

# Murweh Shire Risk Assessment



# SHIRE OF MURWEH

MORVEN - CHARLEVILLE - AUGATHELLA

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

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## Foreword

Murweh Shire Council plays a significant role in managing and minimising the impact of environmental and social adverse events in the region to build a sustainable and resilient community. Through sound planning, preparedness, mitigation, response and recovery strategies the council manages the expectations, responsibilities and capabilities at government, business and community level to minimise the impact of adverse effects on the community.

The following Risk Assessment addresses key areas, identified by EarthCheck Australia as below baseline, relevant to the Murweh 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 Murweh community. This plan presents well-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 the possible scenarios and mitigation strategies for the management of resources and to minimise adverse impacts that threaten the sustainability of the Murweh Shire community. In short, this Risk Assessment aims to reduce vulnerability and improve resilience of the community.

## The Region

Information on the region was supplied in the Benchmarking Supplementary report attached to the benchmarking data.

Murweh 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 (MSC Corporate Plan 2022-2027).

Murweh Shire Council 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

### **Purpose of the Risk Assessment**

The EarthCheck Risk Assessment in the following table addresses the EarthCheck indicators. This Risk Assessment is informed by the existing Murweh Shire Risk Policy which identifies possible areas of risk, responsibilities and actions for the Shire, and the Disaster Management Plan.

<https://www.murweh.qld.gov.au/downloads/file/702/gov-001-risk-management-policy>

<https://www.murweh.qld.gov.au/downloads/file/117/murweh-shire-local-disaster-mangament-plan>

This risk assessment follows a standard methodology for assessing risk that follows the EarthCheck and Australian Government guidelines including:

- ISO 31000:2009 Risk Management – Principles and guidelines
- SA/SNZ HB 436:2013 Risk Management Guidelines
- SA/SNZ HB 89:2013 Risk Management – Guidelines on risk assessment techniques.

### **Objectives of the Risk Assessment**

The overall objective of this Risk Assessment is to outline possible management arrangements for the Shire. The document ensures direction of 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.

The prime objectives of the document are to:

- Identify impacts, evaluate risks, including from climate change, and develop key strategies and actions to be undertaken by Council and other stakeholders to manage identified sustainability indicators.
- 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 MSC has an ongoing public awareness program Council 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, radio and social media, as well as through community organisations.

The Murweh Shire Council runs regular community forums to promote its actions and to receive feedback and suggestions for the future of the Shire.

## Murweh Risk Table for EarthCheck Indicators

Key indicator	Impact	Potential Likelihood	Severity	Risk Evaluation	Existing / Future Mitigation
<b>Energy</b>	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	<b>Extreme</b>	<ul style="list-style-type: none"> <li>• Council to investigate, with Energex, the viability of alternative energy supply to the Shire.</li> <li>• Council to develop an education program on energy savings/ devices etc for local community.</li> <li>• Council to install energy saving measures in Council buildings.</li> <li>• Council to investigate further solar installation on Council buildings.</li> <li>• Council to promote energy efficient and self-sufficiency – eg. Solar in homes and business</li> <li>• Council to run workshops/ forums on energy savings.</li> <li>• Council to investigate funding to support solar installation in homes and businesses</li> </ul>
<b>Greenhouse Gas Emissions</b>	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	<b>Extreme</b>	<ul style="list-style-type: none"> <li>• Council to investigate strategies to reduce its emission output where appropriate to the operation including improving landfill operations.</li> <li>• Council to develop community waste education programs to encourage Waste Recovery Strategies.</li> <li>• Council to investigate further emission reductions through carbon farming or other initiatives.</li> <li>• Council to discuss emission reduction ideas with agricultural properties such as grazing management / use of improved pasture and enteric methane emissions reduction supplements.</li> <li>• Council to encourage individual business to apply for funding through the ERF fund.</li> </ul>
<b>Air quality protection, noise control, &amp; light pollution</b>	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	<b>Low</b>	Murweh Shire does not have air, light, or noise pollution due to the remote location of the region and the low population.

