrastructure is designed and built, such as measures to increase provision of infrastructure to support the move to electric vehicles, this iteration of the plan does not cover influencing public choices to use more sustainable processes. This is something we may consider in future.

The plan explains how we will work directly with operators and stakeholders, and includes ways in which we will work with them to use our shared influence to improve environmental performance throughout the industry supply chain.

Consultation question 1:

This is the scope that we are proposing for our Strategic Infrastructure (Transport and Utilities) Sector Plan. Do you agree with this?

2. Our vision for the strategic infrastructure (transport and utilities) sector

We want this sector plan to help industry transform, to deliver One Planet Prosperity, and help us achieve a sustainable Scotland that is well-connected, resilient and successful.

This will mean:

- strategic infrastructure is designed, built and managed in a way that ensures minimal environmental impact and maximum social benefit;
- strategic infrastructure is in place which:
 - is climate change ready;
 - enables a low carbon economy;
 - uses a circular economy approach to minimise the materials entering the waste stream and to ensure that waste (or secondary) materials are recycled for further use wherever possible;
 - delivers net environmental gain;
 - delivers long term integrated solutions rather than short term, single issue fixes.
- a cultural change in the sector means the industry, from client to contractor, places a high degree of value in the sustainability and impact of strategic infrastructure, and does not place such heavy weighting on the immediate financial cost;
- all operators in the sector are working within a financial and legislative context that supports the delivery of their environmental obligations and allows them to take full advantage of beyond compliance opportunities;
- the sector engages with a wide range of stakeholders from the outset, ensuring the impact on communities is minimised and benefit is maximised;
- the sector is driven by clients who are 'intelligent customers': they know what good environmental performance looks like and what it takes to achieve it, and take this into consideration during their procurement processes.

Consultation question 2:

This is the vision that we are proposing for our sector plan. Do you think that this sets the right level of ambition for the sector? Is there anything that you think should be included or changed to improve this vision?

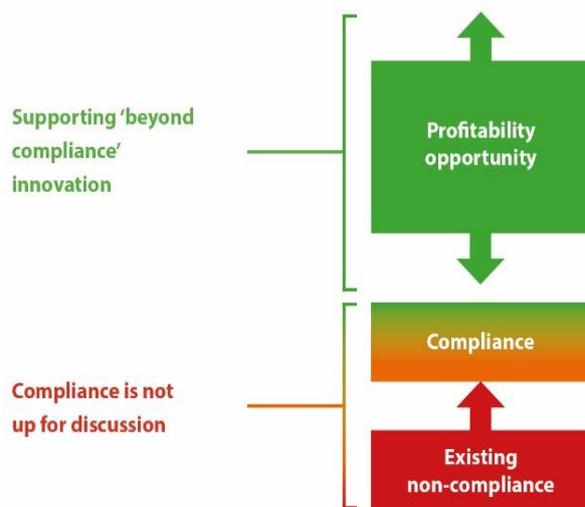
Our objectives

The objectives of the Strategic Infrastructure (Transport and Utilities) 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 strategic infrastructure (transport and utilities) sector. For our vision and objectives to be achieved our staff will work with partners and facilitate liaison between them and the 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 strategic infrastructure (transport and utilities) sector on a pathway to becoming a 'one planet' sector.

3. The strategic infrastructure (transport and utilities) sector

Sustainable, high quality, resilient and climate-ready infrastructure for transport and utilities provides the framework on which Scotland's social, environmental and national economic success relies; everything we do is built around our strategic infrastructure network. We rely on roads and rail for transporting freight, for getting to work, for access to leisure spaces, and visiting family. Infrastructure carries water and energy to and waste from our homes and businesses. Our professional and personal interactions are increasingly taking place online, relying on digital communication networks and the electricity to power them.

Delivery of a largely decarbonised energy system by 2050 will be influenced by innovations and developments that are difficult to forecast today. It will depend to a large extent on global and regional markets, geopolitics and consumers' willingness to adapt to new opportunities and behaviours, as well as on the underlying costs of primary energy sources and the related infrastructure¹. However, all the changes that need to take place will require new infrastructure to enable the decarbonisation of heat, electricity and transport as outlined in the Scottish Energy Strategy and Climate Change Plan, namely:

- The equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources by 2030².
- To phase out the need for new petrol and diesel cars and vans by 2032¹.

Changing demographics, new technologies and the need to respond to the demands of climate change will influence the way infrastructure in Scotland is built and used. It is predicted that Scotland's population will rise from 5.40 million in 2016 to 5.69 million in 2041³. Decarbonisation of transport will influence our travel and work patterns and fundamentally change both our electricity and transport systems. Delivering infrastructure to meet our climate change and energy commitments, and ensure resilience to flooding and the growing risks from heat, water scarcity and severe weather⁴ will pose significant challenges to the sector. It will also provide significant opportunities.

Infrastructure⁵ has been a strong driver of growth in Scotland in recent years, with construction output⁶ peaking in 2015 at over £3.6bn (2015 prices), which was 26% of all construction in that year - double that of the rest of the UK⁷. This growth was driven by a number of large infrastructure projects, such as the Queensferry Crossing, Aberdeen Western Peripheral Route (AWPR) and Beaulieu-Denny powerline. As these major schemes have reached completion, output for the sector has declined since 2016⁷. There are other sizeable infrastructure projects in progress or planned such as the dualling of the A9 and A96 trunk roads, the Aberdeen to Inverness rail upgrade, a significant number of wind and solar farms and upgrades to the transmission network (Figure 4). However these projects are spread over much longer timescales, and so their impact on sector growth is diluted⁷.

¹ Climate Change Plan Third Report on Proposals and Policies 2018-2032, Scottish Government, 2018

² Scottish Energy Strategy: The future of energy in Scotland, Scottish Government, 2017

³ Projected Population of Scotland (2016-based), National Records of Scotland, 2017

⁴ UK Climate Change Risk Assessment 2017: Evidence Report Summary for Scotland, Committee on Climate Change, 2017

⁵ 'Infrastructure' in this context includes local, as well as strategic-level transport and utilities infrastructure (e.g. local roads as well as trunk roads), but does not include housing, schools, hospitals etc.

⁶ 'Output' = total value of all goods and services produced in an economy.

⁷ Industry Insights, Construction Skills Network Forecasts 2018-2022, Construction Industry Training Board, 2018

Facts and figures (Figure 3)⁸

Queensferry Crossing

Suspended bridge from three towers with a 2.7km span over the Firth of Forth and connecting roads. It is the tallest bridge in the UK.



22km

Length of connecting roads



37,000km

Length of cable used



1.34 billion

Total cost of the project



6 years

Time taken to construct



1,200

Job opportunities created in the local area

Beauldy-Denny Power Line

Longest transmission line to be built anywhere in the UK. Operates at up to 400 kilovolts. It can provide enough energy to supply a city one and a half times the size of Glasgow.



