Appendices

Appendix A
Consultation Responses

Table A.1: Consultation Authority Responses to the SEA Screening/Scoping Report

Consultation Authority	Response	Action (how comments have been addressed in this Environmental Report)
SNH	Highlight any environmental effects that could be increased by the updated policies, and then assessing whether mitigation specified in the previous SEA would be sufficient.	Noted with thanks. This approach will be adopted in the assessment.
	Specific objectives should be set for each SEA topic and should be harmonised with those to be adopted for NPF4.	The assessment has been informed by the draft SEA objectives for NPF4.
	Content with the proposed minimum 4-week consultation period.	Noted with thanks.
HES	Content with the approach and satisfied with the scope and level of detail proposed for the assessment.	Noted with thanks.
	Content with the environmental objectives proposed for the Cultural Heritage and Historic Environment subject to the inclusion of non-designated heritage assets.	Noted with thanks. Non-designated heritage assets are considered in the assessment.
	Content with the proposed minimum 4-week consultation period.	Noted with thanks.
SEPA	Content with the approach and satisfied with the scope and level of detail proposed for the assessment.	Noted with thanks.
	Reference the Just Transition Commission.	Noted with thanks. The Just Transition Commission referenced and considered in the assessment.

Consultation Authority	Response	Action (how comments have been addressed in this Environmental Report)
	Content with aligning SEA objectives with those of NPF4 but it is more important to ensure good engagement across the plan-making process so that key plans that will be critical to the successful delivery of Scotland's climate ambition support each other and are aligned to the net-zero mission.	To be addressed through cumulative assessment.
	Content with the proposed minimum 4-week consultation period.	Noted with thanks.

Appendix B
SEA Matrices

Electricity

Policy Outcome 1: The electricity system will be powered by a high penetration of renewables, aided by a range of flexible and responsive technologies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy outcome outlines that Scotland's electricity system will be powered by a high proportion of renewables, aided by a range of flexible and responsive technologies. The policy outcome therefore seeks to reduce GHG emissions by encouraging the use of renewable energy sources as a means to reduce the emissions intensity of the electricity grid. Reductions in GHG emissions is likely to lead to improvements in air quality and subsequent positive effects on population and human health. Furthermore, the use of flexible and responsive technologies to power the electricity grid will have positive effects on the population and human health, and material assets, by improving reliability and security of electricity supply, potentially improving security and reducing electricity rates, thus helping to reduce fuel poverty across Scotland. However, the greater use of commercial scale renewable energy schemes may result in adverse impacts on biodiversity, soil and water from the increased occurrence of construction, operation and decommissioning works of renewable devices, and adverse effects on landscape and cultural heritage assets through the siting of some technologies. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and cultural heritage as a result of an increase in cumulative developments such as renewable energy schemes. The results provided reflect the potential for significant impacts. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy will promote further renewable and low carbon energy development and the replacement of energy generated from traditional, finite sources. ■ Seeks to promote the development of flexible and responsive new technologies. *Previous SEA work:* Reducing the electricity grid intensity was previously considered in the SEA work taken forward for RPP3.

Policy 1: Support the development of a wide range of renewable technologies by addressing current and future challenges, including market and policy barriers.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The policy encourages further investment in the renewables sector through delivering a viable route to market for a wide range of renewable technologies, and long-term funding through schemes such as the Energy Investment Fund, Community and Renewable Energy Scheme, and Low Carbon Infrastructure Transition Programme is likely to aid the continued development of renewable technologies (both commercial and local/community projects). The policy could aid a larger shift towards the decarbonisation of energy supply in Scotland, with an increase in local or community ownership. Positive effects for climatic factors are likely through a reduction in GHG emissions from the sector by reducing reliance on carbon-intensive sources of electricity. Benefits for air quality and in association population and human health are also likely from aiding a larger shift from traditional non-renewable supplies. There is also potential for the policy to enhance community involvement with associated positive effects through implementation of community energy projects. If more widely implemented, as advocated through this policy, there is the opportunity to reduce the reliance on carbon intensive energy generation and provide more benefits in terms of climate change adaptation. However, the increased implementation of some low carbon and renewable technologies can lead to a greater number of negative impacts and there may be additional infrastructure requirements associated with the move to renewables, such as larger number of small generators. This may include adverse impacts on biodiversity, soil and water from the increased occurrence of construction, operation and decommissioning works of renewable devices, and adverse effects on landscape and cultural heritage assets through the siting of some technologies. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in

									relation to landscape and cultural heritage as a result of an increase in cumulative developments such as renewable energy schemes such as onshore and offshore wind and marine renewable arrays. The results provided reflect the potential for significant impacts. The continued and enhanced promotion of low carbon and renewable energy will play a key role in further enhancing the security of energy supply as the impacts of a changing climate and the challenges are likely to become increasingly important. However, it is noted that the realisation of any of the identified impacts and further growth in the sector would rely on the achieving the buy-in of stakeholders in facilitating this transition.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will promote further renewable energy development and the replacement of energy generated from traditional, finite sources. ■ Seeks to promote the development of new technologies (e.g. wave and tidal, etc.) and increase take-up of community and locally owned schemes. ■ Increased wave and offshore wind technology development is promoted, and this would help to grow the proportion of energy generated by these technologies in Scotland's energy mix. ■ The policy sets out support for low carbon energy developments in the relevant consenting processes. *Previous SEA work:* Renewable energy policy was previously considered in the SEA work taken forward for: ■ 2020 Routemap for Renewable Energy in Scotland. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland. ■ RPP3. ■ The potential for environmental effects associated with wave renewable development was discussed in the SEA undertaken for the Draft Sectoral Marine Plans for Offshore Renewable Energy in Scottish Waters. ■ RPP3 Support in the renewable energy consenting process has been discussed previously in several SEAs, such as Scotland's National Marine Plan and the Pentland Firth and Orkney Waters Marine Spatial Plan.

Policy 2: Support improvements to electricity generation and network asset management, including network charging and access arrangements that encourage the deployment and viability of renewables projects in Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The policy aims to further promote the improved management of electricity generation and asset management, including network charging and access arrangements which encourage the deployment of renewable energy projects. The uptake of renewable energy technologies and general improvements to asset management, including reviewing network charges and access arrangements could provide a more flexible and resilient electricity system. Improved efficiency in the generation and supply of electricity, including through the development of renewable energy schemes, as promoted and encouraged through this policy, is likely to provide greater benefits for climatic factors as a result of an overall reduction in GHG emissions. Subsequently, it is likely that there would be improvements in air quality as a result of reduced reliance on oil and gas, and greater uptake of renewable energy developments. Greater system efficiency and flexibility is likely to be positive for consumers and could result in benefits for population and human health. Additionally, greater security in network charge rates could result in positive effects for the population and human health. There is greater potential for adverse localised impacts as a result of this policy, associated with the construction and development of the renewable energy infrastructure. This could include impacts through land take and visual and cultural heritage effects from the siting of infrastructure as well impacts on soil water and biodiversity from construction activities. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and cultural heritage as a result of an increase in cumulative developments such as renewable energy schemes such as onshore and offshore wind and marine renewable arrays. The results provided reflect the potential for significant impacts.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy seeks to promote and facilitate the use of renewables projects in Scotland. ■ The policy seeks to support improvements to electricity generation and network asset management. *Previous SEA work:* ■ Electricity generation and network assets management were discussed in the SEA for RPP3.

Policy 3: Publish a revised and updated Energy Strategy, which reflects the commitment to net zero and key decisions on the pathways to take us there.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy outlines plans to publish a revised and updated Energy Strategy to reflect Scotland's commitment to net zero. The update to the Energy Strategy is likely to promote the shift to renewable and low carbon energy sources from traditional fossil fuel derived sources. This will likely lead to greater reductions in GHG emissions and will have associated benefits for air quality, especially if there is reduced reliance on fossil fuels. Furthermore, the encouragement of renewable and low carbon energy may improve the flexibility and reliability of energy supply. This, alongside improvements in air quality will likely have positive effects on population and human health. However, the greater promotion of low carbon and renewable technologies such as commercial scale wind farms and solar panels etc. may result in adverse effects on a number of environmental topics. This could include impacts through land take and visual and cultural heritage effects from the siting of infrastructure as well impacts on soil, air, water and biodiversity from construction activities. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and cultural heritage as a result of an increase in cumulative developments such as renewable energy schemes such as onshore and offshore wind and marine renewable arrays. The results provided reflect the potential for significant impacts.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The Energy Strategy will further promote renewable and low carbon energy generation. ■ Forms part of wider decarbonisation ambitions to reduce demand from traditional, finite sources. *Previous SEA work:* The existing version of the Energy Strategy was previously considered in the SEA work taken forward for RPP3.

Policy 4: Develop and publish a Hydrogen Policy Statement by the end of 2020, followed by a Hydrogen Action Plan during 2021.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to encourage strategic development of Scotland's hydrogen economy. The shift to decarbonise Scotland's energy supply through the development of novel fuel such as hydrogen will contribute towards a reduction in GHG emissions by further reducing the reliance on fossil fuels. Hydrogen is naturally abundant and is an efficient fuel source which produces no toxic emissions or CO_2 at point of use. Hydrogen can be produced from different sources including fossil fuels, and using different technologies, each with different environmental effects. This can include the need for abundant renewable energy to support the processing, and carbon capture and storage. Increased use of hydrogen for vehicles and domestic use would displace the use of petrol, diesel, and natural gas, respectively. These fuels have carbon emissions at end use, and therefore encouraging the use of Hydrogen through the Hydrogen Policy Statement and Action Plan would contribute towards reducing overall emissions. There could be associated improvements to air quality as a result of reduced air pollutants and subsequent benefits for human health. It is also likely to further increase energy security by continuing to reduce reliance on finite fossil fuels, with benefits for material assets. The development of hydrogen technologies, as promoted through this policy would require the construction of processing plants and fuel cells and may require upgrades to the existing gas network and supporting infrastructure. This may result in potential environmental effects on the environments, including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The Hydrogen Policy Statement and Hydrogen Action Plan will promote the uptake of hydrogen technologies. ■ The uptake of hydrogen fuel forms part of wider decarbonisation ambitions to reduce demand from traditional, finite sources. *Previous SEA work:* Hydrogen as a fuel was previously considered in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy 5: A new renewable, all energy consumption target of 50% by 2030, covering electricity, heat and transport.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy outlines an ambitious target of 50% of Scotland's energy consumption, including electricity, heat and transport, to be met by renewable energy sources by 2030. Increased support for decarbonisation of Scotland's energy production, as advocated through this policy, is expected to generate a wide range of environmental effects through the increased development of renewables. A greater shift towards low carbon energy from more traditional, finite sources such as oil and gas will help to further reduce GHG emissions generated in the energy sector and support overall improvements for air quality, and associated benefits for population and human health. This in turn could help to reduce the impacts of climate change on other aspects of the environment, such as biodiversity, water and soil. The potential for both positive and negative environmental effects on a range of topic areas was also identified as a result of this policy; particularly impacts associated with construction works, the upgrading of existing infrastructure and the installation of new infrastructure that would be necessary to facilitate these ambitions. However, in many instances, it is considered that such impacts may be localised. Activities will be subject to existing mechanisms such as marine licensing, EIA, Habitats

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Regulations Appraisal (HRA) and consenting conditions at the project level prior to work being undertaken. They have not been reflected in the gradings to the left, on this basis. However, more significant effects could arise in relation to landscape and cultural heritage as a result of an increase in cumulative developments such as renewable energy schemes.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will promote further renewable energy development and the replacement of energy generated from traditional, finite sources. ■ Seeks to promote the diversification of energy technologies in Scotland's energy mix. ■ Seeks the continued development of new fuels and technologies such as CCS and energy storage. ■ Seeks increased local and community owned generation. *Previous SEA work:* Renewable energy, electricity storage, smart energy technologies and demand side response were discussed in the SEA for: ■ Electricity Generation Policy Statement. RPP3.

Policy Proposal 1: Introduce a new framework of support for energy technology innovation, delivering a step change in emerging technologies' funding to support the innovation and commercialisation of renewable energy generation, storage and supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to introduce a new framework of support for energy technology, including funding for emerging technologies, to support innovation and commercialisation of renewable energy generation, storage and supply and other elements. The introduction of the support framework and funding mechanisms likely to promote innovation of renewable energy and carbon capture and storage technologies, which may subsequently result in the increased uptake of such technologies. This policy could therefore help lead to significant reductions in GHG emissions, having positive effects on climatic factors. Likewise, a shift from traditional energy sources to energy sourced from lower carbon and renewable technologies may result in improvements in air quality. This could have associated benefits for the population and human health. Positive effects on population and human health are likely to be further enhanced as a result of increasing the number of jobs arising from the development of new energy technologies. Additionally, the increased supply of energy from non-traditional sources may improve the flexibility and reliability of the energy networks, ensuring people across Scotland have access to energy. The development of new technologies, as advocated by this policy, may have some adverse effects on other environmental topics such as soil, water and biodiversity, as a result of the construction, operation and decommissioning of these technologies and developments. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The framework of support and funding mechanisms will promote further renewable energy development and the replacement of energy generated from traditional, finite sources through encouraging investment in innovative energy technologies. ■ The policy seeks to promote and facilitate the use of renewables projects in Scotland. *Previous SEA Work:* Funding for research and innovation in renewable and low carbon energy technologies were discussed in the SEA for RPP3.

Policy Proposal 2: Renewed focus on developing local energy projects and models, including through CARES, supporting the achievement of 1GW and 2GW of renewable energy being in Local Community ownership by 2020 and 2030.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The policy proposal encourages the continued development of new low carbon energy generation and storage technologies and demonstrator schemes, at a local and community level through funding from CARES to support achievement of 1GW and 2GW of renewable energy by 2020 and 2030 respectively being in Local Community ownership. Encouraging further community and local energy ownership through funding and support schemes such as CARES, as advocated by this policy proposal, is likely to lead to a greater increase in the development of low carbon electricity and heat generation projects. If more widely implemented, further decentralisation of energy generation will significantly reduce Scotland's reliance on more traditional energy sources, reducing GHG emissions and subsequently improving air quality. Further reducing pressure on traditional supplies, as a result of this policy proposal, is likely to have positive impacts for material assets, particularly through a reduction in pressure on existing networks. The proposal could also provide more opportunities to future-proof supply against new challenges; by enabling smaller energy production developments to connect to and supply energy to the network. Progress to date regarding the uptake of community and locally owned renewable energy has been significant with the 2020 target of 500 MW being exceeded five years early. Further expansion of community and locally owned energy through this boosted policy can play a key role in further raising awareness of climate change, improved acceptance of the need for renewable energy and provide a long-term income with local control over finances. Additional wider community benefits that may arise include increased autonomy, empowerment and resilience and a strengthened sense of place. There may be adverse impacts on biodiversity, soil and water from the increased occurrence of construction, operation and decommissioning works of community owned and locally owned renewable schemes, and adverse effects on landscape and cultural heritage assets through the siting of some technologies. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and cultural heritage as a result of an increase in cumulative developments such as renewable energy schemes. The results provided reflect the potential for significant impacts.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This would result in greater take-up of community-developed or owned energy generation projects. ■ Appropriate network upgrades would be undertaken to enable this and facilitate feed into the national grid. *Previous SEA work:* ■ Community ownership of renewable energy schemes is discussed in the SEA of the Electricity Generation Policy Statement. ■ Community and locally owned renewable energy is also discussed in the SEA of the Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									■ RPP3.

Policy Proposal 3: We will carry out detailed research, development and analysis during 2021 to improve our understanding of the potential to deliver negative emissions from the electricity sector.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to improve the understanding of the potential to deliver negative emissions from the electricity sector through increased research, development and analysis. This could accelerate the deployment of key energy and carbon capture technologies (e.g. CCUS, biomass and hydrogen) to support reductions in GHG emissions. The commissioning of this research is likely to result in greater uptake of negative emission technologies such as biomass and hydrogen, as well as use of carbon capture technologies. This will likely lead to reductions in GHG emissions, having positive effects on the climate. This may have associated benefits for air quality, and subsequently population and human health. If widely implemented, as promoted through this policy proposal, these technologies are likely to further contribute to reducing energy demand from traditional supplies, reducing pressure on network infrastructure and making it more readily available for other fuels such as hydrogen. There could also be a positive impact on material assets as infrastructure may be reused or converted, for example for hydrogen, or new or upgraded infrastructure would likely be required to ensure adequate security of energy supply. There may be adverse impacts on biodiversity, soil and water from the increased occurrence of construction, operation and decommissioning works of negative emission technology schemes, and adverse effects on landscape and cultural heritage assets through the siting of some technologies. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increased research will lead to greater innovation and development of new low carbon technologies. ■ There will be greater uptake of low carbon technologies, including CCS, hydrogen and bioenergy. *Previous SEA work:* ■ CCS, hydrogen and biomass were discussed in the SEA work undertaken for the RPP3.

Policy Proposal 4: We will continue to review energy consenting processes to make further improvements and efficiencies where possible, seeking to reduce timescales for determination of complex electricity generation and network infrastructure applications.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The intention of this policy is to continue reviewing energy consenting processes to make further improvements and efficiencies and reduce timescales for determination. With increasing pressures on reducing GHG emissions and the promotion of renewable energy, the consenting process for energy generation and overhead lines is to be reviewed in line with the expected increases over the coming years for renewable energy. The review will examine the existing consenting process for electricity generation and overhead line developments and examine the scope for improvements to the consenting system. It is likely to identify and amend obstacles and unnecessary complexities in the process which may prevent the future development of new schemes which could otherwise contribute towards Scotland's ambitious GHG emissions reduction targets and may provide recommendations for alternative approaches to the existing consenting process. Therefore, by seeking to streamline the consenting process for energy developments (including renewable energy schemes) and associated infrastructure, this policy may contribute towards reducing GHG emissions, having subsequent benefits on the climate and air quality. Improvements in air quality, through a shift from traditional, finite energy sources to low-carbon energy sources may have associated benefits for air quality and on population and human health. However, the review of the consenting process for such developments may have adverse effects on some environmental topics. By streamlining the consenting process, it is more likely that proposed developments will be consented and subsequently there is greater potential for impacts on soil, water, and biodiversity associated with the construction and operation of infrastructure as a result of this policy. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and cultural heritage as a result of an increase in cumulative developments. The results provided reflect the potential for significant impacts. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Streamlining the consenting process will enable the greater uptake of low carbon and renewable energy developments. ■ Streamlining the consenting process will maintain the rigour of current environmental protection. Previous SEA work: None.

Policy Proposal 5: We will deliver the actions from our Offshore Wind Policy Statement, published in October. These actions, ranging from support for supply chain, planning, innovation and skills, will support the development of between 8 and 11 GW of offshore wind capacity by 2030.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The Climate Change (Emissions Reduction Targets) (Scotland) 2019 Act commits Scotland to achieving net-zero emissions of all GHG by 2045. Offshore wind renewable energy has the potential to play a significant role in helping to meet these targets, and the Offshore Wind Policy Statement is already facilitating this. This policy sets out plans to deliver the actions outlined in the Offshore Wind Policy Statement published in October 2020, including a commitment to provide support for supply chain, planning innovation and skills relating to offshore wind developments. The policy outlines a commitment to support between 8 and 11 GW of offshore wind capacity by 2030. Support for decarbonisation of Scotland's energy production by delivering the actions set out in the Offshore Wind Policy Statement is expected to generate a wide range of environmental effects. Primarily, the further promotion of offshore renewable energy will facilitate the continued shift towards low carbon energy from more traditional, finite sources such as oil and gas. This will therefore help to reduce GHG emissions generated and subsequently support overall improvements for air quality, and thus population and human health. This in turn could help to reduce the impacts of climate change on other aspects of the environment, such as biodiversity, water and soil. Additional positive effects on population and human health are likely to arise from an increase in offshore wind employment and skills opportunities.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									However, the development and operation of offshore wind technologies, and the associated infrastructure, could have some adverse environmental impacts, including on the landscape and seascape, on the setting of cultural heritage assets, and disruption to marine biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and seascape and cultural heritage as a result of an increase in cumulative developments of offshore wind farms. The results provided reflect the potential for significant impacts.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The Offshore Wind Policy Statement and its subsequent actions will result in a greater number of offshore wind farm developments. ■ Renewable energy from offshore wind turbines will continue to reduce demand for energy from traditional, more finite sources (e.g. oil and gas). *Previous SEA work:* Offshore renewable energy was discussed in the SEA work taken forward for: ■ Electricity Generation Policy Statement. ■ Draft Sectoral Marine Plans for Offshore Renewable Energy in Scottish Waters. ■ RPP3.

Policy Proposal 6: Accelerate our work with aviation, energy and other stakeholders to ensure that all radars are wind turbine tolerant / neutral during the coming decade

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This boosted policy seeks to accelerate work with aviation and energy sectors to ensure that all radars used during the next decade are wind turbine tolerant. Ensuring radars are compatible with wind turbines may result in the greater uptake of these renewable developments, both on land and offshore. The increased uptake of wind energy development, as a result of the boosting of this policy is likely to lead to greater reductions in GHG emissions, due to enabling a shift from more traditional energy sources such as oil and gas to renewable sources. This may subsequently have further positive effects on air quality and population and human health. The increased implementation of wind energy developments, as a result of the boosting of this policy, can lead to a number of negative impacts and there may be additional infrastructure requirements. This may include adverse impacts on biodiversity (particularly bird species), soil and water from the increased occurrence of construction, operation and decommissioning works of turbines, and adverse effects on landscape and cultural heritage assets through the siting of turbines. There is also potential for greater cumulative effects to arise as a result of the installation of multiple developments. The results provided reflect the potential for significant impacts. Notwithstanding these potential negative environmental effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. The continued promotion of energy from wind turbines will play be a key role in further enhancing the security of energy supply as the impacts of a changing climate and the challenges are likely to become increasingly important.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Ensuring radars are compatible with wind turbines will allow the development of more onshore and offshore wind farms on Scottish land and in the surrounding waters. *Previous SEA work:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									None.

Policy Proposal 7: Review and publish an updated Electricity Generation Policy Statement ahead of the next Climate Change Plan.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy seeks to review and update the Electricity Generation Policy Statement[1] (EGPS) in line with changes in national policy, including the Update to the Climate Change Plan and amendments to Scotland's emissions reductions targets as outlined in the Climate Change (Emissions Reduction Targets) (Scotland) 2019 Act. With more challenging emissions reductions targets (net-zero by 2045, with interim targets for reductions of at least 56% by 2020, 75% by 2030, 90% by 2040) the updated EGPS is likely to further promote the use of low-carbon and renewable energy sources for electricity generation, and the potential for Carbon Capture and Storage (CCS). Additionally, measures to improve energy efficiency and decarbonisation of the transport sector may be further promoted in the update to the EGPS. Greater support for the decarbonisation of Scotland's electricity generation and transport sectors, and overall improvements in energy efficiency will likely contribute towards a reduction in GHG emissions, due to a shift from fossil fuels such as oil and gas to low-carbon energy production. This therefore could have significant positive effects on the climatic factors, and subsequently result in improved air quality, providing associated benefits for population and human health. Additional positive effects on population and human health are likely to arise from an increase in employment opportunities relating to low-carbon energy generation. However, the further development and operation of renewable energy technologies and improvements to energy efficiency, as is likely to be encouraged in the update to the EGPS, could have some adverse environmental impacts, particularly with relation to the landscape and on the setting of cultural heritage assets as a result of cumulative developments. Improvements to energy efficiency measures, including loft insulation may have implications for biodiversity (e.g. bats) due to disturbance to roof cavities. The realisation of any negative impacts identified will be largely at a localised level, and may result in a larger cumulative effect, and will require further consideration, including due regard being given to consenting processes.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The updated Statement will promote the greater use of renewable and low carbon electricity technologies as a means of achieving Scotland's decarbonisation goals. The Statement will support the use of renewable energy, hydrogen, electricity storage, CCS and investment in energy technologies. *Previous SEA work:* ■ The current Electricity Generation Policy Statement. ■ RPP3.

[1] Scottish Government (2013) Electricity generation policy statement 2013 [online] Available at: https://www.gov.scot/publications/electricity-generation-policy-statement-2013/ (accessed 12/03/2020)

Policy Outcome 2: Scotland's electricity supply is secure and flexible, with a system robust against fluctuations and interruptions to supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	0	0	0	-	-	+	This policy outcome seeks to ensure Scotland's electricity supply is secure and flexible, with a system which is robust against fluctuations and interruptions to supply. Technologies including energy storage and renewable energy sources could play a key role in achieving greater flexibility and improved efficiency in Scotland's electricity system. If widely implemented, this policy outcome could improve the overall balance of supply and demand from the electricity grid, reducing pressure on existing network infrastructure. It may also improve reliability and security of electricity supply, as well as the resilience of the electricity sector to the predicted pressures from climate change. Greater system flexibility and reliability is likely to be positive for consumers and could result in benefits for population and human health. Furthermore, improved efficiency of the electricity network due to increased flexibility of supply may help to reduce GHG emissions as a result of more efficient supply. However, the development and operation of renewable energy technologies to ensure Scotland's electricity supply could have some adverse environmental impacts, particularly with relation to the landscape and on the setting of cultural heritage assets as a result of cumulative developments. The realisation of any negative impacts identified will be largely at a localised level, and may result in a larger cumulative effect, and will require further consideration, including due regard being given to consenting processes. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy seeks to promote and facilitate the use of renewables projects in Scotland. ■ The policy seeks to support improvements to electricity generation and network asset management. ■ A variety of energy storage technologies are encouraged to help against fluctuations. *Previous SEA work:* ■ Electricity storage was discussed in the SEA work taken forward for the Electricity Generation Policy Statement; and ■ Electricity generation and network assets management were discussed in the SEA for RPP3.

Policy 1: Support the development of technologies which can deliver sustainable security of supply to the electricity sector in Scotland and ensure that Scottish generators and flexibility providers can access revenue streams to support investments.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	0	0	0	-	-	+	This policy supports the development of new technologies which can deliver sustainable security of supply and flexibility. It promotes the greater uptake such technologies by enabling electricity generators and providers to access revenue streams to further support investment in the sector, such as the Energy Investment Fund, Community and Renewable Energy Scheme, and Low Carbon Infrastructure Transition Programme. The use of systems and technologies such as energy storage and other smart technology could play a key role in achieving greater flexibility and efficiency in Scotland's energy system. Greater security and reliability in the supply of electricity is likely to have positive effects on material assets and is likely to improve the resilience of the sector to the predicted pressures arising from climate change. Additionally, encouraging a more sustainable, secure supply of electricity is likely to have positive effects in relation to climate change, by reducing overall GHG emissions. Enhancing the security of electricity supply is likely to be beneficial for consumers, by ensuring an electricity supply is reliable. This subsequently could result in benefits for population and human health. Additionally, greater security in electricity supply may result in greater security in network charge rates, which could also result in positive effects for the population and human health, helping to minimise fuel poverty. However, there is potential that the promotion of technologies more capable of delivering a sustainable, secure supply of electricity may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage. The results provided reflect the potential for significant cumulative effects on the landscape and historic environment from multiple renewable energy schemes such as onshore and offshore wind farms. Notwithstanding these potential negative environmental

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy seeks to promote and facilitate the use of renewables projects in providing sustainable electricity. ■ The policy supports improvements to sustainable electricity generation and network asset management. ■ Sustainable energy supply can be partly achieved through energy storage technologies. ■ A variety of energy storage technologies are being promoted as part of the policy, including battery storage, hydrogen fuel cells and pumped hydro storage. *Previous SEA work:* Electricity storage, smart energy technologies and demand side response were discussed in the SEA for the: ■ Electricity Generation Policy Statement. ■ RPP3.

Policy Proposal 1: Press the UK Government for market mechanisms and incentives which recognise locational value, both for energy and for security of supply, and which do not create undue barriers for investment in Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy encourages the delivery of market mechanisms and incentives to increase investment in innovative low carbon and renewable energy in Scotland. This could help aid a broad shift towards the decarbonisation of energy supply in Scotland. As a result of reducing the barriers to development, there is likely to be a subsequent increase in renewable and low carbon development which may have positive effects for climatic factors through a reduction in GHG emissions. This policy is likely to reduce reliance on carbon-intensive sources of energy. Benefits for air quality and population and human health may also occur from aiding the shift to renewable energy supplies, through greater investment incentives and minimising market barriers. However, the implementation of some technologies as a result of increased investment may lead to negative impacts and there may be additional infrastructure requirements. This can include adverse impacts on biodiversity, soil and water from construction, operation and decommissioning of technologies such as renewable energy developments or energy storage facilities, and adverse effects on landscape and cultural heritage assets through the siting of some technologies. There is also potential for cumulative effects associated with the installation of numerous developments, for example, the installation and operation of multiple renewable energy schemes. Notwithstanding these potential negative environmental effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will promote further renewable energy development and the replacement of energy generated from traditional, finite sources through encouraging investment in innovative energy technologies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									■ Seeks to promote the development of new technologies by pushing for market mechanisms and incentives. *Previous SEA work:* Investment in energy technologies was previously considered in the SEA work taken forward for: ■ 2020 Routemap for Renewable Energy in Scotland. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland. ■ RPP3.

Policy Proposal 2: Collaborate on actions to support investment in new pumped storage hydro capacity.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	-	-	-	-	+	This policy seeks to support greater investment in pumped storage capacity. Hydroelectric power is generated from the kinetic energy of falling or fast flowing water turning a turbine to produce electricity. Hydroelectric power can be generated on a small scale, with micro and run-of-river' schemes, to those on a larger scale involving dams impounding a head of water in a reservoir to be released according to the demand for electricity. Pumped storage is another type of hydroelectric scheme which can be used to generate electricity during periods of high demand. In such schemes, water is typically pumped from a lower reservoir to an upper reservoir for release back to the lower reservoir through a turbine. This policy may encourage greater uptake of pumped storage hydro capacity, which is likely to have increased benefits in relation to greenhouse gas emissions and climatic factors. Energy generation from hydroelectric schemes may therefore have further positive effects on air quality, as there is less requirement and dependence on finite and polluting energy sources. This could result in associated benefits in relation to human health. However, adverse effects may arise as a result of an increase in the uptake of hydroelectric schemes. The impacts from hydroelectric schemes on Scotland's nature and landscape can occur over a wide area. For example, effects of particular concern include sediment transportation, effects on water quality and quantity, morphological changes and impacts on species; particularly on migratory fish, oceanic bryophytes and fresh water pearl mussels. There is also the potential for adverse effects on the character of the landscape and the setting of historic environment. Furthermore, the installation of such schemes may have greater implications for recreational users. The development and operation of hydro power schemes and pumped storage systems can have negative impacts, particularly from the construction and siting of infrastructure. However, the significance of these effects would depend on a range of factors such as the siting and scale of developments. Operating "closed loop" pumped storage systems, where no natural inflows of water are involved, could help to avoid environmental impacts during the operational phase. Existing mechanisms such as Controlled Activity Regulations (CAR) are in place to help manage and mitigate potential adverse environmental effects.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy will encourage the greater uptake of pumped hydro storage capacity through more investment opportunities. *Previous SEA work:* Hydroelectric power and pumped storage hydro capacity was discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement.

Policy Proposal 3: Work with all parties to secure maximum benefits from the move towards smarter and more flexible electricity systems and network, as set out in the UK Smart Systems and Flexibility Plan (2017).

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to encourage a shift towards smarter and more flexible electricity systems and networks. The greater use of systems and technologies such as Active Network Management, and other smart technology, coupled with energy storage, can play a key role in achieving greater flexibility and improved efficiency in Scotland's electricity system. Active Network Management in particular could provide a means for further increasing amounts of renewable energy to connect to distribution networks and providing flexibility and security in distribution to help to meet predicted increases in electricity demand. Energy storage technology is available in many forms and at different scales which can help to manage variations in supply and demand as they occur. For example, it can help the network to manage the intermittency of energy generation by renewables. Greater storage of energy can allow consumers to use energy differently, and in the case of fuel cells and battery storage, can allow them to operate independently from the power grid. If widely implemented as a result of this policy, this could improve the overall balance of supply and demand from the grid, further reducing pressure on network infrastructure. This can also improve reliability and security of supply, as well as the resilience of the sector to the predicted pressures from climate change. Potential benefits also include a reduced need to significantly reinforce existing networks. Improved efficiency in the supply and use of energy should help to help further reduce GHG emissions as a result of a greater reduction in demand for electricity generation, and subsequently can result in greater improvements to air quality, especially where this reduces reliance on oil and gas. Greater system flexibility and reliability is likely to be positive for consumers and could result in benefits for population and human health. There is also potential for adverse impacts associated with the construction and development of the infrastructure required to implement certain technologies such as energy storage facilities, particularly if deployed on a large scale. Greater changes in land use and visual and cultural heritage effects could arise from the siting of infrastructure, as well as increased impacts on soil, air, water and biodiversity from construction activities. Local level consideration would need to be given to the potential implications that may arise through the siting, construction and development of required infrastructure. In addition, cumulative effects arising from numerous developments should also be a consideration. Any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. **<u>Assumptions & Links with Other SEA Work</u>** *<u>Assumptions:</u>* ■ A variety of energy storage technologies are being promoted as part of the Plan, including battery storage (including electric vehicles), hydrogen fuel cells and pumped hydro storage. ■ Technologies including Solar Thermal Storage and CCS have not been assessed here. ■ Energy storage can be used in conjunction with demand side response, smart technologies and active network management. *<u>Previous SEA work</u>*: Electricity storage was discussed in the SEA work taken forward for: ■ Electricity Generation Policy Statement. ■ RPP3.

Policy Proposal 4: Encourage and support increased interconnection which can enhance Scottish system security while considering effects on domestic capacity and investment.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy seeks to encourage and support increased interconnection to enhance Scottish system security whilst taking into consideration the effects on domestic capacity. The greater use of systems and technologies such as renewable energy and energy storage, can play a key role in achieving security across Scotland's electricity system by improving the connectivity and flexibility of the system. Energy storage technology is available in many forms, at both small and large scales. Such technologies can manage the intermittency of energy generation by renewables, whilst pumped hydro storage can be used to generate electricity during periods of high consumption, ensuring there is enough electricity supplied to meet domestic demands. This policy could therefore improve the overall balance of supply and demand from the grid, reducing pressure on network infrastructure and ultimately improving the security of supply. This is likely to have positive effects for consumers and could result in benefits for population and human health.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Increased interconnection across the electricity system as a result of the greater uptake of different technologies may help to reduce GHG emissions by encouraging a shift from more traditional electricity sources. Furthermore, ensuring domestic capacity is considered may prevent the generation of excess electricity that cannot be stored and GHG emissions. This could subsequently result in improvements in air quality. There is also greater potential for adverse impacts associated with the construction and development of the infrastructure required to increase the security of supply, for example renewable energy schemes including onshore and offshore wind farms. Greater changes in land use and visual and cultural heritage effects could arise from the siting of infrastructure, as well as increased impacts on soil, air, water and biodiversity from construction activities. This however would depend on the type of interconnections, e.g. new pylon routes, undergrounded cables, undersea cables etc. Local level consideration would need to be given to the potential implications that may arise through the siting, construction and development of required infrastructure. In addition, cumulative effects arising from numerous developments should also be a consideration. Notwithstanding these potential negative environmental effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. The results provided reflect the potential for significant impacts.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increased renewable and low carbon energy developments will contribute towards improving connectivity across the Scotland's electricity network. *Previous SEA work:* Increased interconnection was previously considered in the SEA work for RPP3.

Policy Proposal 5: Launch a call in 2021 for evidence and views on technologies that can transform our electricity system, including energy storage, smart grid technologies, and technologies to deliver sustainable security of supply. This will help ensure that our funding and interventions support world leading activity in Scottish based companies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	0	0	0	0	0	+	This policy proposal seeks to launch a call for evidence and views on technologies which could help transform Scotland's electricity system. Technologies promoted through this policy include energy storage, smart grid technologies and technologies to enable the delivery of sustainable security of supply. Such technologies could play a key role in achieving greater flexibility, reliability, and improved efficiency in Scotland's electricity system. Greater security and reliability in the supply of electricity is likely to have positive effects on material assets and is likely to improve the resilience of the sector to the predicted pressures arising from climate change. Additionally, encouraging a more sustainable, secure supply of electricity (e.g. through renewable and low-carbon sources) is likely to have positive effects in relation to climate change, by reducing overall GHG emissions. This could have subsequent benefits for air quality. Enhancing the security of electricity supply is likely to be beneficial for consumers, by ensuring an electricity supply is reliable. This subsequently could result in benefits for population and human health. Additionally, greater security in electricity supply may result in greater security in network charge rates, which could also result in positive effects for the population and human health, helping to minimise fuel poverty. However, there is potential that the promotion of technologies more capable of delivering a sustainable, secure supply of electricity may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage, particularly as a result of cumulative developments. The design and siting of specific proposals developed through these funding schemes must meet the requirements of the statutory processes for assessing impacts on the wider environment through the planning process, which should help to mitigate any effects.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy seeks to promote and facilitate the use of renewables projects in providing sustainable electricity. ■ The policy supports improvements to sustainable electricity generation and network asset management. ■ Sustainable energy supply can be partly achieved through energy storage technologies. *Previous SEA work:* Electricity storage, smart energy technologies and demand side response were discussed in the SEA for the: ■ Electricity Generation Policy Statement. ■ RPP3.

Policy Proposal 6: Develop a series of whole system energy scenarios to guide infrastructure investment decisions for Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy proposal seeks to develop whole system energy scenarios, to help guide future infrastructure investment decisions. The energy scenarios as part of this policy will help promote the development of low-carbon technologies such as renewable energy. Therefore, the establishment of the "whole system energy scenarios", as advocated through this policy proposal, is likely to encourage the increased development of low carbon and renewable technologies, which will contribute towards a greater reduction in GHG emissions, by enabling a shift away from finite fossil fuels. This may result in associated improvements in air quality, and thus population and human health. There is potential that the whole system energy scenarios will help avoiding issues in relation to infrastructure investments. However, renewable energy infrastructure may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage. Local level consideration would need to be given to the potential implications that may arise through the siting, construction and development of required infrastructure. In addition, cumulative effects arising from numerous developments should also be a consideration. Notwithstanding these potential negative environmental effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. The results provided reflect the potential for significant impacts. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Scenarios will align with the main decarbonisation goals of the Plan. ■ The policy will promote further renewable and low carbon energy development and the replacement of energy generated from traditional, finite sources. ■ The policy will help to ensure social equity in relation to Scotland's energy system. Previous SEA work: None.

Policy Proposal 7: Ensure that sustainable security of electricity supply is included as a priority within future Scottish Government energy innovation funding programmes.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	0	0	0	0	0	+	This policy seeks to ensure that sustainable security of electricity supply is a priority within future energy innovation funding programmes such as Energy Investment Fund, Community and Renewable Energy Scheme, and Low Carbon Infrastructure Transition Programme. Greater security and reliability in the supply of electricity is likely to have positive effects on material assets and is likely to improve the resilience of the sector to the predicted pressures arising from climate change. Additionally, encouraging a more sustainable, secure supply of electricity is likely to have positive effects in relation to climate change, by reducing overall GHG emissions. Enhancing the security of electricity supply is likely to be beneficial for consumers, by ensuring an electricity supply is reliable. This subsequently could result in benefits for population and human health. Additionally, greater security in electricity supply may result in greater security in network charge rates, which could also result in positive effects for the population and human health, helping to minimise fuel poverty. However, there is potential that the promotion of technologies more capable of delivering a sustainable, secure supply of electricity may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage, particularly as a result of cumulative developments. The design and siting of specific proposals developed through these funding schemes must meet the requirements of the statutory processes for assessing impacts on the wider environment through the planning process, which should help to mitigate any effects. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy seeks to promote and facilitate the use of renewables projects in providing sustainable electricity. ■ The policy supports improvements to sustainable electricity generation and network asset management. ■ Sustainable energy supply can be partly achieved through energy storage technologies. *Previous SEA work:* Electricity storage, smart energy technologies and demand side response were discussed in the SEA for the: ■ Electricity Generation Policy Statement. ■ RPP3.

Policy Outcome 3: Scotland secures maximum economic benefit from the continued investment and growth in electricity generation capacity and support for the new and innovative technologies which will deliver our decarbonisation goals.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy outcome seeks to secure maximum economic growth from the continued investment and growth in electricity generation capacity, and support for innovative technologies which help deliver decarbonisation goals. The promotion of these technologies could contribute to the growth of these technology sectors and help facilitate their implementation in Scotland. Furthermore, the encouragement of renewable and low carbon technologies to help achieve decarbonisation goals is likely to lead to reductions in GHG emissions which would have positive effects on climatic factors. However, the promotion of renewable and low carbon technologies, may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage. There is also greater potential for cumulative effects on landscape character and cultural heritage associated with the installation of multiple developments, for example, the installation and operation of multiple renewable energy schemes such as commercial scale wind farms. Notwithstanding these potential negative environmental effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. The results provided reflect the potential for significant impacts. The reduced reliance on fossil fuel derived electricity is likely to result in improvements to air quality, and human health. The promotion of new electricity innovation technologies such as renewable energy schemes will play a key role in enhancing the security of energy supply as the impacts of a changing climate and the challenges are likely to become increasingly important. This will likely lead to positive effects on material assets.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy outcome will promote further renewable and low carbon energy development and the replacement of energy generated from traditional, finite sources through encouraging investment in innovative energy technologies. *Previous SEA work:* The development of innovative technologies and renewable energy was previously considered in the SEA work taken forward for: ■ 2020 Routemap for Renewable Energy in Scotland. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland. ■ RPP3.

Policy Proposal 1: Press the UK Government to reform and maintain the CfD mechanism in a manner which better captures the economic benefits and total value added for the Scottish and UK supply chains.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+		0	0	0	0	0	+	This policy proposal seeks to reform the Contracts of Difference (CfD) mechanism. The CfD is the government's main mechanism for supporting the deployment of new low carbon electricity generation. It has been designed to reduce the cost of capital for developers bringing forward low-carbon projects with high up-front costs and long payback times, whilst minimising costs to consumers. The policy proposals seeks to reform the CfD mechanism so it better captures the economic benefits and total value added for the Scottish and UK supply chains. The reforms to the mechanism may therefore further encourage developers to bring forward low-carbon projects. Subsequently, this may result in the development of more low-carbon and renewable energy and heat schemes. Therefore, this policy is likely to contribute towards achieving reductions in GHG emissions, having positive effects in relation to climatic change. The greater uptake of such technologies may result in greater security and reliability in the supply of electricity, having positive effects on material assets. This positive effect is further enhanced by the potential for these developments to improve the resilience of the sector to the predicted pressures arising from climate change. Additionally, enhancing the security of electricity supply is likely to be beneficial for consumers, by ensuring an electricity supply is reliable. This subsequently could result in benefits for population and human health. Additionally, greater security in electricity supply may result in greater security in network charge rates, which could also result in positive effects for the population and human health, helping to minimise fuel poverty. However, there is potential that the promotion of technologies more capable of delivering a renewable or low-carbon electricity may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage, particularly as a result of cumulative developments. The design and siting of specific proposals developed through these funding schemes must meet the requirements of the statutory processes for assessing impacts on the wider environment through the planning process, which should help to mitigate any effects.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy seeks to promote and facilitate the use of renewables projects in providing sustainable electricity. ■ The policy supports improvements to sustainable electricity generation and network asset management. ■ Sustainable energy supply can be partly achieved through energy storage technologies. *Previous SEA work:* Electricity storage, smart energy technologies and demand side response were discussed in the SEA for the: ■ Electricity Generation Policy Statement. ■ RPP3.

Policy Proposal 2: Introduce new requirements for developers to include supply chain commitments when applying to the ScotWind leasing process run by Crown Estate Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The ScotWind leasing process grants property rights for seabed in Scottish waters for new commercial scale offshore wind developments. This policy proposal seeks to introduce new requirements for developers to include supply chain commitments when applying to the ScotWind leasing process. By requiring supply chain commitments, this policy proposal will likely result in the award of contracts to local, Scottish suppliers. Primarily, the promotion of offshore renewable energy will facilitate the continued shift towards low carbon energy from more traditional, finite sources such as oil and gas. This will therefore help to reduce GHG emissions generated and subsequently support overall improvements for air quality, and thus population and human health. This in turn could help to reduce the impacts of climate change on other aspects of the environment, such as biodiversity, water and soil. This positive effect will be further reinforced by the requirement for local suppliers during the construction phases of the development, which may minimise GHG emissions associated with transportation of construction materials. Additional positive effects on population and human health are likely to arise from an increase in offshore wind employment opportunities, including those associated with the supply of materials. However, the development and operation of offshore wind technologies, and the associated infrastructure, could have some adverse environmental impacts, including on the landscape and seascape, on the setting of cultural heritage assets, and disruption to marine biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, marine licensing, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. However, more significant effects could arise in relation to landscape and seascape and cultural heritage as a result of an increase in cumulative developments of offshore wind farms. The results provided reflect the potential for significant impacts.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy proposal will result in a greater number of offshore wind farm developments. ■ Renewable energy from offshore wind turbines will continue to reduce demand for energy from traditional, more finite sources (e.g. oil and gas). ■ The use of local suppliers will reduce GHG emissions associated with the transportation of construction materials. *Previous SEA work:* Offshore renewable energy was discussed in the SEA work taken forward for: ■ Electricity Generation Policy Statement. ■ Draft Sectoral Marine Plans for Offshore Renewable Energy in Scottish Waters. ■ RPP3.

Policy Proposal 3: Identify and support major infrastructure improvements to ensure that Scotland's supply chain companies and facilities can benefit from the continued growth of renewable energy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy proposal seeks to identify and support major infrastructure improvements to ensure that Scotland's supply chain companies and facilities can benefit from the continued growth of renewable energy. This policy will help identify and support the development of low-carbon technologies such as renewable energy. Therefore, the identification and support for major infrastructure improvements, as advocated through this policy proposal, is likely to encourage the increased development of low carbon and renewable technologies, which will contribute towards a greater reduction in GHG emissions, by enabling a shift away from finite fossil fuels. This may result in associated improvements in air quality, and thus population and human health. There is potential that the identification and support of major infrastructure improvements may have adverse effects on other topic areas, including soil, water, biodiversity, landscape and cultural heritage. There is also greater potential for cumulative effects on landscape character and cultural heritage associated with the installation of multiple developments, for example, the installation and operation of multiple renewable energy schemes such as commercial scale wind farms. Notwithstanding these potential negative environmental effects, any development would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. The results provided reflect the potential for significant impacts. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Scenarios will align with the main decarbonisation goals of the Plan. ■ The policy will promote further renewable and low carbon energy development and the replacement of energy generated from traditional, finite sources. ■ The policy will help to ensure social equity in relation to Scotland's energy system. Previous SEA work: None.

Transport

Policy Outcome 1: To address our overreliance on cars, we will reduce car kilometres by 20% by 2030.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy outcome seeks to address overreliance on cars and reduce car mileage by 20% by 2030. This may be achieved through increasing the use of public transport such as buses and trains and increasing uptake of active travel by walking and cycling. This policy outcome is therefore likely to result in reductions in GHG emissions, having positive effects on climate change. It is also considered that improvements in air quality are likely to arise as a result of this policy proposal, with subsequent benefits for population and human health. This will be particularly relevant in areas where current air quality problems exist, including Air Quality Management Areas. However, this policy outcome may put pressure on material assets if the existing infrastructure for public and active transport modes is not adequate to accommodate the increased demand and use. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ There will be increased use of public transport. ■ More journeys will be made by active modes of travel. *Previous SEA work:* Minimising journeys made by car is discussed in the SEA work undertaken for the RPP3 and National Transport Strategy 2.