<b>Management of freshwater resources</b>	High extraction of water from the Artesian Basin can lead to water table changes, that reduce availability of freshwater for consumption and to surrounding ecosystems.	Certain	Major	<b>Extreme</b>	<p><b>Existing</b></p> <ul style="list-style-type: none"> <li>• Data to be reviewed for accuracy as extremely high</li> <li>• Water conservation program already in place for residents and visitors through <ul style="list-style-type: none"> <li>○ Water usage regulations (ie times for sprinklers), and charges for overuse.</li> </ul> </li> </ul> <p><b>Future</b></p> <ul style="list-style-type: none"> <li>• Council to develop an education program on water savings/ devices etc for local community.</li> <li>• 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.</li> <li>• Council to encourage the use of water tanks and water harvesting.</li> <li>• Council to support research into agricultural innovations for farmers, council staff and natural resource managers.</li> <li>• Council to consider installation of more rainwater harvesting tanks, on Council and public facilities.</li> <li>• Council to investigate using greywater irrigation of public lands, where appropriate.</li> <li>• 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.</li> <li>• Council to seek collaboration with external providers to Identify best practices in water use efficiency for businesses and promote to local businesses.</li> <li>• Council to seek collaboration with external providers to Identify the performance efficacy of water reduction innovations and promote their use to businesses/community.</li> </ul>
	Reduced water volume in natural springs.	Certain	Moderate	<b>Extreme</b>	
	Encourages the spread of pest plants and species.	Certain	Minor	<b>High</b>	
	Land and water salination.	Certain	Major	<b>Extreme</b>	
	Increased production of Co2, methane and other elements adding to climate change.	Possible	Minor	<b>Medium</b>	
	Impacts wildlife and attracts pest species.	Possible	Insignificant	<b>Low</b>	

Key indicator	Impact	Potential Likelihood	Severity	Risk Evaluation	Existing / Future Mitigation
<b>Wastewater management</b>	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	<b>Low</b>	<b>Existing</b> <ul style="list-style-type: none"> <li>MSC to continue to manage and maintain frequency of water testing to ensure 100% of water samples pass State Government levels for safe drinking water.</li> <li>MSC to continue to manage the Planning Scheme and use of flood mapping data to identify flood hazard areas for future potential climate change event.</li> </ul>
<b>Land use planning and development.</b>  <i>Habitat Conservation</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	<b>Low</b>	<b>Existing</b> <ul style="list-style-type: none"> <li>Council and Dept Environment monitors biosecurity and acts accordingly.</li> <li>Council manages its own spaces proactively, Dept Env and others manage non-Council areas.</li> </ul> <b>Future</b> <ul style="list-style-type: none"> <li>Council to encourage local landowners to manage their properties for habitat and endangered species protection.</li> <li>Council to encourage landowners to advise Council of areas set aside for habitat conservation and endangered species protection. ie report Land area set aside.</li> <li>Council to provide funding to increase size of existing habitat conservation areas under Council control.</li> <li>Council to fund native tree planting days in community, with stock bought from Landcare.</li> <li>Council to run habitat conservation workshops in conjunction with Landcare and Dept Env.</li> </ul>
<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	<b>Low</b>	<b>Existing</b> <ul style="list-style-type: none"> <li>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.</li> <li>Large parts of the Shire under agricultural properties are used for recreation/ events.</li> </ul> <b>Future</b> <ul style="list-style-type: none"> <li>Council to undertake a review of current green space and plan for new green space areas appropriate to the Shire and its needs.</li> <li>Source government funding to develop new spaces for community.</li> <li>Council will continue to develop new green space as appropriate for the size and distribution of the population.</li> <li>Council to incorporate areas of shade and protection when developing new greenspace area.</li> <li>Council to manage disturbance to ecosystems from visitors on Council managed space.</li> </ul>
<b>Transport</b>	Increase in GHG emissions from Council operation, contractor and increasing visitor numbers.	Certain	Minor	<b>Low</b>	<b>Future</b> <ul style="list-style-type: none"> <li>Council to develop a sustainable transport plan to address the impact of vehicles on the environment from Council operations, community and tourists.</li> <li>Council to liaise with tourism operators to investigate sustainable transport options for visitors.</li> <li>Council to promote to community and tourists the use of alternative transport options.</li> </ul>
<b>Solid Waste Management</b>	Contamination of surface and ground water from leachate.	Possible	Minor	<b>Medium</b>	<b>Existing</b> <ul style="list-style-type: none"> <li>Council has appointed a new contractor to manage and redesign Landfill sites, to allow greater recycling of waste.</li> <li>Council has received Govt funding to allow this to move forward.</li> <li>Cash for cans already in place. Discuss with new contractor expanding this at landfill and for green waste and other items not currently recycled.</li> </ul> <b>Future</b> <ul style="list-style-type: none"> <li>Council to acquire data from recycling contractors re the amount of material removed from landfill.</li> <li>Council to secure funding to have paper/plastic recycling at landfill and install appropriate waste bins in towns.</li> <li>Council to run community awareness programs on recycling.</li> <li>Council to run business education programs on waste management best practice.</li> <li>Council to encourage local community to <ul style="list-style-type: none"> <li>Donate clothes to people in need, shelters, or thrift stores.</li> <li>Reduce food waste -donate unused items for your pantry; save leftovers for the next meal.</li> <li>Buy things with less packaging or in bulk and use reusable drinking containers</li> </ul> </li> </ul>
	Increased production of Co2, methane and other elements adding to climate change.	Possible	Minor	<b>Medium</b>	
	Impacts on wildlife from contamination of environment and competition from scavenger birds / pest species	Possible	Insignificant	<b>Low</b>	

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