



Etheridge Shire Risk Assessment

This document has been prepared by Etheridge Shire Council in response to the requirements of the Earth Check Sustainable Destinations Program.



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Foreword

Etheridge Shire Council (ESC) plays a significant role in managing the liveability of this remote region through minimising the impact of environmental and social conditions in the region. This region has a very low population for its size and is experiencing a population decline, similar to many outback Queensland regions. To mitigate this the Council, through sound planning, preparedness, response and proactive strategies, manages the expectations, responsibilities and capabilities at government, business and community level to minimise the impact of remoteness on the community.

The following Risk Assessment addresses key areas, identified by EarthCheck Australia as below baseline, relevant to the Etheridge Shire and provides detailed guidance for Council and the community to prepare to mitigate, respond to and manage, these indicators that directly and indirectly affect the Etheridge community. This plan presents considered and appropriate adaptation measures to address the indicators noted, on communities, the economy and ecosystems (natural and social) both in the short and long term.

The purpose of this document is to detail current and possible scenarios and mitigation strategies for the management of resources to minimise adverse impacts that threaten the sustainability of the Etheridge Shire community. In short, this Risk Assessment aims to reduce vulnerability, to build a sustainable and more resilient community.

The Region

Information on the region was supplied in the Benchmarking Supplementary report attached to the benchmarking data. Etheridge Shire community vision is underwritten by a sustainability focus for the environment, economic development, and human settlement, as well as a commitment to building community capacity through education, fostering business, improving lifestyle for an inclusive community. (<https://www.etheridge.qld.gov.au/downloads/file/1211/esc-corporate-plan-2021-2025-final>)

ESC recognises that to adapt and cope with the impact and ongoing stressors from future events they need to support the community and build leadership capability, resilience, and capacity.

Risk Assessment

The following Risk Assessment addresses the 12 KPI EarthCheck indicators. This Risk Assessment is informed by the existing Etheridge Shire Risk Policy:

<https://www.etheridge.qld.gov.au/downloads/file/659/esc-s015-risk-management-policy-and-erm-guidelines>

and the Disaster Management Plan.

<https://www.etheridge.qld.gov.au/downloads/file/1189/2021-ldmg-disaster-management-plan>

Objectives of the Risk Assessment

The overall objective of this Risk Assessment is to outline possible management strategies for the Shire. The document ensures direction for community and management priorities, resource allocation and accountability, supported through sound business continuity, performance management reporting and corporate risk management processes. Council's response will vary in relation to the nature of the event proportionate to its scale, scope, complexity and impact as appropriate for the community and region.

Climate Change.

As Australia and the world experiences the effect of a changing climate, the need to address climate change is inherent in any risk assessment due to more extreme weather events, bushfires, changes in rainfall patterns, increased temperatures and heatwaves. As the climate continues to change, the risks to people and property, infrastructure, human health, natural systems, agriculture and the economy are expected to increase.

While we all have a responsibility to reduce our share of global emissions, Councils play an important role in their community to minimise impacts and safeguard the future.



Council's intersection with climate change risk

Council continues to proactively approach its operations regarding climate risk to build the adaptive capacity of the shire and reduce emissions.

Climate and emission reduction decisions are considered within Council's broader ongoing financial sustainability requirements including affordability and on annual rating decisions.

Council's role is:

- To provide up-to-date information to develop community understanding, preparedness and build resilience in the face of climate change impacts and more extreme weather events, through:
 - strengthening community relationships
 - increasing community knowledge, and awareness and
 - empowering the community through discussion at all levels of business, community and government to encourage community action on climate change and emissions reduction.
- Improve Council decision making by considering and incorporating climate risks and emissions reduction into all areas of council operations.
- Ensure infrastructure planning and asset management take account climate risks and emissions reduction.
- Ensure climate-ready and effective disaster management and governance systems to assess climate impacts and coordinate an appropriate response and monitor ongoing progress, as appropriate.
- Ensure, where possible, ecological sustainability is fully integrated into decision making in order to help secure the continued availability of natural resources for present and future generations.
- Proactively source and assess effective and affordable emissions reduction solutions to mitigate risks and adapt to climate change impacts locally by using a scientific evidence-based approach to managing the environment and climate change and adapt and respond appropriately as new information arises.
- Adopt an adaptive management approach to climate risks and periodically undertake climate risk assessments and updates consistent with ISO 31000:2009.