Policy 1: If the health pandemic has moved to a phase to allow more certainty on future transport trends and people's behaviours – and work and lifestyle choices future forecasting – we will publish a route-map to meet the 20% reduction by 2030 in 2021.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy sets out to publish in 2021 a route-map to meet 20% reductions in emissions from transport by 2030. This policy will take advantage of future transport trends and people's behaviours around work and lifestyle triggered by the changes brought by the Covid-19 pandemic. This policy is likely to have positive effects on climatic factors, if future transport trends will rely more heavily on sustainable transport modes. Moreover, there is the potential for positive effects on air quality as a result of the reduced GHG emissions from transport. Population and human health will not only benefit from the positive effects on air quality, but also from a better work-life balance, through, for example saving time on a daily commute. As more people will be able to work from home, peak-hours transport pressure will decrease, and it will reduce pressure on current transport network infrastructure. In relation to material assets employees will use more energy at homes, however energy will be saved at the workplaces. Demand for office space will reduce. This may have indirect positive effects for material assets by freeing up existing office space or land allocated for offices for residential use in accessible urban locations. The route map is also likely to support future development of transport infrastructure to meet post pandemic sustainable travel needs.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ▪ Introduction of the route-map will help Scotland meet 20% reduction from transport by 2030. The transport network will accommodate the changes in work and lifestyle choices. *Previous SEA work:* None.

Policy 2: Commit to exploring options around remote working, in connection with our work on 20-minute neighbourhoods and work local programme.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to encourage more flexible, home working and local workplace hubs. It is likely to have positive effects on GHG emissions and as a result improve air quality and population and human health. As more people will be able to work from home, peak-hours traffic will decrease and it will reduce pressure on current transport network infrastructure. In relation to material assets employees will use more energy at homes, however energy will be saved at the workplaces. Demand for office space will reduce. This may have indirect positive effects for material assets by freeing up existing office space or land allocated for offices for residential use in accessible urban locations. Population and human health will not only benefit from better air quality, but also from a better work-life balance, through, for example saving time on a daily commute.
									Assumptions & Links with Other SEA Work *Assumptions:* ▪ Introduction of the policy will encourage people to commute less and work more from home or local workplace hubs. ▪ The planning system will accommodate the changes to office-based working. *Previous SEA work:* None.

Policy 3: Covid-19 has impacted on how we work. We launched a Work Local Challenge to drive innovation in work place choices and remote working to support flexible working and our net zero objectives.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal recognises the impact of COVID-19 on how many people work. The launch of a Work Local Challenge will drive innovation in work place choice, and support flexible and remote working to help achieve objectives for net zero emissions. The policy proposal therefore is likely to support and encourage more flexible working, home working and local workplace hubs which may reduce travel to work, and support local working accessible by sustainable travel modes. It is likely to have positive effects on GHG emissions and as a result improve air quality and population and human health. As more people will be able to work from home, peak-hours traffic will decrease, and it will reduce pressure on current transport network infrastructure. Employees will use more energy at home, however energy will be saved at the work places. Demand for office space will reduce. This may have indirect positive effects for material assets by freeing up existing office space or land allocated for offices for residential use in accessible urban locations. Population and human health will not only benefit from better air quality, but also from a better work-life balance, through, for example saving time on a daily commute. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Introduction of the policy will encourage people to commute less and work more from home or local workplace hubs. ■ The planning system will accommodate the changes to office based working. *Previous SEA work:* ■ None.

Policy 4: We will work with the UK Government on options to review fuel duty proposals, in the context of the need to reduce demand for unsustainable travel and the potential for revenue generation.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to review fuel duty proposals in order to reduce the demand for unsustainable travel and the potential revenue generation. It is likely that electric vehicles will be promoted as a result of this policy, which could further reduce GHG emissions. Increased use of electric vehicles has the potential to increase electricity demand and pressure on existing electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Reduced car travel will improve air quality with direct effects on human health. Additionally, infrastructure such as the increased development of recharging points will be required to meet market demand. However, electric vehicle charging infrastructure has the potential for secondary effects. For example, increased construction works can result in noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets, however it is likely that the identified impacts would be largely localised and managed through existing mechanisms.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy proposal will promote sustainable travel. ■ The proposal will encourage the uptake of low-emission vehicles. *Previous SEA work:* Decarbonising the transport sector was discussed in the SEA for the RPP3.

Policy 5: We will work with local authorities to continue to ensure that their parking and local transport strategies have proper appreciation of climate change, as well as the impact on road users, including public transport operations, disabled motorists, cyclists and pedestrians.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to ensure that parking and local transport strategies across all local authorities have proper appreciation of climate change, as well as the impact on road users, including public transport operations, disabled motorists, cyclists and pedestrians. Parking strategies control the demand for parking places and encourage the use of public transport services. The primary aim of these strategies is to determine the current and potential future need for parking controls across the Local Authority Area. This can include parking management measures such as charging, enforcement and identifying areas where additional parking can be provided. Well designed local transport strategies can encourage and provide incentives for people to use more sustainable modes of transport by making them the most convenient and cost-efficient. This policy is likely to have positive effects on climate change by reducing GHG emissions. Subsequent improvements in air quality and population and human health are also possible as a result of less vehicle derived air pollution. The development of parking strategies to identify parking need, whilst at the same time reflecting climate change may have limit additional parking spaces within the Local Authority Area which may encourage more people to chose sustainable transport modes such as buses, trains, walking and cycling.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy will ensure that parking and local transport strategies properly account for climate change. ■ Parking strategies will support reduced parking provision to support modal shift. ■ This policy promotes the use of sustainable transport. *Previous SEA work:* None.

Policy 6: To support the monitoring requirement for the National Transport Strategy set out in the Transport (Scotland) Act 2019 and to further our understanding of how and why people travel we will develop a data strategy and invest in data.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	0	0	0	0	0	+	This policy proposal seeks to support the monitoring requirement for the National Transport Strategy as documented in the Transport (Scotland) Act 2019 which will outline the progress made and steps taken during the reporting period. The policy proposal also seeks to establish greater understanding on how and why people travel. This policy will therefore provide better data on transport and travel which will be used to inform decision making in relation to infrastructure requirements for public and active travel and public transport services. Therefore, it is likely this policy will have indirect positive effects on climatic factors, population and human health, and material assets. Furthermore, through implementing more effective improvements to public transport services and infrastructure, it may encourage more people to travel by these modes, having positive effects on climatic factors by minimising GHG emissions. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Data will be used to inform decision making in relation to transport services and infrastructure which bring about emissions reductions and transport infrastructure improvements. *Previous SEA work:* None.

Policy 7: Continue to support the Smarter Choices, Smarter Places (SCSP) [91] programme to encourage behaviour change. Continue to support the provision of child and adult cycle training, and safety programmes including driver cycling awareness training through Bikeability.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to further promote and facilitate active travel through investment in walking and cycling infrastructure and public transport and programmes targeting greater changes in travel behaviours. The focus is primarily towards promoting short and local active travel and the use of paths and on-road provision, as well as the promotion of car sharing and public transport for longer journeys. Moreover, this policy seeks to support the provision of cycle training and safety programmes for children and adults. The policy also supports driver cycling awareness training which will further increase safety for cyclists, encouraging further uptake and reducing impacts on population and human health from road accidents between cyclists and vehicles. Increased uptake of active travel for shorter journeys, as advocated through this policy, is likely to be beneficial overall in reducing travel through other means, particularly in urban areas (e.g. car travel). This policy presents an opportunity to develop a cohesive, multi-use transport network, with clear benefits in terms of material assets. There is also greater potential for reduced pressure on existing transport modes, particularly the road network. Reducing single occupancy car use in longer journeys, through car clubs, for example, will also help to further reduce pressure on the roads. Introduction of driver cycling awareness training will ensure safety on the roads and may potentially encourage more people to cycle. If widely implemented and adopted, a reduction in GHG emissions is likely through reducing travel journeys. Additionally, improvements in air quality are likely to be seen in urban areas as a result of the policy, particularly in areas designated due to poor air quality. Additionally, there are likely to be associated benefits for population and human health through improved connectivity of walking and cycling networks, and likely benefits in human health if active travel alternatives are widely taken up. Positive effects for material assets are identified from improvements to walking and cycling infrastructure and public transport infrastructure.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy includes measures such as the use of short, local links via paths and on-road provision, more and better bike parking and the development of a network of active travel hubs at public transport interchanges. ■ This policy will ensure provision of child and adult cycle training. ■ This policy will ensure the provision of driver awareness training through Bikeability. ■ The Smarter Choices Smarter Places programme partners with COSLA and targets specific populations for travel change interventions through projects such as public awareness events, signage and mapping, supporting car clubs, and working with public transport operators. Previous SEA work: Behavioural change to transport was discussed in the SEA work for RPP3 and the National Transport Strategy 2.

Policy 8: Support transformational active travel projects with a £500 million investment, over five years, for active travel infrastructure, access to bikes and behaviour change schemes. Enabling the delivery of high quality, safe walking, wheeling and cycling infrastructure alongside behaviour change, education and advocacy to encourage more people to choose active and sustainable travel. Support the use of E-bikes and adapted bikes through interest free loans, grants and trials.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted policy seeks to support transformational active travel projects by investing £500 million, over a period of five years, in active travel infrastructure, access to bikes and behavioural change schemes. Furthermore, the policy promotes the delivery of high quality, safe walking, wheeling and cycling infrastructure and programmes to provide education on the benefits of active travel and changing travel behaviours. Increased uptake of active travel for journeys is likely to further benefits overall in reducing travel through other means, particularly in urban areas (e.g. car travel). By boosting this policy, there is the potential to further develop a cohesive, multi-use transport network, with clear benefits in terms of material assets. There is also the potential for further reducing pressure on existing transport modes, particularly the road network. Reducing single occupancy car use by travelling using alternative modes such as electric bikes, for example, will also help to reduce pressure on the roads. If widely implemented and adopted, a reduction in GHG emissions is likely through reducing travel journeys. Additionally, improvements in air quality are likely to be seen in urban areas as a result of the policy, particularly in areas designated due to poor air quality. Additionally, there are likely to be associated benefits for population and human health through improved connectivity of walking and cycling networks, and likely benefits in human health if active travel alternatives are widely taken up. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy includes measures such as the use of short, local links via paths and on-road provision. ■ The policy will result in behavioural change around transport use. *Previous SEA work:* ■ Active travel is discussed in the SEA work for RPP3 and the National Transport Strategy 2.

Policy 9: We have re-purposed almost £39 million of active travel funding for the Spaces for People; this is enabling local authorities to put in place the temporary measures such as pop-up cycle lanes and widening walkways that are needed to allow people to physically distance during transition out of the Covid-19 lockdown.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to re-purpose £39 million of active travel funding for the Spacer for People, to enable local authorities to put in place pop-up cycle lanes and widening walkways to ensure people can socially distance during the transitioning out of the Covid-19 lockdown. This policy has the potential to encourage a higher uptake of active travel (walking and cycling) and reduce the number of journeys made by car. As a result, this policy can have positive effects on the overall GHG emissions reduction and improve the air quality. The improvements in air quality and increased levels of physical activity will have positive effects on population and human health. Positive effects are also expected for material assets through increasing the quality and extent of the active travel network.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy will increase the number of journeys made using active travel. ■ This policy will reduce the number of car journeys, especially for short distances. *Previous SEA work:* ■ Active travel is discussed in the SEA work for RPP3 and the National Transport Strategy 2.

Policy 10: Support increased access to bikes for all including the provision of public bike and e-bike share.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy promotes increased access to public bike and E-bike sharing schemes, to encourage the use of bikes instead of single occupancy car journeys. Furthermore, the policy supports the use of E-bikes and adapted bikes through loans, grants and trials. The promotion of bikes is likely to lead to reductions in GHG emissions, as more people choose to make journeys using bikes over other less sustainable modes. This will likely have associated benefits on air quality and population and human health, and in increasing equality of opportunity to access local services and employment. Increasing the bike share infrastructure will have positive effects on material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy will encourage more people to make journeys by bike. *Previous SEA work:* None.

Policy 11: Mobility as a Service and increased use of peer to peer car sharing which will help reduce the number journeys made by car. To do this we are harnessing innovation within our transport system through investing up to £2 million over three years to develop 'Mobility as a Service' (MaaS) in Scotland. We will grant funding CoMoUK to increase awareness of the role and benefits of shared transport and looking at the barriers to uptake of car clubs. We will provide support for travel planning through

Travelknowhow Scotland, which is an online resource which offers employers access to sustainable travel planning tools to develop and implement workplace Travel Plans and encourage ride-sharing in order to start changing travel behaviour within organisations.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to encourage the increased use of peer to peer car sharing, car clubs, bike sharing, ride sharing and multi-modal journeys to help reduce the overall number of journeys and miles travelled by private car. The policy seeks to support schemes including Mobility as a Service (MaaS), and CoMoUK. MaaS seeks to rethink mobility in a way that is smarter, faster and greener, offering new and alternative ways to travel, address user needs and develop technological solutions, whilst CoMoUK seek to increase awareness of the role and benefits of shared transport. This policy also sets out the provision of support for travel planning for employers through Travelknow how Scotland, which will serve as a tool to plan sustainable travel and for development and implementation of workplace Travel Plans. The encouragement of more sustainable travel through this policy and the included schemes are likely to result in reductions in GHG emissions, as people are encouraged to change behaviours and take up more sustainable, low carbon modes of transport. This is likely to have associated benefits for air quality and population and human health, with benefits for the latter is likely to be further intensified by the promotion of active modes of travel such as walking and cycling. The development of MaaS will also support material assets by increasing the use of existing travel resources.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy will increase the use of car sharing. *Previous SEA work:* Car sharing was previously discussed in the SEA work for RPP3.

Policy 12: We will work to improve road safety, ensuring people feel safe with appropriate measures in place to enable that. We will publish Scotland's Road Safety Framework to 2030, following consultation on an ambitious and compelling long-term vision for road safety where there are zero fatalities or serious injuries on Scotland's roads by 2050.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to improve road safety, ensuring people feel safe with appropriate measures in place to enable this. This policy has the potential to increase the uptake of active travel and enable more people to choose more sustainable transport modes, especially walking, wheeling or cycling. Road safety is one of key factors of why some people may not be willing to cycle or walk or let their children to do this. Therefore, this policy has the potential to reduce the overall GHG emissions and as a result improve the air quality. Better air quality and higher levels of physical activity will positively impact population and human health. Positive effects are also expected for material assets through improving infrastructure such as safe crossing points, cycle routes and speed reduction measures.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Improved road safety will enable and encourage more people to walk and cycle. *Previous SEA work:* Active travel and cycling were discussed in the SEA work undertaken for the RPP3 and the National Transport Strategy 2.

Policy 13: We are committed to taking forward policy consultation in advance of drafting supporting regulations and guidance to enable local authorities to implement workplace parking levy schemes that suit their local circumstances.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water.	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy seeks to enable local authorities to implement workplace levy schemes that suit their local circumstances. This is likely to discourage employees to travel to work by private vehicles, instead opting for more sustainable options such as public or active transport modes. This is being taken forward in combination with the support for Local Authorities to help develop and implement parking strategies. Parking strategies control the demand for parking places and encourage the use of public transport services. The primary aim of these strategies is to determine the current and potential future need for parking controls across the Local Authority Area. This can include parking management measures such as charging, enforcement and identifying areas where additional parking can be provided. This policy is likely to have positive effects on climate change by reducing GHG emissions. Subsequent improvements in air quality and population and human health are also possible as a result of less vehicle derived air pollution. This is likely to lead to indirect positive effects on material assets through supporting the efficient use of land. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The workplace parking levy will deter people from driving to work. ■ This policy promotes the use of sustainable transport. *Previous SEA work:* None.

Policy 14: We will bring forward a step change in investment with over £500 million to improve bus priority infrastructure to tackle the impacts of congestion on bus services and raise bus usage. We will launch the Bus Partnership Fund in the coming months to support local authorities' ambitions around tackling congestion.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+/-	+/-	+/-	0	0	0	0	0	+/-	This policy seeks to provide £500 million to improve bus priority infrastructure to help tackle the impacts of congestion on bus services and raise bus usage, for example investing in bus lane infrastructure. This policy may therefore encourage people to make journeys using more sustainable transport modes like buses instead of by private car. This therefore could result in an overall reduction in GHG emissions, having positive effects on climate change. However, the investment of infrastructure to prevent bus congestion, such as development of bus lanes, may result in greater congestion for other vehicles. This may therefore lead to greater GHG emissions due to more traffic and congestion, and subsequently adverse effects on air quality and human health. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Developing priority infrastructure for buses (e.g. bus lanes) will increase journeys travelled on these services. ■ This policy will improve the journey time of buses and increase travel by bus. ■ The existing bus fleet includes a high proportion of diesel vehicles. ■ This policy will cause increased traffic in other lanes. *Previous SEA work:* None.

Policy 15: We remain committed to delivering a national concessionary travel scheme for free bus travel for under 19s, and have begun the necessary preparations including planning, research, legal review and due diligence

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy proposal seeks to introduce a National Concessionary Travel Scheme to enable people age 19 and under to travel on buses for free. This may encourage people under the age of 19 and more families with children to make journeys by bus instead of relying on the use of private vehicles. However, free transport may encourage people to travel by bus instead of walking or cycling, although overall this is judged to be positive for climatic factors. This scheme will increase equality of access to these services for people under the age of 19, having positive effects on population and human health. Free or concessionary transport may encourage people to travel by bus instead of walking or cycling, which may discourage the use of active travel modes, however, the overall effect on the population and human health is expected to be positive.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The scheme will only provide free travel for those under 19 travelling on buses. ■ The policy will improve access for young people under the ages of 19 to bus services. ■ There will be less journeys made by private vehicles. ■ Bus fleets will include low-emission vehicles. *Previous SEA work:* None.

Policy 16: We are also carrying out a review of discounts available on public transport to those under the age of 26 – due for completion end of December 2020 (with consultation planned on young people's views on the impacts of COVID 19 and post lockdown measures on public transport usage and behaviour).

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy proposal seeks to consider the extension of public transport concessions to enable people aged 26 and under to travel on buses at a discount. This may encourage people under the age of 26 to make journeys by bus instead of relying on the use of private vehicles. This would have positive effects on the climate by reducing GHG emissions released from private vehicles and improve air quality. This scheme will increase equality of access to these services for people under the age of 26, having positive effects on population and human health. Free or concessionary transport may encourage people to travel by bus instead of walking or cycling, which may discourage the use of active travel modes, however, the overall effect on the population and human health is expected to be positive.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The scheme will only provide free travel for those under 26 travelling on buses. ■ The policy will improve access for young people under the ages of 26 to bus services. ■ There will be less journeys made by private vehicles. ■ Bus fleets will include low-emission vehicles. *Previous SEA work:* None.

Policy 17: Delivery of our First Active Freeways – segregated active travel routes on main travel corridors connecting communities and major trip attractions.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to deliver the first active freeways on main travel routes. Segregated active travel routes will enhance the road safety especially for cyclists and pedestrians. This policy has the potential to encourage a greater number of people to use active travel as preferred travel modes at least for shorter distances. As a result, this policy may lead to significant reductions in GHG emissions and help Scotland achieve its emissions reductions targets. Reduced emissions will also positively impact air quality and human health. Greater uptake of active travel is likely to have positive effects on mental and physical health and deliver overall positive effects on population and human health. Lastly, this policy is also likely to deliver positive effects on material assets as it will result in improvements to active travel infrastructure. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy will deliver segregated active travel routes on main travel corridors. ■ This policy will encourage higher uptake of active travel. ■ This policy will enhance road safety for cyclists. *Previous SEA work:* Active travel and cycling were discussed in the SEA work undertaken for the RPP3 and the National Transport Strategy 2.

Policy Outcome 2: We will phase out the need for new petrol and diesel cars and vans by 2030.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This boosted policy outcome seeks to completely phase out the need for new petrol and diesel cars by 2030, so that all new cars and vans registered by 2030 are ultra-low emission vehicles. This boosted policy outcome is therefore likely to further encourage the increased uptake of ultra-low emission vehicles which will have positive effects on climatic factors and air quality by reducing the release of GHG emissions and air pollutants. Improvements in air quality may have subsequent benefits for human health, particularly in urban areas with known air quality issues (e.g. Air Quality Management Areas). However, the promotion of ultra-low emission vehicles such as electric vehicles and vehicles fuelled by biofuel may have mixed effects on material assets. Increased use of electric vehicles has the potential to increase electricity demand and pressure on existing electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Infrastructure such as the increased development of recharging points will be required to meet market demand. Likewise, increased use of bio-fuel in the transport sector has the potential to put greater pressure on land use, soils and landscape through the production of bio-fuel crops. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ There will be increased uptake of electric vehicles and vehicles powered by alternative fuels.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									▪ Infrastructure to meet this demand will be provided. *Previous SEA work:* Phasing out need for diesel and petrol cars was discussed in the SEA work undertaken for RPP3.

Policy 1: We will consider and develop new financing and delivery models for electric vehicle charging infrastructure in Scotland and work with the Scottish Futures Trust to do so.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This boosted policy seeks to further enhance the capacity of the EV charging network and collaborate with Scottish Futures to do so. By boosting of this policy there is the potential to encourage the greater development of electric charging infrastructure. Beyond the benefit of developing a national network of charging and fuelling points, improving this infrastructure is primarily likely to foster the take up of electric vehicles, and ultimately, help to facilitate the further decarbonisation of the road transport sector. An increase in the number of these vehicles on Scotland's roads, and the replacement of older petrol and diesel-fuelled vehicles is likely to result in a reduction in GHG emissions, improved air quality and associated benefits for human health, particularly in urban areas with known air quality issues (e.g. Air Quality Management Areas). The increased uptake of electric vehicles has the potential to further increase electricity demand and increase pressure on electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Recharging points and infrastructure for electric vehicles are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population in these areas. Infrastructure development has the potential for secondary effects, particularly in relation to land take and areas out-with low emissions zones. For example, construction works can result in noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. However, it is likely that the identified impacts would be largely localised, and potentially managed through existing mechanisms.
									Assumptions & Links with Other SEA Work *Assumptions:* This policy and assessment refer to LEVs including electric vehicles and hybrids. Previous SEA work: This policy was previously considered in the SEA work for the RPP3.

Policy 2: We have invested over £30m to grow and develop the ChargePlace Scotland network which is now the 4th largest in the UK. We will continue to develop the capacity of the electric vehicle charging network.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to enhance the capacity of the EV charging network by investing over £30 million to grow and develop the ChargePlace Scotland network for electric vehicle charging infrastructure. This policy therefore is likely to encourage the greater development of electric charging infrastructure. Beyond the benefit of developing a national network of charging and fuelling points, improving this infrastructure is primarily likely to foster the take up of electric vehicles, and ultimately, help to facilitate the further decarbonisation of the road transport sector. An increase in the number of these vehicles on Scotland's roads, and the replacement of older petrol and diesel-fuelled vehicles is likely to result in a reduction in GHG emissions, improved air quality and associated benefits for human health, particularly in urban areas with known air quality issues (e.g. Air Quality Management Areas). The increased uptake of electric vehicles has the potential to increase electricity demand and increase pressure on electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Recharging points and infrastructure for electric vehicles are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population in these areas. Infrastructure development has the potential for secondary effects, particularly in relation to land take and areas out-with low emissions zones. For example, construction works can result in noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. However, it is likely that the identified impacts would be largely localised, and potentially managed through existing mechanisms.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy and assessment refer to LEVs including electric vehicles and hybrids. Previous SEA work: This policy was previously considered in the SEA work for the RPP3.

Policy 3: Our Low Carbon Transport Loan has provided over £80m of funding to date to support the switch to low carbon vehicles. We will continue to support the demand for ultra-low emission vehicles (ULEVs) through our Low Carbon Transport Loan scheme, which is now being expanded to include used electric vehicles.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to encourage higher uptake of ultra-low emission vehicles by offering the Low carbon Transport Loan scheme. If widely implemented, uptake of low emission vehicles is likely to contribute towards reductions in GHG emissions in the transport sector, with benefits in relation to improved air quality. Improved air quality also has the potential to be beneficial for human health, particularly in urban areas where there are existing air quality issues such as Air Quality Management Areas. Increased uptake of low emissions vehicles such as electric and electric-hybrid vehicles has the potential to increase electricity demand and pressure on electricity generation networks. There will also be a requirement for infrastructure requirements, such as recharging points, to facilitate or meet demand. However, recharging points and infrastructure are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population. Consideration will need to be given to this and network requirements to enable this transition.
									Assumptions & Links with Other SEA Work *Assumptions:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									▪ Infrastructure works would be largely focused on those required to facilitate uptake of electric vehicles, such as charging points, rather than the development of hydrogen plants. *Previous SEA work:* The policy was discussed in the SEA undertaken for the RPP3.

Policy 4: We will continue to promote the uptake of ULEVs in the taxi and private hire sector.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to encourage incentives to help further reduce the emissions generated by vehicles used in the taxi and private hire sector. This will be through the progressive replacement of older fossil-fuelled taxi and private hire vehicle fleets with lower emission vehicles or used electric vehicles. If widely implemented, uptake of low emission vehicles in these sectors is likely to contribute towards reductions in GHG emissions in the transport sector, with benefits in relation to improved air quality. Improved air quality also has the potential to be beneficial for human health, particularly in urban areas where there are existing air quality issues such as Air Quality Management Areas. Increased uptake of low emissions vehicles such as electric and electric-hybrid vehicles has the potential to increase electricity demand and pressure on electricity generation networks. There will also be a requirement for infrastructure requirements, such as recharging points, to facilitate or meet demand. However, recharging points and infrastructure are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population. Consideration will need to be given to this and network requirements to enable this transition.
									Assumptions & Links with Other SEA Work *Assumptions:* ▪ Infrastructure works would be largely focused on those required to facilitate uptake of electric vehicles, such as charging points, rather than the development of hydrogen plants. *Previous SEA work:* The policy was discussed in the SEA undertaken for the RPP3.

Policy 5: Continue to promote the benefits of EVs to individuals and fleet operators (exact nature of promotion to be decided annually).

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to continue increasing the use of low emission cars and vans for individuals and fleet operators, phasing out the need for new petrol and diesel vehicles. It intends to do this by increasing awareness by promoting the benefits of EV ownership. It is expected that within the timescales being considered in the Plan, this is expected to focus primarily on electric vehicles. This policy has the potential to lead to reductions in GHG emissions with benefits for air quality. Furthermore, improvements in air quality can have associated benefits for human health, particularly in urban areas where air quality issues have been identified, such as Air Quality Management Areas. The increased uptake of low emissions vehicles such as electric and electric-hybrid vehicles has the potential to increase electricity demand and put pressure on electricity generation networks. There will also be infrastructure requirements, such as recharging points, to facilitate or meet market demand. However, recharging points and infrastructure are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population. Consideration will need to be given to this and network requirements to enable this transition. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The proposal refers to electric and electric hybrid vehicles. Previous SEA work: Electric vehicles were discussed as part of the SEA work undertaken for the RPP3.

Policy 6: We will work with public bodies to phase out the need for any new petrol and diesel light commercial vehicles by 2025.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This boosted policy seeks to further support and encourage the public sector in transitioning to the use of electric vehicles. The widespread adoption of electric vehicles on Scotland's roads, as advocated through the boosting of this policy, is likely to result in reductions in GHG emissions and lead to associated improvements in air quality, with subsequent benefits for human health. Particular benefits are likely to be seen in urban areas with existing air quality issues (e.g. AQMAs) and by those with underlying health issues, exacerbated by poor air quality. By boosting this policy there is the potential to promote the uptake of electric vehicles and further help to reduce the demand on more traditional sources. The uptake of electric and electric-hybrid vehicles requires appropriate infrastructure to be in place and an increase in electricity generation, transmission and distribution to meet this demand. The electrification of transport is considered likely to pose a significant challenge in ensuring the energy system can respond to increases in peak demand over the long term. The provision of infrastructure, including recharging points for electric vehicles, are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having adverse effects on the population. The upgrading and development of infrastructure has the potential for some, very localised and temporary, environmental effects. For example, construction works can result in noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could even impact on landscape and the setting of cultural heritage assets. However, such impacts would managed through project level requirements and consenting process.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Promotion of electric vehicles and all associated infrastructure is included in this. Previous SEA work: Electric vehicles were discussed in the SEA work for RPP3.

Policy 7: We will support the public sector to lead the way in transitioning to EVs, putting in place procurement practices that encourage EVs. In the Programme for Government we committed to work with public bodies to phase out the need for any new petrol and diesel light commercial vehicles by 2025.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This boosted policy seeks to further support and encourage the public sector in transitioning to the use of electric vehicles. The widespread adoption of electric vehicles on Scotland's roads, as advocated through the boosting of this policy, is likely to result in reductions in GHG emissions and lead to associated improvements in air quality, with subsequent benefits for human health. Particular benefits are likely to be seen in urban areas with existing air quality issues (e.g. AQMAs) and by those with underlying health issues, exacerbated by poor air quality. By boosting this policy there is the potential to promote the uptake of electric vehicles and further help to reduce the demand on more traditional sources. The uptake of electric and electric-hybrid vehicles requires appropriate infrastructure to be in place and an increase in electricity generation, transmission and distribution to meet this demand. The electrification of transport is considered likely to pose a significant challenge in ensuring the energy system can respond to increases in peak demand over the long term. The provision of infrastructure, including recharging points for electric vehicles, are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag resulting in some inequality between areas. The upgrading and development of infrastructure has the potential for some, very localised and temporary, environmental effects. For example, construction works can result in noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could even impact on landscape and the setting of cultural heritage assets. However, such impacts would managed through project level requirements and consenting process.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Promotion of electric vehicles and all associated infrastructure is included in this. Previous SEA work:

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Electric vehicles were discussed in the SEA work for RPP3.

Policy 8: Create the conditions to phase out the need for all new petrol and diesel vehicles in Scotland's public sector fleet by 2030.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy seeks to phase out the petrol and diesel vehicles including light commercial vehicles and cars from the public sector fleet by 2025 and 2030, respectively. The greater uptake of low carbon vehicles, instead of vehicles using more traditional energy sources such as petrol and diesel, may lead to greater reductions in GHG emissions, having positive effects on climatic factors. This may have associated benefits on air quality due to less air pollutants being released, and subsequent benefits on the population and human health. **Assumptions & Links with Other SEA Work** *Assumptions:* There will be an increase in the use of low carbon vehicles. *Previous SEA work:* Low carbon vehicles were discussed in the SEA work for the RPP3 and National Transport Strategy 2.

Policy 9 We will continue to invest in innovation to support the development of ULEV technologies and their adoption.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to encourage investment in innovation to support the development of ULEV technologies and their adoption. The policy therefore promotes the uptake of ULEV, including electric vehicles, which has the potential to lead to a reduction in GHG emissions with additional benefits for air quality. Further, improved air quality can be beneficial for human health, particularly in urban areas where air quality issues have been identified, such as Air Quality Management Areas. Increased uptake of low emissions vehicles such as electric and electric-hybrid vehicles has the potential to increase electricity demand and increase pressure on electricity generation networks. There will also be infrastructure requirements, such as recharging points, to facilitate or meet market demand. Recharging points and infrastructure for electric vehicles are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population in these areas. Consideration will need to be given to this and network requirements to enable this transition. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy and assessment refer to ULEVs including electric vehicles and hybrids. Previous SEA work: • ULEVs were previously considered in the SEA work for the RPP3.

Policy 10: Take forward the initiatives in respect of connected and autonomous vehicles set out in A CAV Roadmap for Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
0	0	0	0	0	0	0	0	+/-	The policy aims to use connected and autonomous vehicle (CAV) technology to transform our transport system by making it safer and more efficient. This policy is currently only concerned with the trialling of these systems but if trials will be promoted and as such there will be the potential for automated and connected vehicle systems. Subsequently, there is potential for reduced vehicle emissions and improved air quality through more fuel-efficient methods of driving (due to computer control and operation). This policy is based on a trial, but if widely utilised, they would be unlikely to reduce the number of travel journeys but could lead to an overall reduction in fuel consumption and demand, with benefits for material assets. There are also likely to be benefits for population and human health through increased road/vehicle safety and a reduction in traffic accidents. However, buy-in will be key to the take-up of these systems and it may be hampered by negative public perception of 'driverless cars'. Whilst this proposal may encourage the delivery of connected and automated vehicle systems, the infrastructure required may tend to be focussed in more densely populated urban areas initially, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population and material assets. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Autonomous vehicles are unlikely to develop significantly within the timeframe of the Climate Change Plan. ■ Autonomous vehicles have similar levels of road safety than standard vehicles. Previous SEA work:

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									This policy was previously assessed as part of the SEA work for the RPP3.

Policy 12: With local authorities and others, evaluate the scope for incentivising more rapid uptake of electric and ultra-low emission cars and vans.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to encourage local authorities to introduce incentives to encourage the more rapid uptake of electric and ULEVs, to help further reduce the emissions generated by cars and vans. This will be through the progressive replacement of older fossil-fuelled taxi and private hire vehicle fleets with lower emission vehicles. If widely implemented, uptake of electric and ultra-low emission vehicles is likely to contribute towards reductions in GHG emissions in the transport sector, with benefits in relation to improved air quality. Improved air quality also has the potential to be beneficial for human health, particularly in urban areas where there are existing air quality issues such as Air Quality Management Areas. Increased uptake of low emissions vehicles such as electric and electric-hybrid vehicles has the potential to increase electricity demand and pressure on electricity generation networks. There will also be a requirement for infrastructure requirements, such as recharging points, to facilitate or meet demand. However, recharging points and infrastructure are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population. Consideration will need to be given to this and network requirements to enable this transition. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Infrastructure works would be largely focused on those required to facilitate uptake of electric vehicles, such as charging points, rather than the development of hydrogen plants. *Previous SEA work:* • Incentivising electric and ultra-low emission vehicles was discussed in the SEA undertaken for the RPP3.

Policy Outcome 3: To reduce emissions in the freight sector, we will work with the industry to understand the most efficient methods and remove the need for new petrol and diesel heavy duty vehicles by 2035.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy outcome seeks to increase the rate of technological change in the freight sector needed to achieve emission reduction targets. Encouraging further investment in and development of new technologies, such as electric vehicles, will likely result in greater uptake of such technologies. Therefore, this policy has the potential to improve the emissions intensity of road freight vehicles such as vans and HGVs by encouraging the uptake of low -emission vehicles such as electric and those powered by alternative fuels including biofuel and hydrogen. Whilst this would have positive effects on climatic factors, there may be some mixed effects on material assets. Increased use of electric vehicles has the potential to increase electricity demand and pressure on existing electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Infrastructure such as the increased development of recharging points will be required to meet market demand. Likewise, increased use of bio-fuel in the transport sector has the potential to put greater pressure on land use, soils and landscape through the production of bio-fuel crops.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ HGVs and vans will have improved emissions, reducing the amount of GHGs released to the atmosphere. ■ By 2035, there is no need for new petrol and diesel heavy duty vehicles. *Previous SEA work:* Reducing emissions from road freight was discussed in the SEA work undertaken for RPP3.

Policy 1: To support businesses, we will establish a Zero Emission heavy duty vehicle programme and will invest in a new zero drivetrain testing facility in 2021.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to establish a zero emission heavy duty vehicle programme and invest in a new zero drivetrain testing facility in 2021. Emissions from heavy duty vehicles account for a significant part of Scotland's overall emissions, and therefore enabling this sector to find innovative solutions can positively impact the overall GHG emissions. Reductions in carbon emissions from the transport sector will also positively impact air quality and population and human health. There may be some mixed effects on material assets. Increased use of electric vehicles has the potential to increase electricity demand and pressure on existing electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Infrastructure such as the increased development of recharging points will be required to meet market demand. Likewise, increased use of bio-fuel in the transport sector has the potential to put greater pressure on land use, soils and landscape through the production of bio-fuel crops.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ HGVs and vans will have improved emissions, reducing the amount of GHGs released to the atmosphere. *Previous SEA work:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Reducing emissions from road freight was discussed in the SEA work undertaken for RPP3.

Policy 2: Explore the development of green finance models to help business and industry to invest in new road transport technologies

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+	0	0	0	0	0	+/-	This policy seeks to explore the development of green financing models to help businesses and industry invest in new technologies, such as electric vehicle charging infrastructure in Scotland. The promotion of the development of new technologies, such as electric charging infrastructure, due to increased funding, is likely to improve the national network of charging points and encourage increased use of electric vehicles instead of petrol and diesel cars. This could therefore help reduce GHG emissions, resulting in positive effects on climatic factors and air quality, and subsequent benefits for population and human health. However, increased uptake of low emission vehicles (such as electric vehicles) as a result of increased investment in new technologies, has the potential to put greater pressure and demand on electricity generation networks if upgrades are not made to facilitate transition towards decarbonisation. Charging points and infrastructure for electric vehicles and low emission vehicles are likely to be focussed in densely populated urban areas, and as such the development of infrastructure in more rural areas may lag, having negative effects on the population in these areas. Infrastructure development has the potential for secondary effects. For example, increased construction works can result in noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. However, it is likely that the identified impacts would be largely localised, and potentially managed through existing mechanisms. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Financing and delivery models will increase the development of EV charging infrastructure. ■ Improvements and increased accessibility to charging infrastructure will encourage the greater uptake of electric vehicles. *Previous SEA work:* Electric vehicle infrastructure was discussed in the SEA work for the RPP3.

Policy 3: We will engage with industry to understand how changing technologies and innovations in logistics (including consolidation centres) can help to reduce carbon emissions, particularly in response to the increase in e-commerce.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+/-	-	0	0	-	-	+/-	This policy seeks the engagement with industry to understand how changing technologies and innovations in logistics (including consolidation centres) can help reduce carbon emissions, especially in response to the increase in e-commerce. The introduction of consolidation centres for freight, may help increase the efficiency and sustainability of freight movements in urban areas. The policy is likely to facilitate changes in how goods are received and delivered, especially if consolidation centres are located on the outskirts of towns and cities. If this is further combined with an increase in the use of low emission HGVs it should lead to a reduction in GHG emissions. Improvements in air quality are likely to be seen in urban areas as a result of the development of consolidation centres on the outskirts of urban areas, resulting in less vehicle deliveries within the urban area. This is likely to particularly benefit areas designated due to poor air quality, however, the exacerbation of existing issues outside these urban areas could occur as a result of the displacement of traffic. For example, the creation of these centres could worsen existing traffic congestion or increase traffic movements in adjoining areas, leading to reduced air quality and subsequently adverse effects on human health. The proposal also has the potential to reduce pressure on urban transport networks through changing freight movement. Conversely, adverse effects could also arise through the physical establishment of new infrastructure. Negative impacts may include land take, leading to loss of habitats, impacts on biodiversity, air, water and soil. There is the potential for visual impacts which could affect landscape and cultural heritage, depending on site and setting. However, it is likely that the negative impacts identified through the implementation and construction of such infrastructure will be realised at a local level. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This proposal is linked with the creation of urban low emission zones and increased utilisation of LEVs in urban areas. ■ Planning approvals are likely to be required for the development of freight consolidation centres.

Policy 4: Continue to investigate the role that other alternative fuels, such as hydrogen, gas and biofuel can play in the transition to a decarbonised road transport sector. Consider the scope for market testing approaches to alternative fuels infrastructure and supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	-	0	0	-	-	+/-	Supporting the continued investigation into the adoption of cleaner alternative fuels is likely to lead to reducing the reliance on petrol and diesel transport fuels. This has the potential to reduce GHG emissions and contribute to the overall decarbonisation of the transport sector. In addition, it is likely to lead to improvements in air quality with associated benefits for human health. Particular benefits are likely to be seen in urban areas with known air quality issues (e.g. Air Quality Management Areas) and by those susceptible to health concerns associated with poor air quality. It is also likely to increase energy security by reducing reliance on finite fossil fuels, with benefits for material assets. Whilst an increase in the proportion of ULEVs utilising alternative fuels (such as hydrogen and biofuels/biogas) could contribute to reducing the demand for oil and gas production there is the potential for greater demand and pressure on other energy sources. For example, increased production of first generation biofuels (from bio-crops) has the potential to put pressure on land use, soils and landscape. However, benefits could be realised in utilising second generation biofuels (from waste and by-products), particularly in terms of maximising the use of waste resources and also in terms of overall carbon abatement. Consideration may also need to be given to the development and implementation of novel energy sources such as hydrogen, as the development of hydrogen processing plants will likely result in land take and soil compaction. The construction of plants and infrastructure to process hydrogen also has the potential for environmental effects such as noise and visual disturbance, impacts to air, soil and water quality, amongst others. If inappropriately sited, infrastructure could impact on landscape and the

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									setting of cultural heritage assets, How ever, it is likely that any such impacts w ould be realised at a local level and managed through project level requirements, although there may be some significant effects resulting from cumulative developments.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Hydrogen w ill be produced from renew able sources. ■ Hydrogen-powered vehicles are unlikely to develop significantly w ithin the timeframe of the Climate Change Plan. Previous SEA w ork: Hydrogen technologies w ere discussed in the SEA w ork for the RPP3.

Policy 5: Launched the new Hydrogen Accelerator Programme to attract technical experts to help scale up and quicken the deployment of hydrogen technologies across Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	-	0	0	0	0	+/-	This policy seeks to develop a Hydrogen Accelerator Programme to attract experts to help scale up and quicken the deployment of hydrogen technologies. The programme w ill help promote the use of hydrogen as a low emission fuel instead of traditional fuel sources such as petrol and diesel. This may subsequently lead to reduction in GHG emissions, having positive effects on climatic factors. Air quality improvements are also likely to arise as a result of this policy, and this has the potential to result in benefits for population and human health, particularly in urban areas w here there are existing air quality issues. It is also likely to further increase energy security by continuing to reduce reliance on finite fossil fuels, with benefits for material assets. Through this policy, consideration may also need to be given to the development and implementation of hydrogen energy sources as the development of hydrogen processing plants w ill likely result in land take and soil compaction. The construction of plants and infrastructure to process hydrogen also has the potential for environmental effects such as noise and visual disturbance, impacts to air, soil and w ater quality, amongst others. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets, How ever, it is likely that any such impacts w ould be realised at a local level and managed through project level requirements, although there may be more significant effects resulting from cumulative developments. Additionally, the uptake of low carbon vehicles, such as electric vehicles, is likely to increase pressure/demand for electricity and could place pressure on existing netw orks if upgrades are not made to facilitate transition tow ards decarbonisation.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Hydrogen will be produced from renewable sources. ■ Hydrogen-powered vehicles are unlikely to develop significantly within the timeframe of the Climate Change Plan. *Previous SEA work:* Hydrogen technologies were discussed in the SEA work for the RPP3.

Policy Outcome 4: We will work with the newly formed Bus Decarbonisation Taskforce, comprised of leaders from the bus, energy and finance sectors, to ensure that the majority of new buses purchased from 2024 are zero-emission, and to bring this date forward if possible.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	-	0	0	0	0	+/-	This policy outcome seeks to ensure that the majority of new buses purchased from 2024 are zero-emission by working with the Bus Decarbonisation Taskforce. This policy has the potential to support the uptake of low-emission buses (i.e. electric, hydrogen fuelled and hybrid buses), which would result in additional reductions in GHG emissions, having positive effects on the climate resulting from the increased use of green buses and replacement of existing bus fleets. Air quality improvements are also likely to arise as a result of this policy, and this has the potential to be beneficial for human health. However, the continued development of lower-emission bus services has the potential for a range of secondary effects depending on the technologies that are being introduced. For example, the introduction of hydrogen buses would require new infrastructure and new facilities, creating the potential for impacts to some topic areas during construction and operational periods (e.g. disturbance, impacts to soil, water and air quality). Additionally, the uptake of low carbon bus systems, such as electric busses, is likely to increase pressure/demand for electricity and could place pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be an increase in the uptake of low-emission vehicles across the Scottish bus fleet. ■ Low emission vehicles will include those powered by electricity, bio-fuel and hydrogen. *Previous SEA work:* Green bus services were discussed in the SEA undertaken for the RPP3.

Policy 1: We have introduced a revised green incentive of the Bus Service Operators Grant

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to explore new forms of financing to accelerate the deployment of zero emissions buses across Scotland, including through a revised green incentive of the Bus Service Operators Grant. The policy outlines how the green incentive will be revised so it is weighted to the lowest emitting buses, to further encourage the uptake of ultra-low and zero emission buses. This policy is therefore likely to further promote and encourage the uptake of low emission buses amongst Scottish bus operators. The greater uptake of such technologies will lead to reductions in GHG emissions and have subsequent benefits to air quality through minimising the release of air pollutants. This may have associated benefits in relation to population and human health. However, the development of green bus technologies has the potential for a range of secondary effects. For example, a more widespread introduction of hydrogen buses would require new infrastructure and new facilities, creating the potential for impacts to some topic areas during construction and operational periods (e.g. disturbance, impacts to soil, water and air quality). The greater uptake of low carbon bus systems, such as electric buses, is likely to further increase pressure/demand for electricity and could place additional pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Grant will help the industry achieve lower emissions by providing incentives for fuel and operational efficiencies. ■ Lower emission buses will receive greater incentives. *Previous SEA work:* Green bus services were considered in the SEA work for the RPP3.

Policy 2: We launched a £9 million Scottish Ultra Low Emission Bus Scheme (SULEBS).

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to explore new forms of financing to accelerate the deployment of zero emissions buses across Scotland, including through the recently launched £9 million Scottish Ultra Low Emission Bus Scheme (SULEBS) which will help bus operators invest in ultra-low and zero emission busses. This policy is therefore likely to further promote and encourage the uptake of low emission buses amongst Scottish bus operators. The greater uptake of such technologies will lead to reductions in GHG emissions and have subsequent benefits to air quality through minimising the release of air pollutants. This may have associated benefits in relation to population and human health. However, the development of green bus technologies has the potential for a range of secondary effects. For example, a more widespread introduction of hydrogen buses would require new infrastructure and new facilities, creating the potential for impacts to some topic areas during construction and operational periods (e.g. disturbance, impacts to soil, water and air quality). The greater uptake of low carbon bus systems, such as electric buses, is likely to further increase pressure/demand for electricity and could place additional pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Grant will help the industry achieve lower emissions by providing incentives for fuel and operational efficiencies. ■ Lower emission buses will receive greater incentives. *Previous SEA work:* ■ Green bus services were considered in the SEA work for the RPP3.