220km

Amount of overhead line



615

Number of steel towers constructed (replacing 800 pre-existing ones)



680 million

Capital investment



7 years

Time taken to construct



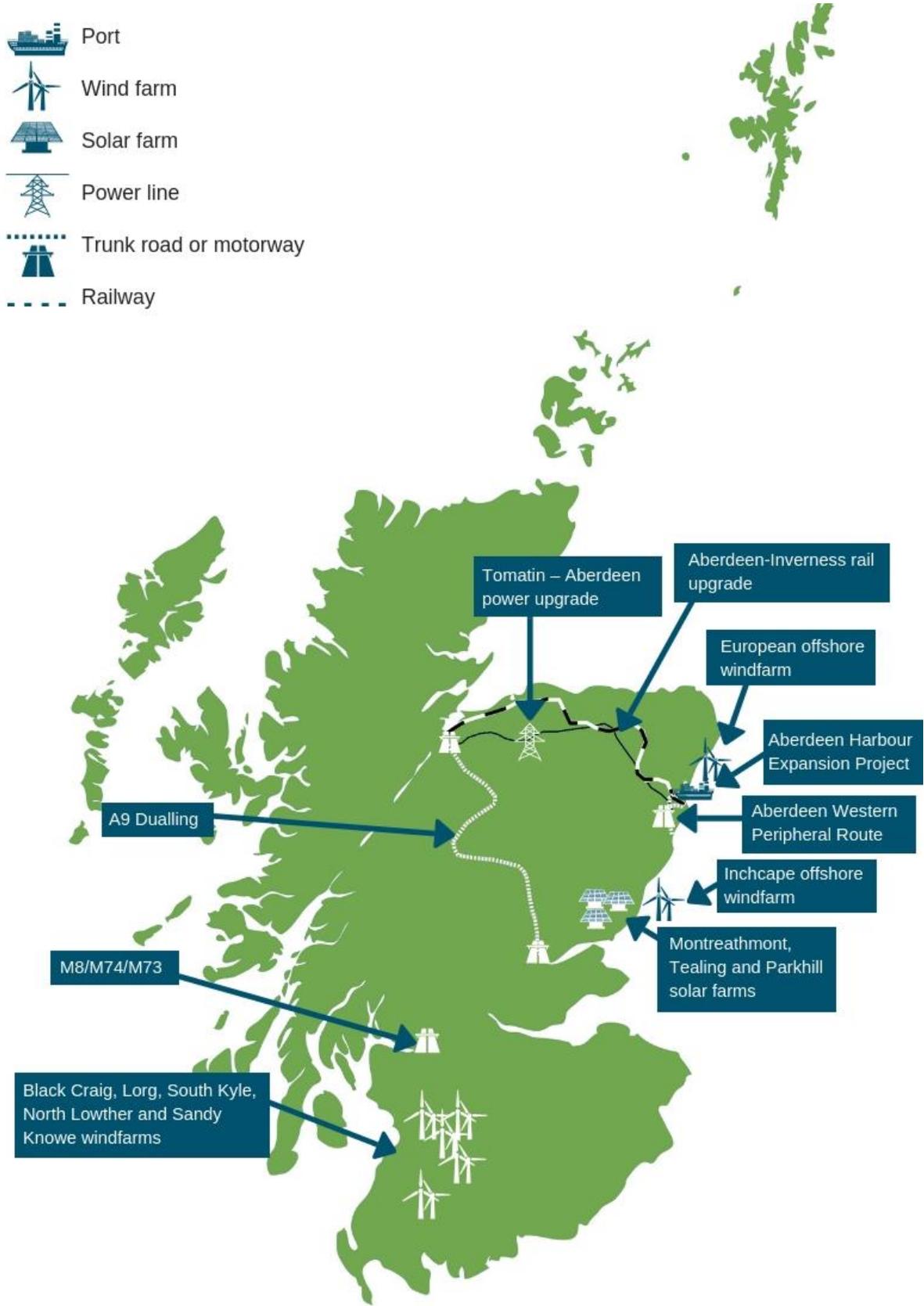
2,000

Job opportunities created

⁸ Sources

www.transport.gov.scot/projects/forth-replacement-crossing/project-details/#
www.ssen-transmission.co.uk/projects/beauldy-denny/
www.ssen-transmission.co.uk/news-views/articles/2016/5/scottish-hydro-electric-transmissions-1-billion-investment-in-the-north-of-scotland/

Examples of recently completed, currently under construction, and planned strategic infrastructure (transport and utilities) projects (Figure 4)



Decision-making surrounding infrastructure for transport and utilities in Scotland is complex, with a mixture of devolved/reserved powers and public/private ownership, as well as several funding and finance sources (Figure 5).

Scottish transport and utilities infrastructure - policy decision making, ownership, delivery and funding (Figure 5)^{9,10}

Type	Powers devolved or reserved	Ownership	Scottish delivery bodies	Funding	Financing
Road	Devolved	Public	Transport Scotland (trunk roads)/ local authorities (non-trunk roads)	Tax	Scottish Government/Private PPP
Rail	Scottish Government (internal services) UK Government (cross-border services)	Public	Transport Scotland/Scotrail Alliance	User charges/tax	Public budgets/regulated asset base
Major airports	Devolved powers, with some minor exceptions	Private	Transport Scotland	User charges	Private corporate
Rural airports	Devolved responsibility	Public	Transport Scotland	Tickets/tax	Scottish Government
Major ports	Devolved powers, with some minor exceptions	Private	Local authorities	User charges	Private corporate
Local authority ports		Public	Local authorities	Tax	Scottish Government
Energy	Reserved powers	Private		User charges	Private/part regulated
Communications	Reserved powers	Private		User charges	Private/part regulated
Water/Waste water	Devolved powers	Public	Scottish Water	User charges	Scottish Government

⁹ The State of the Nation Scotland 2018: Infrastructure Investment, Institution of Civil Engineers Scotland, 2018

¹⁰ While energy policy is reserved, certain aspects such as energy efficiency and planning powers for granting/refusing permissions for generation are devolved. The Scottish Government is also committed to setting up a publicly owned energy company.

In 2015 the Scottish Government published its latest Infrastructure Investment Plan (IIP) which provides information on projects worth over £20m where the Scottish Government has a lead role in procurement or funding¹¹. As of March 2018, projects costing £2.5bn have been completed, with £3.6bn in construction, and a further £1.3bn planned¹². The 2018-2019 Programme for Government (PfG) set out the Scottish Government's mission to increase annual infrastructure investment in Scotland so it is £1.5bn per year higher by 2025-2026 than in 2019-2020, to support faster broadband, improved transport and low-carbon energy infrastructure¹³. This is a significant commitment to a long-term level of infrastructure spend, which could provide major social, environmental and economic opportunities. Future strategic investments will be guided by advice from the newly-formed Scottish Infrastructure Commission¹².

Consultation question 3:

Does this narrative broadly set out the context for the strategic infrastructure (transport and utilities) sector in Scotland? Is there anything that is missing, or which should be changed?

¹¹ Infrastructure Investment Plan 2015, Scottish Government, 2015. 'Infrastructure' in the context of the IIP covers transport, digital, energy, water, health, education, housing, schools, justice and culture.

¹² The State of the Nation Scotland 2018: Infrastructure Investment, Institution of Civil Engineers Scotland, 2018

¹³ Delivering for today, investing for tomorrow: the Government's programme for Scotland 2018-2019, Scottish Government, 2018.

4. Environmental impacts and how we manage them

Environmental impacts throughout the infrastructure lifecycle

Environmental impacts (Figure 6)

Construction

- Loss of greenbelt and habitat fragmentation.
- Raw material extraction.
- Greenhouse gases, air quality impacts, and fossil fuel use from plant and transport of materials.
- Peat disturbance.
- Emissions to air from cement and concrete manufacture.
- Impacts to groundwater and downstream watercourses from dewatering and process water abstractions.
- Noise.
- Emissions to water.
- Waste disposal.

Operation

- Polluted run-off from vehicles.
- Greenhouse gas emissions from fossil fuel use.
- Accidental spills.
- Noise and particulates.
- Antifreeze and salt.
- Noise.
- Emissions to water.
- Littering.

End-of-life

- Noise and dust from materials processing.
- Disposal of unfit materials.
- Impacts to groundwater from water abstraction for materials processing.
- Greenhouse gases and fossil fuel use from plant and transport of materials.
- Emissions to water from plant and processing.
- Waste disposal.

Consultation question 4:

Do you think we have identified the main environmental impacts of the sector in Figure 6? Are there any other impacts that concern you that should be included?

Environmental regulation of the strategic infrastructure (transport and utilities) sector

What is SEPA's regulatory role?

Under the Environmental Assessment (Scotland) Act 2005, public plans, programmes and strategies must be subjected to Strategic Environmental Assessment (SEA). SEA is a key part of sustainable development, protecting the environment and offering the public an opportunity to participate in decision making. SEPA, along with Scottish Natural Heritage (SNH) and Historic Environment Scotland (HES), is a Consultation Authority for SEAs, and thus has an opportunity to make comments at this stage for infrastructure programmes that are to be built using public funding, such as new trunk roads or motorways.

