March 2025

Glen Earrach Pumped Storage Hydro

Environmental Impact Assessment Report

Volume 5: Appendices
Appendix 17.1: Climate Change Risk Assessment

Glen Earrach Energy Ltd

Glen Earrach AECOM

Quality information

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Issue History

Issue	Issue date	Details	Authorized	Name	Position
1	March 2025	Submission	DL	David Lee	Technical Director – Renewable Energy

Appendix 17-1: Climate Change Risk Assessment (CCRA)

Table 17-1: CCRA – Pre-construction & Enabling and Construction

RISK ASSESSMENT										ADAPTATION MEASURES					
Risk ID	Climate Variable	Risk Statement	Direct or Indirect	Components Impacted	Impact Type	Planned Controls	Initial risk rating RCP8.5 (2020 – 2049)			Justification	Adaptation measures	Responsibility	Residual risk rating RCP8.5 (2020 – 2049)		
		Description of impacts			e.g. Asset damage / engineering / operational, Health and safety, Environmental, Social, Financial, Reputation, Cultural	e.g. controls planned within the current design that mitigate the identified risk	Likelihood	Consequence	Risk Rating	Rationale for likelihood and consequences and any changes between climate scenarios	e.g. additional design or operational measures that can be implemented to further reduce the climate risk		Likelihood	Consequence	Risk Rating
PRE-CONSTRUCTION & ENABLING AND CONSTRUCTION															
1	Extreme Heat	Extreme heat days results in ambient temperatures to rise above optimal design temperatures of construction equipment. This can cause the overheating of construction equipment, resulting in delay, repairs and additional project costs.	Direct	Construction equipment & site	Asset damage, financial, health & safety	The Contractor will monitor weather forecasts, and plan works accordingly, protecting construction equipment and materials from any extreme heat weather conditions.	Unlikely	Minor	Low	Occurrence of extreme heat events unlikely to change considerably during construction phase	No further adaptation measures required	Contractor	Unlikely	Minor	Low
2	Extreme Heat	Extreme heat events causes health and safety to the construction force, which could lead to sunstroke and dehydration, or in a worst-case scenario death.	Direct	Human health & safety e.g. Staff, visitors	Health & safety	The Contractor will monitor weather forecasts, and plan works accordingly, protecting workers from any extreme heat weather conditions.	Unlikely	Minor	Low	Occurrence of extreme heat events unlikely to change considerably during construction phase	No further adaptation measures required	Contractor	Unlikely	Minor	Low

3	Changes in precipitation (Extreme rainfall)	Extreme rainfall event results in damage to construction equipment and/or unsafe working conditions resulting in a delay to construction	Direct	Human health & safety e.g. Staff, visitors Construction equipment & site	Health & safety, asset damage, financial	Contractors will monitor weather forecasts and receive Scottish Environmental Protection Agency (SEPA) flood alerts and plan works accordingly with internal methodologies to manage workers and resources in extreme weather conditions such as storms, flooding. Health and safety plans to be in place.	Unlikely	Minor	Low	Precipitation changes are uncertain, though likely to increase slightly during winter months	No further adaptation measures required	Contractor	Unlikely	Minor	Low
4	Changes in precipitation (Extreme rainfall)	Extreme rainfall events can cause surface water flooding at the construction site, which can cause disruption and damage to the site. Flooding on the site can result in critical infrastructure becoming damaged, which can increase costs.	Direct	Headpond Embankment Tailpond Construction equipment & site	Health & safety, financial, asset damage	A surface water drainage system on site will be designed to accommodate the 1:30 year plus 40% climate change rainfall event without any surface water flooding.	Unlikely	Moderate	Medium	Extreme rainfall events are unlikely to change considerably during the construction phase. While unlikely, damage to infrastructure during construction can cause significant long-term effects.	No further adaptation measures required	Contractor	Unlikely	Moderate	Medium
5	Changes in precipitation (Extreme rainfall)	Extreme rainfall event causes surface water flooding of the construction site and local roads. This affects the viability of and access to the site, causing potential delays to construction work, disruption to supply chains, and damage to equipment.	Indirect	Permanent Compounds Temporary Accommodation Human health & safety e.g. Staff, visitors Construction equipment & site	Financial, health & safety, asset damage	Surface water should be stored within the drainage system either below ground or in formal above ground systems for the 1 in 30-year storm event with an allowance for climate change (allowance of 42% for rainfall). In excess of this up to the 1 in 200 year plus climate change event, ponding is tolerated above ground on the site. Any ponding would need to be contained in areas such as formal landscaping or car park areas.	Unlikely	Moderate	Medium	According to UKCP18 projections, increased winter rainfall may result in more extreme rainfall periods and flood events.	Critical construction equipment to be stored at higher ground levels. Welfare areas to be assigned to higher ground levels.	Contractor	Unlikely	Minor	Low
6	Wildfire Event	Increased heatwaves and dry periods increase the potential for wildfires, which could result in considerable damage to construction equipment and the construction site itself.	Direct	Construction equipment & site	Financial, health & safety, asset damage	Weather forecasts should be monitored so expected extreme temperatures are prepared for in advance, and	Rare	Insignificant	Low	While unlikely in the construction phase, wildfires can have significant impacts on construction	No further adaptation measures required	Contractor	Rare	Insignificant	Low

