

Appendix 4 – Detailed SEA Assessment Table – All Technologies

Environmental Report

Renewable & Low Carbon Energy Supplementary Guidance

July 2017

Wind

Wind				
SEA Topic	SEA Objective	Score	Time-scale	Evaluation
Pop and Human Health	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 10 – Protect and enhance green infrastructure and networks	+/-	S/M	There is potential for negative effects on green infrastructure and networks through the construction of wind energy proposals and associated infrastructure. The SG will set out detailed criteria to mitigate against the loss of existing green infrastructure and networks. Development proposals also offer opportunities to significantly enhance existing, and establish new, green infrastructure and networks.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation and resultant improvements to air quality.
Biodiversity, flora and fauna	SEA 1 – Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M	There is potential for negative effects on valuable soil resources which support biodiversity and flora/fauna from the siting of turbines and associated infrastructure. The SG will set out criteria to mitigate impacts, and identify opportunities for enhancement such as peatland restoration. The Spatial Framework specifically protects Class 1 and 2 peatlands, as well as prime agricultural land as part of the Strategic Land Use Capacity mapping.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-	S/M	There is potential for negative effects on existing land uses and land cover which provide habitat for biodiversity, in particular protected sites. The SG will set out criteria to mitigate impacts. The Spatial Framework specifically protects internationally and nationally designated sites including Natura 2000 and Ramsar sites, SSSIs and National Nature Reserves.
	SEA 4 - Promote the important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value.	+/-	S/M	There is potential for the loss and/or removal of forestry and woodland cover to make way for turbines and associated infrastructure, which is likely to result in negative impacts on associated biodiversity, flora and fauna. The SG will set out criteria to mitigate impacts, and where applicable, opportunities for enhancement through additional planting.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M	There is potential for direct and indirect negative effects on a range of habitats and species, in particular protected sites and protected species. The SG will set out criteria to mitigate direct and indirect impacts, and where applicable, opportunities for enhancement. The Spatial Framework specifically protects internationally and nationally designated sites including Natura 2000 and Ramsar sites, SSSIs and National Nature Reserves.
	SEA 10 - Protect and enhance green infrastructure and networks	+/-	S/M	There is potential for negative effects on green infrastructure and networks through the construction of wind turbines and associated infrastructure. The SG will set out detailed criteria to mitigate against the loss of existing green infrastructure and networks. Development proposals also offer opportunities to significantly enhance existing, and establish new, green infrastructure and networks.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M	There is potential for direct and indirect negative effects on designated sites from the construction of turbines and associated infrastructure. The SG will identify and require mitigation of direct and indirect impacts, and where applicable, opportunities for restoration. The Spatial Framework specifically protects internationally and nationally designated sites including Natura 2000 and Ramsar sites, SSSIs and National Nature Reserves.
Soil	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M	There is potential for loss of, and negative impacts, to carbon rich soils and prime agricultural land from the construction of turbines and associated infrastructure. The SG will set out criteria to mitigate impacts and identify opportunities for enhancement such as peatland restoration. The Spatial Framework specifically protects Class 1 and 2 peatlands, as well as prime agricultural land as part of the Strategic Land Use Capacity mapping.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M	There is potential for direct and indirect negative effects on soil-based habitats and species from the construction of turbines and associated infrastructure. The SG will set out criteria to mitigate direct and indirect impacts.
Water	SEA 3 – Promote the sustainable management of the water environment	+/-	S/M/L	In the short term, during construction, there could potentially be negative effects on the water environment i.e. from construction and decommissioning waste. There is potential for medium and longer term impacts on the water environment if drainage issues, etc, are not addressed. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction, surface drainage, etc.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	In the short term, during construction, there can potentially be negative effects on the water environment and associated habitats and species. There is potential for medium and longer term impacts on the water environment if drainage issues, etc, are not addressed. The SG will set out criteria to mitigate direct and indirect impacts, including temporary impacts during construction and decommissioning.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	In the short term, during construction, there can potentially be negative effects on the water environment including designated sites. There is potential for medium and longer term impacts on the water environment if drainage issues, etc, are not addressed. The SG will set out criteria to mitigate direct and indirect impacts, including temporary impacts during construction and decommissioning. The Spatial Framework specifically protects designated sites associated with the water environment including Ramsar and Natura 2000 sites, SSSIs, and NNRs.