SEPA is a key agency in the land use planning process in Scotland, providing environmental advice to planning authorities, developers and the wider public. Under the Planning etc. (Scotland) Act 2006 we proactively assist in the delivery of the Scottish Government's commitment to provide a more effective and efficient planning system. We provide formal environmental advice in relation to development plans and on a wide range of development proposals across Scotland.

While we issue authorisations for discharges from the drainage serving some major roads, SEPA's direct regulation of these infrastructure developments is concerned for the most part with the construction phase, where the following regulatory regimes apply:

- The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR).
- The Pollution Prevention and Control (Scotland) Regulations 2012 (as amended) (PPC).
- The Environmental Protection Act 1990 (WML).
- The Special Waste (Scotland) Regulations 1997.
- The Waste Management Licensing (Scotland) Regulations 2011 (activities exempt from WML).
- The Environmental Protection (Duty of Care) (Scotland) Regulations 2014.

Historically, SEPA has issued authorisations to large infrastructure projects for engineering works impacting rivers, such as culverts, realignments or bank reinforcement, and for mobile plant conducting crushing of stone or concrete; and has registered exemptions from waste management licensing for the recycling or recovery of material that has entered the waste stream, such as the use of surplus soil and stones for relevant works. Through our work with planning authorities, we have encouraged the adoption of zero waste principles, where as much material as possible generated on site during construction is re-used within the site. All strategic infrastructure construction results in large quantities of material that could potentially enter the waste stream. SEPA's policy applies the waste hierarchy of prevention, minimisation, re-use and recycling, with a goal of zero waste disposal, in line with our Waste to Resources Framework¹⁴ and the Scottish Government's Zero Waste Plan and Circular Economy Strategy¹⁵.

¹⁴ One Planet Prosperity: A Waste to Resources Framework, SEPA, 2016

¹⁵ Making Things Last: a circular economy strategy for Scotland, Scottish Government, 2016

Construction can also give rise to nuisance, mainly in the form of dust and noise. The local authority, rather than SEPA, is the competent authority for the regulation of noise from vehicles or road works, however we can exercise control over dust and noise where these arise from plant authorised under PPC.

As well as peat disturbance, the most significant impacts arising from the construction of large-scale infrastructure are often from silt-contaminated surface water. Until January 2018, SEPA's primary tools for regulation of surface water from construction sites were the CAR General Binding Rules 10 and 11, covering discharges from and into a surface water drainage system respectively. In January 2018, amendments to the legislation restricted the application of the GBRs to smaller construction sites so that larger sites now need to apply for the appropriate licence (a Construction Site Licence), enabling SEPA to take a more active and flexible approach to controlling this type of pollution. This will also enable us to benchmark compliance in a way that we have previously been unable to do.

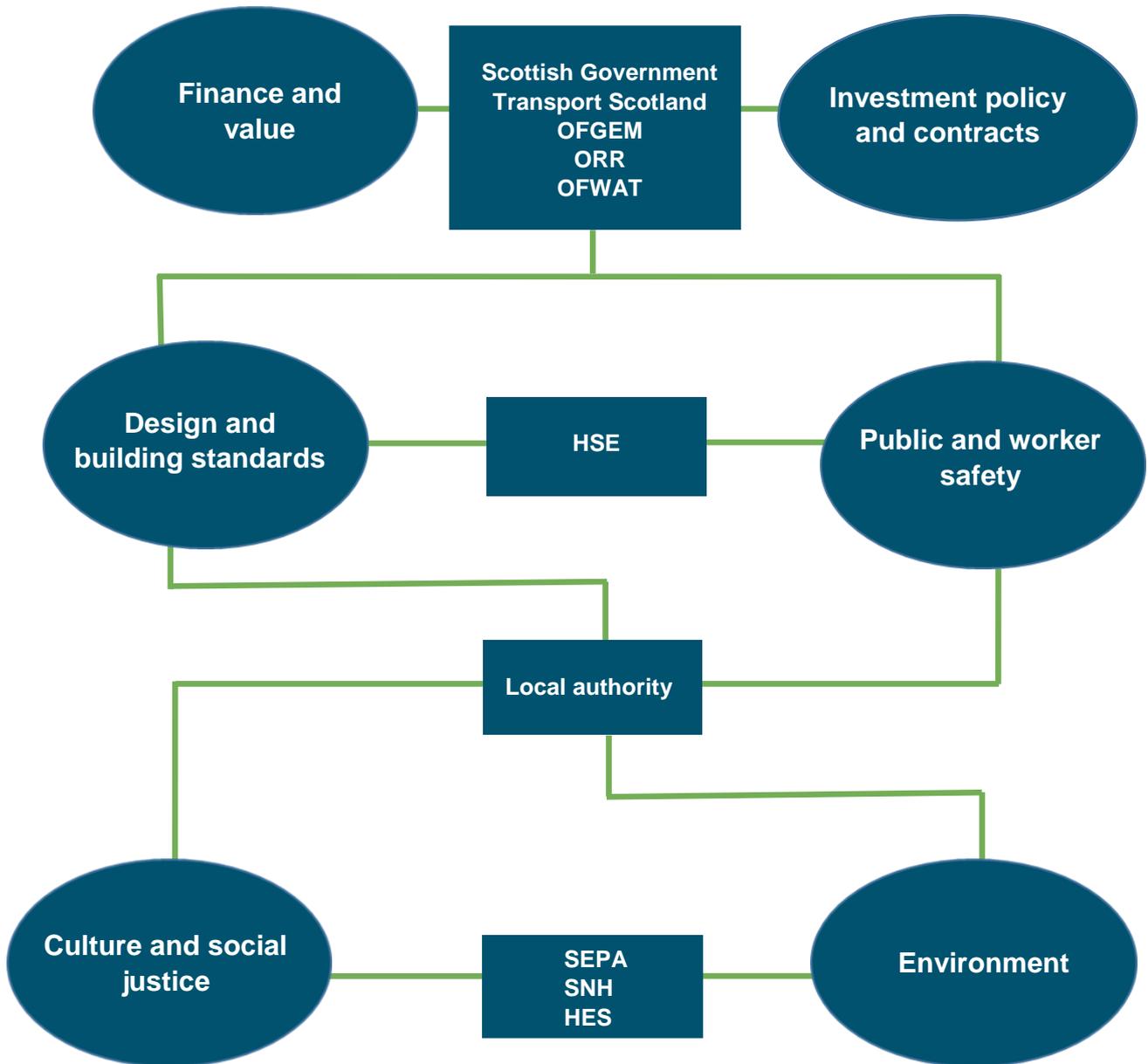
Around 80% of environmental legislation in Scotland originates from the European Union. As the UK leaves the EU, changes will, where necessary, be made to domestic legislation to ensure that the standards of environmental protection we enjoy today and the principles upon which they are based are maintained. 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.

Other regulators

The financing, design, building and operating of much large scale infrastructure is regulated by a number of agencies other than SEPA. These include the Office for Gas and Electricity Markets (OFGEM), the Office of Road and Rail (ORR), the Water Services Regulation Authority (OFWAT) and the Health & Safety Executive (HSE). Commercial developments, such as windfarms, may also be subject to regulation by one or more of these authorities. Regulators ensure that strategic infrastructure falling under their remit offers value for money, provides security of service, and delivers government programmes. The agencies who procure public-funded projects (known in the sector as 'clients' or 'owners', and referred to as 'clients' in this plan where they are acting as a procuring agency rather than a regulator) include Transport Scotland, Scottish Water, local authorities, and Scotrail Alliance. It is for these agencies to determine whether or not a particular piece of infrastructure should be developed, taking into account the above criteria. Other regulators, such as Scottish Natural Heritage (SNH) and Historic Environment Scotland (HES), may be statutory consultees and influence some of these factors, as long as it directly relates to their regulatory remit.