Policy 3: In the context of the review of the National Transport Strategy and Transport Act, we will examine the scope for climate change policies, in relation to buses, across the public sector in high-level transport legislation strategies and policies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to examine the scope for climate change policy, in relation to buses, across the public sector's high-level transportation legislation and policies. Gaining an understanding of climate change policies that refer to bus services has the potential to deliver GHG emissions reductions from transport sector. Hybrid or electric buses can deliver significant reductions in the overall emissions. Additional benefits can be delivered for human health and air quality as a result of reduced emissions. Mixed effects are identified for material assets, as enhanced bus service can deliver positive effects on bus infrastructure, however, the roll out of electric and hybrid buses may put more pressure on electricity supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policies relating to bus services will be examined to assess whether they sufficiently account for climate change across public sector transport legislation. *Previous SEA work:* ■ Green bus services were considered in the SEA work for the RPP3.

Policy 4: We will work to align government financial support of £120 million over the next 5 years with private sector investment to decarbonise the bus sector.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to align governmental financial support of £120 million with private investment to decarbonise the bus sector. This policy is therefore likely to further promote and encourage the uptake of low emission buses amongst Scottish bus operators. The greater uptake of such technologies will lead to reductions in GHG emissions and have subsequent benefits to air quality through minimising the release of air pollutants. This may have associated benefits in relation to population and human health. However, the development of green bus technologies has the potential for a range of secondary effects. For example, a more widespread introduction of hydrogen buses would require new infrastructure and new facilities, creating the potential for impacts to some topic areas during construction and operational periods (e.g. disturbance, impacts to soil, water and air quality). The greater uptake of low carbon bus systems, such as electric buses, is likely to further increase pressure/demand for electricity and could place additional pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy will enable private sector investments to decarbonise bus sector. *Previous SEA work:* ■ Green bus services were considered in the SEA work for the RPP3.

Policy Outcome 5: We will work to decarbonise scheduled flights within Scotland by 2040.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy outcome seeks to work with the aviation industry to challenge them to increase the pace of sustainable aviation, with an aim of decarbonising scheduled flights within Scotland by 2040. The policy outcome is largely aimed at decarbonising flights but may also include improving efficiencies and sustainability of operations undertaken at airports, including reducing emissions. This could include measures to reduce emissions associated with airport ground operations and whilst planes are on the ground; for example, single engine taxiing, the use of ground power for planes at stand, and low emission ground vehicles where appropriate. There is the potential for this policy outcome to contribute to reducing GHG emissions and improving air quality. Improved air quality also has the potential to be beneficial for human health in urban areas located near to these facilities.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Measures to reduce emissions will be adopted by airports. ■ There will be technological advance to enable all internal flights within Scotland to be carbon free. *Previous SEA work:* Reducing emissions from Scottish ports and airports was previously discussed in the SEA work undertaken for RPP3.

Policy 1: We will aim to create the world's first zero emission aviation region in partnership with Highlands and Islands Airports Limited (HIAL). This will include taking action to decarbonise airport operations in the HIAL region.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines how the Scottish Government will seek to create the world's first zero emission aviation region in partnership with Highlands and Island Airports Limited (HIAL) by 2040. The policy includes actions to decarbonise airport operations within the region, and it outlines plans to work with the aviation sector to see what is being done to work with industry, helping to emphasis a change of transport mode from air to rail for domestic journeys where possible. Plans to decarbonise the HIAL region through use of low or zero emission planes will help reduce GHG emissions, having positive effects on climatic factors. A reduction in GHG emissions is also likely to have associated benefits on air quality and human health. Greater reductions in GHG emissions are likely through the promotion of rail travel over air travel, for domestic journeys. The continued investment and investigation into developing low or zero emission commercial passenger aircrafts, powered by energy lower carbon sources such as electricity could place additional pressure on existing electricity networks if upgrades are not made to facilitate transition towards decarbonisation. The potential use of hydrogen as an alternative fuel may have environmental effects arising from the construction of hydrogen plants and infrastructure, such as noise and visual disturbance, impacts to air, soil and water quality, amongst others. However, it is likely that any such impacts would be realised at a local level and managed through project level requirements.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Decarbonising the Highlands and Islands region will reduce GHG emissions. ■ There will be greater uptake of rail for domestic journeys. *Previous SEA work:* None.

Policy 2: We will begin trialling low or zero emission planes in 2021.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines how the Scottish Government will seek to trial low or zero emission aeroplanes. Plans to use low or zero emission planes will help reduce GHG emissions, having positive effects on climatic factors. A reduction in GHG emissions is also likely to have associated benefits on air quality and human health. Greater reductions in GHG emissions are likely through the promotion of rail travel over air travel, for domestic journeys. The continued investment and investigation into developing low or zero emission commercial passenger aircrafts, powered by energy lower carbon sources such as electricity could place additional pressure on existing electricity networks if upgrades are not made to facilitate transition towards decarbonisation. The potential use of hydrogen as an alternative fuel may have environmental effects arising from the construction of hydrogen plants and infrastructure, such as noise and visual disturbance, impacts to air, soil and water quality, amongst others. However, it is likely that any such impacts would be realised at a local level and managed through project level requirements.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy will facilitate the introduction of low or zero carbon planes. *Previous SEA work:* None.

Policy 3: The Scottish Government will continue to engage with Aviation sector to encourage sustainable growth post Covid-19.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
-	0	0	0	0	0	0	0	-	This policy sets out continued engagement of the Scottish Government with the aviation sector to encourage sustainable growth post Covid-19. Negative effects are expected in relation to climatic factors and material assets is if growth of aviation sectors is to be pursued.
									Assumptions & Links with Other SEA Work *Assumptions:* • There will be an increase in aviation activity post Covid-19. *Previous SEA work:* • None.

Policy 4: Explore the potential for the purchase of zero/low emission aircraft by the Scottish Government, for lease back to operators, with more detailed assessment in the forthcoming Aviation Strategy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to explore the potential to purchase of zero/low emissions aircraft by the Scottish Government. Plans to use low or zero emission planes will help reduce GHG emissions, having positive effects on climatic factors. A reduction in GHG emissions is also likely to have associated benefits on air quality and human health. Greater reductions in GHG emissions are likely through the promotion of rail travel over air travel, for domestic journeys. The continued investment and investigation into developing low or zero emission commercial passenger aircrafts, powered by energy lower carbon sources such as electricity could place additional pressure on existing electricity networks if upgrades are not made to facilitate transition towards decarbonisation. The potential use of hydrogen as an alternative fuel may have environmental effects arising from the construction of hydrogen plants and infrastructure, such as noise and visual disturbance, impacts to air, soil and water quality, amongst others. However, it is likely that any such impacts would be realised at a local level and managed through project level requirements. **Assumptions & Links with Other SEA Work** *Assumptions:* ▪ This policy will facilitate the introduction of low or zero carbon planes. *Previous SEA work:* • None.

Policy 5: Explore options for incentivising the use of more sustainable aviation fuel as we develop our Aviation Strategy, recognising that significant levers in this area are reserved.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to explore options for incentivising the use of more sustainable aviation fuel. Sustainable aviation fuels are derived from waste oils from a biological origin, such as agricultural residues or non-fossil CO_2, therefore, this policy has the potential to significantly reduce GHG emissions from aviation industry and help Scotland achieve its GHG emissions reduction targets. Reduced GHG emissions will also likely lead to improvements in air quality and lead to positive effects on human health. Transition from traditional petrol-based aviation fuels to sustainable aviation fuels has the potential for positive effects on material assets, as some of the sustainable fuels can be produced from renewable feedstocks. **Assumptions & Links with Other SEA Work** *Assumptions:* ▪ Sustainable aviation fuel will be incentivised leading to higher uptake across the sector. *Previous SEA work:* ▪ None.

Policy Outcome 6: Proportion of ferries in Scottish Government ownership which are low emission has increased to 30% by 2032.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outcome seeks to increase the proportion of the Scottish Government owned ferries which are low emission to 30% by 2032. This policy supports the uptake of low-emission ferries (i.e. hybrid ferries), which would result in reductions in GHG emissions, having positive effects on the climate resulting from the increased use of low carbon vessels. Air quality improvements in port and harbour areas are also likely to arise as a result of this policy, and this has the potential to be beneficial for human health. There is also expected to be positive effects on material assets associated with the replacement of aging vessels with new ferries.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be an increase in the uptake of low-emission ferries owned by the Scottish Government. ■ Specific types of ferries have not been discussed in any detail in the assessment. It has been considered that this would be detailed elsewhere as plans evolve. However, it is expected that low emission ferries will include those powered by fuel cell and battery powered. *Previous SEA work:* Low carbon ferry services were discussed in the SEA undertaken for the RPP3.

Policy 1: Continue to examine the scope for utilising hybrid and low carbon energy sources in the public sector marine fleet as part of our vessel replacement programme.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to examine the scope for utilising hybrid and low carbon energy sources in the public sector marine fleet as part of vessel replacement programme. Replacement of traditional fuel reliant fleet with the low carbon fleet can deliver significant reductions of GHG emissions from the marine transport sector. Reducing the amount of GHG emitted will also have a positive impact on population and human health and air quality. There are positive effects expected for material assets, as replacement of the fleet may require new or upgraded port infrastructure, which may also provide further opportunities to incorporate modifications to support climate change adaptation at ports.
									Assumptions & Links with Other SEA Work *Assumptions:* • Marine fleet will be low-carbon. *Previous SEA work:* • None

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects

Policy 2: Working with the UK Government to support proposals at the International Maritime Organisation (IMO) to significantly lower shipping carbon emissions in the global sector, including the option of introducing a global levy on marine fuel to fund research in cleaner technologies and fuels.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	+	0	0	0	0	0	0	This policy seeks to lower shipping carbon emissions in the global sector by for example introducing a global levy on marine fuel. Reducing emissions from the global shipping sector will have positive effect on overall GHG emissions, and also air quality in marine and coastal areas. **Assumptions & Links with Other SEA Work** *Assumptions:* • There will be a significant reduction of the GHG emissions from the global shipping sector. *Previous SEA work:* • None

Policy Outcome 7: By 2032 low emission solutions have been widely adopted at Scottish ports.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy outcome seeks to work with the marine industry to increase the pace of sustainable ferry services. This could include measures to reduce emissions associated with ports ground operations and whilst ferries are in ports. There is the potential for this policy outcome to contribute to reducing GHG emissions and improving air quality. Improved air quality also has the potential to be beneficial for human health in urban areas located near to these facilities. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Measures to reduce emissions will be adopted by ports. *Previous SEA work:* Reducing emissions from Scottish ports was previously discussed in the SEA work undertaken for RPP3.

Policy 1: Working with individual ports and the British Ports Association to consider a process for encouraging shared best practice initiatives for reducing emissions across the sector.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	0	This policy outcome seeks to work with individual ports and the British Ports Association to increase the pace of sustainable ferry services. This could include measures to reduce emissions associated with ports ground operations and whilst ferries are in ports. There is the potential for this policy outcome to contribute to reducing GHG emissions and improving air quality. Improved air quality also has the potential to be beneficial for human health in urban areas located near to these facilities. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Measures to reduce emissions will be adopted by ports. *Previous SEA work:* • Reducing emissions from Scottish ports was previously discussed in the SEA work undertaken for RPP3.

Policy 2: Working with the ports sector and with its statutory consultees through the Harbour Order process to ensure future port developments are environmentally underpinned.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy seeks to work with the ports sector and with its statutory consultees through the Harbour Order process to ensure future port developments are environmentally underpinned. This policy is likely to have positive effects on climatic factors and material assets. This will include enhancements to reduce GHG emissions at ports, and support climate change adaptation measures, particularly in respect to sea level rise and storm impacts. These changes will also support the maintenance of port infrastructure, with positive effects on material assets. **Assumptions & Links with Other SEA Work** *Assumptions:* • That the environmental considerations will include climate change mitigation and adaptation measures, and result in enhancement to infrastructure. *Previous SEA work:* • Scotland's National Marine Plan covered climate change mitigation and adaptation at ports and harbours.

Policy Outcome 8: Scotland's passenger rail services will be decarbonised by 2035.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to decarbonise Scotland's passenger railways by 2035. The continued electrification of passenger rail services has the potential to contribute to reducing GHG emissions through the replacement of diesel engines with electric engines. Associated works aimed at enhancing rail accessibility and connectivity through the wider rail improvement programme could help to encourage a modal shift from road to rail transport, and as a consequence, could also aid in reducing road-related GHG emissions. Rail electrification is also likely to have generally positive effects on air quality and has the potential to lead to human health benefits, particularly in urban areas such as Air Quality Management Areas where there are existing air quality issues. Other benefits are also likely, such as a reduced risk of fuel leaks/spills to soil and watercourses. However, the electrification of the rail network also has the potential for adverse impacts, particularly at the local level in relation to infrastructure development and construction activities. For example, the improvement works can result in noise and visual disturbance, impacts to air, soil and water quality impacts during the construction works, impacts from spills/leaks, adverse effects on landscape and cultural heritage assets, and effects on biodiversity. It is likely that the negative impacts identified will be realised at a local level. Overall, increased electrification of Scotland's railways is likely to increase pressure/demand for electricity and could place pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy also aims to investigate hybrid trains and other emerging technologies to determine suitability for application on Scotland's railways as a potential alternative to overhead wire electrification. *Previous SEA work:* Rail electrification was discussed in the SEA undertaken for the Edinburgh Glasgow Improvements Programme and RPP3.

Policy 1: Our commitment to decarbonise (the traction element of) Scotland's railways by 2035 will be delivered through investment in electrification and complementary alternative traction systems. Transport Scotland has published the Rail Services Decarbonisation Action Plan (July 2020) which will be updated as appropriate. Work is ongoing by industry partners to develop the initial schemes.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to decarbonise Scotland's railways by 2035 through investment in electrification and complementary alternative traction systems. The continued electrification of rail services has the potential to contribute to reducing GHG emissions through the replacement of diesel engines. Associated works aimed at enhancing rail accessibility and connectivity through the wider rail improvement programme could help to encourage a modal shift from road to rail transport, and as a consequence, could also aid in reducing road-related GHG emissions.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Rail electrification is also likely to have generally positive effects on air quality and has the potential to lead to human health benefits, particularly in urban areas such as Air Quality Management Areas where there are existing air quality issues. Other benefits are also likely, such as a reduced risk of fuel leaks/spills to soil and watercourses. However, the electrification of the rail network also has the potential for adverse impacts, particularly at the local level in relation to infrastructure development and construction activities. For example, the improvement works can result in noise and visual disturbance, impacts to air, soil and water quality impacts during the construction works, impacts from spills/leaks, adverse effects on landscape and cultural heritage assets, and effects on biodiversity. It is likely that the negative impacts identified will be realised at a local level. Overall, increased electrification of Scotland's railways is likely to increase pressure/demand for electricity and could place pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy also aims to investigate hybrid trains and other emerging technologies to determine suitability for application on Scotland's railways as a potential alternative to overhead wire electrification. *Previous SEA work:* • Rail electrification was discussed in the SEA undertaken for the Edinburgh Glasgow improvements Programme and RPP3.

Policy 2: We will establish an international rail cluster in Scotland to unlock supply chain opportunities using the interest at Longannet as a catalyst. This will be built around existing strengths in rail in Scotland and will seek to enhance the innovation and supply chain in the decarbonisation of our rolling stock and wider network.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	This policy seeks to establish an international rail cluster in Scotland to unlock supply chain opportunities using the interest at Longannet as a catalyst. This policy is likely to deliver wider decarbonisation of rail sector in Scotland and therefore lead to reductions in GHG emissions. It will as a result have positive effects on climatic factors, population and human health and air quality. Positive effects are expected for material assets as it will enhance overall rail infrastructure, and support positive re-use of Longannet. However, the electrification of the rail network also has the potential for adverse impacts, particularly at the local level in relation to infrastructure development and construction activities. For example, the improvement works can result in noise and visual disturbance, impacts to air, soil and water quality impacts during the construction works, impacts from spills/leaks, adverse effects on landscape and cultural heritage assets, and effects on biodiversity. It is likely that the negative impacts identified will be realised at a local level. Overall, increased electrification of Scotland's railways is likely to increase pressure/demand for electricity and could place pressure on existing networks if upgrades are not made to facilitate transition towards decarbonisation.
									Assumptions & Links with Other SEA Work *Assumptions:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									▪ The policy also aims to investigate hybrid trains and other emerging technologies to determine suitability for application on Scotland's railways as a potential alternative to overhead wire electrification. *Previous SEA work:* • Rail electrification was discussed in the SEA undertaken for the Edinburgh Glasgow improvements Programme and RPP3.

Policy 3: Continue to deliver our Rail Freight Strategy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+/-	'Delivering the Goods' – Scotland's Rail Freight Strategy sets a vision for a competitive, sustainable rail freight sector and providing a safer, greener, and more efficient way of transporting products and materials in Scotland. With the buy-in of stakeholders, the Strategy seeks to change in how freight is managed and transported. A shift from road to rail freight transport is likely to lead to a reduction in GHG emissions, having overall positive effects in relation to climatic factors. Associated improvements in air quality are likely to be seen in urban areas as a result of the policy, particularly in areas designated due to poor air quality, with benefits for population and human health. While the policy has the potential to reduce pressure on the existing road network, there is the potential for increased pressure/demand on the rail freight network should the appropriate infrastructure not be in place to accommodate this transition.
									Assumptions & Links with Other SEA Work *Assumptions:* ▪ The Strategy was published in March 2016. Previous SEA work: This policy was assessed in the SEA work for the RPP3.

Industry

Policy Outcome 1: Scotland's Industrial sector will be on a managed pathway to decarbonisation, whilst remaining highly competitive and on a sustainable growth trajectory.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outcome seeks to enable the industry to decarbonise, while remaining highly competitive and on a sustainable growth trajectory. By becoming more energy efficient, the total amount of energy used will decrease which will likely result in reductions in GHG emissions as a result of minimising total energy use. Greater reductions in GHG emissions are likely to result in associated improvements to air quality, especially if there is a greater reduction in the use of traditional fuels for energy. These improvements in air quality may have benefits for population and human health. Improving energy productivity across these sectors has the potential to reduce pressure on existing supply and distribution networks and if widely adopted could potentially contribute to further enhancing security of supply. The uptake of low carbon technologies in the industrial sector may have adverse effects on other environmental topics, for example, increased renewable energy technologies may have adverse effects on landscape character and the historic environment. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy considers the industrial and commercial sectors only. ■ Achieving the target for energy productivity will involve the retrofitting of existing commercial and industrial buildings with energy efficiency measures. *Previous SEA work:* Improving energy efficiency as a means of achieving better energy productivity was previously considered in the SEA for the RPP3.

Policy 1: Zero Emissions Trading Scheme (ETS): following EU Exit we will work with UK Government and other devolved administrations on maintaining carbon pricing that is at least as ambitious as the EU ETS. The Scottish Government's preference is to establish a UK ETS that will have an interim cap 5% tighter than the EU ETS, and will be reviewed for consistency with Net Zero in 2021

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted policy seeks to implement a UK ETS, that is consistent with Net Zero. The tax would put a cap on the amount of GHGs that can be emitted by businesses and would create a market and price for carbon allowances, thereby providing an incentive for installations to reduce their carbon emissions as they can sell their surplus allowances. The UK ETS, as advocated through this policy, is likely to result in potential for continuing the GHG emission reduction action by business and industry under the current phase of the (EU) ETS. It is expected that the ETS would have an interim cap 5% tighter than the EU ETS, which is expected to move from -80% emissions target to net zero by 2050. There is also the potential for further improvements in air quality associated with a reduction in energy demand from traditional and finite fossil fuel sources. These improvements in air quality may have benefits for population and human health.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The EU ETS continues into Phase IV and V, and the UK continues to be a member of the EU ETS, or linked to the EU ETS, post-Brexit, operating to the same overall cap agreed by the UK for its contribution to the EU 2030 GHG target (of -40% on 1990) within the Paris Agreement and the development of Phase V target. *Previous SEA work:* The related Carbon Emissions tax was previously assessed in the SEA work undertaken for the RPP3.

Policy 2: Deliver an Energy Transition Fund (ETF) – to provide support for a sustainable, secure and inclusive energy transition in the North-East.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines that the Energy Transition Fund (ETF) will provide support for a sustainable, secure and inclusive energy transition in the North-East. This policy is likely to result in a higher uptake of energy efficiency measures or participating in decarbonisation projects as a result of increased investment. This is therefore likely to lead to reductions in GHG emissions as energy efficiency will increase and it will potentially lead to achieving decarbonisation. Subsequent improvements in air quality, human health and to material assets are also likely. However, the encouragement of energy efficiency measures and the update of low carbon and renewable energy solutions may have adverse long-term effects on several environmental topics including landscape and historic environment as a result of greater use of renewable energy technologies such as solar panels and wind turbines. In addition, retrofitting of industrial buildings with energy efficiency measures may disturb biodiversity nesting in cavities, including species such as birds and bats. It is considered that many of these impacts may be localised and these activities

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The ETF will encourage increased energy efficiency and the uptake of low carbon and renewable energy solutions. ■ There will be increased use of energy efficiency measures including the use of renewable energy. *Previous SEA work:* None.

Policy 3: Establish and deliver a Scottish Industrial Energy Transformation Fund (IETF) – to support the decarbonisation of industrial manufacturing through a green economic recovery.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines that the Scottish Industrial Energy Transformation Fund (IETF) will support the decarbonisation of industrial manufacturing through a green economic recovery. This policy is likely to result in more industrial businesses taking up energy efficiency measures or participating in decarbonisation projects as a result of increased investment. This is therefore likely to lead to reductions in GHG emissions as more businesses adopt energy efficiency measures and seek to achieve decarbonisation. Subsequent improvements in air quality, human health and to material assets are also likely. However, the encouragement of industrial energy efficiency measures may have adverse long-term effects on several environmental topics including landscape and historic environment as a result of greater use of renewable energy technologies such as solar panels and wind turbines. In addition, retrofitting of industrial buildings with energy efficiency measures may disturb biodiversity nesting in cavities, including species such as birds and bats. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The IETF will encourage the industrial sector to increase their energy efficiency and seek to achieve decarbonisation. ■ There will be increased use of energy efficiency measures including the use of renewable energy. *Previous SEA work:* None.

Policy 4: Making Scotland's Future: multi-faceted programme will boost manufacturing productivity, innovation, and competitiveness, supporting manufacturing businesses to make the transition to net zero and realise the opportunities of a low carbon economy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to boost manufacturing productivity, innovation, and competitiveness, while supporting businesses to make the transition to net zero and realise the opportunities of low carbon economy through Making Scotland's Future. The increased promotion of low carbon manufacturing and the development of new lower carbon manufacturing techniques may encourage industrial manufacturing businesses to adopt these techniques and attitudes towards manufacturing. This policy therefore is likely to aid the shift to lower carbon methods for manufacturing, resulting in less GHG emissions. As such there are likely to be positive effects on the climate and associated improvements to air quality and human health. Additionally, improving manufacturing techniques may have positive effects on material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be a widespread shift towards lower carbon manufacturing technologies and techniques. *Previous SEA work:* None.

Policy 5: Low Carbon Manufacturing Challenge Fund: to support innovation in low carbon technology, processes and infrastructure. It will be based on successful delivery of ERDF funded Advancing Manufacturing Challenge Fund.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines that Low Carbon Manufacturing Challenge Fund will provide support for innovation in low carbon technology, processes and infrastructure, through Advancing Manufacturing Challenge Fund. The increased promotion of low carbon manufacturing and the development of new lower carbon manufacturing techniques may encourage industrial manufacturing businesses to adopt these techniques and attitudes towards manufacturing. The policy therefore is likely to aid the shift to lower carbon methods for manufacturing, resulting in less GHG emissions. As such there are likely to be positive effects on the climate and associated improvements to air quality and human health. Additionally, improving manufacturing techniques may have positive effects on material assets. The uptake of low carbon technologies in manufacturing may have adverse effects on other environmental topics; for example, increased renewable energy technologies may have adverse effects on landscape character and the historic environment. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The Low Carbon Manufacturing Challenge Fund will encourage increased implementation of low carbon technology. ■ There will be a widespread shift towards lower carbon manufacturing technologies and techniques. *Previous SEA work:* None.

Policy 6: The Renewable Heat Incentive (RHI) is a GB-wide scheme created by the UK Government (with the agreement of the Scottish Government). UK Government is extending both the domestic and non-domestic RHI out to 2022.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	The Renewable Heat Incentive (RHI) and associated programmes aim to incentivise the adoption of low renewable heat technologies within businesses by allowing users to be paid for generating and consuming their own heat to contribute towards the decarbonisation of Scotland's energy supplies. RHI was a component of RPP3. This boosted policy could encourage the further implementation of technologies such as heat pumps, solar thermal panels and biomass boilers which could help further reduce reliance on fossil fuels, and in doing so reduce GHG emissions and improve air quality/human health, although this is likely to be influenced by the specific renewable heat technology use and the industries to which it relates. However, this boosted policy has the potential for negative impacts to arise from the siting, installation and operation of the different technologies, both short term and long term. This boosted policy could promote the uptake of RHI and renewable heat technologies, which may result in long term adverse effects on the landscape and setting of the historic environment. Biodiversity implications may also arise if work is undertaken in roof cavities to install technologies which could lead to adverse impacts on bats. If care is not taken, there is the also the potential for greater adverse effects on biodiversity, landscapes, soil and water quality. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. The resilience of Scotland's energy supply to the predicated impacts of climate change is likely to become increasingly important; promotion of more diverse technologies, as advocated through this boosted policy, and increased flexibility in relation to how these feed into the energy system as a whole should aid in future proofing supply. The implementation of efficient heat technologies advocated through the RHI could potentially contribute to further enhancing security of supply and help to further future-proof energy supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy considers both domestic and commercial/industry sectors. ■ While the RHI does not include district heating, it does include eligible heat technologies that provide heat to a heat network. *Previous SEA work:* The RHI was discussed in the SEA undertaken for the RPP3.

Policy Proposal 1: Scottish Industrial Decarbonisation Partnership (SIDP): Scottish Government -convened cross-sector energy-intensive-industrial (EII) stakeholder forum with representatives from manufacturing sites. Initial objectives: bring together other initiatives; build a shared narrative between government/ industry on decarbonisation; and disseminate best-practice.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to establish a Scottish Industrial Decarbonisation Partnership (SIDP), which would include representation from EIIs stakeholder forum with representatives from manufacturing sites to bring them together and to build a shared narrative between government and the industry on decarbonisation and to disseminate best-practice. The SIDP will develop a clear vision for industrial decarbonisation in Scotland, develop decarbonisation policies, identify investment opportunities for the Industrial Energy Transformation Fund (IETF) and commit to transparency, knowledge-sharing and promoting best practice. The development of the SIDP, alongside the decarbonisation policy and delivery plan it would facilitate, will help to reduce carbon emissions across the industrial sector, having positive effects on climate change. Aiding the shift to lower carbon and renewable technologies from more traditional energy sources such as oil and gas, will likely have positive effects on air quality and human health. Furthermore, increased uptake of lower carbon technologies such as renewable energy or hydrogen may have adverse effects on soil due to land take for infrastructure and processing facilities. The increased uptake of such technologies is likely to further contribute to reducing energy demand from traditional supplies, reducing pressure on network infrastructure and making it more readily available for other fuels such as hydrogen. There could also be a positive impact on material assets as infrastructure may be reused or converted, for example for hydrogen, or new or upgraded infrastructure would likely be required to ensure supply to industry and increased security of energy supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Decarbonisation policy will inform decision making. ■ There will be increased uptake of lower carbon and renewable technologies. ■ The delivery plan will help facilitate decarbonisation across the industrial sector. *Previous SEA work:* None.

Policy Proposal 2: Deliver a Net Zero Transition Managers Programme to embed Managers in organisations tasked with identifying, quantifying and recommending decarbonisation opportunities for the business.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to deliver a Net Zero Transition Managers Programme that will embed Managers in organisations. The manager will be tasked with identifying, quantifying and recommending decarbonisation opportunities for the business. By supporting the transition to net zero in industry, these industries may be afforded additional funding from the Scottish Government and other UK funding programmes. The introduction of a manager into businesses will help lead to a reduction in GHG emissions through monitoring current emissions and making recommendations to further reduce emissions. Achieving an overall reduction in GHG emissions released may also result in improvements to air quality, particularly if the high emitting businesses are in close proximity to each other. As a result of improvements to air quality, there may be subsequent benefits for population and human health. Additionally, increasing accessibility to potential funding sources may have positive effects on material assets, by enabling industries to invest in new technologies, whilst also improving security of energy supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The Net Zero Transition Managers Programme will encourage a switch to lower carbon technologies. ■ Embedding managers tasked with achieving net zero will enable greater scale reductions in GHG emissions. ■ Increased funding will encourage the uptake of lower carbon technologies. ■ The Managers Programme could enable knowledge-sharing which will help inform decisions. *Previous SEA work:* None.

Policy Proposal 3: Establish a Grangemouth Future Industry Board (GFIB) – forum to coordinate public sector initiatives on growing economic activity at the Grangemouth industrial cluster, whilst supporting its transition to our low-carbon future.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									This policy proposal sets out to establish a Grangemouth Future Industry Board (GFIB) that will operate in a form of a forum to coordinate public sector initiatives on growing economic activity at the Grangemouth industrial cluster and simultaneously supporting its transition to our low-carbon future. The transition to low carbon is likely to have positive effects on climatic factors, air quality and material assets.
+	+	+	0	0	0	0	0	+	**Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy will encourage the industrial sector to transition to low-carbon solutions while enabling an increased economic activity at the Grangemouth. *Previous SEA work:* None.

Policy Proposal 4: Develop policy on providing market-benefit for Scottish industries that invest to decarbonise production.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to deliver market-benefit for Scottish industries that invest to decarbonise production. The introduction of market-benefits for companies that invest in decarbonisation may encourage more industrial manufacturing businesses to adopt these techniques and attitudes. The policy proposal therefore is likely to aid the shift to lower carbon methods for manufacturing, resulting in less GHG emissions. As such there are likely to be positive effects on the climate and associated improvements to air quality and human health. Additionally, improving manufacturing techniques may have positive effects on material assets. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ There will be a widespread shift towards lower carbon manufacturing technologies and techniques. *Previous SEA work:* None.

Policy Proposal 5: Green Jobs Fund, to help businesses create new, green jobs, working with enterprise agencies to fund businesses that provide sustainable or low carbon products and services to help them develop, grow and create jobs. Further funding will help to ensure that businesses and supply chains across Scotland can capitalise on our investment in low carbon infrastructure such as the decarbonisation of heating and green transport.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal would create the Green Jobs Fund which aims to help businesses create new, green jobs, and would fund businesses that provide sustainable or low carbon products and services to help develop, grow and create low carbon jobs. In addition, further funding will be provided to ensure that businesses and supply chains across Scotland can capitalise on the investment in low carbon infrastructure, such as the decarbonisation of heating and green transport. The policy could help industry create new green jobs through the Green Jobs Fund and has the potential for additional funding which will encourage the greater uptake of lower carbon technologies as a means of moving towards decarbonisation. Therefore, this policy proposal is likely to have positive effects on climatic factors, by reducing GHG emissions. This may have subsequent benefits for air quality and human health. Additionally, increasing accessibility to potential funding sources may have positive effects on material assets, by enabling industries to invest in new technologies and help improve security and flexibility of energy supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be a widespread shift towards lower carbon manufacturing technologies and techniques. ■ Increased creation of low carbon products, services and employment opportunities. ■ Reducing the cost of the transition to low carbon will encourage the uptake of such technologies. *Previous SEA work:* None.

Policy Proposal 6: Seizing the economic opportunity, we will work across government, enterprise agencies and the innovation system to identify strengths that can be built on as part of the decarbonisation journey, for example on The Clyde Mission and continued support for the Michelin Scotland Innovation Parc (MSIP).

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal aims to identify strengths within the decarbonisation journey that can be built on to seize this economic opportunity. The policy would entail collaboration across government, enterprise agencies and the innovation system to build upon low carbon work that has already been done, such as the Clyde Mission and continued support for the Michelin Scotland Innovation Parc (MSIP). This policy encourages the uptake of lower carbon technologies as a means of moving towards decarbonisation through collaboration and continued support of low carbon projects. Therefore, this policy proposal is likely to have positive effects on climatic factors, by reducing GHG emissions. As such, there may be associated benefits for air quality and human health. Additionally, as the policy proposal promotes innovation and development of lower carbon technologies it may have positive effects on material assets, by encouraging investment in new technologies and it may help improve security and flexibility of energy supply through greater uptake of such technologies.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Enable knowledge sharing between government and the industry. ■ There will be greater uptake of lower carbon technologies. ■ Increased employment opportunities within the low carbon sector. *Previous SEA work:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									None.

Policy Outcome 2: Technologies critical to further industrial emissions reduction (such as carbon capture and storage, carbon capture and utilisation, and production and injection of hydrogen into the gas grid) are operating at commercial scale by 2030.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outcome promotes the use of Carbon Capture Utilisation and Storage and production and injection of hydrogen into gas grid in Scotland. The outcome supports the development of CCUS in north-east Scotland and seeks to develop a CCUS challenge fund to boost early stage work and explore technologies and innovations. The CCU process is an emerging technology which manufactures carbon dioxide into commercially viable products such as chemicals, polymers, building materials and fuels. If this was progressed further, the use of waste products in this way is considered likely to have a positive effect on material assets. The implementation of CCS could contribute to significant reductions in GHG emissions, particularly if utilised with carbon intensive industries and energy generation from fossil fuels where CCS can capture up to 90% of the CO_2 emissions produced. Increased uptake of CCUS could have further positive effects on air quality and human health through reducing CO_2 emissions. This policy outcome is therefore likely to contribute significantly to reducing GHG emissions and will have positive effects on climate change and air quality, although this is likely to be influenced by the specific CCS use and the industries to which it relates. Should CCUS be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ CCUS is not an energy generation technology but rather a technology that could aid in reducing climatic impacts of fossil fuel-intensive industry and energy generation. ■ CCUS is likely to have a role to play in the continued use of oil and gas resources in industry and in the bioenergy and emerging hydrogen-fuel sector. *Previous SEA work:* CCUS was discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy 1: ACORN CCS Project: support the delivery of the CCS and Hydrogen capability at St. Fergus Gas Processing complex by 2025.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to support the delivery of the CCS and Hydrogen capability at St. Fergus Gas Processing complex by 2025. This policy will encourage increased strategic engagement with the UK Government, Ofgem, developers and gas network stakeholders, which may encourage the uptake of CCS. The implementation of CCS at this site could contribute to reductions in GHG emissions and therefore will have positive effects on climate change. Increased support for CCS at St. Fergus could have positive effects on air quality through reducing CO_2 emissions within the atmosphere. However, there is potential for negative environmental effects over a range of environmental topics as a result of the implementation of this project. For example, negative effects on biodiversity are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCS. The proposed development may also have adverse effects on landscape and the historic environment. However, impacts are likely to be managed at a project level through current mechanisms, such as the planning process. Employment generated as a result of this developments could have longer term positive effects on health. In addition, CCS pipelines in marine environments such as the ACORN CCS project at St. Fergus could impact on the seabed, habitats and species and other marine environmental features. The potential for leakage of CO_2 during the operation and post-closure phases may also have adverse environmental effects; for example, environmental issues to soil, water and flora through acidification from small gas and brine leakages, and impacts on biodiversity and human health from large leakages. Notwithstanding these potential negative environmental effects, the development of CCS and any associated infrastructure would be subject to existing mechanisms such as planning, marine licensing, Environmental Impact Assessment (EIA) and potential Habitats Regulations Appraisal (HRA), prior to consent being granted. Any future public plans and programmes relating to CCS would also have to be considered in relation to the requirements of the Environmental Assessment (Scotland) Act 2005. This assessment has focused on the impacts likely to arise directly from the policy proposals. Some effects, such as those arising from activities such as storage and transportation, are expected to be neutral at this stage and would be considered through future assessment work.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ CCS is not an energy generation technology but rather a technology that could aid in reducing climatic impacts of fossil fuel-intensive industry and energy generation. ■ CCS is likely to have a role to play in the continued use of oil and gas resources in industry and in the bioenergy and emerging hydrogen-fuel sector. *Previous SEA work:* CCS was discussed in the SEA work taken forward for: ■ RPP3 ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy 2: Establish and deliver a Carbon Capture and Utilisation (CCU) Challenge Fund.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines that the Carbon Capture and Utilisation (CCU) Challenge Fund will provide support for carbon capture and utilisation projects across Scotland. This policy is likely to result in a number of project proposals that have the ability to capture atmospheric carbon and potentially utilise it. This is therefore likely to lead to reductions in GHG emissions and subsequently improve air quality. However, the encouragement of carbon capture and utilisation may have adverse long-term effects on several environmental topics including soil and landscape as such initiatives may involve land take. In addition, such initiatives may disturb biodiversity nesting in cavities, including species such as birds and bats. The realisation of any negative impacts will be largely felt at a localised level and may require further consideration during the consenting processes. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The CCU Challenge Fund will encourage increased implementation of CCU solutions. *Previous SEA work:* None.

Policy Proposal 1: Emerging Technologies Fund – to support the development of Hydrogen, CCUS and Negative emissions technologies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil		Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0		0	0	0	0	+	This policy proposal seeks to create an emerging technologies fund which would help Scottish reduce the costs for the low carbon transition by supporting the development of lower carbon technologies such as hydrogen, CCUS and negative emission technologies. By reducing the cost of the transition to lower carbon technologies, there is likely to be greater uptake of such technologies across the industry. This could lead to greater reductions in GHG emissions as more businesses switch from the use of more traditional energy sources such as oil and gas, to lower carbon and renewable sources. A reduction in GHG emissions may have associated benefits for air quality and population and human health. Furthermore, the greater uptake of lower carbon technologies is likely to result in positive effects on material assets by improving security and flexibility of energy supply to industries.
										Assumptions & Links with Other SEA Work *Assumptions:* ■ Reducing the cost of the transition to low carbon will encourage the uptake of such technologies. ■ There will be a widespread shift towards lower carbon technologies. *Previous SEA work:* None.

Policy Proposal 2: Carbon Capture Utilisation and Storage (CCUS): work closely with UK Government to get commercial, policy and regulatory frameworks required to support CCUS at scale in the UK.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted policy proposal seeks to accelerate the deployment of key energy and carbon capture technologies (e.g. biomass and hydrogen) to support commercial, policy and regulatory frameworks which will enable the benefits to be applied across all sectors in Scotland. The commissioning of this research is likely to result in greater uptake of key lower carbon energy technologies such as biomass and hydrogen, as well as use of carbon capture technologies. This will likely lead to reductions in GHG emissions, having positive effects on the climate. If widely implemented, as promoted through this boosted policy proposal, these technologies are likely to further contribute to reducing energy demand from traditional supplies, reducing pressure on network infrastructure and making it more readily available for other fuels such as hydrogen. There could also be a positive impact on material assets as infrastructure may be reused or converted, for example for hydrogen, or new or upgraded infrastructure would likely be required to ensure supply to industries and increased security of energy supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increased research will lead to greater innovation and development of new low carbon technologies. ■ There will be greater uptake of low carbon technologies, including CCS. *Previous SEA work:* CCS, hydrogen and biomass were discussed in the SEA work undertaken for the RPP3.

Policy Proposal 3: Forums for CCUS and Blue (low-carbon) Hydrogen: to bring together industry, academics, membership organisations to promote and attract investment in CCUS and Blue Hydrogen.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted policy seeks to establish forums drawn from industry, academia, and membership organisations to help the Scottish Government promote the development of CCS, CCU and hydrogen technologies and attract investment opportunities. The advancement of these technologies is likely to result in greater reductions in GHG emissions, particularly if CCS is utilised with CCU. Carbon Capture and Utilisation (CCU) is an emerging technology which manufactures carbon dioxide into commercially viable products such as chemicals, polymers, building materials and fuels. The use of waste products in this way is considered likely to have a positive effect on material assets. Increased uptake of CCUS and hydrogen technologies, as a result of this boosted policy, could have further positive effects on air quality through reducing CO_2 emissions, although this is likely to be influenced by the specific CCS use and the industries to which it relates. In some circumstances the addition of new infrastructure could have adverse effects on local visual amenity, landscape or the setting of cultural heritage assets, and the operation of these technologies could cause adverse effects on biodiversity, air water and soil quality, population and human health, and landscape. However, impacts are likely to be managed at a project level through current mechanisms, such as the planning process.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ CCS is not an energy generation technology but rather a technology that could aid in reducing climatic impacts of fossil fuel-intensive industry and energy generation. ■ CCS is likely to have a role to play in the continued use of oil and gas resources in industry and in the bioenergy and emerging hydrogen-fuel sector. *Previous SEA work:* CCS was discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 4: Evidence for CCUS and Blue Hydrogen: building the evidence base on impact of technology, regulatory and market barriers.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted policy proposal sets out to build an evidence base on the impact of technology, regulatory and market barriers in relation to the various applications of CCUS and blue hydrogen-based technologies. The boosted proposal outlined is likely to increase the uptake of hydrogen and CCUS technologies as a result of increased knowledge and evidence surrounding the application of technology, regulations and market barriers. The shift to decarbonise Scotland's energy supply through the development of novel fuels, such as hydrogen to be used for transport, industry, and heat, has potential for positive environmental effects, providing it is produced sustainably. Hydrogen production can result in carbon emissions, for example if produced using methane, or expensive if developed using electrolysis. However, hydrogen is naturally abundant and is an efficient fuel source which produces no toxic emissions or CO_2 at point of use. Other potential benefits include improved air quality and human health, for example uptake of vehicles utilising hydrogen cell technology, would displacing the use of petrol and diesel, reducing air pollutants and associated respiratory effects. Additionally, the use of hydrogen for heat and in industry would reduce the demand for more traditional fuel sources such as oil and gas. The large-scale development of hydrogen technologies would require the construction of processing plants and fuel cells. In some circumstances the addition of new infrastructure could have adverse effects on local visual amenity, landscape or the setting of cultural heritage assets, and the operation of these technologies could cause adverse effects on biodiversity, air water and soil quality, population and human health, and landscape. However, impacts are likely to be managed at a project level through current mechanisms, such as the planning process.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Hydrogen will be produced from renewable sources. ■ Hydrogen-powered vehicles are unlikely to develop significantly within the timeframe of the draft Plan (by 2032). *Previous SEA work:* Hydrogen was discussed in the SEA work taken forward for: ■ RPP3. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 5: Strategic development of Scotland's hydrogen economy. This is a cross-portfolio proposal that will impact on the delivery of multiple outcomes.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted proposal outlines strategic development of Scotland's hydrogen economy. The shift to decarbonise Scotland's energy supply through the development of novel fuels, such as hydrogen, as advocated through this policy, has the potential for positive environmental effects, providing it is produced sustainably. The boosted policy supports the exploration for hydrogen to help integrate low-cost renewable generation and seeks regulatory decisions and changes to market mechanisms to enable greater uptake of hydrogen technologies. Hydrogen production can result in carbon emissions, for example if produced using methane, or expensive if developed using electrolysis. However, hydrogen is naturally abundant and is an efficient fuel source which produces non-toxic emissions or CO_2 at point of use. Increased domestic hydrogen use, as a result of the boosting of this policy, would displace the use of natural gas that has carbon emissions at end use, and therefore would contribute towards reducing overall emissions. Other potential benefits as a result of this boosted policy include improving air quality and human health, for example uptake of vehicles utilising hydrogen cell technology, alongside electric vehicles, would displacing the use of petrol and diesel, reducing air pollutants and associated respiratory effects. The large-scale development of hydrogen technologies would require the construction of processing plants and fuel cells. In some circumstances the addition of new infrastructure could have adverse effects on local visual amenity, landscape or the setting of cultural heritage assets, and the operation of these technologies could cause adverse effects on biodiversity, air water and soil quality, population and human health, and landscape. However, impacts are likely to be managed at a project level through current mechanisms, such as the planning process. There is an opportunity to avoid additional impacts through the co-ordinated management of future replacement programmes and conversion activities. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Hydrogen will be produced from renewable sources. ■ Hydrogen-powered vehicles are unlikely to develop significantly within the timeframe of the draft Plan (by 2032). *Previous SEA work:* Hydrogen fuel cells were discussed in the SEA work taken forward for: ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland. ■ RPP3.

Policy Proposal 6: Hydrogen Demonstration: to replicate and scale-up demonstration projects and the evidence base for hydrogen-based technologies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This boosted policy seeks to replicate and scale-up demonstration projects and the evidence base for hydrogen-based technologies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									The shift to decarbonise Scotland's energy supply through the development of novel fuels, such as hydrogen, as advocated through this policy, has the potential for positive environmental effects, providing it is produced sustainably. The boosted policy supports the exploration for hydrogen to help integrate low-cost renewable generation and seeks regulatory decisions and changes to market mechanisms to enable greater uptake of hydrogen technologies. Hydrogen production can result in carbon emissions, for example if produced using methane, or expensive if developed using electrolysis. However, hydrogen is naturally abundant and is an efficient fuel source which produces non-toxic emissions or CO_2 at point of use. Increased domestic hydrogen use would displace the use of natural gas that has carbon emissions at end use, and therefore would contribute towards reducing overall emissions. Other potential benefits as a result of this policy include improving air quality and human health, for example uptake of vehicles utilising hydrogen cell technology, alongside electric vehicles, would displacing the use of petrol and diesel, reducing air pollutants and associated respiratory effects. A large-scale switch from natural gas to hydrogen, as advocated in this boosted policy, would require upgrades to the gas network, using new polyurethane pipes, and new supporting infrastructure may be required, such as new boilers, hobs and ovens in the domestic context. The production and fitting of these will be associated with some level of environmental impact; for example, digging up of roads and disposal of existing infrastructure which may have adverse effects on biodiversity, population and human health, air, water and soil quality, and adverse effects on the landscape and historic environment. There is an opportunity to avoid additional impacts through the co-ordinated management of future replacement programmes and conversion activities.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Hydrogen will be produced from renewable sources. ■ Hydrogen-powered vehicles are unlikely to develop significantly within the timeframe of the draft Plan (by 2032). *Previous SEA work:* Hydrogen fuel cells were discussed in the SEA work taken forward for: ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland. ■ RPP3.

Buildings

Policy Outcome 1: The heat supply to our homes and non-domestic buildings is very substantially decarbonised, with high penetration rates of renewable and zero emissions heating.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy outcome seeks to decarbonise the heat supply to residential and non-domestic buildings which will likely lead to reductions in GHG emissions as a result of less energy being used, and the increased use of lower carbon technologies such as renewable and zero emissions heating. With reductions in GHG emissions are likely to come associated benefits to air quality, especially if there is a greater reduction in the use of traditional fuels for energy. Improvements in air quality may have benefits for population and human health including a reduction in exposure to cold and damp properties. Improving energy efficiency across the sector has the potential to reduce pressure on existing supply and distribution networks and, if widely adopted, could potentially contribute to further enhancing security of supply. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of the different technologies such as district heat networks, heat pumps/ground source heat pumps, biomass and solar panels on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. However, negative effects are identified in relation to the landscape and the historic environment, particularly in relation to cumulative developments or changes to historic buildings from, for example, the installation of solar panels.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Achieving the policy outcome will involve the retrofitting of existing buildings with energy efficiency measures. *Previous SEA work:* Energy intensity of buildings was discussed as part of the work for the SEA of RPP3.