Wind				
Climatic Factors	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There are potential for negative effects on carbon rich soils (and other valuable soil resources) from the construction of turbines and associated infrastructure. The SG will set out criteria to mitigate impacts and identify opportunities for enhancement such as peatland restoration. The Spatial Framework specifically protects Class 1 and 2 peatlands and will direct development to areas where impacts on these resources will be minimised.
	SEA 3 - Promote the sustainable management of the water environment	+/-	S/M/L	There is potential for negative effects on the water environment, both during construction and from the development itself if not appropriately designed and/or managed. The SG will set out criteria to mitigate any short, medium and long-term impacts on the water environment, and where applicable, opportunities for enhancement.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M	There is potential for the loss and/or removal of forestry and woodland cover to make way for turbine development and associated infrastructure. There is likely to be associated negative impacts from forestry and woodland removal in terms of climatic conditions where there is no compensatory planting. There is the opportunity for compensatory and enhanced planting, where applicable, to offset proposals for forestry/woodland removal.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation and resultant improvements to air quality.
Material Assets	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M	There may be potential for the loss of economic benefits associated with agricultural production as a result of direct loss of prime agricultural land. The SG will set out criteria to mitigate against impacts as well as identify opportunities for enhancement such as peatland restoration.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-	S/M	There is potential for loss of and/or negative effects on land uses and land cover(s) which contribute to society from the construction of wind turbines and associated infrastructure. As part of the Strategic Land Use Capacity mapping, wind energy developments – at a strategic level – will be targeted to areas where impacts on these resources will be minimised.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M	There may be issues with the management and disposal of timber and forestry waste. Wind energy proposals may offer benefits through developing and enhancing recreational opportunities within woodland and forested settings.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Onshore wind energy has significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 10 – Protect and enhance, where appropriate, the historic and cultural environment	+/-	S/M	There is the potential for direct and indirect effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts.
Cultural Heritage	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	+/-	S/M/L	There is the potential for direct and indirect negative effects from the siting of wind turbines and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals. The Spatial Framework specifically protects National Parks, NSAs and Wild Land, as well as the Strategic Land Use Capacity mapping identifying areas where impacts on other landscape considerations should be minimised.

Wind				
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	There is the potential for direct and indirect negative effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	There is the potential for direct and indirect negative effects on the integrity of designated sites. The SG will set out criteria to mitigate impacts, and the spatial framework specifically protects sites identified in the Inventory of Gardens and Designed Landscapes and the Inventory of Historic Battlefields.
Landscape	SEA 2 – Avoid adverse impacts on existing land use / cover	+/-	S/M/L	There is the potential for direct and indirect negative effects from the construction of wind turbines and associated infrastructure, in particular on National Parks, National Scenic Areas and areas of Wild Land. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals. The Spatial Framework specifically protects National Parks, NSAs and Wild Land, as well as the Strategic Land Use Capacity mapping identifying areas where impacts on landscape considerations should be minimised.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M/L	There is potential for the loss and/or removal of forestry and woodland cover to make way for wind turbines and associated infrastructure. Where there is no compensatory planting, there is likely to be associated negative effects from forestry and woodland removal in terms of landscape. There are opportunities for compensatory and enhanced planting, where applicable, to offset proposals for forestry/woodland removal.
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area's landscape	+/-	S/M/L	There is the potential for direct and indirect negative effects from the siting of wind turbines and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals, and potential cumulative visual and landscape impacts. The Spatial Framework specifically protects National Parks, NSAs and Wild Land, as well as the Strategic Land Use Capacity mapping identifying areas where impacts on other landscape considerations should be minimised.
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	There is the potential for direct and indirect negative effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	There is the potential for direct and indirect negative effects on the integrity of designated sites. The SG will set out criteria to mitigate impacts, and the Spatial Framework specifically protects sites identified in the Inventory of Gardens and Designed Landscapes and the Inventory of Historic Battlefields.