An overview of direct regulatory remit and reserved areas is given in Figure 7. These agencies will certainly have influences outside their direct authority, but this diagram attempts to explain where there is a statutory duty: for instance, although the Health & Safety Executive carries direct responsibility for regulating the safety of people, a client also has a duty to its employees, as does a local authority when building or maintaining a road. Also, while there is a direct statutory obligation to take the environment into account at the Strategic Environmental Assessment stage, when it comes to construction and operation, the current mode of working results in clients passing liability for environmental compliance onto their contractors via the terms of the contract.

Regulatory responsibilities of agencies involved in finance, design, building and operation of infrastructure for transport and utilities (Figure 7)



Consultation question 5:

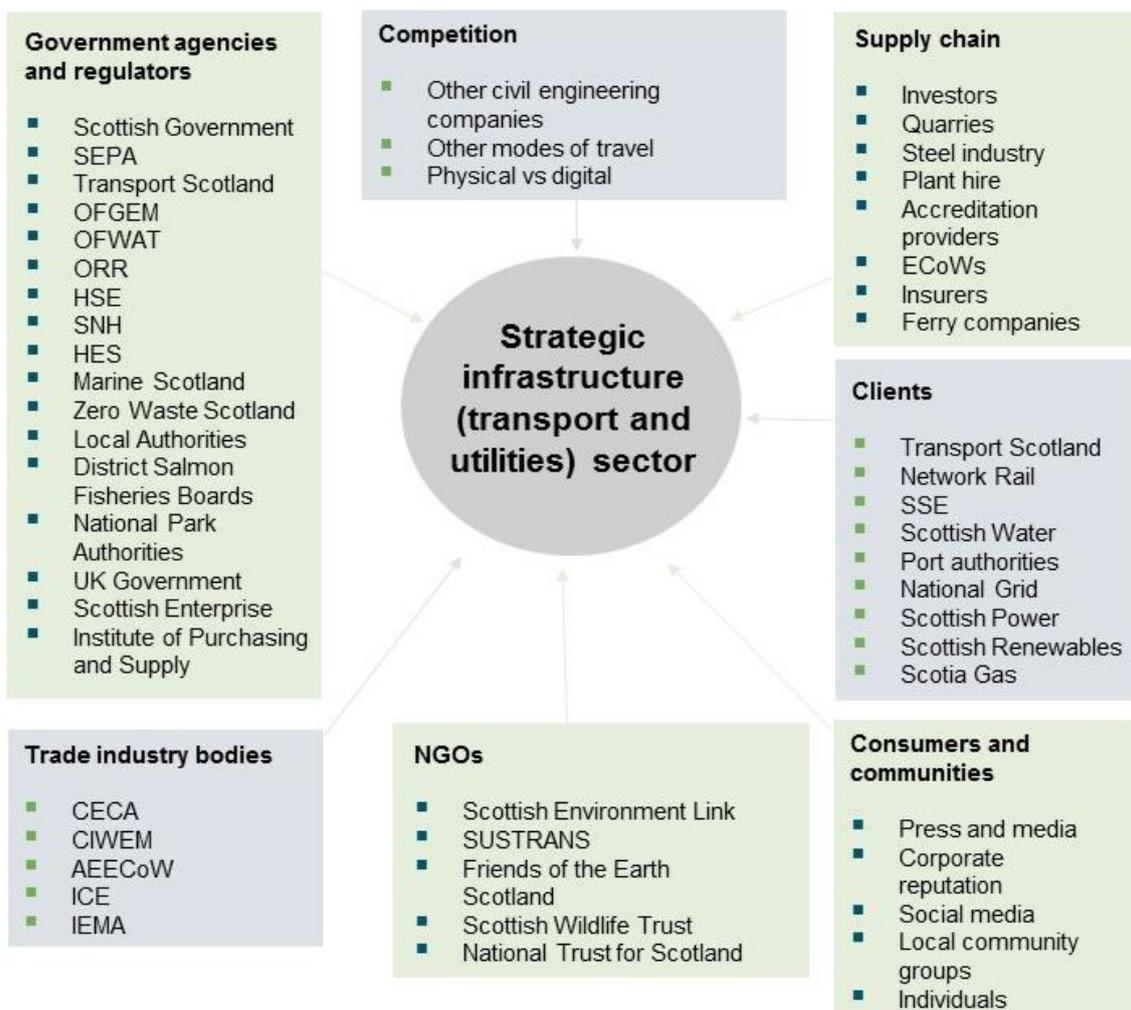
Have we described the regulation of the sector correctly? Are there any aspects that we have missed?

Wider influences on environmental performance of the strategic infrastructure (transport and utilities) sector

Full compliance with environmental regulations will not, by itself deliver the transformational change required to secure our One Planet Prosperity objectives. The Strategic Infrastructure (Transport and Utilities) 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 8 summarises the main organisations that influence and are influenced by operators in the strategic infrastructure (transport and utilities) 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 the strategic infrastructure (transport and utilities) sector (Figure 8)



Consultation question 6:

These are the key partners and influences that we have identified who may be able to help us work to achieve our outcomes. The list is not intended to be exhaustive, but, do you think we have missed anyone?

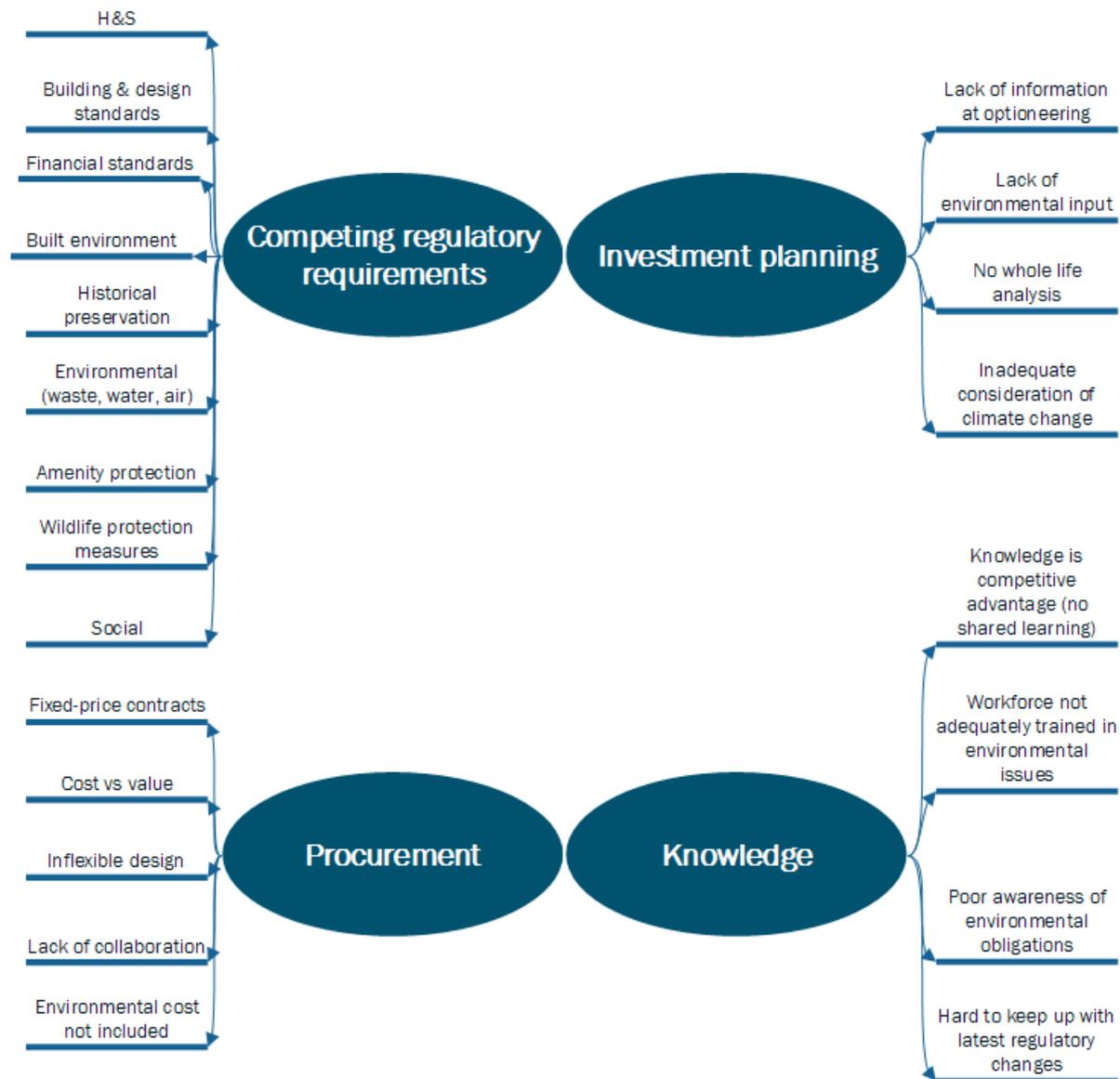
The sector is subject to a complex and occasionally conflicting set of regulatory influences. Trying to fulfil the requirements of different regulators can prove extremely challenging. For instance, SEPA's requirements for roadside drainage may be different from that of the local authority's roads department, and a design that SEPA will approve may not be acceptable to the local authority. This is complicated by the tendency to discover these issues at a relatively late stage, i.e. once the contractor has been appointed and is finalising designs with a view to starting construction. This can also happen once construction is already underway on particularly complex projects.