		This could result in asset damage, plant downtime and machinery repair/ replacement. In addition, this could be exacerbated by any combustible materials at the site. E.g. generator fuel.				contingency measures can be put in place to minimise disruption to the construction.				sites and building work					
7	Wildfire Event	Increased heatwaves and dry periods increase the potential for wildfires, which could result in injury or fatality to personal. This could be exacerbated by any combustible materials at the site. E.g. generator fuel.	Direct	Human health & safety e.g. Staff, visitors	Health & safety	Weather forecasts should be monitored so expected extreme temperatures are prepared for in advance, and contingency measures can be put in place to minimise disruption to the construction.	Rare	Minor	Low	While unlikely in the construction phase, wildfires can have significant impacts on construction site workers and emergency services	No further adaptation measures required	Contractor	Rare	Minor	Low
8	Temperature-related (Extreme cold)	Construction workers are at risk of hypothermia due to low temperatures. As a worst-case scenario this could lead to death.	Direct	Human health & safety e.g. Staff, visitors	Health & safety	The contractor will monitor weather forecasts, and plan works accordingly, managing workers during periods of extreme cold weather.	Unlikely	Minor	Low	UKCP 18 temperature projections indicate that during winter periods temperatures are likely to drop below 0°C, thus resulting in freezing conditions. However, this is unlikely to occur during the construction phase	No further adaptation measures required	Contractor	Unlikely	Minor	Low
9	Temperature-related (Extreme cold)	Low temperatures can lead to ground areas becoming frozen. This can lead to delays and disruption to construction activities, as the areas will need to be de-iced.	Direct	Construction equipment & site	Asset damage and Financial	The contractor will monitor weather forecasts, and plan works accordingly, managing workers during periods of extreme cold weather.	Unlikely	Insignificant	Low	UKCP 18 temperature projections indicate that during winter periods temperatures are likely to drop below 0°C, thus resulting in freezing conditions. However, this is unlikely to occur during the construction phase	No further adaptation measures required	Contractor	Unlikely	Insignificant	Low

10	Storm Events	Storm events create an unsafe environment for construction workers. Workers in outdoor or unstable environments face increased physical risks during storms, including injuries from falling debris, flooding, or high winds.	Direct	Human health & safety e.g. Staff, visitors	Health & safety	The contractor will monitor weather forecasts and plan works accordingly, managing workers during storm events.	Moderate	Minor	Medium	The Met Office has projected an increase in near surface wind speeds over the UK for the winter season when more significant impacts of wind are experienced. However, the increase in wind speeds is modest compared to natural variability from month to month and season to season, so confidence is low. Planned controls mitigate the most severe consequences of this risk	No further adaptation measures required	Contractor	Moderate	Minor	Medium
11	Storm Events	Storms and severe weather can disrupt construction of the Proposed Development Impacts include delays to construction works, damage to construction materials and machinery, and supply chain disruptions. Flooding and blocked roads can also affect material delivery and personnel movement.	Direct	Construction equipment & site	Asset damage and Financial	The contractor will monitor weather forecasts and plan works accordingly, managing workers during storm events. Materials are to be sourced locally where practicable, extending to Europe and China where necessary.	Moderate	Minor	Medium	The Met Office has projected an increase in near surface wind speeds over the UK for the winter season when more significant impacts of wind are experienced. However, the increase in wind speeds is modest compared to natural variability from month to month and season to season, so confidence is low. Sourcing materials locally will reduce reliance on the global supply chain and mitigate exposure to risks from international distribution.	No further adaptation measures required	Contractor	Moderate	Minor	Medium