Policy Outcome 2: Our homes and buildings are highly energy efficient, with all buildings upgraded where it is appropriate to do so, and new buildings achieving ultra-high levels of fabric efficiency.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy outcome seeks to ensure that all residential and non-domestic buildings are energy efficient by retrofitting and building ultra-efficient new buildings. The policy outcome is aimed at reducing GHG emissions in homes by improving the overall energy efficiency by using less energy and increasing the use of zero and low er carbon technologies such as renew able energy. This is likely to result in an overall reduction in GHG emissions from households and subsequently have positive effects on climatic factors. A reduction in emissions intensity is likely to lead to improvements in air quality, especially if there are reductions in the use of energy from fossil fuels. Improvements to air quality may subsequently lead to benefits for population and human health. The retrofitting of buildings through this policy outcome, to reduce their emissions intensity, could potentially have longer-term negative impacts on the landscape and the historic environment, particularly from cumulative developments or changes to a historic building's appearance, for example, through the installation of renew able energy such as solar PV panels. There may also be an impact on biodiversity w here particular species have nested in buildings w here works are carried out, how ever effects are likely to be localised. Improving emissions intensity across the residential sector has the potential to reduce pressure on existing supply and distribution netw orks and if w idely adopted could potentially contribute to further enhancing security of supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Achieving the policy outcome w ill involve the retrofitting of existing buildings w ith energy efficiency measures and low carbon and renew able energy technologies. *Previous SEA work:* Emissions intensity of buildings w as discussed as part of the w ork for the SEA of RPP3.

Policy 1: Energy Company Obligation (ECO) requires obligated energy supply companies to deliver energy efficiency measures in homes – mainly insulation-based measures and boiler replacements.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This is a UK-w ide policy aimed at improving energy efficiency in homes to reduce greenhouse gas emissions. It includes sub-obligations w hich target vulnerable consumer groups. It aims to reduce the demand for heating and create carbon savings. A Scottish ECO policy is also being developed to take forw ard these ambitions. This policy is likely to help improve energy efficiency and reduce GHG emissions. There is also the potential for improved air quality, particularly if coupled w ith a reduction in demand for energy produced from traditional and finite supplies. An increase in energy efficient buildings that are easier to heat, as advocated by this policy, could also have potential benefits in terms of health through reduced exposure to cold and damp properties and improved air quality. As such, there may be benefits for population and human health, particularly for vulnerable members of society w ith existing health complications such as respiratory issues. The occurrence of the retrofitting of buildings through this policy could potentially have longer-term negative impacts on the landscape and the historic environment, particularly from cumulative developments or changes to a historic building's appearance, for example, through the installation of renew able energy such as solar PV panels. There may also be an impact on biodiversity w here particular species have nested in buildings w here works are carried out, how ever effects are likely to be localised.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Further improving energy efficiency across the sector has the potential to reduce pressure on existing supply and distribution networks and if widely adopted could potentially contribute to further enhancing security of supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Measures which deliver the most cost-effective carbon savings will be delivered, such as cavity wall insulation. ■ A Scottish ECO will be consulted upon and taken forward in due course and this will deliver measures similar to those under the current UK scheme. *Previous SEA work:* This policy has been considered in light of the SEA for Conserve and Save: Energy Efficiency Action Plan.

Policy 2: Energy Efficient Scotland Delivery Schemes

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This boosted policy encourages the implementation of Energy Efficiency Scotland (EES) Delivery Schemes to build on and invest further in the success of existing legislation and programmes that are supporting the improved energy efficiency of domestic and non-domestic buildings, including Area Based Schemes and Warmer Homes Scotland; Home Energy Scotland advice service, loans and cashback scheme; and SME advice service, loans and cashback scheme. The implementation of EES Delivery Schemes will include introducing legally binding energy efficiency standards in owner-occupied housing, regulations to improve energy efficiency of homes in the private rented sector and increasing the targets for Energy Efficiency Standard for Social Housing 2 (EESSH 2). The additional capital support to EES Delivery Schemes is likely to further increase the energy efficiency and performance of Scotland's domestic and non-domestic buildings. If more widely adopted as part of this policy, these actions will further reduce energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient housing stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency which involves changes in a building's appearance and could have impacts on landscape and cultural heritage, including as a result of cumulative developments.

									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will increase the uptake of efficiency measures to reduce energy demand and improve energy productivity. *Previous SEA work:* Measures to improve energy efficiency of buildings were discussed as part of the SEA work for RPP3.

Policy 3: Review support programmes. We will review existing Scottish Government funding schemes to ensure that they support the deployment of low and zero emissions heat. We will expand the provision of loans to the SME sector, and enhance the wider energy efficiency and heat advice service and provision of tailored start-to-end support.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy is focussed on programmes and funding schemes for energy efficiency and heating schemes, most notably for SMEs, likely covering both domestic and non-domestic buildings. The policy is therefore likely to increase the energy efficiency and performance of Scotland's domestic and non-domestic buildings, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient housing stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency and decentralised generation which involves changes in a building's appearance and could have impacts on landscape and cultural heritage, including as a result of cumulative developments.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy looks at both domestic and commercial/industrial sectors. ■ The policy focussed on low and zero carbon heat technologies delivering both energy generation and the efficient use of energy. *Previous SEA work:* Review of energy standards within new buildings was discussed as part of the SEA work for RPP3.

Policy 4: Procure a new national delivery scheme, to replace the existing Warmer Homes Scotland contract, to open in 2022

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy promotes the development of a national delivery scheme to replace the existing Warmer Homes Scotland contract from 2022. This is likely to increase the energy efficiency and performance of Scotland's domestic buildings, further reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient housing stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency which involves changes in a building's appearance and could have impacts on landscape and cultural heritage, including as a result of cumulative developments.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy is primarily focussed on improving the energy efficiency of existing and new homes. *Previous SEA work:* Review of energy standards within new buildings was discussed as part of the SEA work for RPP3.

Policy 5: Energy Efficiency Standard for Social Housing will be meet by social landlords by 2020.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy involves the retrofitting of existing social housing stock in Scotland to make homes more energy efficient. It could also include installation of micro renewables systems, such as solar PV panels, to meet targets. Through this policy, there is the potential for these measures to reduce energy demand and, as such, lead to a greater reduction in GHG emissions and improved air quality, particularly in instances where demand for energy generated from traditional and finite supplies is reduced. There is also the potential for human health benefits, particularly for some sectors of the population with health problems that could be exacerbated by cold, damp, and mouldy properties. As such, there may be benefits for population and human health, particularly for vulnerable members of society with existing health complications such as respiratory issues. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency which involves changes in a building's appearance and could have impacts on landscape and cultural heritage, including as a result of cumulative developments. Further improving energy efficiency across the sector has the potential to reduce pressure on existing supply and distribution networks and if widely adopted could potentially contribute to further enhancing security of supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy relates to energy efficiency measures in social housing. *Previous SEA work:* This proposal was discussed in the SEA undertaken for the RPP3.

Policy 6: 2024 New Build Zero Emissions from Heat Standard: requiring new buildings to have renewable or zero direct emissions heating systems.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy seeks to develop regulations to ensure all new homes and non-domestic buildings use renewable or low carbon heating from 2024. The introduction of these regulations will help increase the energy efficiency of buildings and contribute towards a reduction in carbon emissions. Therefore, the introduction of these regulations will help contribute towards Scotland's target of reducing GHG emissions, having positive effects on climate change. Furthermore, the policy is likely to have beneficial effects on population and human health, particularly vulnerable member of society, by encouraging the construction of new homes to use renewable or low carbon heat which may make homes easier and less expensive to heat, reducing exposure to cold, damp, and mouldy properties. Greater uptake of renewable or low carbon heat in new buildings has the potential to reduce pressure on existing supply and distribution networks and improve energy productivity across the sector. If widely implemented, this measure has the potential to contribute to enhancing the security of supply. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of the different technologies such as district heat networks, heat pumps/ground source heat pumps, biomass and solar panels on soil, air quality, water quality, landscape and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. However, negative effects are identified in relation to the landscape and the historic environment, particularly in relation to cumulative developments. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ That all new homes from 2024 and non-domestic buildings (subsequently phased after 2024) will incorporate renewable and low carbon heat. ■ The existing housing and non-domestic building stock will not undergo retrofitting of low carbon heat technologies as a result of this policy. *Previous SEA work:* Review of energy standards within new buildings was discussed as part of the SEA work for RPP3.

Policy 7: Review of energy standards within building regulations.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This boosted policy seeks to review and potentially develop more rigorous standards for buildings, which would likely lead to increased energy efficiency in new buildings and where owners of existing buildings elect to undertake new building work. This is likely to contribute to further reductions in energy demand and emissions and would support the decarbonisation of heat. Positive effects are identified for population and human health and air quality, resulting from this policy, will also be likely where regulations result in a reduction in use of energy generated from traditional and finite sources. Implementing higher energy standards in buildings could result in impacts particularly if this could result in changes to a building's appearance. There is also a potential for impacts on biodiversity where works may be undertaken on the fabric of buildings (e.g. implications for bats relating to roof works). Energy efficiency has the potential to reduce pressure on existing supply and distribution networks, potentially enhancing security of supply. Once determined, the scope of any review of building regulations will be subject to a full and separate SEA.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy could result in the introduction of more stringent standards applicable to new buildings and to work to existing buildings. *Previous SEA work:* The review of energy standards within building regulations was considered in the SEA undertaken for the RPP3.

Policy 8: Heat in Buildings regulation: Put in place regulation to increase uptake of zero emissions heating systems and improve energy efficiency standards across all tenures, prioritising the raising of standards for households living in fuel poverty. Re-introduce revised regulations to the Scottish Parliament requiring mandatory minimum energy efficiency standards for the Private Rented Sector, to come into force from 2022.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This boosted policy sets out the necessary regulatory measures that are within the competence of the Scottish Parliament to increase the uptake of zero emissions heating system to meet GHG emissions reduction targets. The regulatory measures will target improving energy efficiency standards across all tenures and will prioritise the raising of standards for households living in fuel poverty and introduce new minimum energy efficiency standards for the Private Rented Sector. This policy could have positive effects on GHG emissions, and as a result also positively impact air quality and population and human health. Increasing the uptake of zero emissions heating systems could result in decreased demand on current energy infrastructure and reduce pressure on the energy systems. As a result, it could further enhance the security and supply of heat and also help to future-proof energy supply. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of the different technologies such as district heat networks, heat pumps/ground source heat pumps, biomass and solar panels on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. However, negative effects are identified in relation to the landscape and the historic environment, particularly in relation to cumulative developments and changes to historic buildings. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy will promote further zero emissions heating systems and the replacement of heat generated using electricity that relies on traditional, finite sources such as gas or oil. ■ Seeks to promote the development of new technologies and increase take-up of zero emissions heating systems across Scotland. *Previous SEA work:* The decarbonisation of heat to achieve reduced emissions was assessed as part of the SEA work for RPP3.

Policy 9: Low Carbon Infrastructure Transition Programme (LCITP) - supports investment in decarbonisation of business and the public sector.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This boosted policy enshrines the LCITP into the CCPu. The LCITP comprises a raft of support mechanisms including project development, expert advice and funding (where applicable) to support the development of substantive private, public and community low-carbon projects across Scotland. The principal aim of the LCITP is to contribute to the Scottish Government's long-term target of reducing GHG emissions. As such, this policy is likely to have an overall positive effect in terms of climatic factors. Associated benefits for air quality are also considered likely through aiding a shift towards low carbon energy generation from traditional non-renewable supplies, such as fossil fuels. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of the different technologies such as district heat networks, heat pumps/ground source heat pumps, biomass and solar panels on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. However, negative effects are identified in relation to the landscape and the historic environment, particularly in relation to cumulative developments and changes to historic buildings. The uptake of low carbon energy technologies through this policy also has the potential to reduce pressure on existing energy networks and improve energy productivity across the sector. If widely implemented, as advocated through the boosting of this policy, the policy could potentially contribute to enhancing the security and resilience of supply and help future-proof Scotland's energy supply to the predicted effects of climate change through facilitating a broad mix of technologies. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The programme directly supports and facilitates the development of large scale, innovative low carbon energy generation and energy demand reduction projects. ■ An increase in new low carbon energy generation combined with a more comprehensive approach to improving energy efficiency and reduction energy demand will reduce reliance on fossil fuels and increase the resilience of Scotland's energy systems. ■ LCITP has strict requirements for the low carbon technologies that are supported. *Previous SEA work:* The LCITP was discussed in the SEA for RPP3.

Policy 10: Expanded £1.6bn Heat in Buildings capital funding over the next parliament Building on the Low Carbon Infrastructure Transition Programme (LCITP) and existing energy efficiency and zero emissions heat support programmes

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy seeks to allocate £1.6 billion for Heat in Buildings funding to support the development of low carbon and renewable heat across Scotland, building on the Low Carbon Infrastructure Transition Programme (LCITP), energy efficiency programme and the Heat Transition Deal. This policy will help to decarbonise Scotland's homes and buildings by supporting the delivery of low carbon infrastructure projects such as heat pumps and networks, along with investment in renewable and low carbon energy sources, botanic gardens, energy efficiency of public estate and zero carbon energy infrastructure and heat networks for residential and commercial premises in Mission Clyde region. The promotion of low carbon heat will help contribute towards reduction in GHG emissions, having positive effects on climatic factors. Additionally, a reduction in the release of GHG emissions associated with the heating of buildings will likely have positive effects on air quality and population and human health. Positive effects on population and human health are likely to be further enhanced through this policy by making homes easier to heat and reducing exposure to cold, damp, and mouldy properties. The efficient and localised use of energy through schemes such as district heat networks also has potential to reduce pressure on wider supply and distribution networks and improve energy productivity across the sector, however, would result in some land take. The promotion of low carbon and renewable energy will play a key role in further enhancing the security of energy supply. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of the different technologies such as district heat networks, heat pumps/ground source heat pumps, biomass and solar panels on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. However, negative effects are identified in relation to the landscape and the historic environment, particularly in relation to cumulative developments and changes to historic buildings. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy plays key role in directly facilitating the development of low carbon and renewable technologies, including low carbon heat networks. *Previous SEA work:* Low carbon and renewable heat, including various means of funding was previously discussed as part of the SEA work for RPP3.

Policy 11: Non-Domestic Public Sector Energy Efficiency (NDEE) Framework: A four-year framework launched in March 2016, designed to support public and third sector organisations to procure Energy Efficiency retrofit work. The Framework will continue for a further four years commencing in 2020. NDEE Support Unit accelerates the number of projects and delivery timescales of public sector energy efficiency projects using the NDEE Framework and supports our wider ambitions around energy demand reduction

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy seeks to continue addressing the financial and technical barriers to improving energy efficiency within the public and third sector organisations. The framework covers non-domestic energy efficiency retrofit, in its broadest sense, to public sector buildings and grounds including a combination of building fabric, building environmental services systems and their control (for example heating, cooling, ventilation, lighting, water etc) and local energy regeneration (including combined heat and power systems and district heating systems). Overall, it is aimed at reducing energy consumption through retrofitting and aiding decarbonisation of the energy sector. Overall, the policy increases the potential for consistent reductions in GHG emissions and, as such, an overall positive effect on climatic factors. In addition, associated benefits for air quality are also likely from enabling a shift towards low carbon energy generation from traditional non-renewable supplies. Improving energy efficiency also has the potential to reduce pressure on supply and distribution networks and improve energy productivity across the sector. Moving towards a decarbonised energy sector, as promoted with this policy, will require the promotion of a diverse mix of technologies to provide suitable and flexible solutions to Scotland's energy requirements. The promotion of low carbon and renewable energy will play a key role in enhancing the security of energy supply as the impacts of a changing climate and the challenges are likely to become increasingly important. The retrofitting of non-domestic public and third sector buildings through this policy to reduce their emissions intensity, could potentially have longer-term negative impacts on the landscape and the historic environment, particularly from cumulative developments or changes to a historic building's appearance, for example, through the installation of renewable energy such as solar PV panels. There may also be an impact on biodiversity where particular species have nested in buildings where works are carried out, however effects are likely to be localised.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy focuses on directly financing and enabling businesses and the public sector to develop and implement energy efficiency measures in the non-domestic public sector. *Previous SEA work:* This policy was previously discussed in the following SEA work: ■ District heating funds was discussed in RPP3. ■ District heating was discussed in the SEA of The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy 12: The Renewable Heat Incentive (RHI) is a GB-wide scheme created by the UK Government (with the agreement of the Scottish Government). UKG is extending both the domestic and non-domestic RHI out to 2022.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The RHI and supporting programmes seek to increase uptake of renewable heat sources such as biomass boilers, solar water heating and certain heat pumps, and includes wider district heating schemes. The RHI is primarily focused on decarbonising heat supply and, as such, through the boosting of this policy has greater potential for benefits in reducing GHG emissions. Additionally, positive effects for air quality are considered likely, with associated benefits on human health as a result of a shift towards renewable heat technologies, displacing energy production from traditional and finite supplies. As a result of this boosted policy, there is the potential for impacts associated with development, particularly in the construction and operation of infrastructure facilitated through the RHI scheme, which may result in adverse effects on soil, water quality, biodiversity, landscape and cultural heritage. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. However, negative effects are identified in relation to the landscape and the historic environment, particularly in relation to cumulative developments or changes to historic buildings. The resilience of Scotland's energy supply to the predicated impacts of climate change is likely to become increasingly important. The promotion and encouragement of a greater diversity of technologies and increased flexibility in terms of how these feed into the energy system as a whole should help with this challenge. The wider implementation of efficient heat technologies advocated through the RHI policy could potentially contribute to enhancing security of supply and help to future-proof energy supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy looks at both domestic and commercial/industrial sectors. ■ While the RHI does not include district heating, it does include eligible heat technologies that can provide heat to a heat network. *Previous SEA work:* The RHI was considered in the SEA undertaken for the RPP3.

Policy 13: UK Green Gas Support Scheme: a GB-wide Green Gas Scheme will come into force in 2022 and will apply to Scotland, stimulating biomethane injection into the gas grid

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy sets out to introduce a new GB-wide scheme to provide funding for stimulating biomethane injection into the gas grid. This programme will support efforts to reduce the emissions intensity of the gas supply and is likely to have a positive effect on the carbon emissions reductions. Additionally, positive effects for air quality are considered likely, with associated benefits on human health as a result of a shift towards more 'green' energy, displacing energy production from traditional and finite supplies. The wider implementation of Green Gas Schemes could potentially contribute to enhancing security of supply and help to future-proof energy supply. The implementation of the UK Green Gas Scheme may have adverse environmental effect, for example, the construction of grid connection infrastructure could have adverse effects on soil, biodiversity, water quality, landscape and cultural heritage. Construction works also have the potential for adverse effects, including cumulative effects, such as short-term noise disturbance at a local level. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy considers both domestic and commercial/industrial sectors. ■ This is a GB-wide scheme. *Previous SEA work:* Biomethane is discussed as part of the SEA for RPP3.

Policy 14: UK Clean Heat Grant: a GB-wide Clean Heat Grant will come into force in 2022 and will apply to Scotland, supporting uptake of heat pumps (and limited biomass boilers) via up-front grants

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy sets out to introduce a new GB-wide scheme to provide funding for heat pumps (and limited biomass boilers) via up-front grants. This policy could have positive effects on GHG emissions, and as a result also positively impact air quality and the general population and human health. Increasing the uptake of 'clean' heating systems could result in decreased demand on current energy infrastructure and reduce pressure on the energy systems. As a result, it could further enhance the security and supply of heat and also help to future-proof energy supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									This policy could promote the uptake of district heat networks and heat pumps/ground source heat pumps which may result in adverse effects on soil, water quality, biodiversity, landscape and cultural heritage. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy considers both domestic and commercial/industrial sectors. ■ This is a GB-wide scheme. *Previous SEA work:* Heat pumps are discussed as part of the SEA for RPP3.

Policy 15: Support for Heat networks: The District Heating Loan Fund helps address the financial and technical barriers to district heating projects by offering low interest loans.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	The District Heating Loan Fund seeks to address the financial and technical barriers to improving energy efficiency within the public sector, businesses and communities. It involves facilitating the distribution of heat through the development of district heating networks and providing space and water heating through a new local network. Through this boosted policy there is the potential for significant reductions in GHG emissions and as such, an overall positive effect on climatic factors. In addition, increases in associated benefits for air quality are also likely from aiding a shift towards low carbon energy generation from traditional non-renewable sources. Population and human health therefore could also be positively impacted as a result of boosting this policy, through security of supply, particularly if coupled with other efficiency measures. The efficient and localised use of energy through schemes such as district heating also has the potential to reduce pressure on wider supply and distribution networks energy productivity across the sector. The promotion of low carbon and renewable energy will play a key role in enhancing the security of energy supply as the impacts of a changing climate and the challenges therein are likely to become increasingly important. However, this boosted policy has the potential for negative impacts to arise from the siting, installation and operation of district heat networks on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy plays key role in directly facilitating the development of low carbon technologies and low carbon heat networks. *Previous SEA work:* The fund was considered in the SEA undertaken for the RPP3.

Policy 16: Implement the provisions of the Heat Networks (Scotland) Bill to create a strong regulatory framework to support delivery by 2023.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy is set out to regulate district and communal heating networks, and reduce risk associated with investment, in a way that supports its growth in Scotland. The policy is therefore likely to result in the greater uptake of district and communal heat networks, and subsequently has the potential to contribute towards significant reductions in GHG emissions. In addition, increases in associated benefits for air quality are also likely from aiding a greater shift towards low carbon energy generation from traditional non-renewable sources. Population and human health could also be positively impacted as a result of this policy, through increased security of supply and improvements to air quality. The efficient and localised use of energy through schemes such as district heating also has the potential to reduce pressure on wider supply and distribution networks energy productivity across the sector. The promotion of low carbon and renewable energy will play a key role in enhancing the security of energy supply as the impacts of a changing climate and the challenges therein are likely to become increasingly important. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of district and communal heat networks on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The introduction of the Heat Networks Bill will promote the increased uptake of district and communal heat networks in Scotland. ■ This policy plays key role in directly facilitating the development of low carbon technologies and low carbon heat networks. *Previous SEA work:* District and communal heating networks were discussed in the SEA for RPP3 and The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy 17: Continue to support the Heat Network Partnership - a collaboration of agencies focused on the promotion and support of district heating schemes in Scotland

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	The Heat Network Partnership seeks to encourage collaboration between agencies focused on the promotion and support of district heating schemes across Scotland. It can facilitate the distribution of expertise and knowledge amongst these agencies and as a result be of a wider reach. Through the boosting of this policy there is the potential for significant reductions in GHG emissions and as such, an overall positive effect on climatic factors. In addition, increases in associated benefits for air quality are also likely from aiding a greater shift towards low carbon energy generation from traditional non-renewable sources. Population and human health therefore could also be positively impacted as a result of maintaining this policy, through increased security of supply, particularly if coupled with other efficiency measures. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of district and communal heat networks on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. **<u>Assumptions & Links with Other SEA Work</u>** *<u>Assumptions:</u>* ■ This policy plays key role in directly promoting the development of low carbon technologies and low carbon heat networks. *<u>Previous SEA work:</u>* The Partnership was considered in the SEA undertaken for the RPP3.

Policy 18: Net Zero Carbon Public Sector Buildings Standard from 2021 will be introduced and progressively rolled out across the public sector, as announced in the Programme for Government 2019.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy will set out a Net Zero Carbon Standard for public buildings and will be progressively rolled out. This policy could have positive effects on GHG emissions, and as a result also positively impact air quality and the general population and human health. Increasing the uptake of low carbon technologies could result in decreased demand on current energy infrastructure and reduce pressure on the energy systems. As a result, it could further enhance the security and supply of energy and also help to future-proof energy supply. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency which involves changes in the appearance of public buildings which could have impacts on landscape and cultural heritage, including as a result of cumulative developments.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy considers public sector buildings only. ■ The introduction of the Net Zero Carbon Standard will involve the upgrade and retrofitting of existing buildings with energy efficiency measures and low carbon technologies. *Previous SEA work:* The use of energy efficient measures and low carbon technologies to reduce emissions from the buildings was discussed as part of the SEA work for RPP3.

Policy 19: Local Heat and Energy Efficiency Strategies (LHEES) will be in place by the end of 2023, setting out preferred heat solutions zones, guiding building owner decision making about replacement heating systems, and forming the basis for local delivery plans targeting heat and energy efficiency investment

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy sets a target for local authorities to set out Local Heat and Energy Efficiency Strategies (LHEES) by 2023. LHEES will set out preferred heat solutions zones, guide building owner decision making about replacement heating systems, and form the basis for local delivery plans, targeting heat and energy efficiency investment. The implementation of these strategies in the future is likely to result in a reduction in GHG emissions, due a reduction in the overall use of energy and the increased use of more energy efficient technologies such as renewable energy schemes. With reductions in GHG emissions, associated improvements to air quality are likely, which could have benefits on population and human health. This could be further enhanced if homes become easier to heat and power, helping to reduce the number of properties that could currently be classified as cold, damp, and mouldy. Seeking to maximise benefits and further reducing the need for heating and energy, as promoted through the implementation of LHEES, could see less demand on current infrastructure and therefore a reduction of pressure on the systems. If widely implemented across all local authorities, the approach has the potential to contribute to enhancing the security of supply and help to future-proof energy supply. The development of LHEES, which approach delivery across larger areas, will consider cumulative impacts and avoid a piecemeal approach to addressing the longer-term impacts on landscape and cultural heritage; particularly if this could result in changes to a building's appearance in a conservation area. There is also the potential to consider cumulative impacts that could occur by taking a co-ordinated approach to delivery across an area.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy is largely delivery focused, seeking to maximise the benefits produced through other proposals. ■ The policy will help to plan the implementation of energy efficiency measures more effectively. ■ The policy presents an opportunity to target measures towards those in greater need in order to maximise benefits. *Previous SEA work:* LHEES was discussed as part of the SEA for RPP3.

Policy 20: Assessment of Energy Performance and Emissions Regulations (Non-Domestic Buildings)

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	The review of existing regulations has commenced with the support of an Industry Working Group. The review could see the potential introduction of additional requirements relating to energy efficiency improvements beyond current provisions (applicable to non-domestic buildings >1,000 m² offered for sale or rental) and has the potential to result in a range of environmental effects. The potential for a reduction in energy consumption is likely to result in significant reductions in GHG emissions. There is also potential for further improvements in air quality associated reduction in energy demand from traditional and finite sources. Greater energy efficiency has the potential to reduce pressure on existing supply and distribution networks and improve energy productivity across the sector. If widely implemented, this measure has the potential to contribute to enhancing the security of supply. Once determined, the scope of the review of regulations will be subject to a full and separate SEA.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Current policy is a mandatory requirement for non-domestic buildings over 1,000 m² in area. The proposal could result in the introduction of more stringent standards, applicable to a broader range of existing non-domestic buildings. *Previous SEA work:* The review of the Assessment of Energy Performance of Non-domestic Buildings (Scotland) Regulations was considered in the SEA undertaken for the RPP3.

Policy 21: Support for community renewable heat projects through CARES

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to further encourage off-grid community renewable heat projects by providing additional funding via CARES. This policy seeks to increase uptake of renewable heat sources such as biomass boilers, solar water heating and certain heat pumps, and includes such technologies which provide heat to district heating. This policy is primarily focused on decarbonising heat supply. Additionally, positive effects for air quality are considered likely, with associated benefits on human health as a result of a shift towards renewable heat technologies, displacing energy production from traditional and finite supplies. The resilience of Scotland's energy supply to the predicated impacts of climate change is likely to become increasingly important. The promotion and encouragement of a greater diversity of technologies and increased flexibility in terms of how these feed into the energy system as a whole should help with this challenge. The wider implementation of efficient heat technologies advocated through this policy could potentially contribute to enhancing security of supply and help to future-proof energy supply.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy looks at domestic sector. *Previous SEA work:* Community renew able heat projects were considered in the SEA undertaken for the RPP3.

Policy 22: Salix facility for financing non-domestic buildings retrofit

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy seeks to further expand the range of operation of Salix to also finance the retrofit of non-domestic buildings w hich will likely lead to reductions in GHG emissions as a result of less energy being used in non-domestic buildings, and the installation of low carbon technologies such as renew able and zero emissions heating. With reductions in GHG emissions are likely to come associated benefits to air quality, especially if there is a greater reduction in the use of traditional fuels for energy. Improvements in air quality may have benefits for population and human health including a reduction in exposure to cold and damp properties. Improving energy efficiency has the potential to reduce pressure on existing supply and distribution netw orks and could potentially contribute to further enhancing security of supply. The retrofitting of non-domestic buildings through this policy to reduce their emissions intensity, could potentially have longer-term negative impacts on the landscape and the historic environment, particularly from cumulative developments or changes to a historic building's appearance, for example, through the installation of renew able energy such as solar PV panels. There may also be an impact on biodiversity w here particular species have nested in buildings w here works are carried out, however effects are likely to be localised.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy considers non-domestic buildings only. *Previous SEA work:* None.

Policy 23: Work with social landlords to bring forward the review of the existing Energy Efficiency Standard for Social Housing (EESSH2) with a view to strengthening and realigning the standard with net-zero requirements

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to ensure that the existing Energy Efficiency Standard for Social Housing (EESSH2) is strengthened and able to meet net zero emissions objectives for heat in buildings. This policy is likely to have positive effects on climatic factors, air and material assets. Strengthening the EESSH2 could result in the introduction of additional requirements relating to energy efficiency improvements beyond current provisions and have the potential to result in a range of environmental effects. The potential for a reduction in energy consumption is likely to result in significant reductions in GHG emissions. There is also potential for improvements in air quality associated reduction in energy demand from traditional and finite sources. Greater energy efficiency has the potential to reduce pressure on existing supply and distribution networks and improve energy productivity across the sector. If widely implemented, this measure has the potential to contribute to enhancing the security of supply. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy focusses on domestic social housing energy efficiency. *Previous SEA work:* Measures to improve energy efficiency of buildings were discussed as part of the SEA work for RPP3.

Policy 24: Work with our partners, including the UK Government, local authorities and utility providers to determine the best approach to heat decarbonisation for buildings currently heated by natural gas

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy commits to working with relevant partners to develop the most effective and efficient approach to decarbonising buildings currently reliant on natural gas. The successful implementation of the policy will lead to the increased energy efficiency and performance of Scotland's domestic and non-domestic buildings, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient housing stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded natural gas infrastructure. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy considers both domestic and commercial/industrial sectors. ■ The policy covers both energy generation and energy efficiency technologies in existing buildings. *Previous SEA work:* Decarbonising domestic and non-domestic buildings, including those burning natural gas, were discussed as part of the SEA work for RPP3.

Policy 25: Review the system of building assessments and reports on energy performance and heat to ensure a system that is fit for purpose in meeting net zero emissions objectives for heat in buildings.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	The policy sets out plans to review Scotland's assessment and reporting of building energy performance, with a view to ensuring it is fit for the purpose of monitoring and reporting the county's progress in achieving its net zero carbon ambitions in buildings. An effective assessment and reporting system is essential to planning, maintaining and achieving these ambitions. The successful implementation of this policy is therefore likely to contribute positively to Scotland's climate change targets, with associated indirect benefits on the quality of life of its population, as well as the resilience and maintenance of its material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy focusses on the standardisation and effectiveness of monitoring energy performance nationally. *Previous SEA work:* Review of energy standards within new buildings was discussed as part of the SEA work for RPP3.

Policy 26: Work with stakeholders to further understand and support the application and use of low and zero emissions heating within designated historic environment assets and hard to treat buildings.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	+/-	0	+	The policy promotes the sensitive application and use of low and zero emission heating within designated historic environment assets, including hard to treat buildings. The successful implementation of the policy will lead to the increased energy efficiency and performance of Scotland's historic buildings, which represent a significant proportion of its building stock, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient historic buildings is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded natural gas infrastructure. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. Focussed and sensitive investment in Scotland's historic assets may result in adverse effects to their significance, setting or general special character, particularly as a result of the installation of outdoor measures associated with building fabric and micro-renewable installations. However, such investment also offers scope for the sensitive enhancement of historic assets significance and setting, and will also generally contribute positively to their long term climate change resilience.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy focusses exclusively on energy efficiency and generation technologies being retrofitted on designated historic buildings – both domestic and non-domestic buildings. *Previous SEA work:* Review of low and zero emissions heating schemes in all buildings, including historic buildings, was discussed as part of the SEA work for RPP3.

Policy 27: Develop and introduce future regulation for non-domestic buildings and launch a consultation on these proposals

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy is focussed on introducing future regulation for non-domestic buildings. The policy is therefore likely to increase the energy efficiency and performance of Scotland's non-domestic buildings, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient building stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy focusses on non-domestic buildings. *Previous SEA work:* Review of energy standards within non-domestic buildings was discussed as part of the SEA work for RPP3.

Policy 28: Undertake work to identify the capacity and output of renewable electricity generation required in Scotland to support the projected roll-out of heat pumps.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	The policy sets out plans to identify the viable renewable energy generation capacity of Scotland to deliver zero carbon ambitions. An accurate area-based record of such capacity is essential to planning, maintaining and achieving these ambitions. The successful implementation of this policy is therefore likely to contribute positively to Scotland's climate change targets, with associated indirect benefits on the quality of life of its population, as well as the resilience and maintenance of its material assets.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									However, this policy has the potential for negative impacts to arise from the siting, installation and operation of the heat pumps on soil, air quality, water quality, biodiversity, cultural heritage and landscape. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy focusses on assessing the viable renewable energy generation capacity of Scotland to deliver zero carbon ambitions. *Previous SEA work:* Encouraging, facilitating, delivering and monitoring renewable electricity generation in Scotland was considered in the SEA undertaken for the RPP3.

Policy 29: Consider whether to extend Permitted Development Rights for zero-emission heat networks and micro-renewable technologies.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The policy is focussed on simplifying the delivery of zero-emission and renewable technologies through the planning system by expanding the scope of relevant national permitted development rights. The policy is therefore likely to increase the energy efficiency and performance of Scotland's domestic and non-domestic buildings, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient housing stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. However, this policy has the potential for negative impacts to arise from the siting, installation and operation of heat networks and micro renewable technologies on soil, air quality, water quality, and biodiversity. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									planning and consenting conditions prior to w ork being undertaken. How ever, negative effects are identified for the historic environment and the landscape as a result of the siting of cumulative micro-renew able technologies such as solar panels.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy is focussed on simplifying the delivery of zero-emission and renew able technologies through the planning system by expanding the scope of relevant national permitted development rights. *Previous SEA work:* Encouraging decentralised and community zero carbon and renew able technology schemes in Scotland w as considered in the SEA undertaken for the RPP3.

Policy 30: Undertake work to better understand the impact on electricity networks of projected heat pump deployment. Work with the Distribution Heat Network Operators through the Heat Electrification Partnership to build an evidence base to inform business planning. Work with industry and networks to understand need for heat pumps systems to be smart enabled, and identify options to integrate smart systems into our delivery programmes; and to explore how innovation can help to improve the consumer experience.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to undertake work to better understand the impact on electricity networks of projected heat pump deployment. In addition, the policy aims to work with the Distribution Network Operators, industry and networks to inform business planning and understand the need for heat pump systems to be integrated into smart systems. The policy therefore will encourage the uptake of heat pumps as a low-carbon source of providing heat. This will aid the shift away from heat derived from finite sources such as oil and gas and will subsequently result in reductions in GHG emissions. Associated improvements to air quality are likely, as are increased benefits to population and human health. In addition, the integration of heat pump systems into smart systems will help improve the consumer experience through ease of use and will likely lead to a reduction in costs. The use of heat pump systems within developments has the potential to contribute to enhancing the security and flexibility of heat energy supply and help to future-proof against predicted changes to the climate, having positive effects on material assets. The occurrence of the construction and operation of heat pump infrastructure could have a range of environmental impacts; notably the potential for soil compaction from siting of infrastructure, and impacts to cultural heritage and landscape setting, particularly resulting from cumulative developments. Temporary impacts during the construction phase and longer-term impacts on air, water, population and human health and visual amenity have also been identified as being more likely as a result of the maintaining of this policy. It is likely that the increase in these effects will be localised in nature, however, may result in more significant cumulative effects. Such effects will require consideration, including being given due regard in any consenting processes.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The heat pump demonstrator will encourage the greater deployment of heat pumps at different scales. *Previous SEA work:* Low carbon heat, including technologies such as heat pumps, were discussed as part of the SEA work for RPP3.

Policy 31: Support heat networks through: Introducing a Non-Domestic Rates Relief for renewable and low carbon heat networks until 2023/24. Working to identify how new buildings in Heat Network Zones could be made ready to connect to heat networks. Including district heating within the Permitted Development Rights review. Through National Planning Framework 4, ensuring that local development plans take account of where a Heat Network Zone has been identified.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy is focussed on the delivery of decentralised heating schemes through a variety of system and area-based policy measures, with a particular focus on non-domestic buildings. The policy is therefore likely to increase the energy efficiency and performance of Scotland's buildings, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient and self-sufficient building stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy is focussed on the delivery of decentralised heating schemes through a variety of system and area-based policy measures. *Previous SEA work:* ■ Encouraging decentralised and community zero carbon and renewable technology schemes was considered in the SEA undertaken for the RPP3. ■ Heat network zones were considered through discussion of the LHEES as part of the SEA for RPP3.

Policy 32: Explore how local tax powers could be used to incentivise or encourage the retrofit of buildings, and commission further analysis to identify potential options

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The policy is focussed on making the retrofitting of existing buildings with energy efficiency measures and low carbon and renewable energy technologies more financially viable through exploring changes to local tax powers. The successful incentivisation of building retrofit through this policy has the potential to deliver positive effect on climatic factors by reducing the overall GHG emissions from heating. Moreover, positive effects are expected for human health and air, as fuel poverty and heat in buildings programmes have the potential to improve the overall air quality and the quality of life. A just heat transition also has the potential to deliver positive effects on material assets by enabling potential savings of energy to be made through the implementation of energy efficiency measures. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency and decentralised generation which involves changes in a building's appearance and could have impacts on landscape and cultural heritage, including as a result of cumulative developments. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy is focussed on making the retrofitting of existing buildings with energy efficiency measures and low carbon and renewable energy technologies more financially viable. *Previous SEA work:* Delivering improvements in building energy efficiency and zero carbon and renewable energy production through retrofit was discussed as part of the SEA work for RPP3.

Policy 33: Design future delivery programmes to ensure significantly accelerated retrofit of buildings, with new programmes to be in place from 2025

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	The policy is focussed on streamlining the process of achieving nation-wide retrofitting schemes, covering of existing domestic and non-domestic buildings and both energy efficiency measures and low carbon and renewable energy technologies by 2025.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									The policy is therefore likely to increase the energy efficiency and performance of Scotland's domestic and non-domestic buildings, reducing energy demand and subsequently GHG emissions. There is also the increased potential for positive impacts on air quality from a greater reduction in energy production, particularly where this leads to reduced demand for energy generated from traditional finite sources. Promoting measures which help to further reduce energy consumption could benefit population and human health. The greater provision of warmer, more energy efficient housing stock is also likely to particularly benefit people who are vulnerable to health problems that could be exacerbated by cold, damp, and mouldy properties. Further reducing heat and electricity demand, as promoted through this policy, could help to further reduce pressure on existing energy systems and networks, potentially extending the lifespan of current grid infrastructure and reducing or completely eliminating the need for new or upgraded infrastructure in the short term. This may be further enhanced through the implementation of other actions, such as greater off-grid energy generation. This is also likely to enhance the resilience of the sector, particularly in light of the predicted effects of climate change. Together, these could also provide an opportunity to prioritise heat measures and ensure that suitable infrastructure is in place to accommodate future energy needs to facilitate decarbonisation measures. There is potential for adverse effects on a range of environmental topics but particularly from retrofitting work to improve a building's energy efficiency and decentralised generation which could involve changes in a building's appearance and could have impacts on landscape and cultural heritage, including as a result of cumulative developments.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy is focussed on streamlining the process of achieving nation-wide retrofitting schemes, covering of existing domestic and non-domestic buildings and both energy efficiency measures and low carbon and renewable energy technologies. *Previous SEA work:* Facilitating the delivery of improvements in building energy efficiency and zero carbon and renewable energy production through retrofit was discussed as part of the SEA work for RPP3.

Policy Outcome 3: Our gas network supplies an increasing proportion of green gas (hydrogen and biomethane) and is made ready for a fully decarbonised gas future.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to increase the proportion of green gas (hydrogen and biomethane) to help Scotland achieve its decarbonisation and GHG emission reduction targets. This will support efforts to reduce the emissions intensity of the gas supply and is likely to have a positive effect on the carbon emissions reductions. Additionally, positive effects for air quality are considered likely, with associated benefits on human health as a result of a shift towards more 'green' energy, displacing energy production from traditional and finite supplies. The wider implementation of Green Gas Schemes could potentially contribute to enhancing security of supply and help to future-proof energy supply. The greater use of green gas may have adverse environmental effect, for example, the construction of grid connection infrastructure could have adverse effects on soil, biodiversity, water quality, landscape and cultural heritage. Construction works also have the potential for adverse effects, including cumulative effects, such as short-term noise disturbance at a local level. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy considers both domestic and commercial/industrial demand for gas. *Previous SEA work:* Biomethane is discussed as part of the SEA for RPP3.

Policy 1: Hydrogen for heat demonstrator - £6.9m support for SGN's H100 hydrogen for domestic heat demonstrator.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to allocate £6.9 million for hydrogen demonstrator for domestic use. This policy will help to decarbonise Scotland's homes and buildings by supporting the delivery of low carbon infrastructure projects such as hydrogen for heat. The promotion of low carbon heat will help contribute towards reduction in GHG emissions, having positive effects on climatic factors. Additionally, a reduction in the release of GHG emissions associated with the heating of buildings will likely have positive effects on air quality and population and human health. Positive effects on population and human health are likely to be further enhanced through this policy by making homes easier to heat and reducing exposure to cold, damp, and mouldy properties. It is also likely to further increase energy security by continuing to reduce reliance on finite fossil fuels, with benefits for material assets. The use of hydrogen for domestic heat would require the construction of processing plants and fuel cells and may require upgrades to the existing gas network and supporting infrastructure. This may result in potential environmental effects on the environments, including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy plays key role in directly facilitating the development of hydrogen for heat demonstrator. *Previous SEA work:* Low carbon and renewable heat, including various means of funding was previously discussed as part of the SEA work for RPP3.

Policy 2: Work with UK Government on product standards to require all new gas boilers to be hydrogen-ready.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to work with the UK Government on product standards to require all new gas boilers to be hydrogen ready. This policy will help to decarbonise Scotland's homes and buildings by supporting the delivery of low carbon infrastructure projects such as hydrogen for heat. The promotion of low carbon heat will help contribute towards reduction in GHG emissions, having positive effects on climatic factors. Additionally, a reduction in the release of GHG emissions associated with the heating of buildings will likely have positive effects on air quality and population and human health. Positive effects on population and human health are likely to be further enhanced through this policy by making buildings easier to heat and reducing exposure to cold, damp, and mouldy properties. It is also likely to further increase energy security by continuing to reduce reliance on finite fossil fuels, with benefits for material assets. The use of hydrogen for heating would require the construction of processing plants and fuel cells and may require upgrades to the existing gas network and supporting infrastructure. This may result in potential environmental effects on the environments, including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning and consenting conditions prior to work being undertaken.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy plays key role in directly facilitating the development of hydrogen technology. *Previous SEA work:* The full range of currently commercially available low carbon and renewable heat technologies were previously discussed as part of the SEA work for RPP3.

Policy Outcome 4: The heat transition is fair, leaving no-one behind and stimulates employment opportunities as part of the green recovery

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outcome supports a fair heat transition which leaves no-one behind and stimulates employment opportunities as part of the green recovery. Transition from traditional heat infrastructure could have significant positive effects on GHG emissions. Benefits for air quality and population and human health are also likely from greater use of low carbon heat sources, and a reduction in energy generated through traditional, finite supplies such as fossil fuels. Greater use of low carbon heat technologies has the potential to reduce pressure on existing supply and distribution networks and improve energy productivity across the sector.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Achieving the policy outcome will involve the retrofitting of existing buildings with energy efficiency measures and low carbon and renewable energy technologies. *Previous SEA work:* Buildings energy efficiency and heating systems were considered within the SEA work for RPP3.

Policy 1: Develop a long-term public engagement strategy in 2021 and begin implementation of early actions

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	Benefits for climate change, air quality and population and human health are likely as increasing public engagement and communication may increase the likelihood of energy efficient and sustainable heating systems being implemented. Greater energy efficiency and use of low carbon heat technologies has the potential to reduce pressure on existing supply and distribution networks and improve energy productivity across the sector.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increasing public engagement will lead to better informed and positive decision making relating to climate change. ■ Improving public engagement and communication of a variety of climate change mitigation and adaptation measures will happen, including zero emissions heating systems, energy efficiency, and improved building standards. *Previous SEA work:* Buildings energy efficiency and heating systems were considered within the SEA work for RPP3.

Policy 2: Smart Meter installation: All homes and businesses will be offered a smart meter by 2020 under a UK Government initiative, providing the opportunity for a greater understanding of final energy consumption.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	It is expected that the increased rollout of smart meters is likely to encourage improved management of domestic energy consumption and enable more efficient use of energy resources. A reduction in energy consumption is likely to have positive effects on climatic factors from reduced GHG emissions. Associated benefits for air quality are also likely, particularly a reduction in demand from conventional, finite fuel sources. Benefits are expected for population and human health, as a result of boosting this policy, through flexibility for domestic consumers in choice of energy suppliers and energy tariffs and by shifting usage during peak periods in response to financial incentives (which could potentially help fuel become more affordable for some) and improved reliability. For example, enabling two-way communication between consumers and utility providers is expected to have positive effects in providing real-time feedback on use. This could help providers to further improve energy systems in the future, identify and reduce system losses and increase security of supply. However, it is also noted that regulation and powers relating to energy tariffs are not devolved to Scotland. The provision of consumption data and increased control for consumers in managing energy costs through the introduction of smart meters is also anticipated. As a consequence, benefits are expected through an increase in the proportion of 'active consumers', improved energy efficiency and the potential for an overall reduction in energy demand. A reduction in energy demand is also likely to have benefits on material assets through reduced pressure on current energy and network infrastructure. Security of supply and system resilience should also be improved. As noted above, enabling two-way communication between consumers and utility providers could help forecast demand and improve energy systems in the future.
									Assumptions & Links with Other SEA Work *Assumptions* ■ The installation of smart meters will encourage the more sustainable and productive consumption of energy by domestic users. *Previous SEA work:* ■ Smart meters and demand side response were discussed in the SEA for the Electricity Generation Policy Statement. ■ Smart meters were discussed in the SEA for RPP3.