Other complications arise as a result of the information available for use in early optioneering. It is impossible to, for instance, rule out the routes that would result in large amounts of peat disturbance if there is no record of peat deposits to compare against.

It is recognised that sometimes the requirements of the different regulatory regimes which apply to the sector can result in conflicting regulatory obligations (Figure 7). One Planet Prosperity requires us to minimise our use of resources, especially raw materials; if waste legislation and lack of suitable engineering standards means that waste aggregate from one site cannot easily be used on another, then that is disincentivising the re-use of secondary materials. If assessment under planning permission assumes that a windfarm site would be completely reinstated to its natural state at the end of the windfarm's design life, it is harder to gain planning permission for an extension, even if the company wishes to refurbish and repower.

SEPA led the 2011 review of the SEA process, which identified that SEA worked well for environmental improvements when used as a plan shaper, where the responsible authorities used the SEA results to make changes to their decision making. SEA did not work as well when employed after major policy decisions had already been made, and the SEA was used for 'greening the edges'.

Key issues identified by the sector as impeding compliance achievement and beyond compliance opportunities (Figure 9)



Consultation question 7:

To help inform how we can best address non-compliance and encourage uptake of beyond compliance opportunities, we want to understand what issues may exist. Although this list is representative rather than comprehensive, have we identified the right issues which may impede compliance or uptake of beyond compliance opportunities, for the purposes of this plan? Are there others we should include?

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

Compliance in the sector

Compliance¹⁶ with environmental law is non-negotiable and regulated businesses in the sector need to comply.

The legislation which regulates activities at construction sites does not permit a site to be treated as a single entity operating under a single licence. Rather, there are sets of rules and regulations governing particular activities on a construction site, such as river bank engineering or crushing of aggregate. Some activities are covered by General Binding Rules (GBRs) or Waste Management Licensing Exemptions (WMX) that do not require operators to notify SEPA. This makes an assessment of compliance complicated, as explained by some examples below.

Until January 2018, discharges of surface water from infrastructure assets under construction were governed solely by the Controlled Activities Regulations (CAR) GBRs, and there was no requirement for an operator to notify SEPA of an activity being undertaken in compliance with the GBRs. Permanent drainage, which may be licensed where the asset crosses a threshold of at least 1km of dual carriageway, is authorised, but SEPA does not consider that the discharges pose sufficient risk to require routine monitoring and they therefore do not appear on the Compliance Assessment Scheme (CAS). Engineering licences for bridges, culverts, permanent realignments etc. are also not included on CAS. As a result, there is no compliance history for this sector from the point of view of the primary environmental impact, which is to the water environment. WMX are also not part of CAS.

Further complications arise because where activities need to be authorised, they may not be identified as being part of a single project. This is particularly the case with use of waste on off-site projects (e.g. WMX paragraph 19) and mobile plant deployment (e.g. aggregate crushing).

As part of this plan, we will therefore assess how to measure compliance and success with the various regulatory regimes covering the whole sector, and explore how best to take this compliance and assessment forward as we move into the Integrated Authorisation Framework.

The key issues contributing to non-compliance in activities we directly regulate are:

- mis-management and illegal disposal of waste during construction, renewal and demolition phases;
- surface water management, both during construction/renewal/demolition and over the life time of the infrastructure;
- engineering, including unauthorised works and authorised works where licence conditions have been breached.

¹⁶ Compliance with environmental authorisations is currently measured by our Compliance Assessment Scheme. This scheme is currently being reviewed.

Whilst not strictly non-compliance, there are also issues around engineering works that are not sensitively designed for the water environment, for example by using hard engineering when green bank protection would provide sufficient protection, or failing to follow best practice for designs of culverts and outfalls.

Examples of non-compliance issues where SEPA has direct regulatory authority include:

Waste management	<ul style="list-style-type: none"> ■ Borrow pits and peat disposal. ■ Mis-classification of waste. ■ Mis-use of waste management exemptions.
Discharges to water	<ul style="list-style-type: none"> ■ Inadequate surface water management. ■ Inadequate maintenance of permanent SUDs. ■ Poor SUDS design.
Engineering	<ul style="list-style-type: none"> ■ Failure to obtain correct authorisations. ■ Failure to comply with conditions (e.g. design/substrate re-use).
Air emissions	<ul style="list-style-type: none"> ■ Failure to control dust from concrete batching/mobile crushers.

The key issues contributing to non-compliance in areas where we have a statutory role but no direct regulatory role include:

River basin management planning	<ul style="list-style-type: none"> ■ Insufficient space provided. ■ Failure to deliver water body improvement objective. ■ Failure to manage invasive non-native species.
Flood risk	<ul style="list-style-type: none"> ■ Failure to provide adequate compensatory flood storage. ■ Failure to appropriately account for flood risk during optioneering. ■ Poor SUDS design.

Consultation question 8:

Have we identified the correct compliance issues for the sector?

How are we going to address non-compliance?

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.

The sector plan provides an opportunity to be more strategic and co-ordinated in how we will tackle non-compliance consistently across Scotland. Some of what we are already doing is highlighted below. We plan to use the consultation period for this plan to engage more widely with the sector in order to make use of their experience and expertise when developing further solutions to the suite of compliance challenges identified.

Case study

The Aberdeen Western Peripheral Route (AWPR) was issued with the first Construction Site Licence in 2016. Since then, Construction Site Licences have become part of our regulatory regime and will be used on all projects that exceed the threshold of 4ha in area, 5km in length, or have an area of slope in excess of 25 degrees that is greater than 1ha or 500m. This new licensing regime offers us a more robust tool and greater flexibility in controlling pollution of the water environment.

SEPA will:

- use the new enforcement measures we were given in 2015 more widely to tackle the non-compliances listed above;
- work with partners such as Zero Waste Scotland to identify more opportunities for the beneficial use of waste and information sharing on waste classification so that appropriate routes for recycling of waste can be identified easily;
- identify further opportunities for partnership working and information sharing on Duty of Care obligations, including streamlined processes for chain of custody recording;
- continue to develop our construction site licence to ensure it remains effective, pragmatic, and robust;
- examine how the Integrated Authorisation Framework can be utilised to simplify and streamline our direct regulation of strategic infrastructure at the construction stage while also providing robust protection of the environment;
- investigate the best ways to record and assess environmental compliance, benchmark this compliance, and use this information to identify areas of opportunity for improved environmental success;
- be more transparent both in how we regulate and regarding the performance of sites, to create learning opportunities for the sector and foster a culture of continuous improvement;

- where appropriate, ensure that sustainable drainage schemes are included and designed to provide multiple benefits for water quality, flood risk reduction and habitat creation, and amenity value for health and wellbeing;
- explore options for more environmentally sensitive designs, greater focus on renaturalisation of previously straightened watercourses, and the use of more ecologically appropriate bed materials; and
- continue to explore options for plan shaping and early intervention, to ensure that flood risk is considered at the earliest stage of proposals.