Table 17-2: CCRA - Operation (initial risk assessment)

RISK IDENTIFICATION						RISK ASSESSMENT										
Risk ID	**Climate variable**	**Risk statement**	**Direct or Indirect**	**Components impacted**	**Impact type**	**Planned Controls**	**Initial risk rating RCP8.5 (2020-2049)**			**Initial risk rating RCP8.5 (2030 - 2059)**			**Initial risk rating RCP8.5 (2070 - 2099)**			**Justification**
		Description of impacts			**e.g. Asset damage / engineering / operational, Health and safety, Environmental, Social, Financial, Reputation, Cultural**	**e.g. controls planned within the current design that mitigate the identified risk**	**Likelihood**	**Consequence**	**Risk Rating**	**Likelihood**	**Consequence**	**Risk Rating**	**Likelihood**	**Consequence**	**Risk Rating**	**Rationale for likelihood and consequences and any changes between climate scenarios**
OPERATION																
12	Extreme temperatures (heat)	Heatwaves result in heat stress for outdoor workers regarding maintenance activities, causing health and safety incidents. e.g. sunstroke & dehydration	Direct	Human health & safety e.g. Staff, visitors	Health & safety	The Operator will monitor weather forecasts and plan works accordingly, protecting workers and resources from any extreme weather conditions.	Unlikely	Insignificant	Low	Moderate	Minor	Medium	Moderate	Minor	Medium	UKCP18 temperature projections indicate that increased temperatures are likely to occur during the operational phase. Heatwaves are more likely to occur especially during the summer period. Planned controls should mitigate the worst effects on operation site workforce from extreme heat.
13	Changes in Precipitation (Flooding)	Extreme rainfall events could result in changes to streamflow's that could increase the water levels in both the lower and upper reservoir (Headpond). These could create operational challenges as design specifications could be exceeded, potentially leading to the suspension of operations.	Direct	Headpond Embankment Tailpond Headpond Inlet/Outlet Structure Headrace Tailrace Spillway/Spillway Channel	Asset damage/ Engineering/ Operational and Financial	A flood risk assessment will be included with the EIA report, this will be supported by a detailed Flood Risk Assessment (FRA) and will be conducted in line with SEPA guidance. Planned constraints on the Proposed Development - Glen Earrach PSH will not generate if flood levels in Loch Ness exceed 1-in-10-year event.	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Moderate	High	According to UKCP18 projections, increased winter rainfall may result in more extreme rainfall periods and flood events. At a UK level, flooding from rivers is the dominant source in terms of potential damage, but surface water flooding accounts for a greater number of assets at risk.
14	Changes in Precipitation (Flooding)	Extreme rainfall events could cause physical damage to the infrastructure (dams, reservoirs, turbines and electrical equipment) of the Proposed Development, which could all be susceptible to damage from flood waters. This could lead to costly repairs and operational downtime	Direct	Headpond Embankment Tailpond Headpond Inlet/Outlet Structure Headrace Tailrace Power Cavern Cable Tunnel Access Tunnel Aboveground GIS Switchyard Spillway/Spillway Channel	Asset damage/ Engineering/ Operational and Financial	A flood risk assessment will be included with the EIA report, this will be supported by a detailed Flood Risk Assessment (FRA) and will be conducted in line with SEPA guidance. Operational maintenance workers to regularly check condition of infrastructure, replacing parts as needed when damage occurs. SEPA requires reservoir owners to appoint a qualified Construction Engineer to oversee the design	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Minor	Medium	According to UKCP18 projections, increased winter rainfall may result in more extreme rainfall periods and flood events. At a UK level, flooding from rivers is the dominant source in terms of potential damage, but surface water flooding accounts for a greater number of assets at risk. Sufficient maintenance activities mitigates the