Policy 3: Work with the Scottish Cities' Alliance and the seven cities on the opportunities to accelerate activity on heat and energy efficiency

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	-	-	+	This policy sets out a commitment to work with the Scottish Cities' Alliance and the seven cities to improve heat and energy efficiency in homes and other non-residential buildings. This will likely lead to reductions in GHG emissions as a result of less energy being used, and the increased use of lower carbon technologies such as renewable energy schemes. With reductions in GHG emissions are likely to come associated benefits to air quality, especially if there is a greater reduction in the use of traditional fuels for energy. Improvements in air quality may have benefits for population and human health. In addition, increases reducing the energy intensity of buildings will make them easier to heat, having further health benefits through reduced exposure to cold and damp properties. This policy could potentially have longer-term negative impacts on landscape and the historic environment, particularly if these could result in changes to a historic building's appearance. For example, through the installation of solar panels. There may also be an impact on biodiversity where particular species have nested in buildings where works are carried out. The realisation of any negative impacts will be largely felt at a localised level, and may result in a more significant cumulative effect, and will require further consideration, including giving due regard to any consenting processes. Improving energy efficiency across the sector has the potential to reduce pressure on existing supply and distribution networks and, if widely adopted, could potentially contribute to further enhancing security of supply.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy considers domestic and non-domestic buildings. ■ Achieving the target for energy intensity will involve the retrofitting of existing buildings with energy efficiency measures. *Previous SEA work:* Energy intensity of buildings was discussed as part of the work for the SEA of RPP3.

Policy 4: Continue to provide capital investment for Scottish colleges for equipment to deliver training for energy efficiency and heat.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy promotes investment in Scotland's collages in order to develop the necessary skills to research new and improved energy efficiency and generation technologies, manufacture them and install and export them. Direct investment in the county's academic institutions and associated manufacturing industries will directly benefit some of the county's most important strategic material assets. This will also make a notable contribution to Scotland's climate change mitigation targets, with indirect benefits for the county's air quality. It will also contribute to the education and improved financial security of its population, and attract professionals from elsewhere in the world. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy is focussed on investing in Scotland's energy efficiency and zero carbon and renewable heat technology industry through growing the country's skill-base. *Previous SEA work:* None.

Policy 5: Respond to the recommendations of the Expert Advisory Group on a heat pump sector deal for Scotland, by Q1 2022.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy sets out the need to respond to the recommendations of the Expert Advisory Group on a heat pump sector deal for Scotland. Transition from traditional heat infrastructure to heat pumps could have positive effects on GHG emissions and air quality, indirect effects on human health, and will also promote resource efficiency, with additional benefits to the running and maintenance of Scotland's material assets.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will help Scottish Ministers to decide on the most suitable heat pump deal for Scotland by utilising knowledge and experience of the experts. *Previous SEA work:* Low carbon heat, including technologies such as heat pumps, were discussed as part of the SEA work for RPP3.

Policy 6: Bring forward and support demonstrator projects, such as: hybrids and high temperature heat pumps; the use of hydrogen for space and water heating; projects to understand the impact of heat transition on existing energy networks.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to bring forward and support demonstrator projects, such as: hybrids and high temperature heat pumps; the use of hydrogen for space and water heating; projects to understand the impact of heat transition on existing energy networks. This policy will help to decarbonise Scotland's homes and buildings by supporting the delivery of low carbon infrastructure projects such as heat pumps and networks, along with investment in renewable and low carbon energy sources. In addition, this support is likely to reduce energy demand from traditional energy sources, reducing pressure on network infrastructure. The promotion of low carbon heat will help contribute towards reduction in GHG emissions, having positive effects on climatic factors. Additionally, a reduction in the release of GHG emissions associated with the heating of buildings will likely have positive effects on air quality and population and human health. Positive effects on population and human health are likely to be further enhanced through this policy by making homes easier to heat and reducing exposure to cold, damp, and mouldy properties. However, the promotion of low carbon and renewable heat technologies, such as heat pumps result in some negative effects on the environment. The increased occurrence of the construction and operation of heating infrastructure could have a range of environmental impacts; notably the greater potential for soil compaction from siting of infrastructure for heat networks, and additional impacts to cultural heritage and landscape setting, particularly resulting from cumulative developments. Temporary impacts during the construction phase and longer-term impacts on air, water, population and human health and visual amenity have also been identified. It is likely that these effects will be localised in nature, however, may result in more significant cumulative effects. Such effects will require further consideration, including being given due regard in any consenting processes. The efficient and localised use of energy through schemes such as district heat networks also has potential to reduce pressure on wider supply and distribution networks and improve energy productivity across the sector, however, would result in some land take. The promotion of low carbon and renewable energy will play a key role in further enhancing the security of energy supply. **<u>Assumptions & Links with Other SEA Work</u>** *<u>Assumptions:</u>* ■ This policy plays key role in directly facilitating the development of low carbon and renewable technologies, including heat pump and hydrogen technologies. *<u>Previous SEA work:</u>* Low carbon and renewable heat, including technologies such as heat pumps and hydrogen, was previously discussed as part of the SEA work for RPP3.

Policy 7: Publish a 'Heat Network Investment prospectus' in 2021/22 - a first-cut of HN Zones across Scotland, combined with information on decarbonisation needs of existing networks.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy sets out to publish a 'Heat Network Investment prospectus' which will provide information on decarbonisation needs of existing networks, including the listing of heat network zones across Scotland. This policy will help to decarbonise Scotland's homes and buildings by encouraging investments in low / zero carbon heating projects. The successful implementation of the policy will facilitate reductions in GHG emissions, and associated improvements to air quality are likely, which could have benefits on population and human health. This could be further enhanced if buildings become easier to heat and power, helping to reduce the number of properties that could currently be classified as cold, damp, and mouldy, improving quality of life, particularly for the fuel poor.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Exploiting the full potential of viable decentralised heat network zones, could see less demand on current infrastructure and therefore a reduction of pressure on the wider national network. If widely implemented across all local authorities, the approach has the potential to contribute to enhancing the security of supply and help to future-proof energy supply. The development of Heat Network Investment Prospectus will focus on existing built-up areas where there is an established and suitably diverse heat demand. Furthermore, the integration of the network within these relatively urbanised areas is likely to be largely underground and indoors, limiting the scope for adverse effects on the on landscape and cultural heritage.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy is focussed on the delivery of decentralised heating schemes through a variety of system and area-based policy measures. *Previous SEA work:* ■ Encouraging decentralised and community zero carbon and renewable technology schemes was considered in the SEA undertaken for the RPP3. ■ Heat network zones were considered through discussion of the LHEES as part of the SEA for RPP3.

Policy 8: Establish a short life working group on finance for the heat transition

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to establish a short life working group that will advise on financing for the heat transition. The successful facilitation of the transition through this policy has the potential to deliver positive effect on climatic factors by reducing the overall GHG emissions from heating. Moreover, positive effects are expected for human health and air, as fuel poverty and heat in buildings programmes have the potential to improve the overall air quality and the quality of life. A just heat transition also has the potential to deliver positive effects on material assets by enabling potential savings of energy to be made through the implementation of energy efficiency measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy is focussed exclusively on exploring ways to finance the move to zero carbon heating.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Previous SEA work: None.

Policy 9: Establish principles to underpin our commitment to 'no-one being left behind' in the heat transition, ensuring our approach neither increases the fuel poverty rate nor increases the depth of existing fuel poverty. This will include the effective design and targeting of our fuel poverty and heat in buildings programmes.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to establish principles that will underpin the 'no-one left behind' heat transition. Specifically, this policy seeks to ensure that the heat transition will neither increase the fuel poverty rate nor increase the depth of existing fuel poverty, by ensuring effective design and targeting the fuel poverty and the heat in buildings programmes. Ensuring a just heat transition has the potential to deliver positive effect on climatic factors by reducing the overall GHG emissions from heating. Moreover, positive effects are expected for human health and air, as fuel poverty and heat in buildings programmes have the potential to improve the overall air quality and the quality of life. A just heat transition also has the potential to deliver positive effects on material assets by enabling potential savings of energy to be made through the implementation of energy efficiency measures. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy is focussed on ensuring that necessary investment in energy efficiency and generation measures are appropriately financed to avoid or at the very least minimise the financial burden on those in fuel poverty. *Previous SEA work:* None.

Policy 10: Ensure Local Heat and Energy Efficiency Strategies are developed through extensive engagement with local communities

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy would ensure that Local Heat and Energy Efficiency Strategies (LHEES) are developed through extensive engagement with local communities. As this policy encourages local authorities to develop Local Heat & Energy Efficiency Strategies (LHEES), it will help secure energy efficiency and heat decarbonisation measures across the buildings sector. The greater development of LHEES is likely to result in a reduction of GHG emissions, due to a reduction in the overall use of energy and the increased use of energy efficiency technologies. Subsequently, associated improvements to air quality are likely, which could have benefits on population and human health. This could be further enhanced if more homes become easier to heat and power, helping to reduce the number of properties that could currently be classified as cold, damp, and mouldy. Seeking to maximise benefits and further reducing the need for heating and energy, as promoted through the implementation of the strategies outlined in this policy, could see less demand on current infrastructure and therefore a reduction of pressure on the systems. This benefit could be enhanced with off-grid generation. If widely implemented, the approach has the potential to contribute to enhancing the security of supply and help to future-proof energy supply. The development of LHEESs, which approach delivery across larger areas such as entire communities, will consider cumulative impacts and avoid a piecemeal approach to addressing the longer-term impacts on landscape and cultural heritage; particularly if this could result in changes to a building's appearance in a conservation area. There is also the potential to consider cumulative impacts that could occur by taking a co-ordinated approach to delivery across an area. **<u>Assumptions & Links with Other SEA Work</u>** *<u>Assumptions:</u>* ■ The policy is focussed on developing strategies to deliver decentralised heat network and energy efficiency schemes with local communities. ■ There is an in-built assumption that capacity and local enthusiasm to deliver integrated programmes exist, or can be developed, amongst delivery partners. ■ The policy will help to plan the implementation of energy efficiency measures more effectively. ■ The policy presents an opportunity to target measures towards those in greater need in order to maximise benefits. *<u>Previous SEA work:</u>* The LHEESs were discussed in the SEA undertaken for RPP3.

Policy 11: Continue delivery of energy efficiency investment to support fuel poor households and conduct further modelling and analysis in to better understand the potential impact of the heat transition on fuel poor households and the scale of, and options for, mitigation that may be required

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy aims to continue the delivery of energy efficiency investment to support fuel poor households and conduct further modelling analysis to better understand the potential impact of the heat transition on fuel poor households. The analysis would include the scale of the impact and options for mitigation that may be needed. Supporting energy efficiency schemes that benefit fuel poor households will help reduce the reliance on heat from traditional energy sources such as oil and gas, therefore reducing the release of GHG emissions. A reduction in the volume of GHG emissions released from traditional energy sources due to a switch towards renewable and low carbon energy, is also likely to have positive effects on air quality by minimising the release of air pollution and particulate matter. The encouragement of energy efficiency investment may make homes easier and less expensive to heat, thereby reducing fuel poverty and exposure to cold, damp and mouldy properties, whilst ensuring that as many people as possible have access to decent living conditions. As such, there may be benefits for population and human health, particularly for vulnerable members of society and those with existing health complications such as respiratory issues.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy focusses on the delivery of energy efficiency schemes to fuel poor households, and minimising their financial impacts *Previous SEA work:* None.

Policy 12: Urge the UK Government to rebalance levy costs on energy bills to make gas and electric systems relatively more cost comparable.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to rebalance levy costs on energy bills by making gas and electric systems more comparable. By making electricity more affordable in relation to gas there is the potential for a greater number of people to use more efficient electric heaters and boilers. Wider transition to electric systems will also enable utilising renewable energy and as a result phase out using finite resources. Rebalancing of the levy costs between gas and electric systems can deliver significant reductions in GHG emissions leading to improvements in air quality and human health. Making electricity more affordable can also deliver positive effects on population and human health by reducing fuel poverty. This policy is also likely to deliver positive effects on material assets by enabling greater utilisation of renewable energy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy is focussed on maintaining affordable energy bills alongside investment in alternative zero carbon and renew able energy generating technologies. *Previous SEA work:* None.

Agriculture

Policy Outcome 1: A more productive, sustainable agriculture sector that significantly contributes towards delivering Scotland's climate change, and wider environmental outcomes through an increased uptake of climate mitigation measures by farmers, crofters, land managers and other primary food producers

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	Enabling the agriculture sector to further contribute to delivering Scotland's climate change outcomes by encouraging more farmers, crofters, land managers and other primary food producers to uptake climate change mitigation measures can lead to overall reductions of GHG emissions, and restoration of natural habitats or planting woodlands. As a result of these measures there is the potential for positive effects in relation to climatic factors, air, soil, water and biodiversity. Measures such as improved soil and water management may deliver additional indirect benefits for material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Enabling agriculture sector in informed and positive decision making relating to climate change. ■ Improving awareness of a variety of climate change mitigation measures will happen, including use of renewable energy, breeding of low emission livestock, planting of forestry, restoration of habitats, and reducing use of nitrogen fertiliser. *Previous SEA work:* Agricultural climate change mitigation potential is considered within the SEA work for RPP3.

Policy 1: Scale up the Agricultural Transformation Programme across all the policies, including monitoring to assess the effectiveness of the pilot Sustainable Agricultural Capital Grant Scheme that will enable farmers and crofters to purchase equipment that should assist in reducing their greenhouse gas emissions, and support practice change.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	0	+	The policy seeks to enable farmers and crofters to purchase equipment that should assist in reducing GHG emissions, and support practice change and as a result it should improve nitrogen use efficiency, reduce emissions from livestock production and from the storage and use of slurry. Nitrogen fertilisers, livestock sector and storage and use of slurry all lead to significant releases of GHG emissions. Therefore, implementation of appropriate equipment is likely to positively impact the soil condition of farmed land, reduce emissions and potentially having further positive effects on water quality and biodiversity. Moreover, this policy is likely to have potential for positive effects on climatic factors through encouraging the efficient use of nitrogen fertilisers and use and storage of slurry to minimise releases of methane and ammonia. There is also potential for positive effects through better management of a renewable resource which can reduce the requirement for chemical fertilisers, potentially leading to further GHG reductions. Positive impacts have also been identified on human health through the better management of manures which could reduce nuisance effects such as odours. Furthermore, using less chemical fertilisers has the potential for positive effects on material assets.
									Assumptions & Links with Other SEA Work *Assumptions:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									■ The policy is closely linked to the policies and proposals that seek to reduce emissions from the use of nitrogen fertilisers. ■ Increasing awareness and understanding will lead to informed and positive decision making relating to climate change. ■ Nitrogen fertiliser will be applied in a more efficient way. ■ Slurry will be used as a natural fertiliser, displacing or reducing the use of nitrogen fertilisers. ■ Policy considers the reduction of GHG emissions by improving equipment used livestock production. ■ This policy is likely to be closely linked with others that aim to improve the use and management of fertilisers or seek to promote and market low carbon farming. *Previous SEA work:* ■ Reducing use of nitrogen fertiliser is considered within the SEA work for RPP3. ■ Reducing emissions from livestock is considered within the SEA work for RPP3. ■ Reducing emissions from the storage and use of slurry is considered within the SEA work for RPP3.

Policy Proposal 1: Develop rural support to enable, encourage and where appropriate, require the shift to low carbon, sustainable farming through emissions reduction, sustainable food production, improving biodiversity, planting biomass crops and appropriate land use change developed in line with just transition principles.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	0	+	This policy proposal seeks to develop rural support to enable, encourage and where appropriate require shift to low carbon and sustainable farming methods by reducing emissions, implementing sustainable food production, improving biodiversity on a farm, planting biomass crops and appropriate land use change. Moreover, this proposal seeks to enable this shift with just transition principles. Nitrogen fertilisers, livestock sector and storage and use of slurry all lead to significant releases of GHG emissions. Therefore, implementation of sustainable arming methods which reduces reliance on such fertilisers is likely to positively impact the soil condition of farmed land, reduce emissions and potentially having further positive effects on water quality. This policy is also likely to have positive effects on biodiversity by enhancing flora biodiversity on farms and planting biomass crops. Moreover, this policy is likely to have potential for positive effects on climatic factors through sustainable food production such as efficient use of nitrogen fertilisers and use and storage of slurry to minimise releases of methane and ammonia. There is also potential for positive effects through better management of a renewable resource which can reduce the requirement for chemical fertilisers, potentially leading to further GHG reductions and benefits for material assets. Positive impacts have also been identified on human health through the better management of manures which could reduce nuisance effects such as odours. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy is closely linked to the policies and proposals that seek to reduce emissions from the use of nitrogen fertilisers. ■ This policy encourages a transition to sustainable farming. ■ Slurry will be used as a natural fertiliser, displacing or reducing the use of nitrogen fertilisers. ■ Policy considers the reduction of GHG emissions by improving equipment used livestock production. ■ This policy is likely to be closely linked with others that aim to improve the use and management of fertilisers or seek to promote and market low carbon farming. *Previous SEA work:* ■ Reducing use of nitrogen fertiliser is considered within the SEA work for RPP3. ■ Reducing emissions from livestock is considered within the SEA work for RPP3. ■ Reducing emissions from the storage and use of slurry is considered within the SEA work for RPP3.

Policy Proposal 2: Develop new schemes and approaches to support low carbon, sustainable farming, including through the Programme Board for the Beef Suckler Climate Group, other farmer-led groups on arable, dairy and high value, nature farming and crofting which will report in 2021.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal sets out to develop new schemes and approaches to support low carbon, sustainable farming through initiatives such as the Programme Board for the Beef Suckler Group and other farmer-led groups. Supporting farmers in transitioning to less carbon intensive farming can have positive effects on GHG emissions. Moreover, this proposal may enhance carbon sequestration on Scottish farms. Reducing emissions from agriculture of gases such as methane and ammonia in particular will help Scotland achieve its GHG emissions reductions. This policy proposal is also likely to have positive effects upon material assets through low carbon and sustainable farming.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ New schemes and approaches will encourage low carbon and sustainable farming among farmers and crofters.. *Previous SEA work:* Carbon sequestration on Scottish farms was previously discussed as part of the SEA work for RPP3 and Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy Proposal 3: Introduce Environmental Conditionality, from 2021 via implementation of the Beef Suckler Climate Report and more widely from 2022 through the review of existing CAP Greening which will extend the requirements to all farmers and crofters to undertake environmental actions

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy outlines plans to introduce environmental conditionality in relation to nutrient planning, soil testing, carbon auditing, livestock health planning and grazing management. There is the potential for this policy to lead to significant reductions in GHG emissions as fertiliser applications to grassland are reported to be the largest single source of nitrous oxide emissions. Additionally, further benefits resulting from this policy may be likely across a range of topics, such as soil, water and biodiversity, through the reduced or improved application of fertilisers. Through introducing environmental conditionality there is the potential for significant positive effects for material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be increased uptake of nutrient planning, soil testing, carbon auditing, livestock health planning and grazing management through the compulsory nature of this policy. *Previous SEA work:* The benefits of precision farming and efficient use of nitrogen were assessed for RPP3.

Policy Proposal 4: Further provision of advice for farmers and crofters who wish to retire: A new commitment to work with stakeholders to provide advice, including further extending the Land Matching Service and guidance for farmers and crofters who wish to step back from agricultural businesses by providing an opportunity to consider alternative land-uses or alternative agricultural uses..

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposals sets out to provide advice for farmers and crofters who wish to step back from agricultural business and provide them opportunities for alternative land uses or alternative agricultural uses. This proposal has the potential to deliver reductions in GHG emissions from agriculture and also positively impact on material assets. Considering that farmers and crofters will be given opportunities for alternative land uses, the secondary benefits can include enhanced biodiversity, improved soil and water quality and improved landscape if actions such as land restoration are implemented.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be farmers and crofters who step down from agricultural business and get involved in alternative land uses. ■ Alternative land uses may contribute towards GHG emission reductions. *Previous SEA work:* The benefits of alternative land use such as woodland and peatland were assessed for RPP3.

Policy Outcome 2: More farmers, crofters, land managers and other primary food producers are aware of the benefits and practicalities of cost-effective climate mitigation measures and uptake will have increased.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This policy outcome seeks to increase awareness of the benefits and practicalities of climate change mitigation amongst those involved with farmwork which may increase the likelihood of these measures being implemented. Measures such as reducing overall GHG emissions, encouraging the restoration of natural habitats and planting woodland may have positive effects in relation to climatic factors, soil, water and biodiversity. Additional benefits for material assets may arise from indirect benefits for agricultural production from improved soil and water management.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increasing awareness will lead to informed and positive decision making relating to climate change. ■ Improving awareness of a variety of climate change mitigation measures will happen, including use of renewable energy, breeding of low emission livestock, planting of forestry, restoration of habitats, and reducing use of nitrogen fertiliser. *Previous SEA work:* Agricultural climate change mitigation potential is considered within the SEA work for RPP3.

Policy 1: The dissemination of information and advice on climate change mitigation measures in agriculture, utilising technology and all media to best effect.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This boosted policy sets out to further disseminate information and advice on climate change mitigation measures in agriculture through a variety of communication methods, technology, and media. The distribution of information and knowledge transfer will promote and encourage the uptake of carbon neutral farming. Carbon neutral farming which can contribute towards climate change mitigation may include practices such as precision application of farm chemicals, altering livestock diets, changes to grassland management, methane capture, carbon sequestration through woodlands and hedges and the growth of energy crops. Therefore, the promotion and greater uptake of such practices may have positive effects on climatic factors by reducing GHG emissions and facilitating climate change adaptation Additional benefits associated with improved soil include better water quality due to less soil erosion, as well as benefits for biodiversity. Furthermore, improving the condition of soil will likely increase its potential to act as a carbon store, therefore having positive effects on climatic factors. Implementation of carbon neutral farming is also likely to have positive effects on material assets. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Carbon neutral farming models will be utilised by farmers and will help inform decision making on farms. ■ The dissemination of information will encourage the uptake of sustainable farming practices including the restoration of natural habitats and planting of forestry and hedgerows. ■ On-farm renewable energy is encouraged. ■ Farming practices such as soil testing and rotational livestock grazing, will improve overall soil quality. ■ Improved soil will benefit water quality and biodiversity. ■ Greater amounts of carbon can be stored within good quality soils. *Previous SEA work:* ■ Carbon contributions from farming practices was considered as part of the SEA work for RPP3. ■ Reducing GHG emissions through farming practices was previously considered as part of the SEA work for RPP3 and Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ Soil functionality was previously discussed as part of the SEA work for RPP3.

Policy 2: An agri-tech group will be established to share, disseminate and encourage adoption of advances in agricultural science and technology as widely as possible.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	The policy sets out to deliver and disseminate information on agriculture and the role of the sector in producing GHG emissions, including sharing information on advances in technology. The provision of information on optimising crop yields and reducing emissions intensity should also have a benefit through possible reductions in the use of nitrogen fertilisers. Increasing awareness of advances in science and technology through boosting this policy has the potential to lead to a reduction in GHG emission with secondary benefits for other associated topics through improved land management particularly relating to soil, air, water and biodiversity. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Education and information provision should lead to informed decision making on the ground. ■ This policy is likely to include measures that seek to better manage the application of nitrogen fertilisers. ■ The policy is closely linked to other policies and proposals that seek to reduce GHG emissions from nitrogen fertilisers. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy 3: Launch a new and expanded peer to peer knowledge transfer initiative based on the success of our Young Climate Change Champions work.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy promotes knowledge transfer amongst peers, based on the success of the Young Climate Change Champions work, to provide wider environmental benefits. Increasing awareness of the Young Climate Change Champions work has the potential to lead to a reduction in GHG emission with secondary benefits for other associated topics through improved land management particularly relating to soil, air, water and biodiversity. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Knowledge exchange should lead to informed decision making on the ground. ■ This policy is likely to include measures that seek to increase habitat creation and restoration. ■ Planting of woodland and forestry is encouraged.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									▪ Improving soil condition will reduce the rate of soil erosion and minimise the need for nitrogen fertilisers. *Previous SEA work:* ▪ Exchanging of knowledge was discussed in SEA work for RPP3 and Getting the Best From Our Land: A Land Use Strategy for Scotland 2016 - 2021.

Policy 4: Realign and enhance our established programmes and initiatives such as the Farm Advisory Service, the Knowledge Transfer and Innovation Fund and Monitor Farm Programme to create a more cohesive approach to ensure advice and support is focussed on helping industry to professionalise to support sustainable farming.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy seeks to realign the established programmes and initiatives to further reflect the increased need to address SG environmental priorities. This policy will put greater emphasis on environmental priorities in the Knowledge Transfer and Innovation Fund and the programmes it funds such as the Monitor Farm Programme by promoting appropriate skills development and knowledge transfer, and by delivering improvements in competitiveness, efficiency and environmental performance and sustainability to help achieve these priorities. Likewise, similar environmental priorities will be emphasised in advice from the FAS. This policy will likely promote practices which will help reduce GHG emissions, minimise water pollution, improve and expand habitats. Some of these benefits will have further secondary benefits for other topics. For example, habitat and woodland creation have beneficial effects for biodiversity as well as improving water quality by preventing soil erosion and intercepting leached minerals. Furthermore, creating habitats such as woodland would likely have positive effect on air quality, and help increase carbon sequestration, having positive effects on climate change. Other secondary benefits that may arise as a result of the measures promoted through this policy proposal include improvements to soil condition and the character of the landscape.
									Assumptions & Links with Other SEA Work *Assumptions:* ▪ Knowledge exchange should lead to informed decision making on the ground. ▪ Improving efficiency and productivity will contribute to reductions in GHG emissions. ▪ This policy is likely to include measures that seek to increase habitat creation and restoration. ▪ Improving soil condition will reduce the rate of soil erosion and minimise the need for nitrogen fertilisers. *Previous SEA work:* Exchanging of knowledge was discussed in SEA work for RPP3 and Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy Proposal 1: Carbon Audits: in 2018, we will consult on how best to ensure maximum take up of carbon audits and how to enable tenant farmers and crofters in particular to benefit.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to ensure maximum uptake of carbon audits and to enable tenant farmers and crofters to benefit from the process. This policy proposal is likely to lead to improved farm management practises, such as the management and application of nitrogen fertiliser, soil testing, alternative land uses, consideration of the lengths of grazing and improved genetics and breeding. The uptake of such practices, notably the reduced and improved use of nitrogen fertiliser, may have positive effects on climate change by reducing GHG emissions. The improved use of nitrogen may also have secondary benefits on soil, water and biodiversity. Positive effects are also identified for material assets, as reducing reliance on fertilisers will help saving on energy required to carry out these farming practices. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Maximum uptake of carbon audits will be achieved. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Proposal 2: We will explore with stakeholders, including the Scottish Tenant Farmers Association and the Tenant Farming Commissioner, how best to engage tenant farmers to increase understanding of the environmental and economic benefits of low carbon farming.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to explore how to best engage tenant farmers to increase understanding of the environmental and economic benefits of low carbon farming. Increasing the understanding of low carbon farming amongst farmers can lead to significant GHG emissions reductions and positive effects on material assets. Carbon neutral farming models include precision application of farm chemicals, altering livestock diets, changes to grassland management, methane capture, carbon sequestration through woodlands and hedges and the growth of energy crops. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The proposal is likely to lead to wider implementation of low carbon farming. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Proposal 3: Marketing scheme: Determine the feasibility of a Low Carbon Farming marketing scheme.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to explore the potential use of market tools to incentivise and promote Scotland as a producer of low carbon foods. Boosting this policy through additional market incentives and supporting greater market demand for products produced via low carbon farming practices should lead to greater increased uptake of low carbon farming methods and sustainability practices being undertaken to meet this standard. For example, the consideration of carbon audits. The boosting of this policy proposal has the potential to lead to a number of benefits, such as reduced GHG emissions from improved nitrogen efficiencies, consideration of the length of grazing season and improved genetic and breading. The improved use of nitrogen is also likely to have secondary benefits on soil, water and biodiversity. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The proposal will lead to the creation of a marketing scheme. ■ Market demand will be generated leading to increased uptake of low carbon farming methods in addition to the adoption of farming methods that achieve greater sustainability in the sector. *Previous SEA work:* ■ RPP3.

Policy Outcome 3:

Nitrogen emissions, including from nitrogen fertiliser, will have fallen through a combination of improved understanding, efficiencies and improved soil condition.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	The policy outcome provides support for reducing nitrogen emissions, including from nitrogen fertiliser, through improving understanding, efficient application and improving soil condition. This policy outcome will lead to improved understanding and increased efficiencies of nitrogen fertiliser application, which could lead to significant reduction in GHG emissions. Likewise, improving the soil condition of farmed land may minimise the need for additional nitrogen fertiliser to be used, potentially having further positive effects on water quality and biodiversity as a result of less leaching of fertiliser. A number of associated benefits are also considered likely, in particular for soil if the policy is complimented by action that supports good soil management. Positive effects on material assets arise from improved management of the land.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy outcome is closely linked to the policies and proposals that seek to reduce emissions from the use of nitrogen fertilisers. ■ Increasing awareness and understanding will lead to informed and positive decision making relating to climate change. ■ Nitrogen fertiliser will be applied in a more efficient way. ■ Soil testing and improving soil condition will minimise the need for nitrogen fertiliser. *Previous SEA work:* ■ Reducing use of nitrogen fertiliser is considered within the SEA work for RPP3.

Policy 1: Communicate and demonstrate the benefits of precision farming and nitrogen use efficiency in order to achieve a reduction in GHG emissions.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This boosted policy seeks to communicate and demonstrate the benefits of precision farming and the efficient use of nitrogen in order to further reduce GHG emissions. The boosted policy seeks to continue the voluntary code of practice for nitrogen use which includes the storage and application of slurries and manure, with the potential for the code to become compulsory from 2024. Additionally, the policy outlines plans to explore conditionality in relation to nutrient planning, soil testing, carbon auditing, livestock health planning and grazing management There is the potential for this boosted policy to lead to additional reductions in GHG emissions as fertiliser applications to grassland are reported to be the largest single source of nitrous oxide emissions[2]. Additionally, further benefits resulting from this policy may be likely across a range of topics, such as soil, water and biodiversity, through the reduced or improved application of fertilisers.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The provision of advice and guidance will lead to informed decision making on the ground. *Previous SEA work:* The benefits of precision farming and efficient use of nitrogen were assessed for RPP3.

[2] Rees R.M, Topp CFE, Bell M, Reid G, Audsley R, Eory V, McLeod M, Wall E, Moran D, Moxely AP, (2015) Reducing the emissions from the agriculture and land use sector, Evidence presented to the Committee on Climate Change 22 January 2015 [online] Available at: https://www.theccc.org.uk/wp-content/uploads/2015/01/SRUC.pdf (accessed 02/04/2020)

Policy 2: Work with the agriculture and science sectors regarding the feasibility and development of a SMART (specific, measurable, achievable, relevant and time bound) target for reducing Scotland's emissions from nitrogen fertiliser.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This boosted policy considers how best to support and promote the optimal use of nitrogen fertiliser and improve land management practices as a means to reduce Scotland's carbon emissions. By boosting this policy, which will be taken forward alongside the establishment of a National Nitrogen Balance Sheet for Scotland, there is the potential to further enable an understanding of the flow of nitrogen in terms of inputs, emissions and removals, throughout the whole of Scotland. The inappropriate application of nitrogen fertilisers can lead to significant releases of GHG emissions and boosting this policy will further reduce emissions. The setting of an enhanced target to reduce these emissions and the development of a National Nitrogen Balance Sheet, as advocated through this policy, therefore has greater potential for significant benefits once implemented. A number of secondary positive effects are also identified, in particular for soil if the policy is complimented by action that supports good soil management, but also for water, biodiversity and material assets. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The policy will lead to the development a target being developed. ■ The policy is closely linked to soil testing. ■ The policy will be supported by advice and guidance on good soil management. *Previous SEA work:* ■ RPP3.

Policy 3: From 2018 we expect farmers to test the soil on all improved land every five or six years, and we will work with them to establish how best to achieve this.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	The boosting of this policy is likely to lead to improved farm management practises, in particular, the management and application of nitrogen fertiliser as a result of increased soil testing. This has greater potential to lead to significant benefits through an increased reduction in GHG emissions, as fertiliser applications to grassland are reported to be the largest single source of nitrous oxide emissions. The more effective management of nutrients such as nitrogen, as a result of more frequent soil testing, is critically important in delivering lower carbon emissions from farming. As such, a greater positive impact is expected for climatic factors. The boosting of this policy could also lead to greater long-term benefits for soil health particularly if soil management advice and guidance is also promoted. In addition to benefits for climatic factors and soil, it is also anticipated that there could be further benefits for other topics such as water and biodiversity.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be increased uptake of soil testing through the compulsory nature of this policy. ■ The policy is likely to include the provision of guidance and advice on soil management. *Previous SEA work:* ■ RPP3.

Policy Proposal 1: Investigate the benefits and barriers of leguminous crops in rotation.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	The boosting of this policy proposal seeks to investigate the advantages and disadvantages of using leguminous crops in rotation. Crop rotation farming is recognised as an effective means of improving soil fertility[3] through the ability of legume crops to fix atmospheric nitrogen, returning this to soils which have previously been exhausted of nutrients. The success of this process depends on the crop used. The anticipated benefits of this boosted proposal include reduced use of artificial fertilisers with associated enhanced benefits for climatic factors and improved soil health. Additionally, a greater reduction in the use of nitrogen fertiliser is likely to have associated benefits on water and biodiversity. There may also be additional benefits for biodiversity through the reduced risk of insect pests and diseases that can arise from the application of crop rotation farming methods. The benefits of leguminous crops will also reduce the amount of nitrogen fertilizer required with associated benefits for material assets from reduced resource use.

[3] DEFRA (2011) Crop Rotation Integrated Crop Management (CPA) [online] Available at: http://adlib.everysite.co.uk/adlib/defra/content.aspx?id=000IL3890W.17USY7NEWZ4R1 (accessed 10/03/2020)

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The proposal will lead to measures being implemented to support the use of legumes in farming practice. *Previous SEA work:* ■ RPP3.

Policy Proposal 2: Crop varieties with improved nitrogen-use efficiency.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	The proposal is aimed at improving the efficiency of crops in the uptake of nitrogen, whilst maintaining yields. This boosted proposal is likely to lead to reduced fertiliser use, with associated benefits of reduced GHG emissions and improved air quality. Additionally, other secondary benefits are anticipated as a result of reduced nitrogen fertiliser use and improved soil health, including on a range of other topics; notably, soil, water and biodiversity. The benefits of crop varieties with improved nitrogen-use efficiency will also reduce the amount of nitrogen fertilizer required with associated benefits for material assets from reduced resource use. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ New breeding goals and the development of breeding programmes will be established prior to improved nitrogen varieties being introduced. *Previous SEA work:* ■ RPP3.

Policy Outcome 4: Reduced emissions from red meat and dairy through improved emissions intensity.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	The red meat and dairy sectors play key roles in the amount of GHG emissions arising from agriculture, in particular methane emissions. This policy outcome aims to reduce GHG emissions from red meat and dairy by improving emissions intensity. The boosted policy outcome is likely to result in greater reductions in GHG emissions, having subsequent benefits for climatic factors. This could lead to further benefits on a range of topics depending on the measures introduced to reduce emissions, for example, reduced use of nitrogen fertilisers will have additional benefits for soil, water and biodiversity.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy outcome considers the reduction of GHG emissions by improving efficiencies and livestock health measures. ■ This policy outcome is likely to be closely linked with others that aim to improve the use and management of fertilisers or seek to promote and market low carbon farming. *Previous SEA work:* Emissions intensity from red meat and dairy were discussed in the SEA for RPP3.

Policy 1: Commission and publish a report into the establishment of emissions intensity figures for beef, lamb and milk.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	Livestock plays a key role in the amount of GHG emissions arising from the agriculture sector, in particular methane emissions. As such, the boosted policy is likely to lead to further benefits for climatic factors, as the report[4] seeks to measure current emissions arising from the production of food, including beef, lamb, milk and crops, with an aim of reducing the overall emissions from these sources. This could therefore lead to further benefits on a range of topics depending on the measures introduced to reduce emissions, for example, reduced use of nitrogen fertilisers will have additional benefits for soil, water, biodiversity and material assets.

[4] Climate X Change (2016) Benchmarking the emissions intensity of Scottish livestock-derived agricultural commodities [Online] Available at: https://www.climatexchange.org.uk/media/2026/benchmarking_the_emissions_intensity_of_scottish_livestock-derived_agricultural_commodities_-_final_-_mar_16.pdf (accessed 10/03/2020)

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will lead to the development of a metric and established target to facilitate a reduction in carbon emissions in food production. ■ The policy is closely linked to other policies that consider the reduction of emissions from dairy and red meat production by improving efficiencies, such as the establishment of an emissions target and livestock health measures. ■ This policy is also likely to be closely linked with others that aim to improve the use and management of fertilisers or seek to promote and market low carbon farming. *Previous SEA work:* ■ Emissions intensity from beef, lamb and dairy was discussed in the SEA work for RPP3.

Policy 2: Work with Quality Meat Scotland, ScotEID and livestock producers to encourage improved emissions intensity through genotyping, improving fertility, reducing animal mortality and improving on farm management practices.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	Breeding programmes and reducing the replacement rates of stocks are likely to lead to benefits primarily through reducing GHG emissions intensity from livestock. This boosted policy also seeks to provide additional support to land managers through the Agricultural Transformation Programme and investigate and report on the practical implementation of beneficial practices on Scottish farms as a means of reducing carbon emissions. This may encourage the greater uptake of such practices, such as improving livestock efficiencies and health, and using feedstock additives which may help reducing GHG emissions. Methane emissions from ruminants are responsible for approximately 50% of the GHG emissions associated with agriculture in Scotland[5]. Feed additives inhibit the micro-organisms that produce methane in the rumen and subsequently reduce emissions. Research has shown that the potential reduction in methane emissions can range from 11-21%, where reductions were expressed per unit field intake[6]. The amount of methane emitted per unit of feed intake varies between animals due primarily to heritable differences in the production of methane in the rumen; however, there is the potential to reduce methane from ruminants by 10-20% through animal breeding[7]. Additionally, greater improvements in animal health and reproductive performance will also be beneficial through reducing the replacement rate and improving the fertility of herds as this likely to reduce the associated methane emissions through carrying less young stock as a proportion of the herd[8]. However, whilst the use of additives in feedstock may improve the overall efficiency of livestock, subsequently reducing GHG emissions, there can be implications arising from GHG emissions associated with the production and transport of feeds as a result of this policy proposal, however these are considered to be minor[9].

[5] ClimateXchange (2016) Nutritional strategies to reduce enteric methane emissions [online] Available at: https://www.climatexchange.org.uk/media/2033/nutritional_strategies_to_reduce_enteric_methane_emissions.pdf (accessed 02/04/2020)
[6] ibid
[7] GOV.UK (2014) Farming Advice Services Reducing emissions of greenhouse gases from agriculture [online] Available at: http://farmingadviceservice.org.uk/events/assets/Uploads/Technical-articles/GHGMitigFINAL270214.pdf (accessed 10/03/2020)
[8] ibid
[9] ibid

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be increased uptake of livestock health management, livestock fertility and genotyping through the compulsory nature of this policy. ■ The policy is closely linked to others that seek to reduce the intensity of emissions from livestock such as the establishment of an emissions target and livestock health measures. ■ The benefits of using livestock breeding to reduce GHG emissions may not be realised in the short term. ■ Delivery mechanisms will be introduced to increase uptake of additives. ■ Consideration will be given to the land use implications that may arise from the creation of additives. *Previous SEA work:* ■ RPP3.

Policy Proposal 1: Determine the practicality of establishing a SMART target for reduction in the intensity of emissions for beef, sheep and dairy sectors.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal considers how to establish a SMART target for reduction in the intensity of emissions from the beef, sheep and dairy sectors. Methane emissions from ruminants are responsible for approximately 50% of the GHG emissions associated with agriculture in Scotland[10]. Feed additives inhibit the micro-organisms that produce methane in the rumen and subsequently reduce emissions. Research has shown that the potential reduction in methane emissions can range from 11-21%, where reductions were expressed per unit field intake[11]. The amount of methane emitted per unit of feed intake varies between animals due primarily to heritable differences in the production of methane in the rumen; however, there is the potential to reduce methane from ruminants by 10-20% through animal breeding[12]. Additionally, greater improvements in animal health and reproductive performance will also be beneficial through reducing the replacement rate and improving the fertility of herds as this likely to reduce the associated methane emissions through carrying less young stock as a proportion of the herd[13]. However, whilst the use of additives in feedstock may improve the overall efficiency of livestock, subsequently reducing GHG emissions, there can be implications arising from GHG emissions associated with the production and transport of feeds as a result of this policy proposal, however these are considered to be minor[14].

[10] ClimateXchange (2016) Nutritional strategies to reduce enteric methane emissions [online] Available at: https://www.climatexchange.org.uk/media/2033/nutritional_strategies_to_reduce_enteric_methane_emissions.pdf (accessed 02/04/2020)
[11] ibid
[12] GOV.UK (2014) Farming Advice Services Reducing emissions of greenhouse gases from agriculture [online] Available at: http://farmingadviceservice.org.uk/events/assets/Uploads/Technical-articles/GHGMitigFINAL270214.pdf (accessed 10/03/2020)
[13] ibid
[14] ibid

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The policy will lead to the development a target being developed. ■ The policy is closely linked to soil testing. ■ The policy will be supported by advice and guidance on good soil management. *Previous SEA work:* ■ RPP3.

Policy Proposal 2: Consult in 2018 to determine the nature of livestock health measures that the sector will adopt from 2019.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to determine livestock health measures that will be adopted across the sector. Improving livestock health can reduce emissions released from livestock, such as methane. Therefore, the uptake of livestock health practices, as promoted through this policy proposal, is likely to have positive effects in relation to climatic factors as it will contribute towards GHG emission reductions as a result of healthier livestock.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be increased uptake of livestock health planning through the compulsory nature of this policy. ■ Policy proposal considers the reduction of GHG emissions by improving efficiencies and livestock health measures. *Previous SEA work:* ■ The contents of this policy proposal were considered as part of the SEA work for RPP3.

Policy Proposal 3: Determine the practicalities and feasibility of using livestock feed additives as a means of reducing emissions.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to determine the practicalities and feasibility of using feedstock additives as a means of reducing emissions. Research has shown that methane emissions from ruminants are responsible for approximately 50% of the GHG emissions associated with agriculture in Scotland[15]. Feed additives inhibit the micro-organisms that produce methane in the rumen and subsequently reduce emissions. Research has shown that the potential reduction in methane emissions can range from 11-21%, where reductions were expressed per unit field intake[16]. Therefore, this policy proposal is likely to have positive effects on climatic factors and material assets as it supports a reduction in emissions and sustainable rural land management.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The proposal is closely linked to those that seek to reduce emissions from the use of nitrogen fertilisers, for example, support for soil testing and increased use of legumes in crops. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Outcome 5: Reduced emissions from the use and storage of manure and slurry.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	0	+	This policy outcome is aimed at reducing emissions from the use and storage of manure and slurry, such as encouraging slurry storage facilities to be covered. Furthermore, this policy outcome will introduce a new code of practice in 2021 for nitrogen use which will include the storage and application of slurries and manure. Whilst this will initially be voluntary there is potential for the code to become compulsory from 2024. As slurry breaks down, this can lead to the release of GHG emissions, in particular methane and ammonia. Whilst ammonia is not a GHG, it reacts in the atmosphere to create nitrous oxides which are considered about 300 times more powerful than carbon dioxide as a GHG[17]. This policy outcome is therefore likely to have potential for positive effects on climatic factors through encouraging the efficient use and storage of slurry to minimise releases of methane and ammonia. There is also potential for positive effects through better management of a renewable resource which can reduce the requirement for chemical fertilisers, potentially leading to further GHG reductions. The policy outcome is likely to positively impact the soil condition of farmed land, reduce emissions and potentially having further positive effects on water quality and biodiversity. Positive impacts have also been identified on human health through the better management of manures which could reduce nuisance effects such as odours.

[15] ClimateXchange (2016) Nutritional strategies to reduce enteric methane emissions [online] Available at: https://www.climatexchange.org.uk/media/2033/nutritional_strategies_to_reduce_enteric_methane_emissions.pdf (accessed 02/04/2020)
[16] ibid
[17] GOV.UK (2014) Farming Advice Services Reducing emissions of greenhouse gases from agriculture [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/343281/GHG_Mitig_FINAL_270214.pdf (accessed 02/04/2020)

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Slurry will be used as a natural fertiliser, displacing or reducing the use of nitrogen fertilisers. ■ This measure is closely linked to those that consider the use of slurry and animal by- products to provide renewable energy, for example, through anaerobic digestion. *Previous SEA work:* ■ Reducing slurry emissions was discussed in the SEA work for RPP3.

Policy Proposal 1: Engaging with farmers to explore their support requirements, establish how they can improve the use and storage of manure and slurry, including the potential for cooperatively owned and managed anaerobic digesters.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	0	+	This boosted policy proposal is aimed at engaging with farmers to explore their support requirements to improve the use and storage of manure and slurry including anaerobic digesters, which would further help reduce the release of GHG emissions. As slurry breaks down, this can lead to the release of GHG emissions, in particular methane and ammonia. Whilst ammonia is not a GHG, it reacts in the atmosphere to create nitrous oxides which are considered about 300 times more powerful than carbon dioxide as a GHG[18]. Fitting above ground slurry pits with a rigid cover can reduce ammonia emissions by around 80%, whilst floating covers (e.g. plastic, straw or bark) have been shown to reduce ammonia emissions by around 50%[19]. The boosting of this policy proposal is therefore likely to have greater potential for positive effects on climatic factors through further preventing avoidable releases of methane and ammonia by encouraging the covering of slurry pits. There is also potential for positive effects through better management of a renewable resource which can reduce the requirement for chemical fertilisers, potentially leading to further GHG reductions with additional benefits on other topics such as soil, water and biodiversity due to a reduction in the leaching of chemicals from chemical fertilisers. Positive impacts have also been identified on human health through the better management of manures which could reduce nuisance effects such as odours.

[18] GOV.UK (2014) Farming Advice Services Reducing emissions of greenhouse gases from agriculture [online] Available at: http://farmingadviceservice.org.uk/events/assets/Uploads/Technical-articles/GHGMitigFINAL270214.pdf (accessed 10/03/2020)
[19] AHDB (2010) Greenhouse Gas Factsheet 5 – Ammonia emissions [online] Available at: https://dairy.ahdb.org.uk/resources-library/technical-information/climate-change/ammonia-emissions/#.WFpKxVJDTcs (accessed 10/03/2020)

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Slurry will be used as a natural fertiliser, displacing or reducing the use of nitrogen fertilisers. ■ This measure is closely linked to those that consider the use of slurry and animal by- products to provide renewable energy, for example, through anaerobic digestion. ■ Introduction of the code of practice, will improve the use of nitrogen by all, particularly if the code becomes compulsory. *Previous SEA work:* ■ RPP3.