Consultation question 9:

(a) Are these the right actions to solve compliance issues in the sector?

(b) Are there specific areas of non-compliance that are likely to respond better to the use of our enforcement measures than others?

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.

Below are our initial thoughts on where opportunities lie for SEPA to help the sector go further - we will use the consultation period for this plan to engage more widely with the sector in order to ensure these are appropriate.

For this plan to be effective in the long-term, and to support Scotland as it moves to a ‘One Planet economy’, it needs to take into account the industry’s mode of investment planning. Strategic infrastructure currently being built was planned and financed years ago; this sector plan needs to aim its higher ambitions at the infrastructure that is currently being planned for, which may not start construction until 2021 or later. We have a vision of a collaborative, mutually-beneficial approach to strategic infrastructure, involving early joint decision-making and optioneering, and where the practice of sub-contracting means innovation and learning on large-scale projects can be disseminated to smaller scale, more local projects and operators working within other sectors such as housing.

The plan shaping identified as the successful approach in the 2011 SEA review can be broadened in scope and enhanced by developing more comprehensive information sources for robust decisions firmly grounded in environmental considerations. To this end, we will

seek to involve SEPA at the investment planning and procurement stage, so we can make our contribution to enhancing the sustainability aspect of public-funded infrastructure strategy.

We will explore opportunities for developing information sources to enable robust decision making by regulatory and responsible authorities, commercial developers, and the design and build teams during the early stages of optioneering. These decisions will assist those planning and building strategic infrastructure to make choices that will contribute to a circular economy and resource reduction approach, as well as helping to ensure assessment of planned infrastructure takes climate change and future-proofing into account.

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.

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 has a statutory duty under the Water Environment and Water Services (Scotland) Act 2003 to secure compliance with the European Water Framework Directive (WFD). While the construction phase of strategic infrastructure can have very visible impacts, these impacts tend not to be significant past the end of the construction phase. Over the longer lifespan of an asset, the impacts to water are more likely to be in the form of changes to flood risk, surface water run-off contaminated by vehicles and contribution to climate change.

SEPA's aspirations are to:

- explore information opportunities for both SEPA staff and external stakeholders, so that Scotland's strategic infrastructure is procured by informed clients, and designed, built, maintained and renewed by competent, knowledgeable teams, who work together for a successful future;
- encourage innovation in methods and practises for the control of water pollution during construction, the operational lifetime of an asset, and the renewal phase. This will include an emphasis on blue-green infrastructure, encouraging characterisation of soil types, and facilitating shared learning across the sector so that the ability to comply with environmental requirements in difficult conditions is not reserved to those companies with whom SEPA has already worked to discover and implement solutions;

- work with sector partner organisations to ensure the sector is resilient to climatic changes, especially around flood risk and water scarcity issues;
- ensure, through new and existing partnerships, that outputs from SEPA's flood warning service and the SEPA/Met Office Scottish Flood Forecasting Service are accessible to and understood by infrastructure owners and operators, so that they can be used as widely as possible to improve business and community resilience to reduce the impacts of flooding.

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.

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.

The Scottish Government has made our transition to a low carbon Scotland a core aspect of its Climate Change and Energy Strategy commitments, with a particular focus on the decarbonisation of the energy system by 2050. To meet this ambition, Scotland will require considerable low carbon electricity and heat infrastructure development at a national and local level. SEPA, a delivery agency for the Scottish Energy Strategy and climate change commitment, can use our regulatory tools, experience, knowledge and partnership approach to support the sector to identify opportunities early at design stage that can help drive the use of the most suitable energy sources, improve energy storage, and increase energy efficiency and productivity (increased output from every unit of energy used) while minimising wasted energy, and support the sector to design and deliver climate ready infrastructure.

Although there are significant challenges ahead for the sector to deliver infrastructure that is resilient and climate-ready, extends the life of existing infrastructure and assets and is suitable to manage the increased pressure that will be placed on transport, water, energy and waste networks, there are also significant opportunities.

Extending the life of existing assets and developing new infrastructure represents an opportunity to deliver high quality investments that drive regeneration, enable future energy networks and underpin sustainable economic growth. Improving and growing our infrastructure provides an opportunity to reduce carbon and transport emissions, and deliver more efficient, low carbon energy solutions. It is also an opportunity to offer innovative products and solutions that deliver improvements not only in energy use but also in water and materials usage.

The beyond compliance elements of the sector approach are an opportunity to target reduction of non-regulated sources of emissions to air and nuisance (such as dust and

noise), to which transport and combustion are significant contributors. Transportation cuts across all activities carried out within the sector and represents a significant source of non-regulated emissions to the Scottish environment. SEPA will, through collaboration to drive behaviours that are 'beyond compliance', work with industry to make choices that reduce the environmental impacts that can be associated with transportation. This also aligns with the Scottish Government's Cleaner Air for Scotland (CAFS) strategy.

SEPA's aspirations are to:

- use our regulatory tools, experience, knowledge and partnership approach to support the sector to consider opportunities early at design stage to ensure environmental and climate opportunities are identified and incorporated at concept and design stage through to delivery and legacy;
- work with partners, such as SNH and local authorities, to provide tools to raise the awareness of the environmental responsibilities and opportunities on the ground.
- promote best practice from within the sector for improving energy efficiency and supporting and encouraging the development and use of innovative low carbon energy solutions;
- use voluntary initiatives such as Sustainable Growth Agreements and the VIBES – Scottish Environment Business Awards to specifically showcase and inspire low carbon energy innovation.

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 economy, recover more and dispose of only the very minimum. Where waste is produced, we will always seek to facilitate the productive use within a framework of strong environmental protection.

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

The construction sector is a huge consumer of natural resources and accounts for around 50% of all wastes generated in Scotland. In 2015, construction and demolition waste was 5.56 million tonnes of the 11.63 million tonnes of waste from all sources¹⁷. Construction aggregate demand in Scotland is around 29 million tonnes, of which only 20% is met by recycled aggregates¹⁸.

Structural steel and aluminium are significant construction resources used as part of the frames and envelopes of Scotland's buildings and infrastructure. Both have significant use in

¹⁷ Waste from all sources – Summary data 2015, SEPA, 2015

¹⁸ Recycled Aggregates from Inert Waste, SEPA, 2013

commercial, school, health and industrial buildings, both existing stock and new build, as well as having extensive use in transport, and oil and gas infrastructure projects. Both have high embodied carbon and are inherently durable for re-use.

SEPA will work with strategic infrastructure projects to embed circular economy thinking and support the reduction of embodied carbon associated with the creation of an asset.

Reducing embodied carbon is about using fewer materials and using alternative materials with lower manufacturing and transport related emissions and high-recycled content and durability.

SEPA's aspirations are to:

- help facilitate productive reuse of waste within a framework of strong environmental regulation and protection;
- work with industry and partners to facilitate the circularity of timber and promote the sustainable use of Scottish timber in infrastructure projects, to reduce the cost of transportation and embedded carbon;
- work with industry and partners to increase the use of secondary aggregate circulating in the economy while reducing the demand for primary aggregates;
- encourage the reuse of structural steel and aluminium;
- work with partners to help design out waste and embed circularity while using raw materials more efficiently and sustainably;
- work with partners to develop guidance for waste efficient procurement: takeback schemes and leasing can help reduce the amount of materials that are acquired and then must be disposed of when they become surplus to requirements;
- work with partners and the sector to encourage design for materials optimisation via standardisation and Building Information Modelling (BIM), to ensure that materials acquired are both fit for purpose and easily interchangeable;
- work with partners to develop policies on design for reuse and recovery: where possible, the lifecycle design should facilitate the redeployment of the materials via a service such as the RES Construction Material Exchange. Materials Passports are an example mechanism for this;
- work with partners to develop guidance on design for deconstruction (including climate adaptation).