						and construction of a reservoir and designate each reservoir with a risk rating based on the consequence of an uncontrolled release of water under the Reservoirs (Scotland) Act 2011.												risk of permanent, long-term damage to infrastructure.
15	Changes in Precipitation (Increased seasonal rainfall)	Water stored in reservoirs is vulnerable to high water flows which has implications for bank integrity. More persistent heavy rainfall could damage embankments.	Direct	Embankment	Environmental, asset damage	A Water Management Plan (**Appendix 10.4: Operational Water Management Plan)** describing the mitigation measures to protect the surface water environment will be produced as part of the planning application. This includes mitigation measures like limiting the stripping of vegetation and top-soil and sizing flumes to maintain the current land drainage regime and the existing flow.	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Minor	Medium	According to UKCP18 projections, increased winter rainfall may result in more extreme rainfall periods and flood events. At a UK level, flooding from rivers is the dominant source in terms of potential damage, but surface water flooding accounts for a greater number of assets at risk.
16	Droughts	Periods of reduced precipitation (Droughts) could change the streamflow trends, which could disrupt the water supply to both the lower and upper reservoir (Headpond), thus reducing the electricity generation capacity of the Proposed Development and resulting in downtime.	Direct	Headpond, Tailpond, Headpond Inlet/Outlet Structure Headrace Tailrace Aboveground GIS Switchyard Spillway/Spillway Channel	Asset damage/ Engineering/ Operational and Financial	A Water Management Plan describing the mitigation measures to protect the surface water environment will be produced as part of the planning application.	Unlikely	Minor	Low	Unlikely	Minor	Low	Moderate	Minor	Medium	UKCP 18 data for precipitation for the area suggests increased winter rainfall that has the potential to result in an increase of flood events, rather than persistent decreased rainfall. However, drought risk is considered likely in the east Highlands by NatureScot.
17	Wildfire Event	Increased heatwaves and dry periods increase the potential for wildfires, which could result in considerable damage to plant infrastructure and operational machinery. This could result in asset damage, plant downtime and machinery repair/ replacement. In addition, this could be exacerbated by any combustible materials at the site. E.g. generator fuel.	Direct	Power Cavern Cable Tunnel Access Tunnel Aboveground GIS Switchyard Spillway/Spillway Channel Permanent Compounds	Asset damage/ Engineering/ Operational	The vegetation and woodland near the development mean a risk of wildfires within the Proposed Development's Red Line Boundary. Any fires on site are more likely to be human caused as a result of negligence or process failure rather than as a result of climate change.	Rare	Moderate	Medium	Rare	Moderate	Medium	Rare	Moderate	Medium	As stated by Think Hazard, there is between a 10% and 50% chance of experiencing weather that could support a hazardous wildfire that may pose some risk to the operation of the Proposed Development.

18	Wildfire Event	Wildfire reaches the plant causing considerable damage to site infrastructure and operational machinery. This could result in injury or fatality for workers and people within the vicinity.	Direct	Human health & safety e.g. Staff, visitors	Health & safety	The vegetation and woodland near the development means a low risk of wildfires within the Proposed Development's Red Line Boundary. Any fires on site are more likely to be human caused as a result of negligence or process failure rather than as a result of climate change.	Rare	Moderate	Medium	Rare	Moderate	Medium	Rare	Moderate	Medium	As stated by Think hazard, there is between a 10% and 50% chance of experiencing weather that could support a hazardous wildfire that may poses some risk to plant and facilities.
19	Temperature-related (Extreme cold)	Low temperatures can lead to ground areas becoming frozen. This can lead to delays and disruption to operations as the areas will need to be de-iced.	Direct	Embankment Headpond Inlet/Outlet Structure Aboveground GIS Switchyard Spillway/Spillway Channel Ventilation Shaft Access Tracks Permanent Compounds	Asset damage/ Engineering/ Operational	The Operator will monitor weather forecasts and plan works accordingly, protecting workers and resources from cold weather events.	Unlikely	Minor	Low	Unlikely	Minor	Low	Rare	Minor	Low	UKCP 18 temperature projections indicate that during winter periods temperatures are likely to drop below O°C, thus resulting in freezing conditions. Out to 2099, minimum daily temperatures are expected to increase.
20	Storm Events	Storm events create an unsafe environment for on-site operational workers and contractors. Workers in outdoor or unstable environments face increased physical risks during storms, including injuries from falling debris, flooding, or high winds.	Direct	Human health & safety e.g. Staff, visitors	Health & safety	The Operator will monitor weather forecasts and plan work accordingly, managing workers during storm events. **Appendix 10.4: Outline Water Management Plan** dictates that the safety of site workers takes precedence over other flood risk mitigation measures.	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Minor	Medium	The Met Office has projected an increase in near surface wind speeds over the UK for the winter season when more significant impacts of wind are experienced. However, the increase in wind speeds is modest compared to natural variability from month to month and season to season, so confidence is low. Climate change is expected to lead to more frequent and intense winter storms across the UK. Shut down of operations mitigates risks to operational workforce.