Council has been working to address emissions through proactively determining its operational emissions and that of the Shire through a dedicated assessment undertaken in 2022 for the 2021/22 Financial Year and more recently 2022 for the 2022/23 Financial Year.

The prime objectives of the document are to:

- Identify, evaluate and manage the impact of potential risks, including climate change, within the context of the 12 EarthCheck KPA of sustainability.
- Develop key strategies and actions to be undertaken by Council and other stakeholders to manage and mitigate risk.
- Build community capacity and resilience to adapt to unexpected and incremental events that potentially have adverse impacts on the Shire.
- To provide Council with a roadmap to meet the needs of the community in addressing long term sustainability.
- To increase community sustainability and resilience through public awareness, information, and education within the region.
- To develop contingency plans and mitigation strategies to address future operational issues and community needs.
- To enhance the capability of community and management agencies by encouraging participation in training programs and the building of relationships.

This Risk Assessment document is a dynamic document and will be maintained and updated to ensure currency with legislation, relevance and best practice on an ongoing basis. This document will be reviewed every three years or as appropriate in response to an event, and/or legislative changes affecting the Shire.

Communications and Public Awareness

The ESC has an ongoing public awareness program through the Council Corporate Plan, office, website and newsletter about sustainability at home and in business. Council will use a variety of communication media to provide the community with relevant information in relation to initiative and events including print, and social media, as well as through community organisations. The ESC runs regular community forums to promote its actions and to receive community feedback and suggestions for the future of the Shire.



Etheridge Risk Table for EarthCheck Key Performance Indicators

Key indicator	Impact	Potential Likelihood	Severity	Risk Evaluation	Mitigation/ Response
Energy	Depletion of natural energy resources through electricity consumption. Increased air and environmental pollution from gases and harmful by products emitted from electricity generation.	Certain	Major	Extreme	<p>Existing</p> <ul style="list-style-type: none"> • Council is currently in discussion with Genex to access alternative energy sources from the Kidston renewable project site by 2025. <p>Future</p> <ul style="list-style-type: none"> • Council to develop an education program on energy savings/ devices etc for local community. • Council to install energy saving measures in Council buildings. • Council to investigate further solar installation on Council buildings. • Council to promote energy efficient and self-sufficiency – eg. Solar in homes and business • Council to run workshops/ forums on energy savings. • Council to investigate funding to support solar installation in homes and businesses
Greenhouse Gas Emissions	Increasing effect on climate patterns including flooding, desertification of prime agricultural areas, fire risks, prolonged warming Council's biggest emissions are from transport. Community emissions are primarily from agriculture.	Certain	Major	Extreme	<p>Existing</p> <ul style="list-style-type: none"> • Etheridge Shire Council has undertaken Emissions reports for both the Shire and Council operations. • Etheridge is 20.2% below baseline due to agriculture. <p>Future</p> <ul style="list-style-type: none"> • Council to investigate strategies to reduce its emission output where appropriate to the operation including improving landfill operations. • Council to develop community waste education programs to encourage Waste Recovery Strategies. • Council to investigate further emission reductions through carbon farming or other initiatives. • Council to discuss emission reduction ideas with agricultural properties such as grazing management / use of improved pasture and enteric methane emissions reduction supplements. • Council to encourage individual business to apply for funding through the Emissions Reduction Fund.
Air quality noise & light pollution	Nitrous Oxide and particulates continue to increase when fossil fuels are burnt producing smog, acid rain leading to lung and related respiratory issues such as asthma.	Possible	Minor	Low	Etheridge Shire does not have air, light, or noise pollution due to the remote location of the region and the low population.
Management of freshwater resources	High extraction of water from the Artesian Basin can lead to water table changes, that reduce availability of freshwater for human consumption and to surrounding ecosystems.	Possible	Major	Extreme	<p>Existing</p> <ul style="list-style-type: none"> • Water conservation program already in place for residents and visitors through <ul style="list-style-type: none"> ○ Water usage restrictions/ regulations (ie times for sprinklers), and charges for overuse. ○ ESC continues to implement and maintain water saving devices and strategies in all venues. <p>Future</p> <ul style="list-style-type: none"> • Council to develop an education program on water savings/ devices etc for local community. • Council to support and encourage the local community and farmers to attend workshops and seminars organised by Council/Government agencies, to better understand water usage and conservation. • Council to encourage the use of water tanks and water harvesting. • Council to support research into agricultural innovations for farmers, council staff and natural resource managers. • Council to consider installation of more rainwater harvesting tanks, on Council and public facilities. • Council to investigate using greywater irrigation of public lands, where appropriate. • Council to actively manage water assets including storage and use of recycled water for land management practices. Improve water efficiency and use in agricultural sector. • Council to seek collaboration with Griffith University to Identify best practices in water use efficiency for businesses and promote to local businesses. • Council to seek collaboration with Griffith University Identify the performance efficacy of water reduction innovations and promote their use to businesses/community.
	Reduced water volume in natural springs.	Certain	Moderate	Extreme	
	Encourages the spread of pest plants and species.	Certain	Minor	High	
	Land and water salination.	Certain	Major	Extreme	
	Increased production of Co2, methane and other elements adding to climate change.	Possible	Minor	Medium	
	Impacts wildlife and attracts pest species. https://www.dccew.gov.au/water/policy/national/gre-at-artesian-basin	Possible	Insignificant	Low	