Habitat and net environmental gain

Land and habitat provides us with a range of economic and environmental services, including clean water, protection from flooding, carbon storage, building materials, space to grow food and green space for the health of us all. With competing demands for land we need to try to ensure all needs are considered and the right land is used for the right purpose.

While building any physical asset on the scale of strategic infrastructure will inevitably lead to environmental impacts in the short term, we can explore how to ensure that, overall, any planned infrastructure has a target of net environmental gain over the lifespan of the project, from conception to renewal. Adoption of a natural capital approach when designing and building large-scale infrastructure can help integrate these projects into the landscape, and ensure an understanding of the impacts or dependencies the infrastructure will have on natural assets over its lifecycle. Strategic, whole-system approaches can deliver net gain for the environment.

SEPA's aspirations are to:

- help businesses build natural capital assessment and net environmental gain concepts into their decision making processes, and encourage this work to be shared to provide good examples for others;
- explore opportunities to improve the resilience and performance of infrastructure by encouraging uptake of innovative engineering solutions to improve biosecurity and prevent the transfer of invasive non-native species, as well as future-proofing against species not yet an issue;
- encourage projects to build innovative connections across the infrastructure which connect not just the habitat fragmented by the project but which recreate links between previously fragmented habitats to facilitate movements of populations of plants and animals.

Consultation question 10:

The proposed aspirations identified in the sections above are our initial thoughts for how we could help the sector to go further. Do you think we have identified the right aspirations?

What actions are we going to take?

The following table summarises the actions that we have described above to fix compliance in the sector and, working in partnership, to 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 and have been grouped into themes that have emerged through our internal and external discussions to date.

The actions and aspirations set out are our initial thoughts on the potential of what could 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 include and prioritise in the final plan will be informed by the findings of this consultation and further internal discussions between now and March 2019.

A number of the potential actions below are intended to deliver across multiple of 'SEPA's aspirations' as outlined in the sections above. For example, the action: "We will work with partners to examine the barriers to effective and efficient materials re-use, including ways to prevent usable materials entering the waste-stream and thus preventing re-use" will deliver multiple of the 'aspiration' statements in the Materials section.

Collaborative decision-making	
<p>(A) Foster a culture that transforms from a traditional regulatory approach to a more flexible, collaborative way of working, based on early engagement.</p>	<ol style="list-style-type: none"> 1. We will seek to have discussions with major clients regarding client-led environmental responsibility for projects, so that the decisions and actions needed to protect the environment are made early, quickly, and are robustly supported. 2. We will work with client, developer and contractor stakeholders to explore opportunities to encourage the uptake of the enterprise model of collaborative decision-making. 3. We will explore the potential for a regulatory hub, so that parties involved in the planning, procurement, design, building, and regulation of strategic infrastructure have opportunities to discuss implementation policies that are mutually consistent, considered, robust, and contribute to future economic and environmental success. 4. We will seek to have involvement with the new Scottish Infrastructure Commission. 5. Through our interactions, we will encourage community involvement, so that the people of Scotland can derive success from infrastructure projects, and balance the short-term impacts with the long-term benefits. 6. We will explore the potential within Scotland's Digital Transformation process for a digital resource that will enable decision-makers to access the information they need at the earliest stage of optioneering to ensure environmentally sustainable solutions. 7. We will explore how we can more generally facilitate robust decision making to ensure that project options are environmentally robust and deliver best value under One Planet Prosperity. 8. We will continue to explore options for plan shaping and early intervention, to ensure that flood risk is considered at the earliest stage of proposals.

<p>Outcomes</p>	<ul style="list-style-type: none"> ■ The sector engages with a wide range of stakeholders from the outset, so communities understand decisions. ■ People living in the vicinity of infrastructure projects feel they have a voice and will benefit. ■ Scotland's environment is robustly protected, and infrastructure projects bring about net environmental gain.
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<p>Investment planning and procurement</p>	
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<p>(B) Ensure One Planet Prosperity principles are embedded at the heart of Strategic Infrastructure investment planning, and encourage adoption of environmental priorities in contracts.</p>	<ol style="list-style-type: none"> 1. We will work to ensure that SEPA has a place in the decision making process for the planning, acquisition and commissioning of new infrastructure. This could include SEPA seeking opportunities to have a strong involvement with various bodies that impact on investment in Scotland's future, such as: <ul style="list-style-type: none"> ■ Scotland's new Infrastructure Commission ■ Scottish Futures Trust ■ Scottish Infrastructure Delivery Group ■ Scottish Development International ■ Scottish Procurement Group 2. We will explore the intersect between the start of new construction and end-of-life/renewal of existing infrastructure, and look at projects to enable the cross-fertilisation of materials, saving cost and resource. 3. We will work with partners to examine the barriers to effective and efficient materials re-use, including ways to prevent usable materials entering the waste-stream and thus preventing re-use. 4. We will work with partners to establish targets for recycled content, embed requirements into existing frameworks (focus on priority material streams), and develop standards, where standards are missing, so that clients and contractors can be confident in their specification and use of non-virgin materials. 5. We will work with key stakeholders to develop an approach that means environmental requirements in contracts are targeted appropriately and deliver best value. 6. Work with partners such as Zero Waste Scotland to identify more opportunities for the beneficial use of waste and information sharing on waste classification so that appropriate routes for recycling of waste can be identified easily. 7. Where appropriate, ensure that sustainable drainage schemes are included and designed to provide multiple benefits for water
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	<p>quality, flood risk reduction and habitat creation, and amenity value for health and wellbeing.</p> <p>8. Explore options for more environmentally sensitive designs, greater focus on renaturalisation of previously straightened watercourses, and the use of more ecologically appropriate bed materials.</p>
Outcomes	<ul style="list-style-type: none"> ■ Strong environmental performance of operators and supply chain. ■ Scotland's infrastructure is robust, resilient and resistant to climate change. ■ Scottish businesses benefit from the flow of valuable materials in the circular economy.

Control of construction impact

(C) Ensure Construction Site Licences are an effective way of regulating the sector	<ol style="list-style-type: none"> 1. We will use the new enforcement measures we were given in 2015 more widely to tackle non-compliance. 2. We will benchmark compliance of all sites that cross the Construction Site Licence threshold, and continue to develop the Construction Site Licence to make it effective, pragmatic and robust. 3. We will examine digital opportunities for site management and the reporting and recording of environmental events at sites, such that impacted communities know they are listened to and their influence has impact. 4. We will take a more active and flexible approach to regulatory management for large-scale projects. This will include exploring the potential for the formation of a dedicated project team to manage regulation of these sites from optioneering to operation, ensuring construction impact is a priority from the outset. 5. We will seek to streamline licensing for complex strategic infrastructure developments in light of the forthcoming Integrated Authorisation Framework. 6. We will employ the new enforcement measures we were given in 2015 more widely to tackle non-compliances. 7. We will seek new partnership opportunities to identify appropriate ways of beneficially recycling waste, and explore digital solutions for tracking chain of custody and duty of care.
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<p>Outcomes</p>	<ul style="list-style-type: none"> ■ Communities understand SEPA's role and responsibilities, and have clear lines of communication to voice their concerns and collaborate on solutions. ■ Strong environmental performance of operators and supply chain. ■ Scotland's environment is robustly protected, and infrastructure projects bring about net environmental gain. ■ Scotland benefits from a highly successful sector, with experience and knowledge that can be deployed worldwide.
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<p>Information</p>	
<p>(D) Help all employees and stakeholders understand their environmental responsibilities, and how to deliver them, ensuring this sector is driven by a client base of intelligent customers.</p>	<ol style="list-style-type: none"> 1. We will build on our development of new training for SEPA staff, so that our officers have a thorough understanding of the sector and how to regulate it effectively. 2. We will explore opportunities to work with external partners to deliver training to the sector, so that those working in the sector have the firm grounding of knowledge and understanding required to innovate. 3. Where appropriate, we will provide resources to institutes such as CIWEM, IEMA, AEECoW, CIEEM, ICE, CITB, Chartered Institute of Procurement and Supply, Association for Project Management, CIRIA and other professional bodies to ensure that CPD is carried out with the latest information and learning. 4. We will investigate how to best help the communities impacted by strategic infrastructure understand the long-term benefits of these projects, and we will be open and honest about the impacts to expect while they are under construction. We will make it easier for impacted communities to tell us about issues that are more serious than should be expected and to find out the results of their reports. 5. We will be more transparent both in how we regulate and regarding the performance of sites, to create learning opportunities for the sector and foster a culture of continuous improvement.