Policy Proposal 2: Investigate the practicalities of livestock grazing in rotation on current arable land.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This policy proposal seeks to investigate the practicalities of rotation farming between livestock grazing and arable land. A number of positive effects are likely as a result of the boosting of this policy, including the reduced need for nitrogen fertilisers due to alternating between crop production and harvesting activities and livestock grazing. Livestock provides organic manure which will likely improve the health and condition of the soil whilst increasing the amount of carbon stored within it. A reduction in the use of nitrogen fertiliser is likely to have additional positive effects on soil, water and biodiversity. Additionally, soil and biodiversity are also likely to benefit from reduced intensification of growing and harvesting crops which can negatively impact on soil structure and can also lead to reduced biodiversity.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The proposal is closely linked to those that seek to reduce emissions from the use of nitrogen fertilisers, for example, support for soil testing and increased use of legumes in crops. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Proposal 3: Conduct a feasibility study for the establishment of manure/slurry exchange.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This policy proposal seeks to establish the feasibility of manure and slurry exchange, whereby manure and slurry is transported from cattle farms to arable farms to be used instead of chemical fertilisers. The boosting of this policy is therefore more likely to lead to a reduced need for nitrogen fertilisers through ensuring that there are stocks of natural resources in place where most needed. The use of natural resources instead of chemical fertilisers therefore has the potential to lead to a number of benefits, primarily reduced GHG emissions, with secondary benefits on other topics such as soil, water and biodiversity due to a reduction in the leaching of chemicals from chemical fertilisers. Appropriate storage conditions will be required as part of the exchange process in order to reduce further emissions of GHG and reduce the risk of leaks to water courses.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The proposal will lead to the establishment of a manure/slurry exchange scheme. ■ This proposal is closely linked to other policies that consider the storage of farm waste and aim to reduce GHG emissions from the use of chemical fertilisers. *Previous SEA work:* ■ RPP3.

Policy Proposal 4: Determine how to consistently minimise emissions from slurry storage.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	0	+	This boosted policy proposal is aimed at determining how to encourage greater management of slurry storage facilities such as through encouraging them to be covered, which would further help reduce the release of GHG emissions. Furthermore, this policy will introduce a new code of practice in 2021 for nitrogen use which will include the storage and application of slurries and manure. Whilst this will initially be voluntary there is potential for the code to become compulsory from 2024. As slurry breaks down, this can lead to the release of GHG emissions, in particular methane and ammonia. Whilst ammonia is not a GHG, it reacts in the atmosphere to create nitrous oxides which are considered about 300 times more powerful than carbon dioxide as a GHG[20]. Fitting above ground slurry pits with a rigid cover can reduce ammonia emissions by around 80%, whilst floating covers (e.g. plastic, straw or bark) have been shown to reduce ammonia emissions by around 50%[21]. The boosting of this policy proposal is therefore likely to have greater potential for positive effects on climatic factors through further preventing avoidable releases of methane and ammonia by encouraging the covering of slurry pits. There is also potential for positive effects through better management of a renewable resource which can reduce the requirement for chemical fertilisers, potentially leading to further GHG reductions with additional benefits on other topics such as soil, water and biodiversity due to a reduction in the leaching of chemicals from chemical fertilisers. Positive impacts have also been identified on human health through the better management of manures which could reduce nuisance effects such as odours.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Slurry will be used as a natural fertiliser, displacing or reducing the use of nitrogen fertilisers. ■ This measure is closely linked to those that consider the use of slurry and animal by- products to provide renewable energy, for example, through anaerobic digestion. ■ Introduction of the code of practice, will improve the use of nitrogen by all, particularly if the code becomes compulsory. *Previous SEA work:* ■ RPP3.

[20] GOV.UK (2014) Farming Advice Services Reducing emissions of greenhouse gases from agriculture [online] Available at: http://farmingadviceservice.org.uk/events/assets/Uploads/Technical-articles/GHGMitigFINAL270214.pdf (accessed 10/03/2020)
[21] AHDB (2010) Greenhouse Gas Factsheet 5 – Ammonia emissions [online] Available at: https://dairy.ahdb.org.uk/resources-library/technical-information/climate-change/ammonia-emissions/#.WFpKxVJDTcs (accessed 10/03/2020)

Policy Proposal 5: Review, management of storage and application of organic materials such as silage, slurry and liquid digestate, including what support may be required to ensure best practice.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	0	+	This policy proposal seeks to review the requirements around management and use of slurry and liquid digestate and consider what support may be required to improve slurry storage and use. As slurry breaks down, this can lead to the release of GHG emissions, in particular, methane and ammonia. Whilst ammonia is not a GHG, it reacts in the atmosphere to create nitrous oxides which are considered about 300 times more powerful than carbon dioxide as a GHG[22]. Fitting above ground slurry pits with a rigid cover can reduce ammonia emissions by around 80%, whilst floating covers (e.g. plastic, straw or bark) have been shown to reduce ammonia emissions by around 50%[23]. This policy proposal is therefore likely to have greater potential for positive effects on climatic factors through further preventing avoidable releases of methane and ammonia by encouraging the covering of slurry pits. There is also potential for positive effects through better management of a renewable resource which can reduce the requirement for chemical fertilisers, potentially leading to further GHG reductions with additional benefits on other topics such as soil, water and biodiversity due to a reduction in the leaching of chemicals from chemical fertilisers. Positive impacts have also been identified on human health through the better management of manures which could reduce nuisance effects such as odours. Lastly, providing support to improve the overall quality of slurry storage and slurry use has the potential to deliver further reductions in GHG emissions. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Slurry will be used as a natural fertiliser, displacing or reducing the use of nitrogen fertilisers. ■ This measure is closely linked to those that consider the use of slurry and animal by- products to provide renewable energy, for example, through anaerobic digestion. ■ Introduction of the code of practice, will improve the use of nitrogen by all, particularly if the code becomes compulsory. *Previous SEA work:* ■ RPP3.

[22] GOV.UK (2014) Farming Advice Services Reducing emissions of greenhouse gases from agriculture [online] Available at: http://farmingadviceservice.org.uk/events/assets/Uploads/Technical-articles/GHGMitigFINAL270214.pdf (accessed 10/03/2020)
[23] AHDB (2010) Greenhouse Gas Factsheet 5 – Ammonia emissions [online] Available at: https://dairy.ahdb.org.uk/resources-library/technical-information/climate-change/ammonia-emissions/#.WFpKxVJDTcs (accessed 10/03/2020)

Policy Outcome 6: Carbon sequestration and existing carbon stores on agricultural land has helped to increase our national carbon sink.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	The policy outcome outlines that carbon sequestration and exiting carbon stores on agricultural land makes an important contribution to increasing Scotland's national carbon sink. The boosting of this policy outcome sets out to explore how to further optimise carbon sequestration on agricultural land through measures such as planting of trees and hedgerows, restoration of natural habitats and soil, carbon sequestration payments, and grazing management practices. The policy outcome therefore has the potential to result in greater reductions in GHG emissions through better land management. There could also be a number of associated benefits for other topic areas, for example, improved soil function and stability and better water quality. Benefits for biodiversity, flora and fauna are also considered likely through providing valuable habitats and connectivity between different habitats. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Planting of woodland and forestry, and restoration of semi-natural habitats will increase carbon sequestration. ■ The policy outcome considers aspects such as the restoration of peat. *Previous SEA work:* ■ Carbon sequestration on agricultural land was discussed in the SEA work for RPP3 and Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 1: Explore with the farming and forestry sectors how best to increase planting of trees and hedgerows which optimise carbon sequestration, including the role of agroforestry.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This boosted policy sets out to explore how to further optimise carbon sequestration by increasing the reach and penetration of advice, information and promotion of carbon sequestration within Scottish agriculture, such as through increased planting of trees and hedgerows. By boosting this policy, there is the potential to further improve how land is utilised, as in some instances, the integration of trees on farms can improve productivity of crops and enable crop diversity. This boosted policy has the potential for increased carbon sequestration, particularly if trees or shrubs are planted on appropriate agricultural land providing an opportunity to further reduce GHG emissions. Additionally, the planting of new trees and hedgerows may help to further adapt to climate change through preventing flooding, reducing surface water runoff and providing shelter for livestock. There could also be a number of associated benefits for other topic areas, as a result of this policy, for example, improved soil function and stability. Benefits for biodiversity, flora and fauna are also considered likely through providing additional areas of valuable habitats and enabling greater connectivity between different habitats.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Possible changes to rural landscapes as a result of the policy have been identified, although this is considered likely to be overall positive; particularly through any improvements to the health, diversity and appearance of agricultural areas that may arise through adopting these management practices. In addition, hedges are an integral part of Scotland's landscape and culture[24]. Additionally, depending on the species of tree grown, there may also be benefits for cultural heritage. However, the nature of any of the identified benefits would be influenced by a number of factors and would be site and region specific. Whilst there is some concern that tree belts can act as a reservoir and source of crop pests, research has shown that increasing elements of non-crop habitat reduces the overall risk of pests[25].
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Carbon sequestration within Scottish agriculture will include planting of woodland, trees and shelterbelts. ■ Woodland/forestry planting will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK. ■ This proposal is closely linked to payment for carbon sequestration. *Previous SEA work:* ■ RPP3. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

[24] SNH (2015) Field Margins and hedgerows [online] Available at: https://www.nature.scot/landscapes-and-habitats/habitat-types/farmland-and-crofting/hedgerows-and-field-margins (accessed 10/03/2020)
[25] Woodland Trust (2012) Benefits of trees on livestock farms – the evidence of integrating trees [online] Available at: https://www.woodlandtrust.org.uk/media/1816/benefits-of-trees-on-livestock-farms.pdf (accessed 10/03/2020)

Policy Proposal 1: Investigate the feasibility of payment for carbon sequestration taking into account any existing schemes such as the woodland carbon code as a means of encouraging the uptake of carbon sequestration on farms.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+	This policy proposal has the potential to improve how agricultural land is used and provides an opportunity to influence land management decisions via financial mechanisms to provide benefits such as greater carbon sequestration which would result in a greater reduction in GHG emissions. This therefore is likely to lead to positive effects for climatic factors through action focused on soils and woodland. A number of secondary benefits are also likely to arise across a range of other topic areas, as a result of this policy proposal, including biodiversity, flora and fauna, through the creation of habitats and improved connectivity, for example, the creation or enhancement of woodlands and hedgerows.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The proposal will lead to a payment scheme being established. ■ The proposal considers aspects such as the restoration of peat and woodland creation. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Proposal 2: Increase woodland cover on suitable agricultural land.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+/-	This policy proposal is aimed at using more areas of appropriate agricultural land for woodland creation, in line with ambitious woodland creation targets set out by Scottish Government. The creation of new woodlands on agricultural land, as advocated through this policy, is likely to have a positive effect on climatic factors by further reducing GHG emissions through increased CO_2 sequestration, and helping to adapt to climate change through preventing flooding, reducing surface water runoff and providing shelter for livestock. Secondary benefits are also considered likely on a range of topics as sustainably managed forest and woodlands can have beneficial impacts on soil, water and biodiversity. Additionally, depending on the species grown, there may also be benefits for cultural heritage. Mixed effects are identified for material assets due to the potential for land use conflicts, for example, the loss of productive agricultural land to allow for woodland.
									Assumptions & Links with Other SEA Work *Assumptions:*

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									■ Woodland/forestry planting will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK. ■ This policy is closely linked the policies and proposals regarding the implementation of targets set out for forestry in the Climate Change Plan. ■ Stakeholder engagement and consideration of the Land Capability for Agriculture classification and local Forestry and Woodland Strategies will be taken into account as the proposal develops. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Proposal 3: Building on the successful work integrating woodland with farming businesses, help remove barriers for those on agriculture holdings, particularly in the tenanted sector who want to engage in woodland creation, including exploring the potential to reform legislation where appropriate

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	0	+/-	This policy proposal seeks to remove barriers for agricultural holdings, particularly in the tenanted sector, who want to engage in woodland creation. Removing of barriers to create more woodlands on agricultural land, as advocated through this policy proposal, is likely to have positive effects on climatic factors by further reducing GHG emissions through increased CO_2 sequestration. In addition, woodland creation may and help to adapt to climate change through preventing flooding, reducing surface water runoff and providing shelter for livestock. Secondary benefits are also considered likely on a range of topics as sustainably managed forest and woodlands can have beneficial impacts on soil, water and biodiversity. Additionally, depending on the species grown, there may also be benefits for cultural heritage. Mixed effects are identified for material assets due to the potential for land use conflicts, for example, the loss of productive agricultural land to allow for woodland. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ This policy proposal will enable more woodlands to be planted on agricultural land, especially in the tenanted sector of agricultural holding. ■ Woodland/forestry planting will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK. ■ This policy is closely linked the policies and proposals regarding the implementation of targets set out for forestry in the Climate Change Plan. *Previous SEA work:* ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ RPP3.

Policy Proposal 4: Work with stakeholders on options to increase peatland restoration on suitable agricultural and crofting land, to support delivery of policies in the LULUCF chapter. We will map peatland against this land which will allow modelling options for land-use change and inform opportunities for targeted support of peatland restoration and management.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	+	+	+	0	+	+/-	This policy proposal seeks to work with stakeholders to increase peatland restoration on agricultural land to support delivery of policies in the LULUCF chapter. This policy proposal also sets out plans to map peatland against land which will allow modelling options for land-use change and inform opportunities for targeted support of peatland restoration and management. The restoration of peatland in areas of degraded peatland such as agricultural grass will reduce CO_2 emissions and increase carbon sequestration, thereby having positive effects on climatic factors. Further positive effects are also expected in relation to biodiversity, flora and fauna as peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration. Improving peatland restoration may also have positive effects on soil and water quality as peatlands store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. Whilst peatland acting as flood plains would have a positive effect on material assets due to reduced need for flood defences, potential negative effects are also possible due to land use conflicts that may arise due to restoration of peatland. For example, loss of productive agricultural land or forestry to allow for peatland restoration. Therefore, mixed effects on material assets are identified. There is increased potential for positive impacts on landscape through restoring a sense of 'wilderness', particularly in areas that have been subject to significant peatland degradation such as agricultural land. By increasing the restoration of degraded peatland there are also likely to be benefits for land use through better land management. Additionally, peatlands are considered some of Scotland's most iconic landscapes and are culturally significant, so there are likely to be benefits for cultural heritage. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Supporting important peat sites, includes restoring degraded areas. ■ Better management of peatland will maximise its carbon storage potential. ■ Supporting such sites will raise awareness of the benefits of peatland. *Previous SEA work:* Peatland was considered in the SEA work for RPP3.

Policy Proposal 5: Explore options for land-use change to optimise uses beyond traditional farming and food production to multi-faceted land use including forestry, peatland restoration and management and biomass production.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	0	+	+/-	This policy proposal seeks to explore options for land-use change to optimise uses beyond traditional farming and food production to multi-faceted land use including forestry, peatland restoration and management and biomass production. Exploration of options for land-use options beyond traditional farming have the potential to benefit towards large-scale restoration of peatlands or woodland creation and deliver greater ecosystem services. This will have positive effects on GHG emissions through improved management of these resources reducing carbon emissions from land, and increased carbon storage. Moreover, biomass production will enhance renewable energy production, which will directly lead to a further reduction in GHG emissions. Alternative land uses can also deliver additional benefits for soil, water quality and biodiversity. There may also be positive effects on material assets and human health as there is the potential for enhanced peatland restoration, woodland expansion and biomass production. These positive effects are further enhanced by the potential role of peatlands in sustaining quality drinking water for private supplies. There is potential for positive impacts on landscape through increased woodland and peatland coverage. Peatland is considered to be culturally significant as it is recognised as one of Scotland's most iconic landscapes, and therefore the expansion and creation of peatland may have benefits for cultural heritage. However, mixed effects are identified for material assets due to land use conflicts that may arise as a result of woodland expansion, peatland restoration and biomass production, e.g. loss of productive agricultural land. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Multi-faceted land-use will enhance forestry creation, peatland restoration and biomass production. ■ Forestry creation and peatland restoration will help reduce GHG emissions. ■ There will be greater uptake of other land-uses alongside agriculture. *Previous SEA work:* ■ The role of peatland and woodland in tackling climate change was discussed in the SEA work for RPP3. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Waste

Policy Outcome 1: Reduction in waste sent to landfill.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy outcome aims to reduce the amount of waste sent to landfill. This policy outcome supports the reduction, reuse and recycling of materials and products, which will discourage disposal to landfill and supports the principles of the circular economy. Reducing the total amount of waste going to landfill, as a result of this policy outcome, is likely to result in fewer GHG emissions associated with the processing of waste. Additionally, through the encouragement of the reuse and recycling of materials, there may be even less demand for new products to be produced. Therefore, there may be indirect reductions in GHG emissions associated with the production of materials and products. The implementation of this policy outcome may have further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure, and in meeting Scotland's waste reduction targets quicker. However, this policy outcome may result in both positive and adverse effects on other environmental topics. For example, whilst there may be a reduced need for landfill operations, leading to associated benefits for all of the topic areas, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Further cumulative negative impacts may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour. The significance of the identified impacts will be dependent on the scale, nature and location of developments and likely to be experienced at a local level. Potential impacts are likely to be mitigated by existing mechanisms such as the planning system, SEPA regulation and on-site management measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy outcome will increase rates of recycling and reduce the amount of waste sent to landfill. ■ The waste hierarchy will be followed (reduce, reuse, recycle). ■ There will be behavioural change to waste amongst the public and different employment sectors. *Previous SEA work:* Reducing waste sent to landfill was discussed in the SEA work undertaken for: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy 1: End landfilling of biodegradable municipal waste by 2025, reduce the percentage of all waste sent to landfill to 5% by 2025 and recycle 70% of all waste by 2025

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This boosted policy seeks to end the landfilling of biodegradable municipal waste by 2025 and reduce the percentage of all waste sent to landfill to 5% by 2025. In addition, the policy seeks to extend the ban on biodegradable municipal waste to include biodegradable non-municipal wastes. The boosting of this policy will result in greater reductions in GHG emissions as a result of reducing the overall percentage of waste being sent to landfill, including ending the landfilling of biodegradable municipal and non-municipal waste. This policy will further encourage reuse and recycling, diverting waste from landfill and will develop a route map to reduce waste and meet the recycling targets for 2025, and also for the period post-2025 to help Scotland achieve its net zero by 2030. There is potential for further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure, and in meeting Scotland's waste reduction targets sooner. However, it is noted that mixed secondary effects on a number of environmental topics may increase as a result of the policy. For example, whilst there may be a reduced need for landfill operations, leading to associated benefits for all of the topic areas, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take, including cumulative negative effects. Further cumulative negative impacts may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour. The significance of the identified impacts will be dependent on the scale, nature and location of developments and likely to be experienced at a local level. Potential impacts are likely to be mitigated by existing mechanisms such as the planning system, SEPA regulation and on-site management measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be a significant reduction in biodegradable waste going to landfill. ■ Policy will increase recycling of waste, and overall, less waste will go to landfill. ■ This policy will lead to an overall reduction of waste produced. *Previous SEA work:* Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy 2: Work with COSLA in the coming year to evaluate the Household Recycling Charter and review its Code of Practice as a key step in developing a future model of recycling collection.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy seeks to further promote the circular economy through evaluating the Household Recycling Charter and reviewing its Code of Practice. Through the Household Recycling Charter, the Scottish Government along with COSLA will commit to improving household waste and recycling services and encouraging citizens to utilise recycling and reuse facilities. Therefore, through improving recycling services and access to them, there is the potential for a further reduction in the amount of waste produced, diverting waste from landfill and thus minimising the need for waste management. This policy could lead to a greater reduction in the need to manufacture goods from new, instead promoting the reuse and recycling of existing products, providing further benefits as a result of reduced energy use in the manufacturing sector and minimising the use of unnecessary packaging. This will result in a reduction in GHG emissions, having positive effects on climatic factors. There is also potential for further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure through increased re-use and recycling. A reduction in the amount of waste going to landfill will have positive environmental effects on each of the topic areas. However, the implementation of this policy may result in adverse effects on some environmental topics. For example, whilst there may be a reduced need for landfill operations, leading to associated benefits for all of the topic areas, there could be requirements for a greater number of additional recycling and reuse facilities which could have negative impacts on soil from land take. Further cumulative negative impacts may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour. The significance of the identified impacts will be dependent on the scale, nature and location of developments and likely to be experienced at a local level. Potential impacts are likely to be mitigated by existing mechanisms such as the planning system, SEPA regulation and on-site management measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The introduction of legislation will lead to compliance. ■ Policy will encourage behavioural change in relation to consumption. ■ More waste will be recycled and less sent to landfill. ■ Reducing the amount of waste sent to landfill will reduce GHG emissions. *Previous SEA work:* The circular economy and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy 3: Underpinning this we will take steps to improve waste data, continuing to work with UK Government, other devolved governments and agencies to develop electronic waste tracking, which will help deliver a step change in the quality and usefulness of waste data for decision making. This will include taking the necessary steps alongside SEPA to drive implementation of the system in Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy seeks to improve the collection of data by developing electronic waste tracking. This will provide the government with more accurate waste data that can be used to inform decision making. For example, more accurate data could highlight where there is excess waste going to landfill due to inadequate recycling facilities. Therefore, improving data may enable better decisions to be made with regards to influencing behaviour and future demand for waste management facilities. Improved data will lead to more informed decision making and more effectual outcomes. This could have positive secondary effects on material assets and climate change, by encouraging the uptake of recycling and minimising the amount of waste going to landfill., reducing GHG emissions and improving resource use. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Data will be used to inform decision making in relation to influencing behaviour change and management of waste facilities. ■ Improved waste facilities for recycling will reduce the amount of waste going to landfill. *Previous SEA work:* None.

Policy 4: Electronic waste tracking fund: improved waste data system will help drive further progress to deliver on existing waste and recycling targets.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy sets out to improve waste data and to develop an electronic waste tracking fund. Therefore, this policy could have positive effects on GHG emissions and material assets. Even though most electronic waste is not recycled domestically, the waste tracking fund could deliver transparency and certainty over proper processing of such waste. It could also encourage more people to dispose of e-waste in an appropriate manner and reduce the amount of recyclable waste going to landfills.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy will encourage proper recycling of e-waste. *Previous SEA work:* Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Outcome 2: Reduction in emissions from closed landfill sites.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	Landfill sites can release GHG emissions, including methane, when biodegradable wastes such as food, paper and card, decompose in anaerobic conditions. The boosting of this policy outcome seeks to further reduce GHG emissions from closed landfill sites which would otherwise be released uncontrolled to atmosphere, over a short timeframe so that reductions are realised sooner This policy outcome is likely to achieve a reduction in the volume of GHG emissions released into the atmosphere by encouraging greater behavioural change sooner, which minimises the amount of waste produced and sent to landfill, and by capturing more GHG emissions from landfill sites by flaring it off. Behavioural change, alongside promoting reuse and recycling, and the circular economy is likely to result in less waste going to landfill, and therefore reduces the potential for GHG emissions to be released. In addition, the use of low calorific flaring of landfill gas, could further reduce GHG emissions, specifically methane. Whilst utilising the gas for power generation is likely to be a more favourable option environmentally and economically, it is noted that this may not be suitable on sites with low gas flow rates. There may be increased cumulative nuisance impacts from increased recycling and flaring activities at a local level such as noise, heat and odour which could affect population/human health and local wildlife. There is also potential for cumulative landscape and visual impacts associated with these activities. However, the design and siting of recycling developments and flares will be managed at a project level through the planning process which should help to mitigate any effects. Other impacts could be managed by following the relevant SEPA Guidance, and from the requirement for site owners/managers to undertake emissions monitoring and environmental assessment of existing and proposed flares.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increasing the reuse and recycling of waste products through behavioural change will reduce the emission of GHG from landfill sites. ■ Capturing landfill gas will prevent its release to the atmosphere. ■ Flaring avoids the release of methane, which is significantly more potent than CO2. *Previous SEA work:* The emission of landfill gas was discussed in the following SEAs: ■ RPP3. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy 1: Accelerate Landfill Gas Capture and Landfill Legacy Management: we will work with SEPA and key industry partners to scale up the existing landfill gas capture programme to mitigate effects of landfill and environmental impact of closed landfill sites.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This boosted policy seeks to work with SEPA and key industry partners to scale up the landfill gas capture programme as means to mitigate the environmental impact of closed landfill sites. This policy proposal builds on a commitment made in RPP3 to capture landfill gas from closed landfill sites which would otherwise be released uncontrolled to the atmosphere, and to flare it to reduce GHG emissions. This will enable energy generated from landfill gas capture to be harnessed, whilst also maximising other opportunities to achieve a circular economy. Greater use of low calorific flaring of landfill gas, due to boosting this policy, could therefore have greater positive effects on climatic factors through further reducing GHG emissions, specifically methane. Whilst utilising the gas for power generation is likely to be a more favourable option environmentally and economically, it is noted that this may not be suitable on sites with low gas flow rates. Many constituents of landfill gas are hazardous. SEPA Guidance on Landfill Gas Flaring[26] notes that during combustion there is a risk of the formation of gaseous pollutants which could have negative impacts on air quality, human health and flora and fauna. However, it is considered that the uncontrolled migration of landfill gas presents more significant negative effects on human health and the environment than flaring. Flaring avoids the release of potent methane into the atmosphere, which has a much larger global warming potential than CO_2, and so, the increased use of flaring through the boosting of this policy offers greater significant benefits overall with relation to climate change. There may be increased cumulative nuisance impacts from flaring activities at a local level such as noise, heat and odour which could affect population/human health and local wildlife. There is also potential for cumulative landscape and visual impacts associated with these activities[27]. However, the design and siting of flares will be managed at a project level through the planning process which should help to mitigate any effects. Furthermore, adverse effects resulting from waste sites could be reduced through suitable site restoration which could provide alternative uses for the land which may benefit material assets through productive land after-use or biodiversity if the site is restored to semi-natural habitats. Furthermore, site restoration will likely enhance the landscape. Other impacts could be managed by following the relevant SEPA Guidance, and from the requirement for site owners/managers to undertake emissions monitoring and environmental assessment of existing and proposed flares.

[26] SEPA and the Environmental Agency (2002) Guidance on Landfill Gas Flaring [online]. Available at: https://www.sepa.org.uk/media/28988/guidance-on-landfill-gas-flaring.pdf (accessed 21/02/2020)
[27] ibid

									Assumptions & Links with Other SEA Work *Assumptions:* ■ Capturing landfill gas will prevent its release to the atmosphere. ■ Flaring avoids the release of methane, which is significantly more potent than CO_2. *Previous SEA work:* The capture of landfill gas was discussed in the following SEAs: ■ RPP3. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 1: Landfill gas capture on closed sites. In association with SEPA and the waste industry, double the number of landfill gas capture sites that undertake investigative or development work (from 12 to 24 sites) by 2025, in order to harness energy generated from landfill gas capture and maximise other circular economy opportunities. SEPA has already identified 12 sites for potential investigative work.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This boosted policy proposal builds on a commitment made in RPP3 to capture landfill gas from closed landfill sites which would otherwise be released uncontrolled to the atmosphere, and to flare it to reduce GHG emissions. The policy proposal seeks to double the number of landfill gas capture sites from 12 to 24 by 2025, in association with SEPA and the waste industry. This will enable energy generated from landfill gas capture to be harnessed, whilst also maximising other opportunities to achieve a circular economy. Greater use of low calorific flaring of landfill gas, due to boosting this policy, could therefore have greater positive effects on climatic factors through further reducing GHG emissions, specifically methane. Whilst utilising the gas for power generation is likely to be a more favourable option environmentally and economically, it is noted that this may not be suitable on sites with low gas flow rates. Many constituents of landfill gas are hazardous. SEPA Guidance on Landfill Gas Flaring[28] notes that during combustion there is a risk of the formation of gaseous pollutants which could have negative impacts on air quality, human health and flora and fauna. However, it is considered that the uncontrolled migration of landfill gas presents more significant negative effects on human health and the environment than flaring. Flaring avoids the release of potent methane into the atmosphere, which has a much larger global warming potential than CO_2, and so, the increased use of flaring through the boosting of this policy offers greater significant benefits overall with relation to climate change. There may be increased cumulative nuisance impacts from flaring activities at a local level such as noise, heat and odour which could affect population/human health and local wildlife. There is also potential for cumulative landscape and visual impacts associated with these activities[29]. However, the design and siting of flares will be managed at a project level through the planning process which should help to mitigate any effects. Furthermore, adverse effects resulting from waste sites could be reduced through suitable site restoration which could provide alternative uses for the land which may benefit material assets through productive land after-use or biodiversity if the site is restored to semi-natural habitats. Furthermore, site restoration will likely enhance the landscape. Other impacts could be managed by following the relevant SEPA Guidance, and from the requirement for site owners/managers to undertake emissions monitoring and environmental assessment of existing and proposed flares. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Capturing landfill gas will prevent its release to the atmosphere. ■ Flaring avoids the release of methane, which is significantly more potent than CO_2. *Previous SEA work:* The capture of landfill gas was discussed in the following SEAs: ■ RPP3. ■ Making Things Last: A Circular Economy Strategy for Scotland.

[28] SEPA and the Environmental Agency (2002) Guidance on Landfill Gas Flaring [online]. Available at: https://www.sepa.org.uk/media/28988/guidance-on-landfill-gas-flaring.pdf (accessed 21/02/2020)
[29] ibid

Policy Outcome 3: A reduction in food waste.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy outcome aims to achieve a reduction in food waste. Through the implementation of this policy outcome, reductions in GHG emissions are likely to be realised sooner by encouraging a reduction in food waste produces, thereby minimising the amount of food waste going to landfill. This could help to reduce the energy requirements needed to process waste. There is potential for further positive effects, resulting from the introduction of this policy outcome, on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure, and in meeting Scotland's waste reduction targets sooner.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy outcome will encourage behavioural change to food consumption and waste. ■ Policy outcome will increase recycling of waste, with less waste going to landfill. *Previous SEA work:* Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy 1: We will lead collaborative efforts to deliver Scotland's landmark Food Waste Reduction Action Plan. To reduce food waste by 33% from the 2013 baseline by 2025

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This boosted policy seeks to deliver Scotland's Food Waste Reduction Action Plan[30], supported by Zero Waste Scotland, achieve a ban of biodegradable municipal waste going to landfill and accelerate recycling targets. The policy aims to reduce food waste by 33% from the 2013 baseline by 2025. The policy seeks to introduce a mandatory national food waste reduction target and reporting of food waste by Scottish businesses. In addition, the policy proposal aims to break down barriers to food waste recycling by consulting on rural exemption and food separation requirements. The policy outlines plans to develop an NHS Scotland action plan on food waste and develop best

[30] https://www.zerowastescotland.org.uk/sites/default/files/Food%20Waste%20Reduction%20Action%20Plan.pdf

									practice guidance for public sector procurement teams to drive new ways of working and more transparent supply chains. Finally, the policy proposal encourages the behavioural change around food and food waste. The Food Waste Reduction Action Plan outlines plans to reduce food waste by 33% by improving monitoring and infrastructure, sector leadership, public engagement and communications and supporting delivery of a new approach to food waste. A greater reduction in the amount of biodegradable municipal waste going to landfill will have beneficial effects on many of the topic areas, but due to the overall reduction in landfill waste management there is likely to be positive effects on material assets and climate change, due to less GHG emissions. However, it is noted that mixed secondary effects on a number of environmental topics may increase as a result of the policy. For example, whilst there may be a reduced need for landfill operations, leading to associated benefits for all of the topic areas, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Further cumulative negative impacts may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour. The significance of the identified impacts will be dependent on the scale, nature and location of developments and likely to be experienced at a local level. Potential impacts are likely to be mitigated by existing mechanisms such as the planning system, SEPA regulation and on-site management measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy will increase recycling of waste, with less waste going to landfill. ■ Action Plan will help deliver behavioural change to food waste. *Previous SEA work:* Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Outcome 4: Reduce waste and establish a more circular economy, where goods and materials are kept in use for longer.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy outcome seeks to reduce waste and establish a more circular economy, where goods and materials are kept in use for longer. This policy outcome will likely result in reductions in GHG emissions as it will divert more waste from landfill and promote improvements in resource efficiency. There is potential for further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure, and in meeting Scotland's waste reduction targets sooner. However, it is noted that mixed secondary impacts on a number of environmental topics may increase as a result of the policy. For example, whilst there may be a reduced need for landfill operations, leading to associated benefits for all of the topic areas, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Further cumulative negative impacts may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour. The significance of the identified impacts will be dependent on the scale, nature and location of developments and likely to be experienced at a local level. Potential impacts are likely to be mitigated by existing mechanisms such as the planning system, SEPA regulation and on-site management measures. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Policy will increase the lifespan of goods, with less waste going to landfill. ■ Increased recycling will reduce the need for new goods to be produced. Previous SEA work: Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 1: We will work with Local Authorities and the future DRS scheme administrator(s) to explore options that will unlock reprocessing investments, including pricing and incentive schemes, to create jobs and a ready supply of recycled material for new packaging.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to work with local authorities and the administrators of the Deposit Return Scheme (DRS) to create jobs and a ready supply of recycled material for new packaging, but also to unlock reprocessing investments. Therefore, this policy proposal will help reduce the amount of waste produced, by encouraging the use of recycle plastic for packaging. This will therefore promote the circular economy, and will divert waste from landfill, thereby reducing the need for waste management. Furthermore, it will help reduce energy use within the manufacturing sector. This may therefore result in a reduction in GHG emissions, having positive effects on climatic factors. There is also potential for further positive effects on material assets by increased re-use and recycling of such products, with less being sent to landfill.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The Deposit Return Scheme will result in behavioural change towards the use of single-use drinks containers. ■ There will be an increase in the reuse and recycling of single-use drinks containers. ■ Less single-use drinks containers will go to landfill. *Previous SEA work:* Reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 2: Measures to encourage more sustainable consumer purchasing, including plans to take further steps to consult on a charge on single-use disposable beverage cups and to increase the carrier bag minimum charge from 5p to 10p in this parliamentary session.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal outlines measures to encourage more sustainable consumer purchasing, including implementing change on single-use disposable beverage cups, and increasing the minimum charge for carrier bags from 5p to 10p. Sustainable consumer purchasing can reduce overall emissions from production by reducing energy and other finite resources and transport of the goods Encouraging more sustainable purchasing, introducing single use plastic charges, and also increasing the charge on carrier bags could reduce the amount of single use packaging used and wasted. As a result, it can reduce waste sent to landfill, considering that single use plastics (including beverage cups and carrier bags) are sometimes too complex to fully recycle.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy will reduce consumption of single use plastics, including beverage cups and carrier bags ■ Introduction of a change on single use beverage cups and the increased charge for carrier bags can lead to a positive and long-term behavioural change. *Previous SEA work:* Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 3: Banning priority single use items: in 2020, we will consult on a proposed legislative approach to ban or restrict the sale of priority items set out in the EU's Single Use Plastics Directive.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to further promote the circular economy by banning single use items. The banning of single use items is likely to result in a reduction in the amount of waste produced, diverting this waste from landfill and thus minimising the need for waste management. Additionally, by banning single use items this policy proposal could lead to a greater reduction in the need to manufacture such goods from new, providing further benefits as a result of reduced energy use in the manufacturing sector. This may therefore contribute to a reduction in GHG emissions, having positive effects on climatic factors. There is also potential for further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure through increased re-use of goods.

									A reduction in the amount of single use items going to landfill will have positive environmental effects on each of the topic areas. However, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Other negative effects may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ There will be a reduction in single use items being sent to landfill. ■ Single use items such as plastic bottles will be reused or recycled. ■ The introduction of the ban will be mandatory in nature. *Previous SEA work:* Reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 4: Implementation of our Deposit Return Scheme (DRS) for single use drinks containers will provide improved quantity and quality of materials.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to further promote the circular economy by implementing Scotland's Deposit Return Scheme for single-use drinks containers. The scheme, with a target return rate of a 90% will result in a reduction in the amount of this waste produced, diverting waste from landfill and thus minimising the need for waste management. This policy proposal could lead to a greater reduction in the need to manufacture goods from new, due to greater rates of reuse and recycling, providing additional benefits as a result of reduced energy use in the manufacturing sector. This may therefore result in a reduction in GHG emissions, having positive effects on climatic factors. There is also potential for further positive effects on material assets by increased re-use and recycling of such products, with less being sent to landfill. A reduction in the amount of waste going to landfill will have positive environmental effects on each of the topic areas. However, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Other negative effects may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour.

									Assumptions & Links with Other SEA Work *Assumptions:* ■ The Deposit Return Scheme will result in behavioural change towards the use of single-use drinks containers. ■ There will be an increase in the reuse and recycling of single-use drinks containers. ■ Less single-use drinks containers will go to landfill. *Previous SEA work:* Reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 5: We will also work collaboratively across the public sector developing tools and guidance and a practical approach to influence and empower buyer, supplier and key stakeholder communities to use public procurement to support a green recovery and our wider climate and circular economy ambitions through procurement, embedding climate considerations in organisational procurement strategies by 2021 and reporting progress in annual procurement reports.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to support the green recovery, climate change and circular economy ambitions, through working collaboratively across the public sector and embedding climate considerations in organisational procurement strategies by 2021. The greater promotion of green recovery, the circular economy and climate change in such strategies, as advocated through this policy proposal, is likely to result in a reduction in the amount of waste produced, diverting waste from landfill and thus minimising the need for waste management. This policy proposal could lead to a greater reduction in the need to manufacture goods from new, providing further benefits as a result of reduced energy use in the manufacturing sector and minimising the use of unnecessary packaging. This may therefore result in a reduction in GHG emissions, having positive effects on climatic factors. It could have a further positive effect on GHG emissions by encouraging less travel and flexible working as part of the green recovery.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Inclusion of climate change and circular economy in public strategies will encourage greater recycling of waste. *Previous SEA work:* The circular economy and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 6: Reforming extended producer responsibility schemes: we will continue to work with the UK Government and other devolved administrations on reforms to the packaging extended producer responsibility regime, which we expect will deliver improved funding for local authorities in the future.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to work with the UK Government and other devolved administrations to promote the circular economy by reforming extended producer responsibility schemes. This involves making sure producers are responsible for the full net costs of managing their products at end of life. The reforms will promote the circular economy, encouraging the minimisation of packaging and waste associated with a product through its lifetime. The reforms will deliver improved funding for local authorities. This policy may therefore result in a reduction in the amount of waste produced, diverting waste from landfill and thus minimising the need for waste management. This policy proposal could lead to a greater reduction in the waste associated with goods, providing further benefits as a result of minimising the use of unnecessary packaging. This may therefore result in a reduction in GHG emissions, having positive effects on climatic factors. There is also potential for further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure, and reducing production of goods and packaging. A reduction in the amount of waste going to landfill as a result of this policy will have positive environmental effects on each of the topic areas. However, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Other negative effects may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Reforms of extended producer responsibility schemes will reduce amount of packaging and other waste associated with products. *Previous SEA work:* Reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 7: We are boosting our commitment to building a circular economy, where goods and materials are kept in use for longer. We will deliver this by embedding circular recovery principles in the wider green recovery. Through Zero Waste Scotland and Scottish Environment Protection Agency (SEPA), we will intensify our work with industry and businesses to address emissions associated with production, consumption and waste of products/resources; and to promote resource efficiency.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	+	This policy proposal seeks to further build on commitments to achieve a circular economy. This policy proposal aims to improve resource efficiency, reduce waste and establish a more circular economy, where goods and materials are kept in use for longer. It outlines that work associated with the emissions from the production, consumption and waste of products or resources will be intensified, through collaborative work with businesses, Zero Waste Scotland and SEPA. This policy proposal will likely result in reductions in GHG emissions as it will divert more waste from landfill and promote improvements in resource efficiency, particularly in relation to the production and consumption of products and resources. This policy proposal could therefore lead to a greater reduction in the need to manufacture goods from new, instead promoting the reuse and recycling of existing products, providing further benefits as a result of reduced energy use in the manufacturing sector and minimising the use of unnecessary packaging. This could have positive effects on both climatic factors and material assets. There is potential for further positive effects on material assets by improving how waste is managed, reducing pressure on existing landfill infrastructure, and in meeting Scotland's waste reduction targets sooner. However, it is noted that mixed secondary impacts on a number of environmental topics may increase as a result of the policy. For example, whilst there may be a reduced need for landfill operations, leading to associated benefits for all of the topic areas, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Further cumulative negative impacts may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour. The significance of the identified impacts will be dependent on the scale, nature and location of developments and likely to be experienced at a local level. Potential impacts are likely to be mitigated by existing mechanisms such as the planning system, SEPA regulation and on-site management measures.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Policy will increase the lifespan of goods, with less waste going to landfill. ■ Increased recycling will reduce the need for new goods to be produced. Previous SEA work: Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 8: In the context of the latest CCC recommendations, we will consider measures to ensure new energy from waste plants are efficient, and 'future-proofed' for Carbon Capture and Storage technology.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	+	0	0	0	0	0	+	This policy seeks to consider measures to further improve efficiency of energy from waste (incineration) facilities and to ensure that new waste plants are efficient, and 'future-proofed' for Carbon Capture and Storage technology. Incineration process takes waste that cannot or is difficult to recycle and turns it into a usable form of energy. This can include electricity, heat or transport fuels. This policy has a potential to reduce GHG emissions from waste and as a result improve the air quality by minimising the amount of waste ending up in landfills. Further, by advancing the efficiency of energy from waste, there is a potential for positive effects for material assets, energy from waste will be used instead traditional fuels or sources of electricity. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Policy will encourage improvements in the efficiency of energy from waste. *Previous SEA work:* Improving the utilisation of waste and reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Policy Proposal 9: As part of our work on developing a route map to 2025, we will undertake a specific and focused piece of work to examine the range of fiscal measures used by other countries to incentivise positive behaviours and to develop proposals to go further in this area.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0		+	This policy proposal seeks to support the development of the route map to 2025 by promoting positive behaviours towards waste. The policy proposal aims to examine a range of fiscal measures used by other countries which have incentivised positive behaviours and allowed the development of proposals. Therefore, this policy proposal may help reduce GHG emissions associated with landfilling operations by promoting behavioural change to waste. This would minimise the amount of waste produced and sent to landfill, and may also lead to a greater reduction in the need to manufacture goods from new, due to greater rates of reuse and recycling, providing additional benefits as a result of reduced energy use in the manufacturing sector. This may therefore result in a reduction in GHG emissions, having positive effects on climatic factors. There is also potential for further positive effects on material assets by increased re-use and recycling of such products, with less being sent to landfill. A reduction in the amount of waste going to landfill will have positive environmental effects on each of the topic areas. However, there could be requirements for a greater number of additional recycling and waste management facilities which could have negative impacts on soil from land take. Other negative effects may also arise from the construction and operation of such facilities through nuisance impacts such as noise, vibration and odour.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy outcome will increase rates of recycling and reduce the amount of waste sent to landfill. ■ The waste hierarchy will be followed (reduce, reuse, recycle). ■ There will be behavioural change to waste amongst the public and different employment sectors. *Previous SEA work:* Reducing landfill waste were discussed in the following SEAs: ■ RPP3. ■ Scotland's Zero Waste Plan. ■ Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient And Circular Economy. ■ Making Things Last: A Circular Economy Strategy for Scotland.

Land Use, Land Use Change and Forestry

Policy Outcome 1: We will introduce a stepped increase in the annual woodland creation rates from 2020 2021 to enhance the contribution that trees make to reducing emissions through sequestering carbon.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	Encouraging greater rates of woodland expansion to enhance carbon sequestration, as promoted through this policy outcome, is likely to lead to overall reductions in GHG emissions. Planting more woodland in quicker timeframes will help sequester more carbon sooner, therefore reducing overall GHG emissions and having positive effects on climatic factors and subsequently population and human health. Furthermore, greater woodland creation may help to adapt more to the predicted effects of climate change. Increasing the amount of woodland can have further beneficial effects on soil and water quality if managed appropriately. This will also be true for biodiversity as Scotland's forests and woodlands support a disproportionately high share of biodiversity. This policy outcome could also provide further benefits for cultural heritage, depending on the species grown and design in proximity to cultural heritage assets. Furthermore, increasing woodland cover over shorter timeframes may provide increased beneficial effects on human health and wellbeing through the greater provision of accessible woodland space which can be used for recreational purposes. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. For example, woodland creation may have significant positive or negative impacts on the landscape, biodiversity and patterns of recreational use, including cumulatively. Furthermore, creation of woodland may impact non-woodland biodiversity and high carbon soils. Potential negative impacts on the landscape can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. Local forestry and woodland strategies also identify the appropriate location for woodlands to maximise the delivery of public benefits and minimise adverse environmental and landscape impacts. In addition, specific woodland creation proposals must meet the requirements of the statutory processes for assessing impact on designated habitats or the wider environment; for example, Environmental Impact Assessment. However, there is also potential for negative effects due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland creation.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Woodland creation will increase levels of carbon sequestration. ■ Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK and be independently certified against the UK Woodland Assurance Scheme. *Previous SEA work:* ■ Woodland creation and carbon sequestration were discussed as part of the SEA work for RPP3, Scotland's Forestry Strategy 2019-29 and Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 1: Forestry grants: We will provide funding via a grant scheme, to support eligible landowners establish appropriate woodlands.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	The provision of funding through the Forestry Grant Scheme aims to support landowners to establish appropriate woodlands. It seeks to increase the rate of woodland creation in Scotland which is likely to have a positive effect on climatic factors by reducing GHG emissions through increased CO_2 sequestration, and helping to adapt to climate change through preventing flooding, reducing surface water runoff and providing cooling. This may have associated benefits for population and human health. This boosted policy has the potential to further encourage appropriate woodland through the provision of the grant schemes. Increasing the extent of sustainably managed forests can have associated beneficial effects on soil and water at the local level if managed appropriately. This will also be true for biodiversity, flora and fauna as Scotland's forests and woodlands support a disproportionately high share of biodiversity. Boosting this policy could also provide additional benefits for cultural heritage, depending on the species grown and design in proximity to cultural heritage assets. Furthermore, increasing woodland cover may provide increased beneficial effects on human health and wellbeing through the provision of accessible woodland space which can be used for recreational purposes and can enhance the environmental quality of urban areas in particular. Forestry is a key asset in Scotland and our forests are some of the most productive in the UK, with the amount of timber harvested increasing steadily. This policy can stimulate rural development and bring possible material asset benefits. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. For example, woodland creation may have significant positive or negative impacts on the landscape, biodiversity and patterns of recreational use, including cumulatively. Furthermore, creation of woodland may impact non-woodland biodiversity and high carbon soils. Potential negative impacts on the landscape can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. Local forestry and woodland strategies also identify the appropriate location for woodlands to maximise the delivery of public benefits and minimise adverse environmental and landscape impacts. In addition, specific woodland creation proposals must meet the requirements of the statutory processes for assessing impact on designated habitats or the wider environment; for example, Environmental Impact Assessment. However, there is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland creation.

Assumptions & Links with Other SEA Work

Assumptions:

- Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK.

Previous SEA work:

Woodland creation was previously considered in the SEA work undertaken for:

- RPP3.
- Scotland's Forestry Strategy 2019-29.
- Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 2: Woodland creation on Scotland's national forests and land. Forestry and Land Scotland will deliver an annual contribution towards the overall woodland creation target by creating new sustainable woodland on Scotland's national forests and land, including through partnerships with external organisations to scale carbon capture opportunities

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	The creation of additional new woodland on national forests and land by Forestry and Land Scotland, as advocated by this policy, is likely to have further positive effects on climatic factors by reducing GHG emissions through increased CO_2 sequestration, and helping to adapt to climate change through preventing flooding, reducing surface water runoff and providing cooling. This may have associated benefits for population and human health. Increasing the area of sustainably managed woodlands and forests, through this policy can have beneficial effects on soil and water at the local level, and for flora and fauna as Scotland's forests and woodlands support a disproportionately high share of biodiversity. Depending on the species grown, there may also be benefits for cultural heritage, and there is also the increased potential for beneficial effects on human health and wellbeing through the increased greater provision of accessible woodland space which can be used for recreational purposes and used to enhance the environmental quality of urban areas. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. For example, further woodland creation can have significant positive or negative impacts on the landscape, cultural heritage, biodiversity and patterns of recreational use, including cumulative impacts. Potential negative impacts can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. Local forestry and woodland strategies also identify the appropriate location for woodlands to maximise the delivery of public benefits and minimise adverse environmental and landscape impacts. In addition, specific woodland creation proposals must meet the requirements of the statutory processes for assessing impact on designated habitats or the wider environment; for example, Environmental Impact Assessment. However, there is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland creation.