Hydro

Hydropower				
SEA Topic	SEA Objective	Score	Time-scale	Evaluation
Pop and Human Health	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 10 – Protect and enhance green infrastructure and networks	+/-	S/M	There is potential for negative effects on green networks through the construction of hydro energy developments and associated infrastructure, including the loss of riparian corridors. The SG will set out detailed criteria to mitigate against the loss of existing green networks. Development proposals also offer opportunities to significantly enhance existing, and establish new, green networks.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation and resultant improvements to air quality.
Biodiversity, flora and fauna	SEA 1 – Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There is potential for loss of, and negative effects on, valuable soil resources which support biodiversity and flora/fauna from the construction of hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-	S/M/L	There is potential for negative effects on existing land uses and land cover which provide habitat for biodiversity, in particular protected sites. The SG will set out criteria to mitigate impacts.
	SEA 4 - Promote the important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value.	+/-	S/M	There is potential for the loss and/or removal of forestry and woodland cover to make way for Hydro energy developments and associated infrastructure, which is likely to result in negative impacts on associated biodiversity, flora and fauna. The SG will set out criteria to mitigate impacts, and where applicable, opportunities for enhancement through additional planting.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	There is potential for direct and indirect negative effects on a range of habitats and species, in particular water-based protected sites. The SG will set out criteria to mitigate direct and indirect impacts, and where applicable, opportunities for enhancement.
	SEA 10 - Protect and enhance green infrastructure and networks	+/-	S/M	There is potential for negative effects on green infrastructure and networks through the construction of hydro energy developments and associated infrastructure. The SG will set out detailed criteria to mitigate against the loss of existing green infrastructure and networks.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	There is potential for direct and indirect negative effects on designated sites from the construction of hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate direct and indirect impacts, and where applicable, opportunities for restoration and/or condition-improving.
Soil	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There is potential for loss of, and negative effects on, carbon rich soils and prime agricultural land from the construction of hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	There is potential for direct and indirect negative effects on soil-based habitats and species from the construction of hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate direct and indirect impacts, and where applicable, opportunities for enhancement.
Water	SEA 3 – Promote the sustainable management of the water environment	+/-	S/M/L	In the short term, during construction, there could potentially be negative effects on the water environment i.e. from construction and decommissioning waste, where applicable. There is potential for medium and longer term impacts on the water environment where design and mitigation measures are not implemented. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction and the design and siting of developments.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	In the short term, during construction, there can potentially be negative effects on the water environment and associated habitats and species. There is potential for medium and longer term impacts on the water environment where design and mitigation measures are not implemented. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction and the design and siting of developments.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	In the short term, during construction, there can potentially be negative effects on the water environment including designated sites. There is potential for medium and longer term impacts on the water environment where design and mitigation measures are not implemented. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction and the design and siting of developments.
Climatic Factors	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There are potential for negative effects on carbon rich soils (and other valuable soil resources) from the construction of hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts.

Hydropower				
	SEA 3 - Promote the sustainable management of the water environment	+/-	S/M/L	There is potential for negative effects on the water environment, both during construction and from the development if not appropriately designed and/or operated, including incorporating appropriate mitigation measures. The SG will set out criteria to mitigate any short, medium and long-term impacts on the water environment.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M	There is potential for the loss and/or removal of forestry and woodland cover to make way for hydro energy developments and associated infrastructure. There is likely to be associated negative impacts from forestry and woodland removal in terms of climatic conditions where there is no compensatory planting. There is the opportunity for compensatory and enhanced planting, where applicable, to offset proposals for forestry/woodland removal.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation and resultant improvements to air quality.
Material Assets	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M	There may be potential for the loss of economic benefits associated with agricultural production as a result of direct loss of prime agricultural land. The SG will set out criteria to mitigate against impacts as well as identify opportunities for enhancement such as peatland restoration.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-	S/M	There is potential for loss of and/or negative effects on land uses and land cover(s) which contribute to society from the construction of hydro energy developments and associated infrastructure. As part of the Strategic Land Use Capacity mapping, hydro energy developments – at a strategic level – will be targeted to areas where impacts on these resources will be minimised.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M	There may be issues with the management and disposal of timber and forestry waste. Hydro energy proposals may offer benefits through developing and enhancing recreational opportunities within existing or new woodland and forested settings.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Hydro energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 10 – Protect and enhance, where appropriate, the historic and cultural environment	+/-	S/M/L	There is the potential for direct and indirect effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts, and where applicable, opportunities for enhancement including interpretation.
Cultural Heritage	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	+/-	S/M/L	There is the potential for direct and indirect negative effects from hydro energy developments have and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.