<p>Outcomes</p>	<ul style="list-style-type: none"> ■ The sector benefits from knowledgeable staff with access to high quality training, enabling world-class innovation. ■ Scotland benefits from a highly successful sector, with experience and knowledge that can be deployed worldwide. ■ Strong environmental performance of operators and supply chain. ■ Communities understand SEPA's role and responsibilities, and have clear lines of communication to voice their concerns and collaborate on solutions. ■ People living in the vicinity of infrastructure projects feel they have a voice and will benefit.
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Consistency with other sector plans

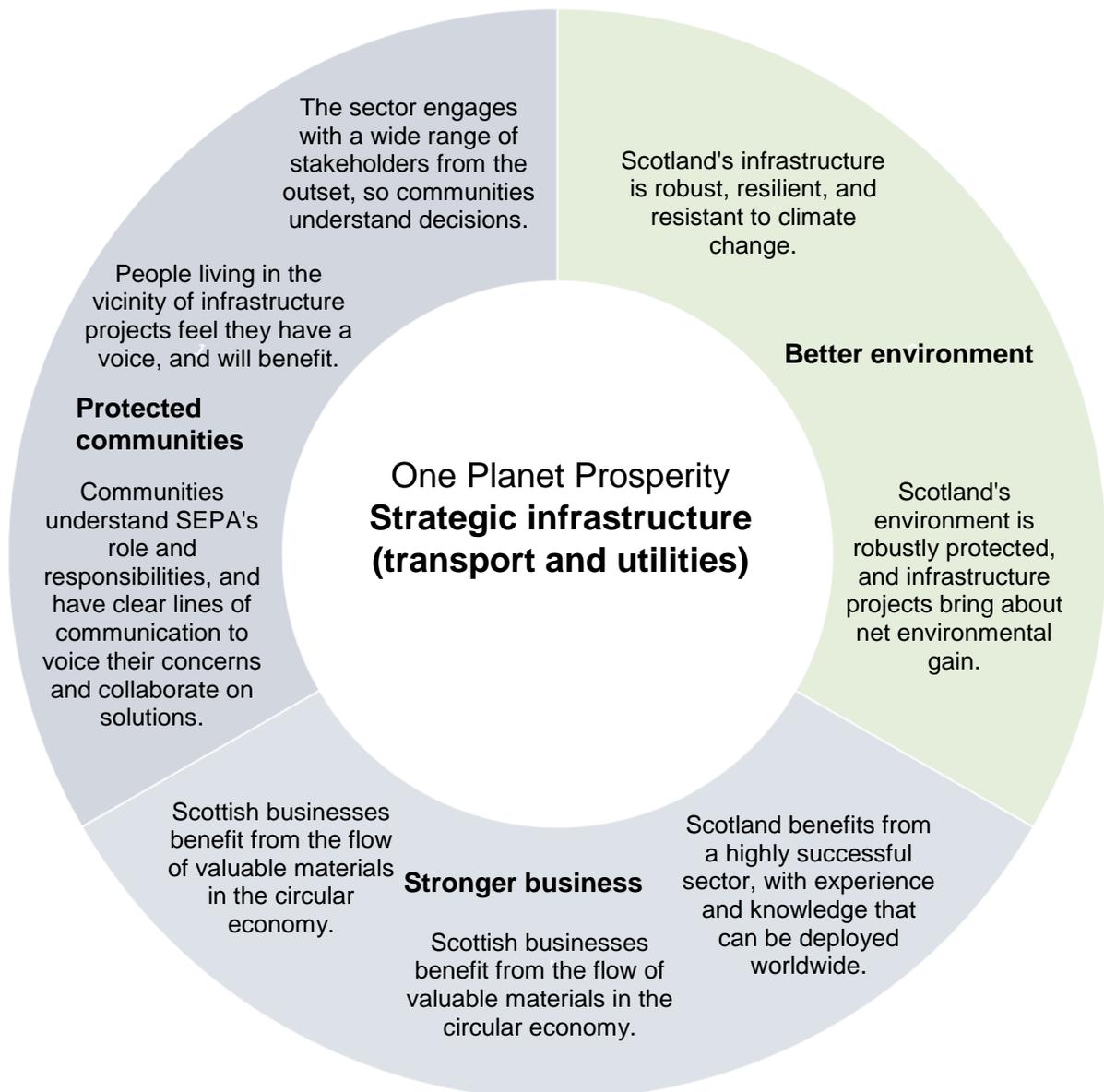
<p>(E) Maximise opportunities for cross sector working and support mutual outcomes</p>	<ol style="list-style-type: none"> 1. We will undertake to have regular discussions and shared learning across sectors, to ensure that innovation and best practice is disseminated, and that requirements for similar activities are consistent. 2. We will ensure effective cross-sector working, and maximise opportunities for joint projects with partner organisations. 3. We will work with partners such as Zero Waste Scotland and the Construction Scotland Innovation Centre to explore opportunities to support the strategic infrastructure, housing, landfill, oil and gas decommissioning, water and wastewater, metals, and forestry, timber production and processing sectors to use resources more efficiently, thereby minimising waste and environmental impacts.
<p>Outcomes</p>	<ul style="list-style-type: none"> ■ Strong environmental performance of operators and supply chain. ■ Scotland's environment is robustly protected, and infrastructure projects bring about net environmental gain. ■ Scotland's businesses benefit from the flow of materials in the circular economy.

Consultation question 11:

Do you think these potential actions will help us achieve our aspirations and outcomes? If not, what actions should we include? Are there any actions you consider to be of the highest priority?

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.



Consultation question 12:

These are our proposed outcomes for the sector plan. Have we identified the right outcomes? Do you think there are other outcomes we should consider?

7. Glossary of terms

AWPR	Aberdeen Western Peripheral Route
AEECoW	Association of Environmental & Ecological Clerks of Works
CAR	SSI 2011 No. 209 The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (known as the CAR Regs)
CAS	SEPA's Compliance Assessment Scheme
CAFS	Cleaner Air for Scotland
CECA	Civil Engineering Contractors Association
CIEEM	Chartered Institute of Ecology and Environmental Management
CITB	Construction Industry Training Board
CIWEM	Chartered Institution of Water and Environmental Management
CIRIA	Construction Industry Research and Information Association
CPD	Continual Professional Development
GWDTE	Ground Water Dependent Terrestrial Ecosystems
HES	Historic Environment Scotland
HSE	Health and Safety Executive
H&S	Health and Safety
ICE	Institution of Civil Engineers
IEMA	Institute of Environmental Management and Assessment
IIP	Infrastructure Investment Plan
OFGEM	Office for Gas and Electricity Markets
ORR	Office of Road and Rail
PfG	Programme for Government
PFI	Private Finance Initiative
PPC	Pollution Prevention and Control
PPP	Public Private Partnership
RES	Renewable Energy Systems

SEA	Strategic Environmental Assessment
SNH	Scottish Natural Heritage
SSE	Scottish and Southern Energy
SUDS	Sustainable Urban Drainage Systems
Sustrans	UK Sustainable Transport charity
VIBES	Scottish Environment Business Awards
WFD	Water Framework Directive
WML	Waste Management Licencing
WMX	Waste Management Licencing Exemptions

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