Assumptions & Links with Other SEA Work

Assumptions:

- Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK and be independently certified against the UK Woodland Assurance Scheme.

Previous SEA work:

Woodland creation was previously considered in the SEA work undertaken for:

- RPP3.
- Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 3: Awareness-raising. We will continue to deliver a programme of farm-based events to demonstrate and support improved productivity through integration of farming and forestry enterprises.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This policy seeks to increase awareness of the benefits of woodland creation amongst landowners and managers who are likely to increase the creation of woodland in Scotland and help to contribute towards the established afforestation targets. Further promotion of the integration of farming and forestry enterprises could also optimise the use of farming land, with benefits for material assets. Increased woodland creation in Scotland is likely to have a positive effect overall on climatic factors by reducing GHG emissions through increased CO_2 sequestration. There is the potential for associated benefits for soil, water, biodiversity, flora and fauna, human health and cultural heritage, particularly if the woodland is accessible for recreation purposes. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. For example, further woodland creation may have significant positive or negative impacts on the landscape, biodiversity and patterns of recreational use, including cumulatively. Furthermore, creation of woodland may impact non-woodland biodiversity and high carbon soils. Potential negative impacts on the landscape and cultural heritage can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. Local forestry and woodland strategies also identify the appropriate location for woodlands to maximise the delivery of public benefits and minimise adverse environmental and landscape impacts. In addition, specific woodland creation proposals must meet the requirements of the statutory processes for assessing impact on designated habitats or the wider environment; for example, Environmental Impact Assessment. However, there is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland creation.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK. *Previous SEA work:* Woodland creation was previously considered in the SEA work undertaken for: ■ RPP3. ■ Scotland's Forestry Strategy 2019-29. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 4: Woodland standards. The Scottish Government will lead on the work with the UK and other UK Governments to maintain and develop a UK Forestry Standard that articulates the consistent UK wide approach to sustainable forestry. The Standard defines how woodland should be created and managed to meet sustainable forest management principles and provides a basis for monitoring.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	The refreshed UK Forestry Standard (2017) focusses on internationally recognised sustainable forest management principles and is likely to deliver overall benefits for the natural environment. This policy promotes the sustainable planting and management of new forests and woodlands which can help to promote the opportunities and benefits of woodland creation to landowners and managers alike. The new UK Forestry Standard (2017) considers the latest information and guidance for managing biodiversity, climate change, historic environment, landscape, people, soil and water issues. The UK Forestry Standard outlines the associated benefits resulting from woodland and forestry, in relation to soil, water, biodiversity, flora and fauna, human health and cultural heritage, particularly if the woodland is accessible for recreation purposes. A continued focus on the importance of balancing the environmental, economic and social benefits of forests, and the recognition that Scotland's forests serve a wide range of objectives, aids in managing potential adverse effects such as land use conflicts that may develop with the creation of new woodland. However, there is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for forestry.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK. *Previous SEA work:* Woodland creation was previously considered in the SEA work undertaken for: ■ RPP3. ■ Scotland's Forestry Strategy 2019-29. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 5: Woodland Carbon Capture. The Scottish Government will further develop and promote the Woodland Carbon Code in partnership with the forestry sector, and will work with investors, carbon buyers, landowners and market intermediaries attract additional investment into woodland creation projects and increase the woodland carbon market by 50% by 2025.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	The promotion of the Woodland Carbon Code, as advocated by this policy is likely to increase the creation of woodlands in Scotland that are accredited under the code. This will help to contribute towards the established afforestation targets and maximise CO_2 sequestration. Increased woodland creation in Scotland is likely to have a positive effect overall on climatic factors by reducing GHG emissions through increased CO_2 sequestration. There is the potential for associated benefits for soil, water, biodiversity, flora and fauna, human health and cultural heritage, particularly if the woodland is accessible for recreation purposes. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. For example, further woodland creation may have significant positive or negative impacts on the landscape, biodiversity and patterns of recreational use, including cumulatively. Furthermore, creation of woodland may impact non-woodland biodiversity and high carbon soils. Potential negative impacts on the landscape or cultural heritage can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. Local forestry and woodland strategies also identify the appropriate location for woodlands to maximise the delivery of public benefits and minimise adverse environmental and landscape impacts. In addition, specific woodland creation proposals must meet the requirements of the statutory processes for assessing impact on designated habitats or the wider environment; for example, Environmental Impact Assessment. However, there is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland creation.

Assumptions & Links with Other SEA Work

Assumptions:

- Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK.

Previous SEA work:

Woodland creation was previously considered in the SEA work undertaken for:

- RPP3.
- Scotland's Forestry Strategy 2019-29.
- Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 6: Forestry and woodland strategies continue to be prepared by planning authorities, with support from Scottish Forestry. They provide a framework for forestry expansion through identifying preferred areas where forestry can have a positive impact on the environment, landscape, economy and local people.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	Forestry and Woodland Strategies are currently being developed by Scotland's Local Authorities and are now statutory in Scotland. Forest and woodland strategies will help to identify further opportunities for landowners and managers and realise the potential for increased CO_2 sequestration. Strategies provide a regional framework for forestry expansion and deliver positive impacts; for example additional benefits through reducing CO_2 emissions through increased carbon sequestration, providing biodiversity benefits through habitat creation, improving soil and water quality, and reducing the risk of adverse effects on the landscape and cultural heritage. Furthermore, woodland creation may improve health and wellbeing through helping to enhance the consideration of recreational use at an early stage. Local forestry and woodland strategies identify the appropriate location for woodlands to maximise the delivery of public benefits and minimise adverse environmental and landscape impacts. However, there is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland or forestry. **<u>Assumptions & Links with Other SEA Work</u>** *<u>Assumptions:</u>* ■ Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK. *<u>Previous SEA work:</u>* Woodland creation was previously considered in the SEA work undertaken for: ■ RPP3. ■ Scotland's Forestry Strategy 2019-29. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy Proposal 1: Support forestry sector on plant and seed supply strategy to help meet the increased planting targets. A programme of technical innovation to develop and adapt modern horticultural practices will help improve seed preparation and handling, techniques to reduce environmental impacts, and increase nursery production. Funding to support increased production of young trees is available through the Harvesting and Processing grant which is now open to forest nurseries across GB with support from Defra.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This policy proposal sets out to support the forestry sector to develop a plant and seed supply strategy. This policy seeks to establish a programme of technical innovation to develop and adapt modern horticultural practices and also offer funding to support production of young trees through the Harvesting and Processing grant. The development of a plant and seed supply strategy, as advocated by this policy proposal is likely to result in greater rates of forestry and woodland planting across Scotland. An increase in woodland and forestry is likely to have positive effects on climatic factors, as there will be greater carbon sequestration. Furthermore, the expanding woodland and forestry is likely to provide greater recreational opportunities for people, providing further benefits to human health. The increased planting of trees, as a result of the plant and seed supply strategy and the Harvesting and Processing grant, is likely to result in positive effects on soil and water quality at the local level if managed appropriately. Furthermore, increasing woodland and forestry cover will likely benefit biodiversity by creating new and better-connected habitats for species. In addition, woodland and forestry may help improve the setting of the landscape, which could have subsequent benefits for cultural heritage. However, if inappropriately sited or designed new woodland could have negative effects on the landscape or cultural heritage. Potential negative impacts can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. There is potential for mixed negative effects on material assets due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland or forestry.
									<u>Assumptions & Links with Other SEA Work</u> *<u>Assumptions:</u>* ■ Strategy will ensure the supply of plants and seeds, subsequently increasing the rate of forestry planting. ■ This will include native seeds, supporting the genetic diversity of Scottish native woodland. *<u>Previous SEA work:</u>* ■ Forestry was discussed as part of the SEA work for RPP3, Scotland's Forestry Strategy 2019-29, and Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy Proposal 2: Forestry and Land Scotland will begin development of a new approach to woodland investment with a view to acquiring more land to establish further woodland on Scotland's national forests and land for the benefit of future generations and to optimise carbon sequestration. This includes partnering with private sector and other organisations to enhance scale and funding of carbon capture projects.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This policy seeks to encourage a new approach to woodland investment with the aim of acquiring more land to establish further woodland. Encouraging greater rates of woodland expansion may increase future climate resilience, enable climate mitigation and adaptation and further enhance carbon sequestration. This policy is likely to lead to overall reductions in GHG emissions. Encouraging further investments in planting more woodlands will help sequester more carbon sooner, therefore reducing overall GHG emissions and having positive effects on climatic factors. Furthermore, greater woodland creation may help to adapt more to the predicted effects of climate change. Increasing the amount of woodland can have further beneficial effects on soil and water quality if managed appropriately. This will also be true for biodiversity as Scotland's forests and woodlands support a disproportionately high share of biodiversity. This policy outcome could also provide further benefits for cultural heritage, depending on the species grown. Furthermore, increasing woodland cover over shorter timeframes may provide increased beneficial effects on human health and wellbeing through the greater provision of accessible woodland space which can be used for recreational purposes. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. For example, further woodland creation may have significant positive or negative impacts on the landscape, biodiversity and patterns of recreational use, including cumulatively. Furthermore, creation of woodland may impact non-woodland biodiversity and high carbon soils. Potential negative impacts on the landscape can be mitigated if woodland creation schemes are appropriately designed and delivered to meet the requirements of the UK Forestry Standard. However, there is also potential for negative effects due to land use conflicts that may arise, such as the loss of productive agricultural land to allow for woodland creation.
									<u>Assumptions & Links with Other SEA Work</u> *<u>Assumptions:</u>* ■ Woodland creation will increase levels of carbon sequestration. ■ Afforestation will meet the requirements of the UK Forestry Standard which defines the requirements for the sustainable management of forests in the UK and be independently certified against the UK Woodland Assurance Scheme. *<u>Previous SEA work:</u>* ■ Woodland creation and carbon sequestration were discussed as part of the SEA work for RPP3, Scotland's Forestry Strategy 2019-29 and Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy Outcome 2: Increase the use of sustainably sourced wood fibre to reduce emissions by encouraging the construction industry to increase its use of wood products where appropriate.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	0	This policy outcome is likely to contribute to reductions in GHG emissions by encouraging the construction industry to increase use of sustainably sourced wood products where possible. Encouraging greater rates of forestry expansion to provide sustainably sourced wood products is likely to lead to overall reductions in GHG emissions. Furthermore, encouraging the greater use of renew able building materials over more carbon intensive materials including steel and concrete will help to reduce overall GHG emissions, especially if the timber is sustainably sourced. Increasing the rate of timber consumption is likely to encourage an increase in productive forest area in Scotland. The effects of land use change on the w ider environment and communities could be mixed, depending on the scale and nature of changes. How ever, specific forestry creation proposals must meet the requirements of the UK Forestry Standard and statutory processes for assessing impact on designated habitats or the w ider environment, for example, Environmental Impact Assessment. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ There will be an increase use of timber in construction. ■ Timber will be sourced from sustainable sources. ■ The policy outcome is closely linked to the delivery of other proposals and policies for the Waste sector. *Previous SEA work:* ■ Timber for construction and construction waste was considered in the SEAs of RPP3, Scotland's Forestry Strategy 2019-29, and Making Things Last: A Circular Economy Strategy for Scotland, respectively.

Policy 1: In collaboration with the private forest sector and other public sector bodies the Scottish Government will implement the Timber Development Programme through an annual programme of projects that support the promotion and development of wood products for use in construction.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	0	0	0	0	0	0	0	0	This policy supports the promotion and development of wood products for use in construction which would encourage a shift in using wood products as building materials rather than non-renewable and more carbon intensive materials, such as steel or concrete. Encouraging greater rates of forestry expansion to provide sustainably sourced wood products is likely to lead to overall reductions in GHG emissions. Furthermore, encouraging the greater use of renewable building materials over more carbon intensive materials including steel and concrete will help to reduce overall GHG emissions, especially if the timber is sustainably sourced. Increasing the rate of timber consumption is likely to encourage an increase in productive forest area in Scotland. The effects of land use change on the wider environment and communities could be mixed, depending on the scale and nature of changes. However, specific forestry creation proposals must meet the requirements of the statutory processes for assessing impact on designated habitats or the wider environment, for example, Environmental Impact Assessment. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The majority of forests producing timber in Scotland are independently certified against internationally recognised principles and criteria for sustainable forest management. ■ The proposal is closely linked to the delivery of other proposals and policies for the Waste sector. *Previous SEA work:* This policy was previously assessed in the SEA work taken forward for: ■ RPP3. ■ Construction waste was considered in the SEA of Making Things Last: A Circular Economy Strategy for Scotland.

Policy Outcome 3: To enhance the contribution of peatland to carbon storage, we will support an increase in the annual rate of peatland restoration.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This policy outcome seeks to increase the carbon store within peatland, by encouraging the restoration of peatland at rates of 20,000ha per year. This policy outcome has potential to have a significant positive effect on climatic factors through further increasing the CO_2 sequestration potential of these areas which could reduce the overall impact of carbon emissions. Peatland restoration is also expected to have secondary benefits for biodiversity, soil and water quality. Furthermore, their restoration has the potential to improve the character of the landscape and have benefits on the

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									cultural heritage. By increasing the restoration of degraded peatland there are also likely to be benefits for land use through better land management. However, potential mixed effects on material assets are possible due to land use conflicts that may arise as a result of loss of productive agricultural land to allow for the restoration of peatland. Peatland restoration could have positive effects on human health by increasing the quality of landscape for people to experience when undertaking recreation in upland areas. Human health will also benefit from the secondary effects of improved water quality and flood management.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ This policy outcome will support and encourage increased peatland restoration. *Previous SEA work:* ■ Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy 1: Restoration grants: We will provide grant funding to support eligible land managers to deliver peatland restoration. Levels of funding will enable at least 20,000 hectares of peatland restoration per year. We will undertake research to inform where restoration can deliver the greatest emission savings per hectare.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This boosted policy is aimed at increasing the rate of restoration of peatlands to their natural state by increasing the amount of public funding to be used for peatland restoration Enabling at least 20,000 hectares of peatland restoration per year. This boosted policy has potentially significant positive effects on climatic factors through further increasing the CO_2 sequestration potential of degraded peatland which could reduce carbon emissions and increase carbon sequestration. Additional positive effects are also expected in relation to biodiversity, flora and fauna as peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration. Furthermore, many peatlands are designated for biodiversity, and therefore the restoration of these areas would have additional beneficial effects on designated habitats and species. Upland peatlands are popular for outdoor recreational activities such as hillwalking, and people will benefit from the improved quality of the landscape. Human health will also benefit from the secondary effects of improved water quality and flood management. There is increased potential for positive impacts on landscape through restoring a sense of 'wilderness', particularly in areas that have been subject to significant peatland degradation. By increasing the restoration of degraded peatland there are also likely to be benefits for land use through

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									better land management. Additionally, upland peatlands are considered some of Scotland's most iconic landscapes and are culturally significant, so there are likely to be benefits for cultural heritage. Soil and water quality are also likely to experience increased benefits, as a result of this boosting policy, as peatlands store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health. Whilst reducing treatment costs for public water supplies would have a positive effect on material assets, potential negative effects are also possible due to land use conflicts that may arise due to restoration of peatland. For example, loss of productive agricultural land or woodland to allow for peatland restoration. Therefore, mixed effects on material assets are identified.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increasing funding will encourage greater peatland restoration. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy 2: Awareness raising: Working through partnership, we will put in place tools and information to promote peatland restoration and develop the capacity, skills and knowledge of land owners, land managers, contractors and others, to deliver peatland restoration.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This policy is aimed at delivering peatland restoration by further increasing awareness amongst landowners and managers. Raising further awareness around peatland restoration and the associated benefits through this policy has further potential to have a positive effect on climatic factors by increasing the CO_2 sequestration potential of these areas which could reduce carbon emissions and increase carbon sequestration. Positive effects are also expected in relation to biodiversity, flora and fauna as peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration, including designated habitats and species. Upland peatlands are popular for outdoor recreational activities such as hillwalking so additional population and human health benefits are likely to be achieved by enhancing the quality of upland environments.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Additionally, enhancing community well-being is another possible benefit through the development of local skills and knowledge in relation to the management of restoration schemes. Through this policy, there is potential for positive impacts on landscape through restoring a sense of 'wilderness', particularly in areas that have been subject to significant peatland degradation. By raising awareness on the importance of restoring degraded peatland there are also likely to be benefits for land use through better land management. Additionally, upland peatlands are considered some of Scotland's most iconic landscapes and are culturally significant, so there are likely to be benefits for cultural heritage. Soil and water quality are also likely to experience increased benefits, as a result of raising more awareness of peatland restoration, as peatlands in good conditions store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health. Whilst reducing treatment costs for public water supplies would have a positive effect on material assets, potential negative effects are also possible due to land use conflicts that may arise due to restoration of peatland. For example, loss of productive agricultural land to allow for peatland restoration. Therefore, mixed effects on material assets are identified.
									<u>Assumptions & Links with Other SEA Work</u> *<u>Assumptions:</u>* ■ Raising awareness will lead to informed and positive decision making on the ground. *<u>Previous SEA work:</u>* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy 3: With partners, refresh our vision for Scotland's peatlands and review peatland restoration support mechanisms to overcome embedded barriers and improve how we fund and deliver this activity.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and	Likely Environmental Effects
+	+	0	+	+	+	+	+	+/-	This policy seeks to refresh a Vision for Scotland's peatlands which will continue outlining the benefits of peatland restoration. The refreshment of the Vision could help to overcome embedded barriers and improve how this activity is funded. Moreover, there is the potential for raising awareness and encouraging more people across the public, private and third sector to undertake peatland restoration to help achieve Scotland's GHG emissions targets. Improving the condition of peatland will reduce carbon emissions from degraded land and sequester carbon. Additional secondary benefits are likely in relation to population and human health due to the improved quality of the upland environment and secondary effects on human health in terms of

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and	Likely Environmental Effects
									water quality and flood management. There is also potential for landscape and cultural heritage benefits, due to restoring the sense of 'wilderness'. Likewise, the Vision will continue highlighting the benefits of peatlands for biodiversity, water quality and flood mitigation. Peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration, including designated habitats and species. They can also store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health and material assets. Whilst improving the quality of water would have a positive effect on material assets, potential negative effects are also possible due to land use conflicts that may arise due to restoration of peatland. For example, loss of productive agricultural land or forestry to allow for peatland restoration. Therefore, mixed effects on material assets are identified. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Increasing awareness of the benefits of peatland restoration will promote and encourage more people to restore peatland. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy 4: Phase out the use of peat in horticulture by increasing uptake of alternative materials, undertaking stakeholder engagement to understand transitional challenges, to improve the uptake of alternatives and develop a time-scaled plan.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This policy seeks to phase out the use of peat in horticulture by encouraging the higher uptake of alternative materials. Moreover, it sets out to conduct a stakeholder engagement to understand traditional challenges. Limiting the use of peat in horticulture will have positive effects on peatland protection and enhancing peatland restoration that will help Scotland achieve its GHG emissions targets. Improving the condition of peatland will reduce carbon emissions from degraded land and sequester carbon. Additional secondary benefits are likely in relation to population and human health due to the improved quality of the peatland

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and	Likely Environmental Effects
									environment and secondary effects on human health in terms of water quality and flood management. There is also potential for landscape and cultural heritage benefits, due to restoring the sense of 'wilderness'. Phasing out the use of peat in horticulture will benefit biodiversity, water quality and flood mitigation. Peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration, including designated habitats and species. They can also store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health and material assets. Improving the quality of water would have a positive effect on material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Phasing out the use of peat in horticulture will enhance peatland protection and restoration. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy 5: Our Position Statement on National Planning Framework 4 confirmed our current thinking that through the planning system we will not support applications for planning permission for new commercial peat extraction for horticultural purposes, we are looking at strengthening controls on development on peatland and we will help facilitate restoration through permitted development rights.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This policy sets out that planning system will not support applications for planning permissions for new commercial peat extraction for horticultural purposes. Limiting the use of peat in horticulture, by not approving planning permissions for new commercial peat extraction, can have significant positive effects on peatland protection that will help Scotland achieve its GHG emissions targets. Reducing the loss of peatland will reduce carbon emissions from degraded land and sequester carbon. Additional secondary benefits are likely in relation to population and human health due to the improved quality of the peatland environment and secondary effects on human health in terms of water quality and flood management. There is also potential for landscape and cultural heritage benefits, due to restoring the sense of 'wilderness'.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Limiting new peat extraction through planning measures will benefit biodiversity, water quality and flood mitigation. Peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration, including designated habitats and species. They can also store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health and material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ No new commercial peat extraction projects. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy Proposal 1: Develop opportunities for private sector investment in peat restoration, engaging with sectors to establish investment pathways, enabling both public and private sector to invest in a range of measures to help mitigate effects of climate change.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This proposal sets out to develop opportunities for the private sector to invest in peatland restoration and as a result help mitigate climate change. This policy proposal has potential to have a significant positive effect on climatic factors through further increasing the CO_2 sequestration potential of peatland through the restoration of these areas which could reduce carbon emissions and increase carbon sequestration. Increasing peatland restoration as a result of additional private sector investment is also expected to have secondary benefits for biodiversity, soil and water quality. Furthermore, restoration has the potential to improve the character of the landscape and have benefits on cultural heritage. By increasing the restoration of degraded peatland there are also likely to be benefits for land use through better land management, having positive effects on material assets, and could have positive effects on human health by increasing the landscape quality of upland areas used for recreational purposes such as hillwalking. It is likely to have positive effects on emissions reductions, air, soil and water quality, biodiversity and landscape.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Increased private investment will enable more peatland restoration. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.:

Policy Proposal 2: Explore how best to restore all degraded peat in the public estate and also within formally designated nature conservation sites, including through statutory mandate.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This policy seeks to explore measures to restore all degraded peat in the public estate and also within formally designated nature conservation sites. Peatland restoration can deliver significant positive effects in relation to GHG emissions and can play a key role in helping Scotland achieve its GHG emissions reductions targets. By restoring all currently degraded peat across public estate and formally designated sites can significantly enhance carbon sequestration potential. Improving the condition of peatland will reduce carbon emissions from degraded land and sequester carbon. Additional secondary benefits are likely in relation to population and human health due to the improved quality of the upland environment and secondary effects on human health in terms of water quality and flood management. There is also potential for landscape and cultural heritage benefits, due to restoring the sense of 'wilderness'. Restoration of degraded peat will benefit biodiversity, water quality and flood mitigation. Peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration, including designated habitats and species. They can also store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health and material assets. Restoration of currently degraded peat will also have positive effects on material assets.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Restoration of peatland across public estate and formally designated nature conservation sites will significantly reduce carbon loss and enhance carbon sequestration. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy Proposal 3: Explore the development of a Peatland Restoration Standard to ensure best practice and continuous development in the success and effectiveness of peatland restoration.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This policy seeks to explore the development of a Peatland Restoration Standard. The Standard would ensure best practice and continuous development in the success and effectiveness of peatland restoration. Introduction of a Peatland Restoration Standard has the potential to ensure the quality of restoration delivered across all peatland restoration sites and help achieve Scotland's GHG emissions reductions targets. Improving the condition of peatland will reduce carbon emissions from degraded land and sequester carbon. Additional secondary benefits are likely in relation to population and human health due to the improved quality of the peatland environment and secondary effects on human health in terms of water quality and flood management. There is also potential for landscape and cultural heritage benefits, due to restoring the sense of 'wilderness'. A Peatland Restoration Standard can benefit biodiversity, water quality and flood mitigation. Peatlands support many important species, habitats and ecosystems which may have been lost through previous degradation and may be gained back through peatland restoration, including designated habitats and species. They can also store and clean water as well as act as important natural flood plains, soaking up excess water and regulating run-off. The ability of peatlands to filter water helps to reduce treatment costs for public supplies and also helps to sustain quality drinking water for private supplies, which may also lead to additional positive benefits for human health and material assets. Restoration of currently degraded peat will also have positive effects on material assets.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ A Peatland Restoration Statement will ensure the best practice and effectiveness across peatland restoration sites. *Previous SEA work:* Peatland restoration was previously assessed in the following SEA work: ■ RPP3. ■ Getting the Best From Our Land: A Land Use Strategy for Scotland 2016-2021. ■ The Energy and Peatlands Policy Statement.

Policy Outcome 4: We will establish pilot Regional Land Use Partnerships (RLUPs) over the course of 2021.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This policy outcome outlines establishing pilot Regional Land Use Partnerships to enable a more strategic and collaborative approach to be taken with regards to land use change and climate change. The Regional Land Use Partnerships will deliver a more integrated and accountable approach to regional land use, and significant land use change. The establishment of Regional Land Use Partnerships will improve the management of natural capital and facilitate the restoration of larger-scale networks of peatlands and creation of larger scale woodlands to deliver greater ecosystem services by working with local authorities, land managers, farmers and other organisations. This will have positive effects on GHG emissions through improved management of these resources reducing carbon emissions from land, and increased carbon storage. More strategic land use can also deliver additional benefits for soil, water quality, and biodiversity. There may also be positive effects on material assets and human health as there is the potential for enhanced peatland restoration if land use is considered at a larger scale. Peatlands play an important role in sustaining quality drinking water for private supplies. There is potential for positive impacts on landscape through increased woodland and peatland coverage. Peatland in particular is recognised as one of Scotland's most iconic landscapes and is culturally significant. Therefore, the expansion and creation of larger scale networks of peatland are likely to have benefits for cultural heritage. The Third Land Use Strategy and Regional Land Use Partnerships will help to address potential conflict between land uses such as loss of productive agricultural land with positive effects on material assets. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ The Regional Land Use Partnerships will identify suitable areas for peatland creation and lead to significant land use change and informed and positive decision making on the ground. ■ Working in partnership with numerous authorities on a regional scale will enable woodland and peatland creation on a larger landscape scales. *Previous SEA work:* ■ The role of peatland and woodland in tackling climate change was discussed in the SEA work for RPP3. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Policy 1: Establishment of pilot Regional Land Use Partnerships to help ensure that we maximise the potential of Scotland's land to help achieve net zero. Publication of Scotland's third Land Use Strategy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	0	+	+	+	+	+	+	This policy sets out to publish Scotland's Third Land Use Strategy and establish a pilot of Regional Land Use Partnerships to maximise the potential of Scotland's land to help achieve GHG emissions reduction targets. The Regional Land Use Partnerships can help to enable a more strategic approach to land use change to climate change mitigation and adaptation. The partnerships will deliver a more integrated and accountable approach to land use, and significant land use change. The Land Use Strategy will strategically guide regional land use planning. The development of regional land use plans will improve the management of natural capital and facilitate the restoration of larger-scale networks of peatlands and creation of larger scale woodlands to deliver greater ecosystem services. This will have positive effects on GHG emissions through improved management of these resources reducing carbon emissions from land, and increased carbon storage. Secondary benefits for soil and water quality are also likely, as are positive effects on biodiversity. There may also be positive effects on material assets and human health due to the potential for peatland to sustain quality drinking water for private supplies. There is potential for positive impacts on landscape through increased woodland and peatland coverage. Peatland in particular is recognised as one of Scotland's most iconic landscapes and is culturally significant. Therefore, the expansion and creation of larger scale networks of peatland are likely to have benefits for cultural heritage. The Third Land Use Strategy and Regional Land Use Partnerships will help to address potential conflict between land uses such as loss of productive agricultural land with positive effects on material assets.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The Regional Land Use Partnerships will identify suitable areas for peatland creation and lead to significant land use change and informed and positive decision making on the ground. ■ Working in partnership with numerous authorities on a regional scale will enable woodland and peatland creation on a larger landscape scales. ■ The Third Land Use Strategy will guide regional land use decisions that will enhance ecosystem services and wider landscape benefits. *Previous SEA work:* ■ The role of peatland and woodland in tackling climate change was discussed in the SEA work for RPP3. ■ Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021.

Negative Emissions Technologies (NETs)

Policy Outcome 1: Detailed feasibility studies on NETS will assess the opportunities for negative emissions in Scotland, and identify applications with the greatest potential, including specific sites where possible.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outcome promotes the use of Negative Emissions Technologies (NETs), for example Carbon Capture Utilisation and Storage (CCUS), hydrogen and bioenergy, to help achieve reductions in GHG emissions. The outcome supports feasibility studies on NETs to identify the technologies with the greatest potential, including specific sites. The implementation of NETs could contribute to significant reductions in GHG emissions, particularly if utilised with carbon intensive industries and energy generation from fossil fuels where for example Carbon Capture Storage (CCS) can capture up to 90% of the CO_2 emissions produced. Increased uptake of NETs could have further positive effects on air quality and human health through reducing CO_2 emissions. This policy outcome is therefore likely to contribute significantly to reducing GHG emissions and will have positive effects on climate change and air quality, although this is likely to be influenced by the specific NETs use and the industries to which they relate. However, the promotion of bioenergy such as biomass may have mixed effects on air quality due to the release of particles during the combustion process. In addition, the promotion of NETs may provide alternative, flexible and responsive technologies to provide energy which will have positive effects on the population and human health, and material assets, by improving reliability and security of energy supply, potentially improving security and reducing energy rates, thus helping to reduce fuel poverty across Scotland. Should NETs be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Hydrogen will be produced from renewable sources. ■ Hydrogen-powered vehicles are unlikely to develop significantly within the timeframe of the draft Plan (by 2032). ■ CCUS is not an energy generation technology but rather a technology that could aid in reducing climatic impacts of fossil fuel-intensive industry and energy generation. ■ CCUS is likely to have a role to play in the continued use of oil and gas resources in industry and in the bioenergy and emerging hydrogen-fuel sector. *Previous SEA work:* CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 1: In 2021/22 carry out a detailed feasibility study of opportunities for developing NETs in Scotland ready for the early 2030s. This will identify specific sites and applications of NETs, including developing work to support policy on Direct Air Capture and its role within NETS in our future energy system.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to carry out feasibility studies for developing Negative Emissions Technologies (NETs) such as CCUS, hydrogen and bioenergy to help achieve reductions in GHG emissions. The feasibility studies will identify the applications of NETs with the greatest potential, including specific sites, to support policy on Direct Air Capture. Conducting feasibility studies on the implementation of and potential sites for NETs is likely to promote and encourage the uptake of such technologies, and as such contribute towards significant reductions in GHG emissions. Increased uptake of NETs could have further positive effects on air quality and human health through reducing CO_2 emissions. This policy outcome is therefore likely to contribute significantly to reducing GHG emissions and will have positive effects on climate change and air quality, although this is likely to be influenced by the specific NETs use and the industries to which they relate. For example, the promotion of bioenergy such as biomass may have mixed effects on air quality due to the release of particles during the combustion process. In addition, the promotion of NETs may provide alternative, flexible and responsive technologies to provide energy which will have positive effects on the population and human health, and material assets, by improving reliability and security of energy supply, potentially improving security and reducing energy rates, thus helping to reduce fuel poverty across Scotland. Should NETs be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									<u>Assumptions & Links with Other SEA Work</u> *<u>Assumptions:</u>* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Hydrogen will be produced from renewable sources but is unlikely to develop significantly within the timeframe of the draft Plan (by 2032). ■ CCUS is not an energy generation technology but rather a technology that could aid in reducing climatic impacts of fossil fuel-intensive industry and energy generation. ■ CCUS is likely to have a role to play in the continued use of oil and gas resources in industry and in the bioenergy and emerging hydrogen-fuel sector. *<u>Previous SEA work:</u>* CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 2: From 2022, based on the outcomes of the feasibility work, we will provide support for commercial partners to develop NETs proposals including initial design and business cases.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to build on the feasibility work for NETs and potential sites, to provide support for commercial partners to develop NETs proposals. The policy proposal is likely to result in the greater implementation of NETs, which could contribute to reductions in GHG emissions and therefore will have positive effects on climate change. Increased support for NETs could not only have positive effects on climate change but also have positive effects on air quality through reducing CO2 emissions within the atmosphere. This may have subsequent benefits for population and human health. However, there is potential for negative environmental effects over a range of environmental topics as a result of the implementation of NETs. For example, negative effects on biodiversity are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate NETs. The proposed development may also have adverse effects on landscape and the historic environment. However, impacts are likely to be managed at a project level through current mechanisms, such as the planning process. Should NETs be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Increased support will promote the uptake of such technologies. *Previous SEA work:* NET technologies including CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 3: Put in place a continual process to review the development of NETs and progress against its envelope.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to continually review the development and progress of NETs. This policy proposal is therefore likely to promote the uptake of existing NETs and encourage innovation and development of new or improved technologies. As such, the policy proposal is likely to contribute towards significant reductions in GHG emissions and will have positive effects on both climate change and air quality, although this is likely to be influenced by the specific NETs developed and used. Additionally, the continual review of existing NETs and development of new technologies may provide alternative, flexible and responsive technologies to provide energy which will have positive effects on the population and human health, and material assets, by improving reliability and security of energy supply, potentially improving security and reducing energy rates, thus helping to reduce fuel poverty across Scotland. Should NETs be implemented more widely in the future as a result of this policy, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Increased support will promote the uptake of such technologies. *Previous SEA work:* NET technologies including CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland

Policy Proposal 4: We will work with UK Government to ensure that they bring forward suitable mechanisms to support the development of NETs business cases in relevant sectors.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to work with the UK Government to ensure suitable mechanisms are in place to support the development of NETs business cases. Support, through the introduction of suitable mechanisms (e.g. funding or incentives) is likely to result in the greater implementation of NETs, which could contribute towards reductions in GHG emissions. This will therefore have positive effects on climate change. Furthermore, increasing the support for and potential viability of NETs could have associated positive effects on air quality through reducing CO2 emissions within the atmosphere. This may have subsequent benefits for population and human health, although this is likely to be influenced by the specific NETs use and the industries to which they relate. For example, the promotion of bioenergy such as biomass may have mixed effects on air quality due to the release of particles during the combustion process. In addition, the promotion of NETs may provide alternative, flexible and responsive technologies to provide energy which will have positive effects on the population and human health, and material assets, by improving reliability and security of energy supply, potentially improving security and reducing energy rates, thus helping to reduce fuel poverty across Scotland. Should NETs be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Increased support will promote the uptake of such technologies. *Previous SEA work:* NET technologies including CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Outcome 2: CCUS: the continued development of CCUS technologies and systems is prioritised to ensure these can be rolled out commercially and at scale by the late 2020s.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outcome seeks to achieve the development and use of Carbon Capture Utilisation and Storage (CCUS) at a commercial scale. The CCU process is an emerging technology which manufactures carbon dioxide into commercially viable products such as chemicals, polymers, building materials and fuels. If this was progressed further, the use of waste products in this way is considered likely to have a positive effect on material assets. The implementation of CCS could contribute to significant reductions in GHG emissions, particularly if utilised with carbon intensive industries and energy generation from fossil fuels where CCS can capture up to 90% of the CO_2 emissions produced. Increased uptake of CCUS could have further positive effects on air quality and human health through reducing CO_2 emissions. This policy outcome is therefore likely to contribute significantly to reducing GHG emissions and will have positive effects on climate change and air quality, although this is likely to be influenced by the specific CCS use and the industries to which it relates. In addition, the promotion of CCUS may provide alternative, flexible and responsive technologies to provide energy which will have positive effects on the population and human health, and material assets, by improving reliability and security of energy supply, potentially improving security and reducing energy rates, thus helping to reduce fuel poverty across Scotland. Should CCUS be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ CCUS is not an energy generation technology but rather a technology that could aid in reducing climatic impacts of fossil fuel-intensive industry and energy generation. ■ CCUS is likely to have a role to play in the continued use of oil and gas resources in industry and in the bioenergy and emerging hydrogen-fuel sector. *Previous SEA work:* CCUS was discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy 1: Support the development of NETS technologies within Scotland

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to support the development of Negative Emission Technologies (NETs) in Scotland. By providing general support for such technologies, the policy is likely to result in the greater implementation of NETs, which could contribute to reductions in GHG emissions and therefore will have positive effects on climate change. Increased support for NETs could not only have positive effects on climate change but also have positive effects on air quality through reducing CO2 emissions within the atmosphere. This may have subsequent benefits for population and human health. However, there is potential for negative environmental effects over a range of environmental topics as a result of the implementation of NETs. For example, negative effects on biodiversity are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate NETs. The proposed development may also have adverse effects on landscape and the historic environment. However, impacts are likely to be managed at a project level through current mechanisms, such as the planning process. Should NETs be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Increased support will promote the uptake of such technologies. *Previous SEA work:* NET technologies including CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 1: Strategic Innovation Challenge Fund – to support strategic investment in R&D and innovation to reduce CO2 emissions, stimulate economic recovery and create jobs.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to support investment in research, development and innovation to help Scotland reduce the costs for the low carbon transition, whilst not undermining the competitiveness of the products, stimulating economic recovery and creating jobs. By reducing the cost of transition to lower carbon technologies, there is likely to be greater uptake of such technologies across the industry thereby enhancing security and flexibility of energy supply, resulting in positive effects for material assets. This could lead to greater reductions in GHG emissions as more businesses switch from the use of more traditional energy sources such as oil and gas, to lower carbon and renewable sources. This could see a positive effect on climate change but also have positive effects on air quality through reducing CO2 emissions within the atmosphere. This may have subsequent benefits for population and human health.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ Reducing the cost of the transition to low carbon will encourage the uptake of such technologies. ■ There will be a widespread shift towards lower carbon technologies. *Previous SEA work:* None.

Policy Proposal 2: Support the inclusion of NETS in the development of strategic, industry lead pathways for CCUS infrastructure in Scotland.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy seeks to support the inclusion of Negative Emission Technologies (NETs) in the development of strategic, industry lead pathways for CCUS in Scotland. By providing general support for negative emission technologies, including CCUS, the policy is likely to result in the greater implementation of NETs, which could contribute to reductions in GHG emissions and therefore will have positive effects on climate change. Increased support for NETs and CCUS could not only have positive effects on climate change but also have positive effects on air quality through reducing CO2 emissions within the atmosphere. The CCUS process is an emerging technology which manufactures carbon dioxide into commercially viable products such as chemicals, polymers, building materials and fuels. If this was progressed further, the use of waste products in this way is considered likely to have a positive effect on material assets. The implementation of CCUS could contribute to significant reductions in GHG emissions, particularly if utilised with carbon intensive industries and energy generation from fossil fuels where CCS can capture up to 90% of the CO2 emissions produced. The development of NETs and CCUS may have subsequent benefits for population and human health by reducing GHG emissions produced and enhancing security and flexibility of energy supply. However, should NETs and CCUS be implemented more widely in the future, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate negative emission technologies. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
									Assumptions & Links with Other SEA Work *Assumptions:* ■ NETs could include a variety of technologies including bioenergy, CCUS and hydrogen. ■ Increased support will promote the uptake of such technologies. ■ NETs will be incorporated into commercial scale CCUS infrastructure *Previous SEA work:* NET technologies including CCUS, bioenergy and hydrogen were discussed in the SEA work taken forward for: ■ RPP3. ■ Electricity Generation Policy Statement. ■ The Heat Policy Statement: Towards Decarbonising Heat: Maximising the Opportunities for Scotland.

Policy Proposal 3: Funding through the Scottish Industrial Energy Transformation Fund to consider the development of NETS demonstrators

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy outlines that the Scottish Industrial Energy Transformation Fund (IETF) will consider supporting the development of NETs demonstrators. This policy is likely to result in more companies or businesses taking up negative emission technologies as a result of increased investment. This is therefore likely to lead to reductions in GHG emissions as due to an increase in the uptake of such technologies. Subsequent improvements in air quality, human health and to material assets are also likely. In addition, the promotion of NETs may provide alternative, flexible and responsive technologies to provide energy which will have positive effects on the population and human health, and material assets, by improving reliability and security of energy supply, potentially improving security and reducing energy rates, thus helping to reduce fuel poverty across Scotland. If NETs is implemented more widely as a result of increased funding, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis.
									Assumptions & Links with Other SEA Work *Assumptions:* ■ The IETF will encourage the uptake of negative emissions technologies to help achieve reductions in GHG emissions. ■ There will be increased use of energy efficiency measures including the use of renewable energy. *Previous SEA work:* None.

Policy Proposal 4: Provide a focus on integrating NETS projects with CCS infrastructure through the Emerging Technologies Fund.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural Heritage & Historic Environment	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+	+	0	0	0	0	0	+	This policy proposal seeks to integrate NETs projects with CCS infrastructure into the Emerging Technologies Fund. The fund would support investment in research, development and innovation to help Scottish reduce the costs for the low carbon transition, with a particular focus on negative emissions technologies. By reducing the cost of the transition to negative emissions technologies, there is likely to be greater uptake of such technologies across Scotland. This could lead to greater reductions in GHG emissions as more businesses switch from the use of more traditional energy sources such as oil and gas, to lower and negative carbon sources. In addition, the requirement for NETs projects to incorporate CCS infrastructure may have further benefits for climate change as making development ready for CCS may enable further reduction in GHG emissions in the future. The implementation of CCS as part of NETs could contribute to significant reductions in GHG emissions, particularly if utilised with carbon intensive industries and energy generation from fossil fuels where CCS can capture up to 90% of the CO2 emissions produced. Increased uptake of CCS could have further positive effects on air quality and human health through reducing CO2 emissions. This policy outcome is therefore likely to contribute significantly to reducing GHG emissions and will have positive effects on climate change and air quality, although this is likely to be influenced by the specific CCS use and the industries to which it relates. Should NETs and/or CCS be implemented more widely in the future as a result of this policy, there is potential for some increased negative environmental effects over a range of environmental topics including on soil and water quality, and biodiversity. If inappropriately sited, infrastructure could impact on landscape and the setting of cultural heritage assets. For example, negative effects are likely to be associated with the upgrading or conversion of existing infrastructure, and the installation of new infrastructure, necessary to facilitate CCUS, hydrogen or bioenergy. It is considered that many of these impacts may be localised and these activities will be subject to existing mechanisms such as planning, EIA and HRA and consenting conditions prior to work being undertaken. These effects have not been reflected in the gradings to the left on this basis. **Assumptions & Links with Other SEA Work** *Assumptions:* ■ Negative emission technologies may include CCUS, hydrogen and bioenergy. ■ Reducing the cost of the transition to negative emission technologies will encourage the uptake of such technologies. ■ There will be a widespread shift towards negative emission technologies. *Previous SEA work:* None.

Policy Outcome 3: Bioenergy: a cross-sectoral approach for the appropriate and sustainable use of biomass in energy applications is agreed and implemented (taking into account competing land and feedstock uses).

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+/-	0	0	0	0	-	+/-	This policy outcome promotes bioenergy and seeks to provide an approach for the sustainable use of biomass which can be adopted across all sectors. The development of a harmonious approach may encourage the increased uptake of biomass technologies which may contribute towards reductions in GHG emissions by providing a carbon-neutral approach alternative fuel, which would help reduce reliance on more traditional fossil fuels. Therefore, the promotion of biomass may have positive effects on climate change. Whilst the reduction of GHG emissions may have associated benefits for air quality and subsequently population and human health, mixed effects are identified overall as biomass may result in some air pollution. The biomass combustion process can result in the emission of air pollutants that could have subsequent adverse effects on human health and air quality. Further mixed effects may be expected in relation to material assets as a result of the promotion of biomass technologies. Whilst biomass may provide an alternative fuel and reduce pressure on energy supply and distribution, there may be adverse effects due to land use conflicts that may arise, such as the loss of productive agricultural land or woodland to allow for feedstock production. Additionally, an increase in the land used for the production of feedstock may have adverse effects on the landscape character of the surrounding area. Whilst there is uncertainty on the likely scale and significance of biofuel feedstock development in Scotland, greater consideration would need to be given to the potential for impacts from large-scale production in particular. Negative effects arising from the development of associated infrastructure required to facilitate biomass activities, such as on biodiversity, soil and water, is likely to be managed at a project level through the planning process which should help to mitigate any effects. The scores to the left reflect this.

Assumption & Links with Other SEA Work

Assumptions:

- Forms part of wider decarbonisation ambitions to reduce demand from traditional, finite sources. Biomass and biofuel feedstocks will be developed in such a way to ensure they are produced according to sustainable management practices and that bioenergy in Scotland will not create additional pressures on ecosystems overseas.
- Bioenergy will reduce dependence on traditional fossil fuels.

Previous SEA Work:

- RPP3

Policy 1: We will publish a Bioenergy Update in early 2021, laying out our current position and understanding of the role of bioenergy in the energy system and setting out in more detail how we will move forward.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+/-	0	0	0	0	-	+	This policy commits to publishing a Bioenergy Update which will outline Scotland's current position and understanding of the role of bioenergy in the energy system. The update will set out details for how to implement bioenergy. The support for bioenergy is likely to result in increased uptake of such technologies, and therefore contribute towards reductions in GHG emissions, by reducing reliance on traditional fossil fuels, and subsequently provide benefits for air quality with associated positive effects on population and human health. The increased capture and utilisation of biogas (particularly biomethane produced in the anaerobic digestion process), which would otherwise be released uncontrolled into the atmosphere, and could also have more significant positive effects on climatic factors by further reducing the release of GHG emissions. However, the increased uptake of bioenergy also has the potential for increased negative environmental effects. Biomass boilers are not carbon neutral and the biomass combustion process can result in the emission of air pollutants that could have subsequent adverse effects on human health. Negative effects arising from the development of associated infrastructure required to facilitate these activities, such as on biodiversity, soil and water, is likely to be managed at a project level through the planning process which should help to mitigate any effects. The scores to the left reflect this. However, an increase in the land used for the production of feedstock may have adverse effects on the landscape character of the surrounding area. Whilst there is uncertainty on the likely scale and significance of biofuel feedstock development in Scotland, greater consideration would need to be given to the potential for impacts from large-scale production in particular. **Assumption & Links with Other SEA Work** ***Assumptions:*** ■ Forms part of wider decarbonisation ambitions to reduce demand from traditional, finite sources. Biomass and biofuel feedstocks will be developed in such a way to ensure they are produced according to sustainable management practices and that bioenergy in Scotland will not create additional pressures on ecosystems overseas. ■ Bioenergy will reduce dependence on traditional fossil fuels. ***Previous SEA Work:*** ■ RPP3

Policy 2: In 2021, building on the Bioenergy Update, we will be establishing a cross sectoral Bioenergy Expert Working Group to consider and identify the most appropriate and sustainable use for bioenergy resources across Scotland. It will also assess the volume of bioenergy resources that we can grow or produce within Scotland, and confirm the level of import that we believe is compatible with a sustainable global trade in bioenergy.