Key indicator	Impact	Potential Likelihood	Severity	Risk Evaluation	Mitigation/ Response
Wastewater management	Adverse impacts of water quality on residents and visitors Impact of runoff on natural environment. Increased flood damage to infrastructure and settlements and low-lying ecosystems due to climate change.	Possible	Minor	Low	Existing <ul style="list-style-type: none"> ESC to continue to manage and maintain frequency of water testing to ensure 100% of water samples pass State Government levels for safe drinking water. <ul style="list-style-type: none"> ESC to continue to manage the Planning Scheme and use of flood mapping data to identify flood hazard areas for future potential climate change event.
Land use planning and development. <i>Habitat Conservation Areas</i>	Greater loss of biodiversity Reduction of vegetation/ food in wildlife corridors. Increase in invasive plant and animals getting established. Disturbance and/ or significant change in composition and structure of natural ecosystems due to activities from the community / tourism operators	Rare	Minor	Low	Existing <ul style="list-style-type: none"> Council and Dept Environment monitors biosecurity and acts accordingly. Council manages its own spaces proactively, Dept Env and others manage non-Council areas. Future <ul style="list-style-type: none"> Council to encourage local landowners to manage their properties for habitat and endangered species protection. Council to encourage landowners to advise Council of areas set aside for habitat conservation and endangered species protection. ie report Land area set aside. Council to provide funding to increase size of existing habitat conservation areas under Council control. Council to fund native tree planting days in community, with stock bought from Landcare. Council to run habitat conservation workshops in conjunction with Landcare and Dept Env.
<i>Green Space</i>	Perceived low % of recreation and leisure space for the community and visitors. Disturbance of natural ecosystems from tourism. Increased impact of extreme weather events Erosion from flooding due to climate change Increased wildfires from climate change	Rare	Insignificant	Low	Existing <ul style="list-style-type: none"> The three small towns have spaces set aside for recreation as appropriate to the size of the community. All areas have extensive shade and provide facilities. Large parts of the Shire under agricultural properties are used for recreation/ events. Future <ul style="list-style-type: none"> Council to undertake a review of current green space and plan for new green space areas appropriate to the Shire and its needs. Source government funding to develop new spaces for community. Council will continue to develop new green space as appropriate for the size and distribution of the population. Council to incorporate areas of shade and protection when developing new greenspace area. Council actively manage disturbance to ecosystems from visitors across Council managed space.
Transport	Increase in GHG emissions from Council operation, contractor and increasing visitor numbers.	Certain	Minor	Low	Future <ul style="list-style-type: none"> Council to develop a sustainable transport plan to address the impact of vehicles on the environment from Council operations, community and tourists. Council to liaise with tourism operators to investigate sustainable transport options for visitors. Council to promote to community and tourists the use of alternative transport options.
Solid waste management	Increased Methane and other GHG emissions due to increased volume of waste from population / visitors at Shires landfill sites. Contamination of surface and ground water from leachate Impacts on wildlife from contamination of environment and competition from scavenger birds / pest species.	Certain	Major	High	Future <ul style="list-style-type: none"> Council to develop a Waste Management Plan with a view to upgrading landfill sites. Council to acquire data from recycling contractors re the amount of material removed from landfill. Council to address uncontrolled dumping at landfills. Council to continue/improve use of recyclable and biodegradable products at all Council operations. Continue education of community about waste behaviour and recycling Provide plastic recycling opportunities around Shire. Council to promote free trade/swap circular economy waste recovery. Council to provide additional bins for recycling, once landfill sites upgraded to accommodate.