Hydropower				
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	There is the potential for direct and indirect negative effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts, and where applicable, opportunities for enhancement including opening up buried sites for investigation during construction and to develop and promote cultural heritage assets to a wider audience.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	There is the potential for direct and indirect negative effects on the integrity of designated sites. The SG will set out criteria to mitigate impacts.
Landscape	SEA 2 – Avoid adverse impacts on existing land use / cover	+/-	S/M/L	There is the potential for direct and indirect negative effects from the construction of hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M/L	There is potential for the loss and/or removal of forestry and woodland cover to make way for Hydro energy developments and associated infrastructure. Where there is no compensatory planting, there is likely to be associated negative effects from forestry and woodland removal in terms of landscape. There are opportunities for compensatory and enhanced planting, where applicable, to offset proposals for forestry/woodland removal.
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area's landscape	+/-	S/M/L	There is the potential for direct and indirect negative effects from Hydro energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals, and potential cumulative visual and landscape impacts.
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	There is the potential for direct and indirect negative effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	There is the potential for direct and indirect negative effects on the integrity of designated sites. The SG will set out criteria to mitigate impacts.

Solar

Solar				
SEA Topic	SEA Objective	Score	Time-scale	Evaluation
Pop and Human Health	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 10 – Protect and enhance green infrastructure and networks	+/-	S/M	There is potential for negative effects on green networks through the removal of existing field boundaries and green corridors during construction of solar energy developments and associated infrastructure. The SG will set out detailed criteria to mitigate against the loss of existing green infrastructure and networks.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation and resultant improvements to air quality.
Biodiversity, flora and fauna	SEA 1 – Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There is potential for loss of, and negative effects on, valuable soil resources which support a variety of species and habitats for biodiversity from solar energy developments, particularly during infrastructure construction and where applicable, decommissioning. The SG will set out criteria to mitigate impacts.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-	S/M/L	There is potential for negative effects on existing land uses and land cover which provide habitat for biodiversity, in particular protected sites. The SG will set out criteria to mitigate impacts, and where applicable, opportunities for enhancement. In addition, solar energy developments have the potential to positively impact on biodiversity, flora and fauna through temporary cessation of intensive agricultural processes which may otherwise limit biodiversity. This allows the land to be rested and creates opportunities for further beneficial land management such as wildflower meadows.
	SEA 4 - Promote the important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value.	N/A		No significant effects identified.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	There is potential for direct and indirect negative effects on a range of habitats and species, in particular protected sites and species. The SG will set out criteria to mitigate direct and indirect impacts, and where applicable, opportunities for enhancement.
	SEA 10 - Protect and enhance green infrastructure and networks	+/-	S/M	There is potential for negative effects on green networks through the removal of existing field boundaries and natural corridors during construction of solar energy developments and associated infrastructure. The SG will set out detailed criteria to mitigate against the loss of existing green infrastructure and networks, and opportunities for enhancement where applicable.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	There is potential for direct and indirect negative effects on designated sites from the construction of solar energy developments and associated infrastructure. The SG will set out criteria to mitigate direct and indirect impacts.
Soil	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There is potential for loss of, and negative effects on, carbon rich soils and prime agricultural land from the construction of solar energy developments, in particular the construction of infrastructure such as service tracks and electricity transmission infrastructure. The SG will set out criteria to mitigate impacts.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	There is potential for direct and indirect negative effects on soil-based habitats and species from the construction of solar energy developments, in particular associated infrastructure. The SG will set out criteria to mitigate direct and indirect impacts, and where applicable, opportunities for enhancement.
Water	SEA 3 – Promote the sustainable management of the water environment	+/-	S/M/L	In the short term, during construction, there could potentially be negative effects on the water environment i.e. from construction. There is potential for medium and longer term impacts on the water environment where design and mitigation measures are not implemented and issues such as surface water run-off and change in land-cover are not considered, as well as potential impacts from decommissioning where applicable. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction and the design and siting of developments.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	In the short term, during construction, there can potentially be negative effects on the water environment and associated habitats and species. There is potential for medium and longer term impacts on the water environment where design and mitigation measures are not implemented and issues such as surface water run-off and change in land-cover are not considered, as well as potential impacts from decommissioning where applicable. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction and the design and siting of developments.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	In the short term, during construction, there can potentially be negative effects on the water environment including designated sites. There is potential for medium and longer term impacts on the water environment where design and mitigation measures are not implemented and issues such as surface water run-off and change in land-cover are not considered, as well as potential impacts from decommissioning where applicable. The SG will set out criteria to mitigate direct and indirect impacts through guidance on construction and the design and siting of developments.