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+/-	0	0	0	0	-	+	This policy seeks to establish a cross-sectoral Bioenergy Expert Working Group to consider and identify the most appropriate and sustainable use for bioenergy resources across Scotland. The policy builds on the Bioenergy Update, and will assess the volume of bioenergy resources that can be grown and produced within Scotland and confirm the volume of imports that will be needed. The increased use of bioenergy is likely to help contribute towards further reductions in GHG emissions, by reducing reliance on traditional fossil fuels. This could provide associated benefits for air quality with potential subsequent positive effects on population and human health. The increased capture and utilisation of biogas (particularly biomethane produced in the anaerobic digestion process), which would otherwise be released uncontrolled into the atmosphere, could also have more significant positive effects on climatic factors by further reducing the release of GHG emissions. However, the potential for imported feedstock may have adverse effects on climate change due to transport related GHG emissions. This adverse effect would be dependent on the potential need for and volume of imported feedstock. The uncertainty surround GHG emissions from imports is reflected in the scores to the left. However, the increased uptake of bioenergy such as biomass and production of biofuels, as advocated through this policy, also has the potential for increased negative environmental effects. Biomass boilers are not carbon neutral and the biomass combustion process can result in the emission of air pollutants that could have subsequent adverse effects on human health. Negative effects arising from the development of associated infrastructure required to facilitate these activities, such as on biodiversity, soil and water, is likely to be managed at a project level through the planning process which should help to mitigate any effects. The scores to the left reflect this. However, an increase in the land used for the production of feedstock may have adverse effects on the landscape character of the surrounding area. Whilst there is uncertainty on the likely scale and significance of biofuel feedstock development in Scotland, greater consideration would need to be given to the potential for impacts from large-scale production in particular.
									Assumption & Links with Other SEA Work ***Assumptions:*** ■ Forms part of wider decarbonisation ambitions to reduce demand from traditional, finite sources. Biomass and biofuel feedstocks will be developed in such a way to ensure they are produced according to sustainable management practices ■ Bioenergy will reduce dependence on traditional fossil fuels. ***Previous SEA Work:*** ■ RPP3

Policy 3: By 2023, in time to inform the next Climate Change Plan we will publish a Bioenergy Action Plan incorporating the learning developed by the expert working group and our understanding of the options to use Bioenergy in both NETS and other applications

Climatic Factors / Emissions Reduction	Population and Human Health	Air	Soil	Water	Biodiversity, Flora and Fauna	Cultural heritage	Landscape	Material Assets (Waste, Energy, Transport and Land Use)	Likely Environmental Effects
+	+/-	+/-	0	0	0	0	-	+	This policy commits to developing a Bioenergy Action Plan prior to the next Climate Change Plan, which will incorporate the understanding of options to use bioenergy in both NETs and other applications. The Bioenergy Action Plan will detail work performed, look at potential challenges, and provide the next steps required to achieve Scotland's ambitious 2050 vision for energy. It will provide policies to support bioenergy. The increased use of bioenergy to provide heat and transport fuel, as promoted through this policy, is likely to help contribute towards further reductions in GHG emissions, and provide more benefits for air quality with associated positive effects on population and human health, particularly if it is incorporated into other negative emission technologies. The increased capture and utilisation of biogas (particularly biomethane produced in the anaerobic digestion process), which would otherwise be released uncontrolled into the atmosphere, could also have more significant positive effects on climatic factors by further reducing the release of GHG emissions. In environmental terms, using gas for power generation is also likely to be a more favourable option than low calorific flaring, although the process of methane capture may not be suitable on sites with low gas flow rates. A greater number of impacts could arise from increased development of associated infrastructure required to facilitate these activities. However, the design and siting of such infrastructure will be managed at a project level through the planning process which should help to mitigate any effects. The increased uptake of bioenergy such as biomass and production of biofuels, as advocated through this policy, also has the potential for increased negative environmental effects. Whilst biomass boilers are subject to regulation and standards, they are not carbon neutral and the biomass combustion process can result in the emission of air pollutants that could have subsequent adverse effects on human health. Greater impacts on biodiversity, soil and water quality may also occur as a result of an increase in the production of biofuel feedstock if it is not managed sustainably. In particular, an increase in the land used for the production of feedstock may have adverse effects on the landscape character of the surrounding area. Whilst there is uncertainty on the likely scale and significance of biofuel feedstock development in Scotland, greater consideration would need to be given to the potential for impacts from large-scale production in particular. If widely implemented, as promoted through this policy, bioenergy technologies are likely to further contribute to reducing demand for heat from traditional supplies, reducing pressure on network infrastructure and making it more readily available for other fuels such as hydrogen. There could also be a positive impact on material assets as infrastructure may be reused or converted, for example for hydrogen, or new or upgraded infrastructure would likely be required to ensure supply to households and increased security of energy supply. **Assumption & Links with Other SEA Work** ***Assumptions:*** ■ Forms part of wider decarbonisation ambitions to reduce demand from traditional, finite sources. Biomass and biofuel feedstocks will be developed in such a way to ensure they are produced according to sustainable management practices and that bioenergy in Scotland will not create additional pressures on ecosystems overseas. ■ Bioenergy will reduce dependence on traditional fossil fuels. ***Previous SEA Work:*** ■ RPP3

Appendix C

Checklist to meet the requirements of the 2005 Act

Table C.1: Checklist to meet the requirements of the 2005 Act

14 (2) The report shall identify, describe and evaluate the likely significant effects on the environment of implementing—	
(a) the proposals in the plan or programme; and	Section 4, Appendix B
(b) reasonable alternatives to the plan or programme.	Section 2
14 (3) The report shall include such of the information specified in schedule 3 as may reasonably be required.	
1. An outline of the contents and main objectives of the plan or programme, and of its relationship (if any) with other qualifying plans and programmes.	Section 1
2. The relevant aspects of the current state of the environment … … and the likely evolution thereof without implementation of the plan or programme.	Section 3
3. The environmental characteristics of areas likely to be significantly affected.	Section 3
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna (as last amended by Council Directive 97/62/EC).	Section 3
5. The environmental protection objectives, established at international, Community or Member State level, which are relevant to the marine spatial plan or programme … … and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 3
6. The likely significant effects on the environment, including— (a) on issues such as— (i) biodiversity and natural heritage; (ii) population; (iii) human health; (iv) fauna; (v) flora; (vi) soil; (vii) water; (viii) air; ix) climatic factors;	Section 4, Appendix B

(x) material assets; (xi) cultural heritage and historic environment, including architectural and archaeological heritage; (xii) landscape; (xiii) the inter-relationship betw een the issues referred to in heads (i) to (xii). (b) short, medium and long-term effects. (c) permanent and temporary effects. (d) positive and negative effects. (e) secondary, cumulative and synergistic effects	
7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Section 5
8. An outline of the reasons for selecting the alternatives dealt w ith, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of expertise) encountered in compiling the required information.	Section 2
9. A description of the measures envisaged concerning monitoring in accordance with section 19.	Section 6
10. A non-technical summary of the information provided under paragraphs 1 to 9.	Included at start of document

Appendix D

Baseline mapping

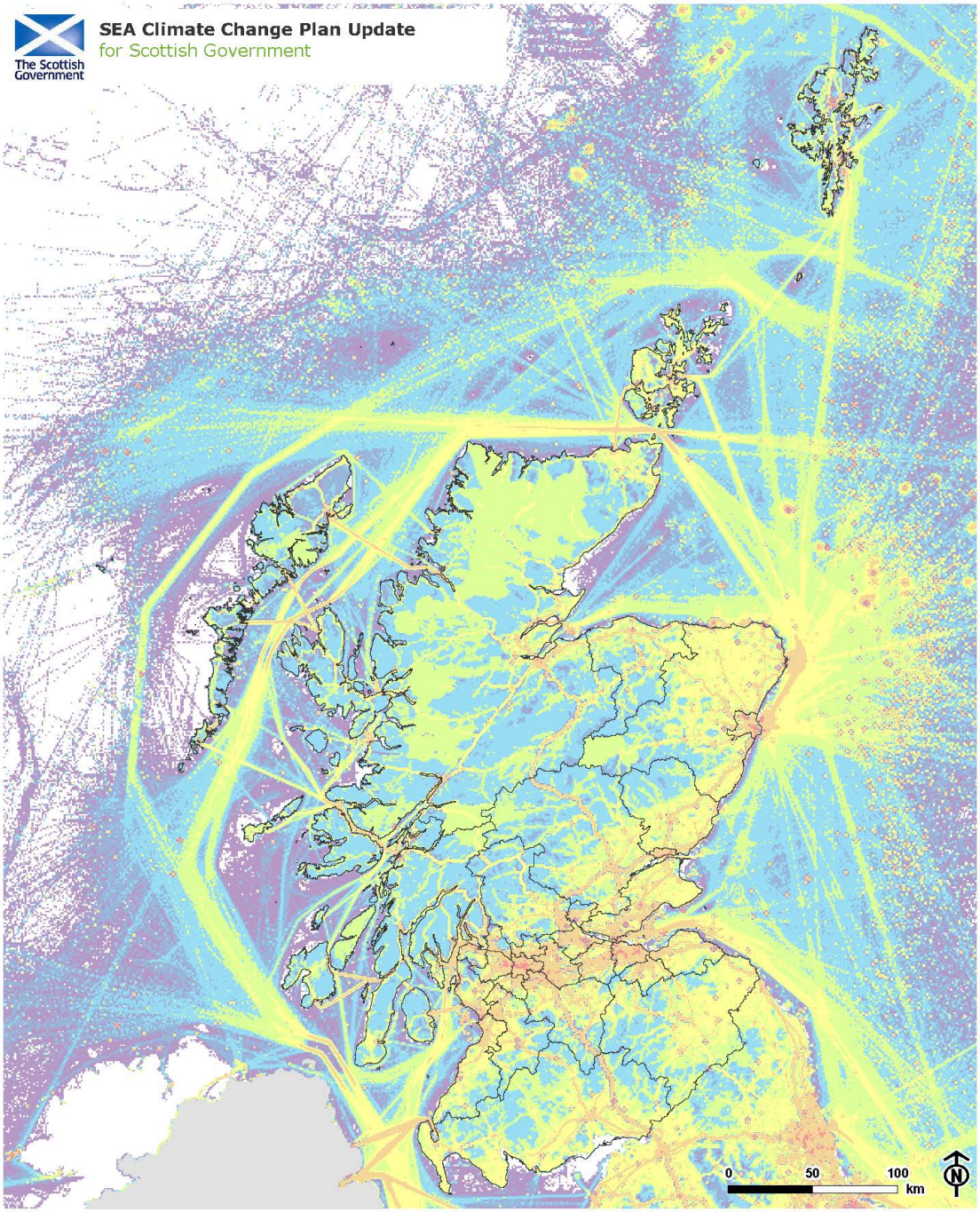
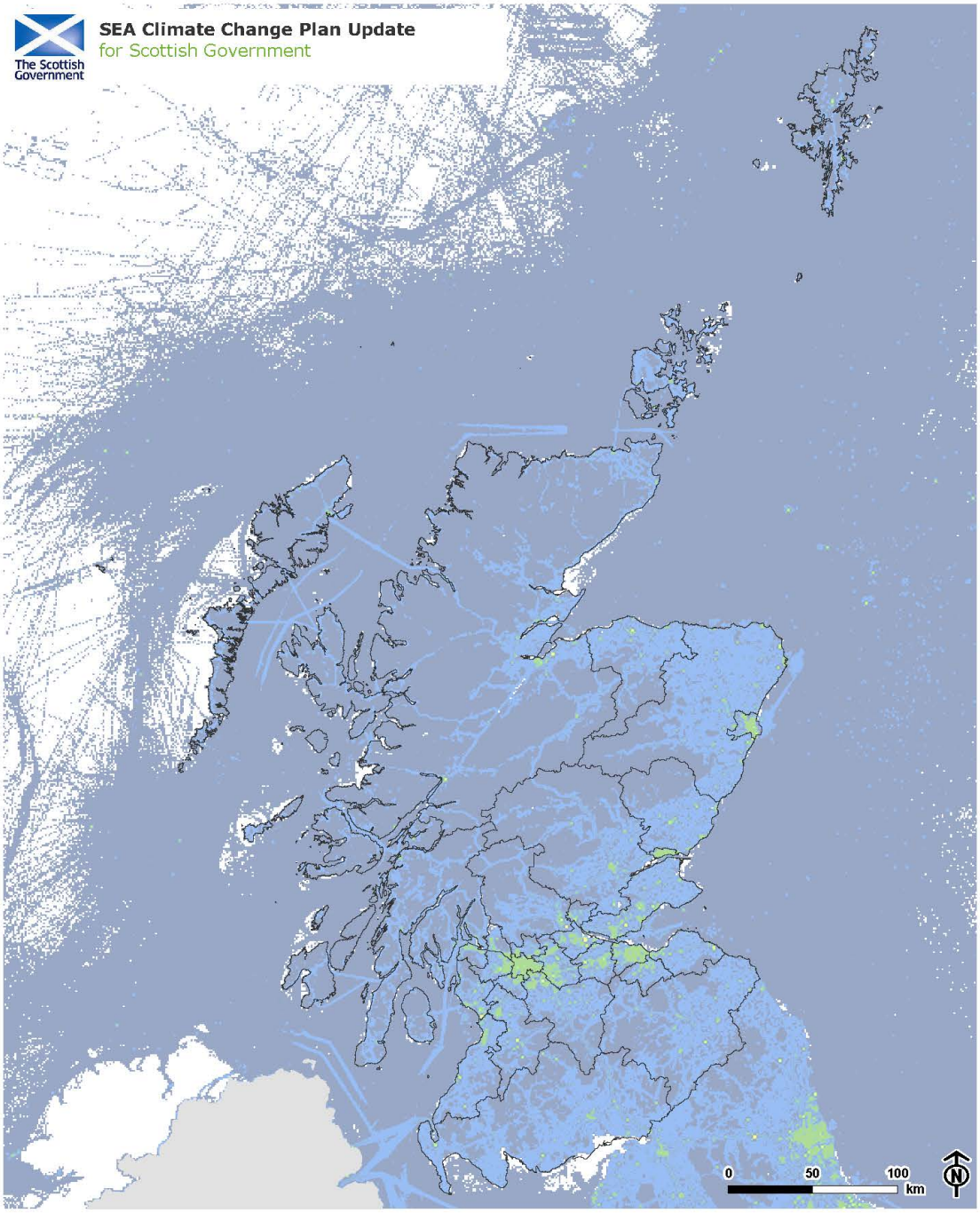


Figure 1: Emissions of Nitrogen Oxides (NOx) as NO2 in tonnes in Scotland 2018

Emissions of Nitrogen Oxides (NOx) 2018 as NO2 in tonnes

- <0.01
- 0.02 - 0.03
- 0.04 - 0.1
- 0.11 - 0.3
- 0.31 - 1
- 1.01 - 25
- >25



LUC Ref: 11218 | Source: naei.beis.gov.uk

Figure 2: Emissions of PM10 (Particulate Matter < 10µm) in tonnes in Scotland in 2018

Emissions of PM10 (Particulate Matter < 10µm) in tonnes in Scotland in 2018

- 0
- <0.03
- 0.04 - 0.1
- 0.11 - 0.2
- 0.21 - 1
- 1.01 - 4
- 4 >

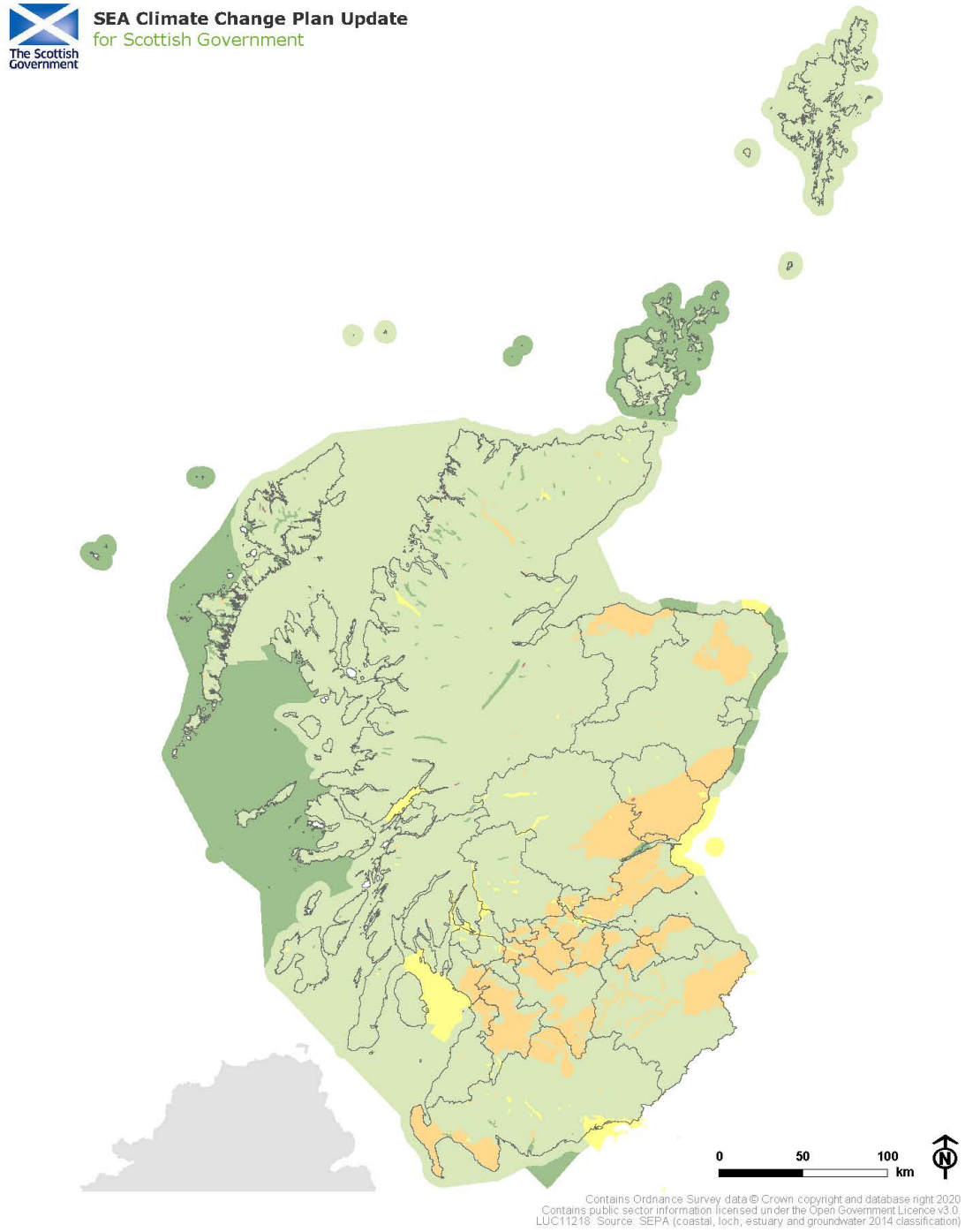


Figure 3: Water Condition in Scotland

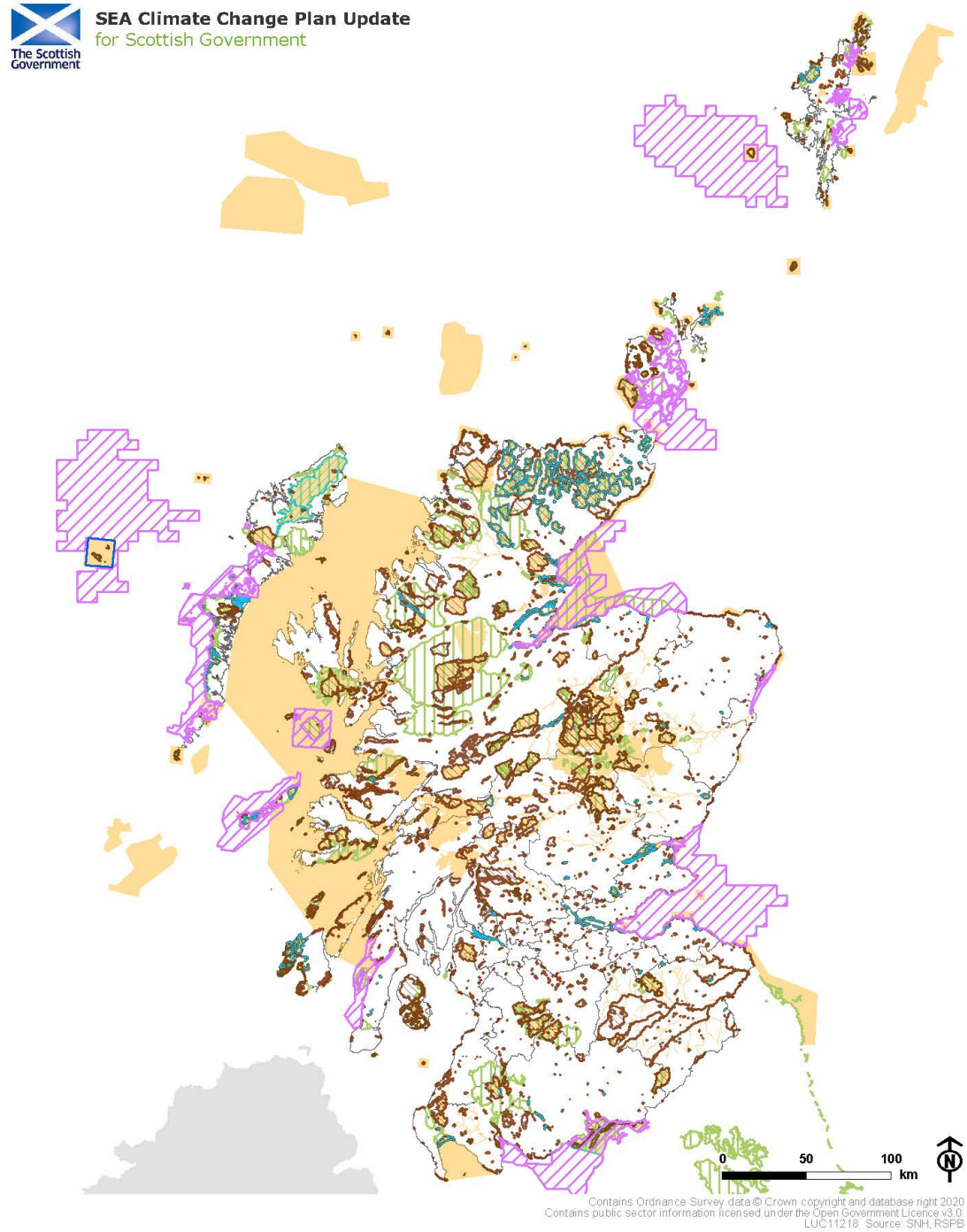


Figure 4: Natural Heritage in Scotland

- World Heritage Site (St Kilda)
- Ramsar site
- Natura 2000 sites (Special Area of Conservation and Special Protection Area)
- Proposed Special Protection Area
- Important Bird Area
- National designations including National Nature Reserves and Sites of Special Scientific Interest

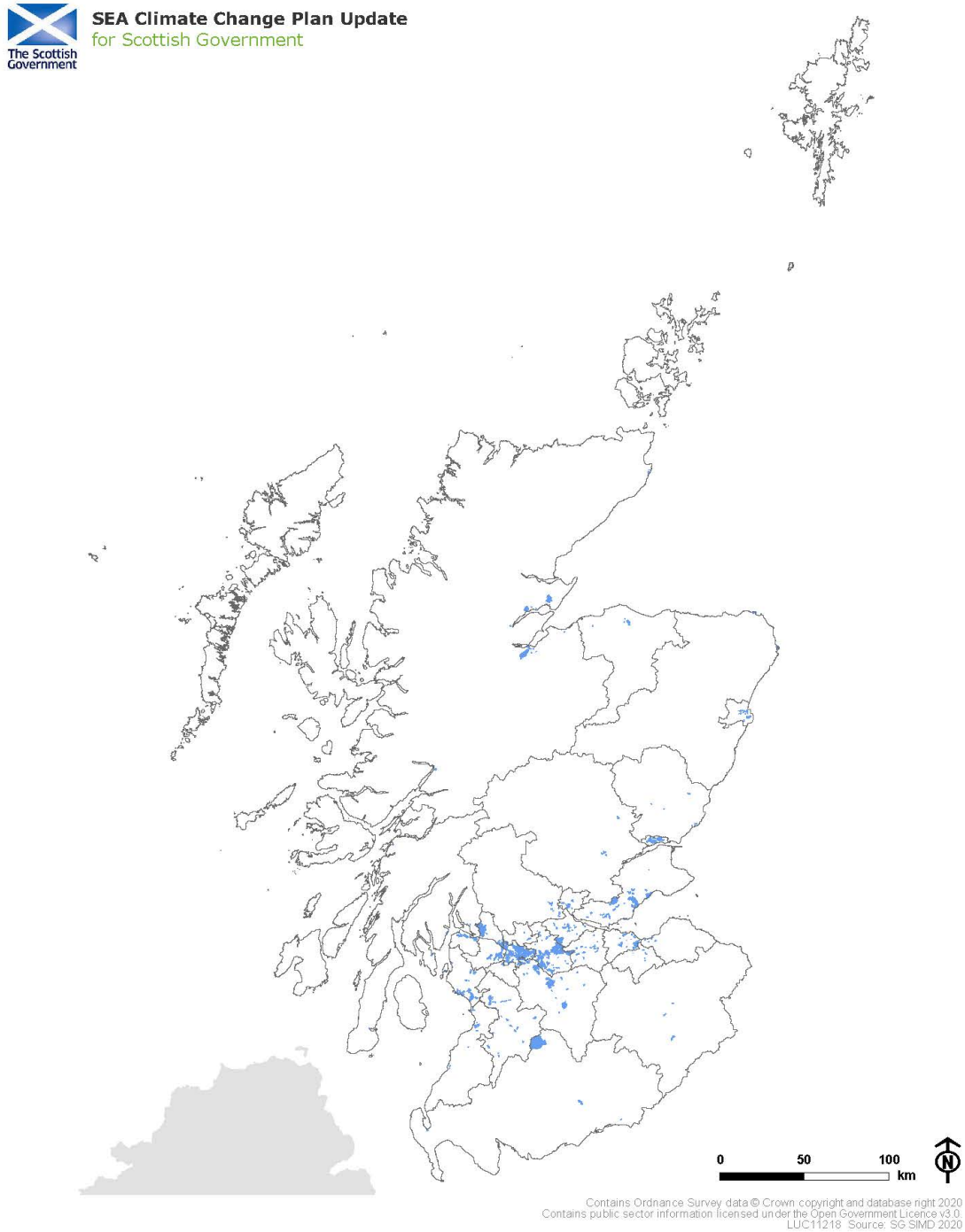


Figure 5: Overall Deprivation in Scotland

Index of multiple deprivation
(20% most deprived areas)

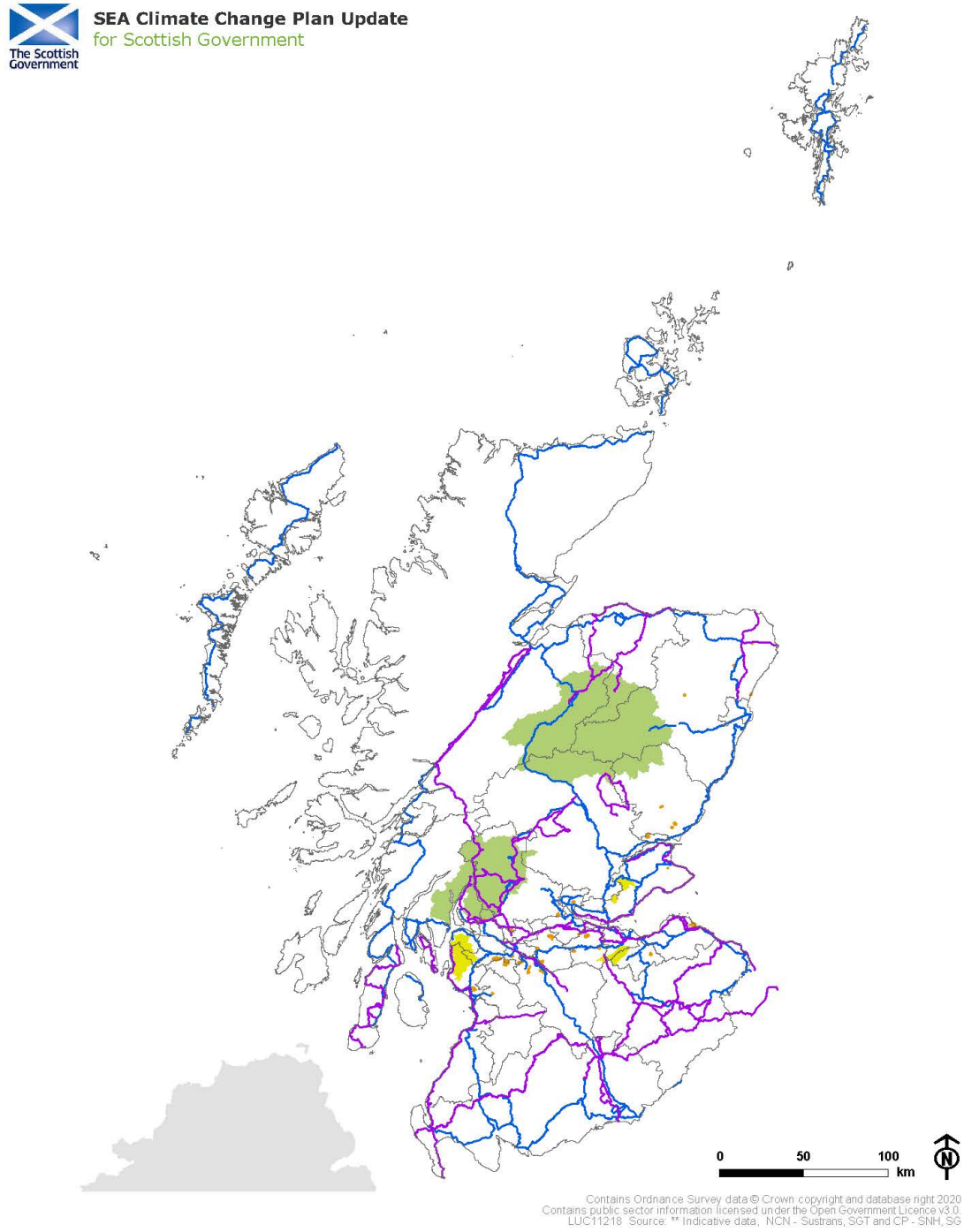


Figure 6: Recreational Routes and Areas in Scotland

- National Park
- Regional Park
- Country Park
- National Cycle Network
- Scottish Great Trails**

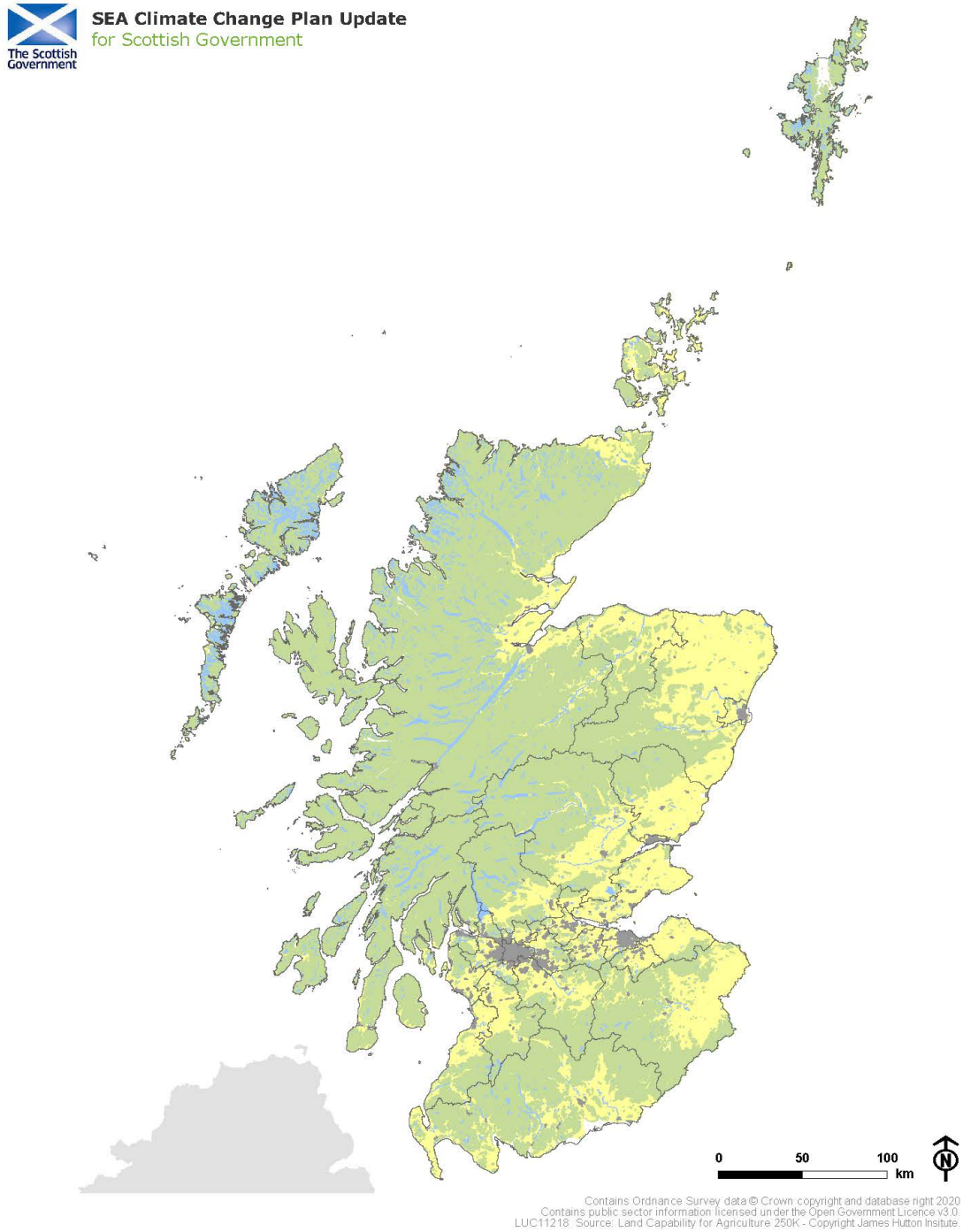


Figure 7: Land Capability for Agriculture in Scotland

- Land suited to arable cropping (categories 1-4)
- Land suited only to improved grassland and rough grazing (categories 5-7)
- Built up area
- Inland water
- Undefined

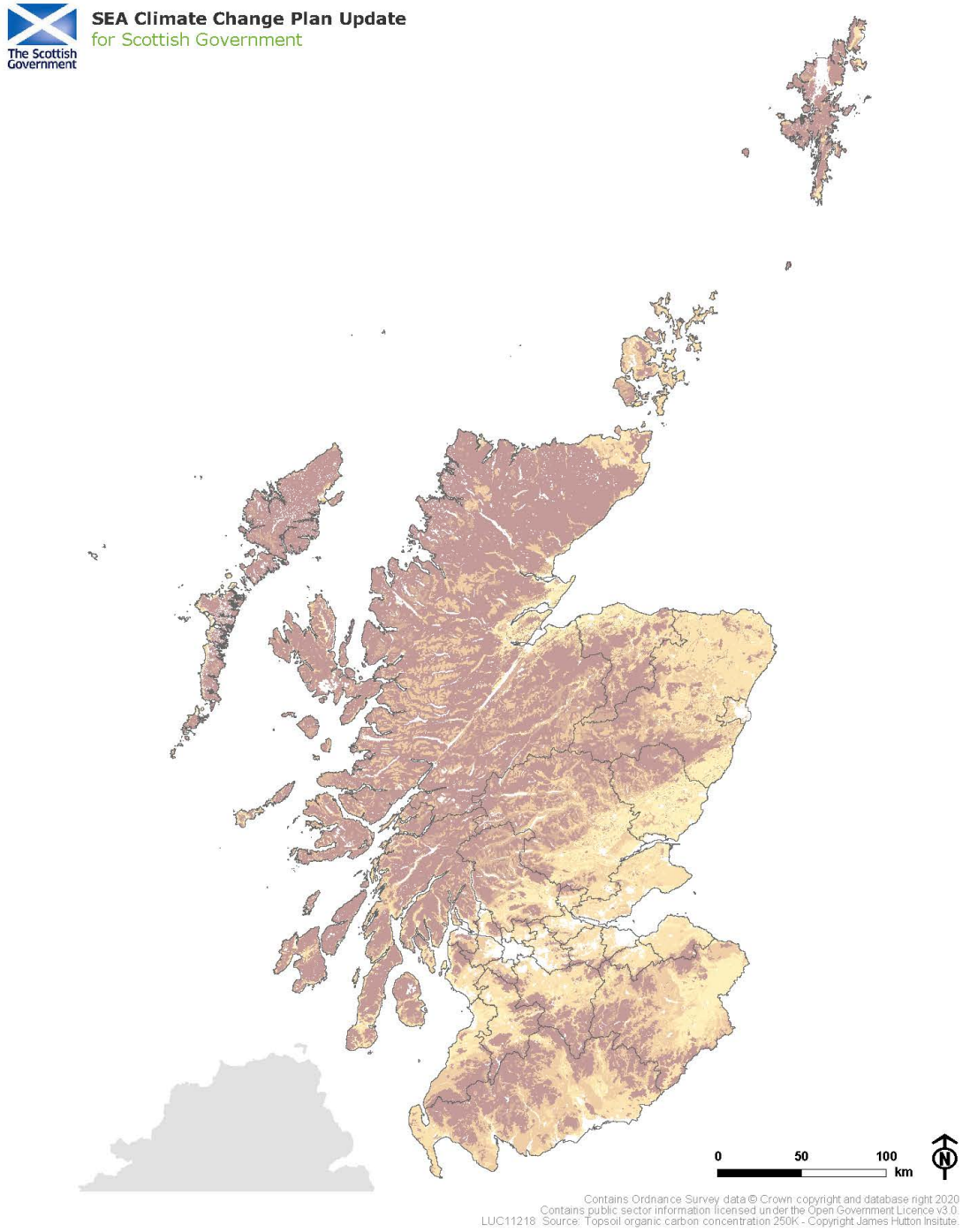


Figure 8: Top Soil Organic Carbon Concentration in Scotland

Top soil organic carbon concentration

- Low (less than 1.5%)
- Moderate (between 1.5 and 3%)
- High (more than 3 to 5%)
- Humose (more than 5 to 12%)
- Organo-mineral (more than 12 to 35%)
- Organic (greater than 35%)

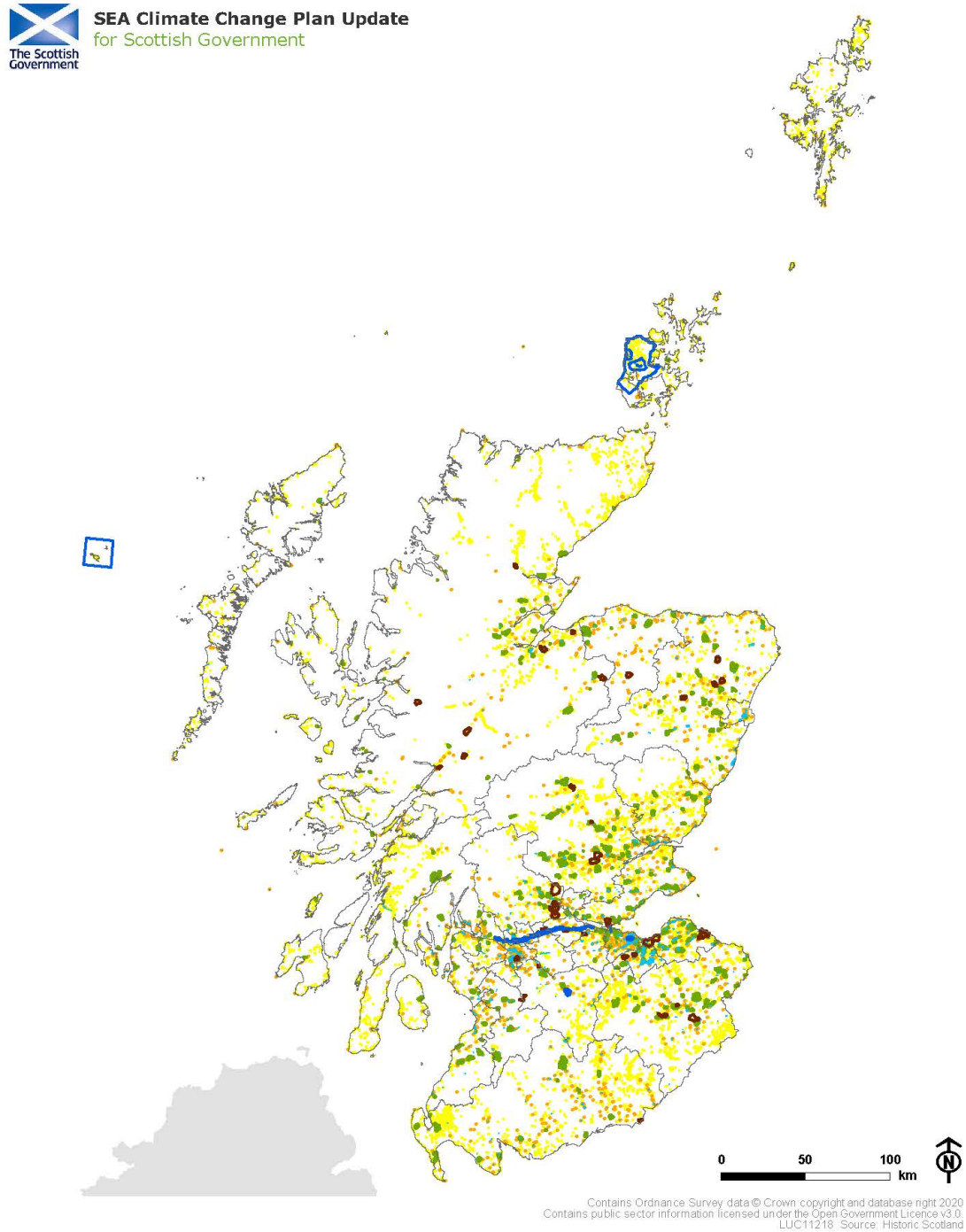


Figure 9: Cultural Heritage in Scotland

- World Heritage Site
- Scheduled Monument
- Historic Battlefield
- Conservation Area
- Gardens and Designed Landscapes
- Listed Buildings (Grade A)

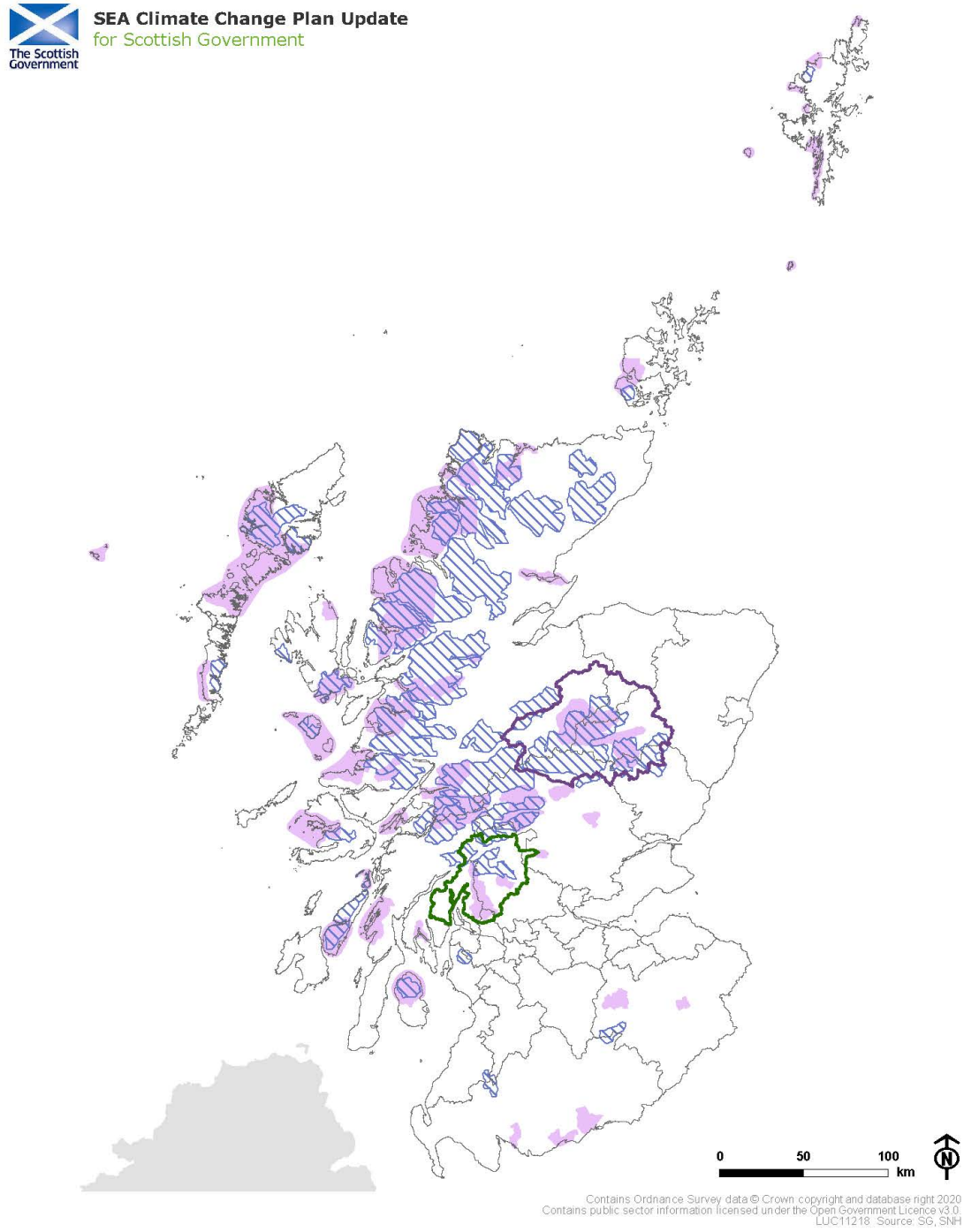


Figure 10: Designated Landscapes in Scotland

- National Scenic Area
- Cairngorms National Park
- Loch Lomond and the Trossachs National Park
- Wild Land Area

Figure 11: Forestry and Woodland Cover in Scotland

Ancient Woodland Inventory (AWI)

Native Woodland Survey of Scotland (NWSS) and National Forest Inventory (NFI 2018)

Appendix E

Respondent Information Form

Respondent information form

Draft Strategic Environmental Assessment of the update to the Climate Change Plan 2018-2032

Scottish Government
Riaghaltas na h-Alba
gov.scot

Respondent information form

Please Note this form **must** be completed and returned with your response.

To find out how we handle your personal data, please see our privacy policy: https://beta.gov.scot/privacy/

Are you responding as an individual or an organisation?

☐ Individual

☐ Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

☐ Publish response with name

☐ Publish response only (without name)

☐ Do not publish response

Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

☐ Yes

☐ No