21	Storm Events	Storms and severe weather can disrupt the operation of the Proposed Development. Potential impacts can include damage to infrastructure and machinery. Flooding and blocked roads can also affect site access for operational workers and contractors, thus impacting operations. For roads, climate change hazards have potential to impact services and network users, including increased wind speeds more frequently exceeding operational limits.	Direct	Headpond Embankment Tailpond Headpond Inlet/Outlet Structure Aboveground GIS Switchyard Spillway/Spillway Channel Access Tracks Permanent Compounds	Asset damage, environmental, and financial	The Operator will monitor weather forecasts and plan work accordingly. There are constraints on the operation of the Proposed Development, secured through licensing agreements with SEPA, which are dependent on flood levels in Loch Ness. The Proposed Development will not generate if storm events cause an exceedance of these pre-determined limits.	Unlikely	Minor	Low	Moderate	Moderate	High	Moderate	Major	Extreme	The Met Office has projected an increase in near surface wind speeds over the UK for the winter season when more significant impacts of wind are experienced. However, the increase in wind speeds is modest compared to natural variability from month to month and season to season, so confidence is low. Climate change is expected to lead to more frequent and intense winter storms across the UK. Shut down of operations mitigates some risk to the Proposed Development.
22	Storm Events	The Proposed Development operates in a system of systems. Cascading effects occur when vulnerabilities in one network causes problems on others, and beyond the infrastructure network. If the Proposed Development's generation is disrupted by a storm event, this could lead to a power supply disruption in the local area which in turn could interrupt water supplies to local households, travel and freight operations, or IT and communication equipment. There may be disproportionate impacts in rural areas, such as from limited access to back-up generation or lack of alternative water sources.	Indirect	Cascading effects	Asset damage/engineering/operational, social, financial	Undertaking the CCRA helps to identify risks to the Proposed Development and mitigation measures to reduce the likelihood of potential cascading effects. The planned controls and adaptation measures identified in the rest of the CCRA should be considered in the context of the entire energy system within which the Proposed Development operates.	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Moderate	High	Planned controls from other identified risks can be used to limit the initial potential damage to the Proposed Development, in turn protecting the resilience of the system.

Table 17-3: CCRA Operation (adaptation measures)

			ADAPTATION MEASURES										
Risk ID	**Climate Variable**	**Risk Statement**	**Adaptation Measures**	**Responsibility**	**Residual risk rating RCP8.5 (2020 - 2049)**			**Residual risk rating RCP8.5 (2040 - 2069)**			**Residual risk rating RCP8.5 (2070 - 2099)**		
		Description of impacts	**e.g. additional design or operational measures that can be implemented to further reduce the climate risk**		**Likelihood**	**Consequence**	**Risk Rating**	**Likelihood**	**Consequence**	**Risk Rating**	**Likelihood**	**Consequence**	**Risk Rating**
12	Extreme temperatures (heat)	Heatwaves result in heat stress for outdoor workers regarding maintenance activities, causing health and safety incidents. e.g. sunstroke & dehydration	Elevate the responsibility for proper enforcement of the heat stress guidelines. Ensure all outdoor workers have access to indoor facilities, air conditioning, breaks in shaded areas and water breaks. Cease outdoor and no essential work if working conditions are too dangerous and could result in injury to workers and damage to equipment.	Operator	Unlikely	Insignificant	Low	Moderate	Insignificant	Low	Moderate	Insignificant	Low
13	Changes in Precipitation (Flooding)	Extreme rainfall events could result in changes to streamflow's that could increase the water levels in both the lower and upper reservoir (Headpond). These could create operational challenges as design specifications could be exceeded, potentially leading to the suspension of operations.	No further mitigation measures practical at this time. **Appendix 10.4: Outline Water Management Plan** describes management of flood risks like maintaining the current land drainage regime and limiting the stripping of vegetation and topsoil.	Operator	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Moderate	High
14	Changes in Precipitation (Flooding)	Extreme rainfall events could cause physical damage to the infrastructure (dams, reservoirs, turbines and electrical equipment) of the Proposed Development, which could all be susceptible to damage from flood waters. This could lead to costly repairs and operational downtime	No further mitigation measures practical at this time. **Appendix 10.4: Outline Water Management Plan** describes management of flood risks like maintaining the current land drainage regime and limiting the stripping of vegetation and topsoil.	Operator	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Minor	Medium
15	Changes in Precipitation (Increased seasonal rainfall)	Water stored in reservoirs is vulnerable to high water flows which has implications for bank integrity. More persistent heavy rainfall could damage embankments.	Project planning decisions, project design, construction methods and emergency response planning should take into account the level of seasonal rainfall variability.	Design team, operator for monitoring	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Minor	Medium