Solar				
Climatic Factors	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M/L	There are potential for negative effects on carbon rich soils (and other valuable soil resources) from the construction of solar energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts.
	SEA 3 - Promote the sustainable management of the water environment	+/-	S/M/L	There is potential for negative effects on the water environment, during construction, operational and decommissioning phases if not appropriately designed and/or operated, including incorporating appropriate mitigation measures. The SG will set out criteria to mitigate any short, medium and long-term impacts on the water environment.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M	There is potential for the loss and/or removal of forestry and woodland cover to make way for solar energy developments and associated infrastructure, particularly where these form field boundaries within large-scale solar schemes. There is likely to be associated negative impacts from forestry and woodland removal in terms of climatic conditions where there is no compensatory planting. There is the opportunity for compensatory and enhanced planting, where applicable, to offset proposals for forestry/woodland removal.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation and resultant improvements to air quality. There may also be an effect on the local micro-climate resulting from shading of the solar panels.
Material Assets	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-	S/M	There may be potential for the loss of economic benefits associated with agricultural production as a result of direct loss of prime agricultural land. The SG will set out criteria to mitigate against impacts as well as identify opportunities for enhancement such as peatland restoration.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-	S/M	There is potential for loss of and/or negative effects on land uses and land cover(s) which contribute to society from the construction of solar energy developments and associated infrastructure. As part of the Strategic Land Use Capacity mapping, solar energy developments – at a strategic level – will be targeted to areas where impacts on these resources will be minimised.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M	There may be issues with the management and disposal of timber and forestry waste. Solar energy proposals may offer benefits through developing and enhancing recreational opportunities within woodland and forested settings.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Solar energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 10 – Protect and enhance, where appropriate, the historic and cultural environment	+/-	S/M/L	There is the potential for direct and indirect effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts.

Solar				
Cultural Heritage	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	+/-	S/M/L	There is the potential for direct and indirect negative effects from solar energy developments and associated infrastructure, in particular on the setting of historic buildings and features. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	There is the potential for direct and indirect negative effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	There is the potential for direct and indirect negative effects on the integrity of designated sites. The SG will set out criteria to mitigate impacts.
Landscape	SEA 2 – Avoid adverse impacts on existing land use / cover	+/-	S/M/L	There is the potential for direct and indirect negative effects from the construction of solar energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals, and opportunities for enhancement.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-	S/M/L	There is potential for the loss and/or removal of forestry and woodland cover to make way for solar energy developments and associated infrastructure. Where there is no compensatory planting, there is likely to be associated negative effects from forestry and woodland removal in terms of landscape. There are opportunities for compensatory and enhanced planting, where applicable, to offset proposals for forestry/woodland removal.
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	+/-	S/M/L	There is the potential for direct and indirect negative effects from solar energy developments and associated infrastructure. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals, and potential cumulative visual and landscape impacts.
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	There is the potential for direct and indirect negative effects on historic and cultural environment, including the setting of historic and cultural features. The SG will set out criteria to mitigate impacts.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	There is the potential for direct and indirect negative effects on the integrity of designated sites. The SG will set out criteria to mitigate impacts.