Key indicator	Impact	Potential Likelihood	Severity	Risk Evaluation	Mitigation/ Response
Management of environmentally harmful substances	<p>Disturbance and/ or significant change to natural ecosystems from harmful substances/ pesticides.</p> <p>Impact of harmful substance due to discharge into rivers and waterways.</p> <p>Loss of biodiversity, vegetation/ food in wildlife corridors.</p>	Certain	Major	High	<p>Existing</p> <ul style="list-style-type: none"> Council currently monitors ESC's pesticide and weedkiller use. <p>Future</p> <ul style="list-style-type: none"> Council to ensure all staff training in Hazardous substances are current. Council to keep records of all staff training. Council to ensure all SDS and PPE equipment is current. Council to investigate with suppliers both domestic and international alternatives to currently available pesticides/ herbicides used in Australia. Council to continue/improve use of recyclable and biodegradable products at all Council operations.
Cultural and Social Management	<p>Reduction in community wellbeing due to changing climate and environmental conditions.</p> <p>Loss of community capacity through outbound migration.</p> <p>Reduction in visitor experience of cultural and social environment.</p> <p>Impact of tourism on historical and cultural sites.</p> <p>Tourist perception that destination is not safe.</p>	Possible	Minor	Low	<p>Future</p> <ul style="list-style-type: none"> Council to promote educational resources on climate change impacts and adaptation in local community. Council to develop initiatives for the continued wellbeing of the community. Council to review business processes to ensure sustainability of business practices. Tourism Industry commitment to providing equal opportunity and diversity of employment for locals, women, young people, minorities, people with disabilities and first nations peoples. Council to engage with tourism operators to discuss impact of visitors on cultural sites and environment. Council to engage with Police, and other community services in a wider proactive role to address theft and assault rates in the Shire through local community initiatives, youth programs and employment training.
Economic Management	<p>Reduction in liveability for community, due to lack of basic services.</p> <p>Loss of community capacity through outbound migration</p> <p>Reduction of opportunities for local employment.</p> <p>Reduction of opportunities / land for new business</p> <p>Lack of available housing for new staff/ businesses.</p> <p>Increasing health issues and public health costs caused by climate change.</p> <p>Impact of climate change on tourism, local businesses, and community wellbeing.</p>	Possible	Minor	Low	<p>Existing</p> <ul style="list-style-type: none"> Council to continue to source funding for social and affordable housing. <p>Future</p> <ul style="list-style-type: none"> Council commitment to secure future business development and innovation. Council to review availability of land for new businesses. Council commitment to support local employment and training. Council to support local community initiatives, and youth programs. Commitment to destination sourced products and services. Council commitment to support health and economic infrastructure in the region. Council to develop initiatives for the continued wellbeing of the community. Council to investigate with tourism operators extending tourism visitation at each end of season.