16	Droughts	Periods of reduced precipitation (Droughts) could change the streamflow trends, which could disrupt the water supply to both the lower and upper reservoir (Headpond), thus reducing the electricity generation capacity of the Proposed Development and resulting in downtime.	No further mitigation measures required	Operator	Unlikely	Minor	Low	Unlikely	Minor	Low	Moderate	Minor	Medium
17	Wildfire Event	Increased heatwaves and dry periods increase the potential for wildfires, which could result in considerable damage to plant infrastructure and operational machinery. This could result in asset damage, plant downtime and machinery repair/ replacement. In addition, this could be exacerbated by any combustible materials at the site. E.g. generator fuel.	Project planning decisions, project design, construction methods and emergency response planning should take into account the level of wildfire hazard.	Operator	Rare	Minor	Low	Rare	Minor	Low	Rare	Minor	Low
18	Wildfire Event	Wildfire reaches the plant causing considerable damage to site infrastructure and operational machinery. This could result in injury or fatality for workers and people within the vicinity.	Project planning decisions, project design, construction methods and emergency response planning should take into account the level of wildfire hazard.	Operator	Rare	Minor	Low	Rare	Minor	Low	Rare	Minor	Low
19	Temperature-related (Extreme cold)	Low temperatures can lead to ground areas becoming frozen. This can lead to delays and disruption to operations as the areas will need to be de-iced.	No further mitigation measures required	Operator	Unlikely	Minor	Low	Unlikely	Minor	Low	Rare	Minor	Low
20	Storm Events	Storm events create an unsafe environment for on-site operational workers and contractors. Workers in outdoor or unstable environments face increased physical risks during storms, including injuries from falling debris, flooding, or high winds.	No further mitigation measures required	Operator	Unlikely	Insignificant	Low	Moderate	Minor	Medium	Moderate	Minor	Medium
21	Storm Events	Storms and severe weather can disrupt the operation of the Proposed Development. Potential impacts can include damage to infrastructure and machinery. Flooding and blocked roads can also affect site access for operational workers and contractors, thus impacting operations. For roads, climate change hazards have potential to impact services and network users, including increased wind speeds more frequently exceeding operational limits.	**Appendix 10.4: Outline Water Management Plan** describes management of flood risks like maintaining the current land drainage regime and limiting the stripping of vegetation and topsoil.	Operator	Unlikely	Minor	Low	Moderate	Moderate	High	Moderate	Moderate	High

22	Storm Events	The Proposed Development operates in a system of systems. Cascading effects occur when vulnerabilities in one network causes problems on others, and beyond the infrastructure network. If the Proposed Development's generation is disrupted by a storm event, this could lead to a power supply disruption in the local area which in turn could interrupt water supplies to local households, travel and freight operations, or IT and communication equipment. There may be disproportionate impacts in rural areas, such as from limited access to back-up generation or lack of alternative water sources.	Collaborating on collective impact with wider infrastructure providers e.g. Scottish Water and Scottish and Southern Electricity Networks could provide a strategic framework for adaptation and supporting partnerships for considering cross organisation risks and interdependencies.	Operator	Unlikely	Minor	Low	Moderate	Minor	Medium	Moderate	Minor	Medium

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