Biomass

Biomass				
SEA Topic	SEA Objective	Score	Time-scale	Evaluation
Pop and Human Health	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 10 – Protect and enhance green infrastructure and networks	N/A		No significant effects identified
	SEA 12 – Protect and enhance air quality	+/-	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, however there are potential negative effects related to the emission of particulate matter from biomass facilities which may impact on health. The SG will refer to adopted SG on Air Quality to detail the planning policy requirements for mitigating against the negative impacts associated with the emission of particulate matter.
Biodiversity, flora and fauna	SEA 1 – Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass, which have low biodiversity value and are difficult for species to move through. The planting of existing vacant and derelict sites for biomass crops could also have significant negative effects as these areas can be rich in biodiversity. As such any new planting proposals will be required to consider and be sensitive to existing habitats and species both within the site and those out-with it but which move through it. Potential for secondary negative impacts on biodiversity, particularly in respect of particulate emissions, due to diminished air quality as a result of the widespread adoption of biomass. The avoidance of any adverse impacts on valuable soil resources, including direct loss, will be strongly advocated in the SG.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass. The SG will identify guidance to support sustainable land use management solutions in respect of biomass planting.
	SEA 4 - Promote the important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value.	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass, which have low biodiversity value and are difficult for species to move through. The planting of existing vacant and derelict sites for biomass crops could also have significant negative effects as these areas can be rich in biodiversity. As such any new planting proposals will be required to consider and be sensitive to existing habitats and species both within the site and those out-with it but which move through it. Potential for secondary negative impacts on biodiversity, particularly in respect of particulate emissions, due to diminished air quality as a result of the widespread adoption of biomass.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass, which have low biodiversity value and are difficult for species to move through. The planting of existing vacant and derelict sites for biomass crops could also have significant negative effects as these areas can be rich in biodiversity. As such any new planting proposals will be required to consider and be sensitive to existing habitats and species both within the site and those out-with it but which move through it. Potential for secondary negative impacts on biodiversity, particularly in respect of particulate emissions, due to diminished air quality as a result of the widespread adoption of biomass.
	SEA 10 - Protect and enhance green infrastructure and networks	+/-		Biomass energy developments have the potential to result in significant negative effects on green networks as a result of the planting of large areas of monoculture biomass, which have low biodiversity value and are difficult for species to move through.
	SEA 11 - Safeguard the integrity of designated sites	+/-		Biomass energy developments have the potential to result in significant negative effects on designated sites as a result of the planting of large areas of monoculture biomass, which have low biodiversity value and are difficult for species to move through. The planting of existing vacant and derelict sites for biomass crops could also have significant negative effects as these areas can be rich in biodiversity. As such any new planting proposals will be required to consider and be sensitive to existing habitats and species both within the site and those out-with it but which move through it. Potential for secondary negative impacts on biodiversity, particularly in respect of particulate emissions, due to diminished air quality as a result of the widespread adoption of biomass.
Soil	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-		Sensitive soil types should be identified and avoided, and the SG should also promote the avoidance of new planting of biomass crops on deep peat soils and promote the application of the UK Forestry Standard and Guidelines and sustainable forest management practices. In addition, it should seek the targeting of the right tree in the right place in order to avoid potential significant negative environmental effects. The measures used to increase biomass yields from existing woodland and forests e.g. extraction of harvesting residues could also contribute to increased soil and water acidification. In addition a range of threats are associated with the growing pressure to harvest tree stumps for woodfuel. These include: increased risk of ground damage leading to soil erosion and siltation, with potential secondary negative effects on water quality.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-		Potential negative effects on soils could give rise to adverse effects on habitats and species that are dependent upon particular soil conditions.

Biomass				
Water	SEA 3 – Promote the sustainable management of the water environment	+/-		The measures used to increase biomass yields from existing woodland and forests e.g. extraction of harvesting residues could contribute to increased soil and water acidification. In addition a range of threats are associated with the growing pressure to harvest tree stumps for woodfuel. These include: increased risk of ground damage leading to soil erosion and siltation, with potential secondary negative effects on water quality. The SG will set out guidance to assist in mitigating against the impacts of biomass planting on the water environment and associated species and habitats, including designated sites.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-		Potential negative effects on water quality could give rise to adverse effects on water-based habitats and species. The SG will set out guidance to assist in mitigating against the impacts of biomass planting on the water environment and associated species and habitats, including designated sites.
	SEA 11 - Safeguard the integrity of designated sites	+/-		Potential negative effects on water quality could give rise to adverse effects on water-based designated sites, either directly or from downstream effects. The SG will set out guidance to assist in mitigating against the impacts of biomass planting on the water environment and associated species and habitats, including designated sites.
Climatic Factors	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-		Sensitive soil types should be identified and avoided, and the SG should also promote the avoidance of new planting of biomass crops on deep peat soils and promote the application of the UK Forestry Standard and Guidelines and sustainable forest management practices. In addition, it should seek the targeting of the right tree in the right place in order to avoid potential significant negative environmental effects.
	SEA 3 - Promote the sustainable management of the water environment	N/A		No significant effects identified
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass, which have low biodiversity value and are difficult for species to move through. The planting of existing vacant and derelict sites for biomass crops could also have significant negative effects as these areas can be rich in biodiversity. As such any new planting proposals will be required to consider and be sensitive to existing habitats and species both within the site and those out-with it but which move through it. Potential for secondary negative impacts on biodiversity, particularly in respect of particulate emissions, due to diminished air quality as a result of the widespread adoption of biomass.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 12 – Protect and enhance air quality	+/-	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, however there are potential negative effects related to the emission of particulate matter from biomass facilities which may impact on health. The SG will refer to adopted SG on Air Quality to detail the planning policy requirements for mitigating against the negative impacts associated with the emission of particulate matter.
Material Assets	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	+/-		Sensitive soil types should be identified and avoided, and the SG should also promote the avoidance of new planting of biomass crops on deep peat soils and promote the application of the UK Forestry Standard and Guidelines and sustainable forest management practices. In addition, it should seek the targeting of the right tree in the right place in order to avoid potential significant negative environmental effects.
	SEA 2 - Avoid adverse impacts on existing land use/cover	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass. The SG will identify guidance to support sustainable land use management solutions in respect of biomass planting.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	+/-		Through the requirement for feedstock for a biomass plant there may be direct loss of forest/woodland cover. The SG will ensure that biomass proposals include sustainable stocks of woodfuels.
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.

Biomass

	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Biomass energy developments have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 10 – Protect and enhance, where appropriate, the historic and cultural environment	N/A		No significant effects identified
Cultural Heritage	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	N/A		No significant effects identified
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	N/A		No significant effects identified
	SEA 11 – Safeguard the integrity of designated sites	N/A		No significant effects identified
Landscape	SEA 2 – Avoid adverse impacts on existing land use / cover	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass. The SG will identify guidance to support sustainable land use management solutions in respect of biomass planting.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	+/-		Biomass energy developments have the potential to result in significant negative effects as a result of the planting of large areas of monoculture biomass. The SG will identify guidance to support sustainable land use management solutions in respect of biomass planting.
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	N/A		No significant effects identified
	SEA 11 – Safeguard the integrity of designated sites	N/A		No significant effects identified

Heat Pumps

Heat Pumps				
SEA Topic	SEA Objective	Score	Time-scale	Evaluation
Pop and Human Health	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 10 – Protect and enhance green infrastructure and networks	N/A		No significant effects identified
	SEA 12 – Protect and enhance air quality	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive air quality effects.
Biodiversity, flora and fauna	SEA 1 – Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 2 - Avoid adverse impacts on existing land use/cover	N/A		No significant effects identified
	SEA 4 - Promote the important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value.	N/A		No significant effects identified.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	Medium and large-scale water source heat pumps have the potential to negatively affect the diversity of water-based habitats and species, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 10 - Protect and enhance green infrastructure and networks	N/A		No significant effects identified
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	Medium and large-scale water source heat pumps have the potential to negatively affect the diversity of water-based habitats and species, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
Soil	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 5 - Conserve and enhance the diversity of habitats and species	N/A		No significant effects identified
Water	SEA 3 – Promote the sustainable management of the water environment	+/-	S/M/L	Medium and large-scale water source heat pumps have the potential to negatively affect the water environment, during construction, operation and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals and sustainable construction methods.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	Medium and large-scale water source heat pumps have the potential to negatively affect the diversity of water-based habitats and species, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	Medium and large-scale water source heat pumps have the potential to negatively affect the water environment, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals and sustainable construction methods.
Climatic Factors	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 3 - Promote the sustainable management of the water environment	+/-	S/M/L	Medium and large-scale water source heat pumps have the potential to negatively affect the water environment, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals and sustainable construction methods.

Heat Pumps				
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 12 – Protect and enhance air quality	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive air quality effects.
Material Assets	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 2 - Avoid adverse impacts on existing land use/cover	N/A		No significant effects identified
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Heat pump technologies have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 10 – Protect and enhance, where appropriate, the historic and cultural environment	N/A		No significant effects identified
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	N/A		No significant effects identified
Cultural Heritage	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	Heat pump technologies have potential direct and indirect negative effects on historic buildings and cultural features where sited inappropriately. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	Heat pump technologies have potential direct and indirect negative effects on designated historic buildings and cultural features where sited inappropriately. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.

Heat Pumps

Landscape	SEA 2 – Avoid adverse impacts on existing land use / cover	N/A		No significant effects identified
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	N/A		No significant effects identified
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	Heat pump technologies have potential direct and indirect negative effects on historic buildings and cultural features where sited inappropriately. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	Heat pump technologies have potential direct and indirect negative effects on designated historic buildings and cultural features where sited inappropriately. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.

Other Renewables

Other Renewables				
SEA Topic	SEA Objective	Score	Time-scale	Evaluation
Pop and Human Health	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation.
	SEA 10 – Protect and enhance green infrastructure and networks	N/A		No significant effects identified
	SEA 12 – Protect and enhance air quality	+/-	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive air quality effects. However, anaerobic digestion, energy from waste and landfill gas technologies have the potential to result in negative air quality impacts from particular matter emissions.
Biodiversity, flora and fauna	SEA 1 – Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 2 - Avoid adverse impacts on existing land use/cover	N/A		No significant effects identified
	SEA 4 - Promote the important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value.	N/A		No significant effects identified.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-/?	S/M/L	Hydro micro-generation schemes have the potential to negatively affect the diversity of water-based habitats and species, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 10 - Protect and enhance green infrastructure and networks	N/A		No significant effects identified
	SEA 11 - Safeguard the integrity of designated sites	+/-/?	S/M/L	Hydro micro-generation schemes have the potential to negatively affect the integrity of water-based designated sites, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
Soil	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 5 - Conserve and enhance the diversity of habitats and species	N/A		No significant effects identified
Water	SEA 3 – Promote the sustainable management of the water environment	+/-	S/M/L	Hydro micro-generation schemes have the potential to negatively affect the water environment, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 5 - Conserve and enhance the diversity of habitats and species	+/-	S/M/L	Hydro micro-generation schemes have the potential to negatively affect the diversity of water-based habitats and species, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 11 - Safeguard the integrity of designated sites	+/-	S/M/L	Hydro micro-generation schemes have the potential to negatively affect the integrity of water-based designated sites, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals and sustainable construction methods.
Climatic Factors	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified

Other Renewables				
	SEA 3 - Promote the sustainable management of the water environment	+/-	S/M/L	Hydro micro-generation schemes have the potential to negatively affect the water environment, during construction, operational and decommissioning phases. The SG will set out criteria to mitigate impacts, including guidance on design and siting of proposals.
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 12 – Protect and enhance air quality	+/-	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive air quality benefits. However, anaerobic digestion, energy from waste and landfill gas technologies have the potential to result in negative air quality impacts from particular matter emissions.
Material Assets	SEA 1 - Avoid adverse impacts on valuable soil resources e.g. prime agricultural land, carbon rich soils	N/A		No significant effects identified
	SEA 2 - Avoid adverse impacts on existing land use/cover	N/A		No significant effects identified
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 6 – Increase the potential of Perth and Kinross in contributing to Scotland’s renewable energy resources	++	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 7 – Support Adaptation to climate change and ‘future proofing’ of new development	++	S/M/L	Other renewable technologies and processes have significant potential to reduce dependency on fossil fuels and increase PKC potential to contribute to renewable energy generation, with associated positive climatic benefits.
	SEA 10 – Protect and enhance, where appropriate, the historic and cultural environment	+/-	S/M/L	Micro-generation and other renewable technologies may enhance historic buildings by providing affordable heating and energy, which may allow them to become more affordable to repair, maintain and use. There may also be negative impacts on some historic buildings due to inappropriate design and siting, however the SG will set out criteria to mitigate against any negative impacts including guidance on design and siting.
Cultural Heritage	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	N/A		No significant effects identified
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	Micro-generation and other renewable technologies may enhance historic buildings by providing affordable heating and energy, which may allow them to become more affordable to repair, maintain and use. There may also be negative impacts on some historic buildings due to inappropriate design and siting, however the SG will set out criteria to mitigate against any negative impacts including guidance on design and siting.

Other Renewables				
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	Micro-generation and other renewable technologies may enhance designated historic buildings by providing affordable heating and energy, which may allow them to become more affordable to repair, maintain and use. There may also be negative impacts on some designated historic buildings due to inappropriate design and siting, however the SG will set out criteria to mitigate against any negative impacts including guidance on design and siting.
Landscape	SEA 2 – Avoid adverse impacts on existing land use / cover	N/A		No significant effects identified
	SEA 4 – Promote important role and potential of forests and woodlands and avoid adverse impacts on their natural heritage value	N/A		No significant effects identified
	SEA 8 – Conserve and enhance the character, local distinctiveness, scenic and cultural value of the area’s landscape	N/A		No significant effects identified
	SEA 9 – Protect and enhance, where appropriate, the historic and cultural heritage	+/-	S/M/L	Micro-generation and other renewable technologies may enhance historic buildings by providing affordable heating and energy, which may allow them to become more affordable to repair, maintain and use. There may also be negative impacts on some historic buildings due to inappropriate design and siting, however the SG will set out criteria to mitigate against any negative impacts including guidance on design and siting.
	SEA 11 – Safeguard the integrity of designated sites	+/-	S/M/L	Micro-generation and other renewable technologies may enhance designated historic buildings by providing affordable heating and energy, which may allow them to become more affordable to repair, maintain and use. There may also be negative impacts on some designated historic buildings due to inappropriate design and siting, however the SG will set out criteria to mitigate against any negative impacts including guidance on design and siting.