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Bundaberg Regional Council Stormwater Management Strategy

Response to Community Submissions Report
February 2021



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Community Submissions Received and Council's Responses

1.0 Introduction

The Stormwater Management Strategy (the Strategy) aims to establish a logical, justified approach to the long-term management of natural and built stormwater assets across the Bundaberg Regional Council local government area. This will minimise the impact on Council's forward operations and risk to life, property, community well-being, environment and the economy.

The Strategy will allow Council to proactively manage the challenge of supporting sustainable growth, while planning for maintenance and augmentation of existing infrastructure. It will also direct the required initiatives to support community and industry education regarding stormwater issues relating to their properties.

The Strategy has been designed to be a dynamic, living document that uses a risk based approach to prioritise future works in the areas of Data Management, Asset Management, Capital Works Prioritisation and Community Engagement, whilst considering future development and renewal requirements. The long-term goal of the Strategy is to progressively reduce stormwater flood risk for the community in line with Council's corporate plan.

2.0 Public Consultation Summary

Council completed public consultation on the Draft Bundaberg Regional Council Stormwater Management Strategy over a 28-day period, which ran from Monday 16th November to Monday 14th December 2020. In response, a total of 5 submissions were received from the public. A detailed review of all submissions was undertaken along with subsequent technical review of the Draft BRC Stormwater Management Strategy to ensure all items raised were appropriately addressed.

The Draft Bundaberg Regional Council Stormwater Management Strategy was made publicly available via Council's Bundaberg Now and www.ourbundabergregion.com.au webpages and social media posts. The following provides a summary of public consultation statistics:

- 7468 people reached on Facebook;
- 939 views on Bundaberg Now;
- 165 webpage visits on www.ourbundabergregion.com.au; and
- 112 Draft Bundaberg Regional Council Stormwater Management Strategy document downloads.

3.0 Community Submissions and Council's Responses Summary

A total of 5 submissions were received during the public consultation period. The key issues raised are summarised as follows:

- Maintaining a balanced/functional natural creek/river system;
- Building habitable structures in high-risk areas (e.g. floodplains);
- Safety, function and maintenance of major urban drains and concrete channels (e.g. Washpool Creek);
- Integrating stormwater quality and quantity outcomes; and
- Undertake master planning for emerging communities prior to re-zoning for urban development.

The community submissions received and Council's responses to these submissions is provided in Appendix A.

4.0 Strategy Updates

A detailed review of all submissions received along with a subsequent technical review of the Draft BRC Stormwater Management Strategy was undertaken. The review concluded that the Draft BRC Stormwater Management Strategy appropriately addressed all items raised in submissions and no further changes were required.

Appendix A

Community Submissions
Received and Council's
Responses

Appendix A Community Submissions Received and Council's Responses

Submission	Submission Comments	Council Response	Reference to SMS
1	Total ban on stormwater emptying into creeks, rivers, and the ocean.	<p>Stormwater runoff naturally collects in watercourses and wetlands which typically discharge into the ocean. This is a natural function of waterways which rely on stormwater to:</p> <ul style="list-style-type: none"> • Fill waterholes and water storages. • Replenish groundwater supplies. • Supply water and transport nutrients for flora (plants) and fauna (animals). <p>Significantly altering this natural cycle (whether for an urbanised creek or not) would cause the creek to rapidly deteriorate. Redirecting stormwater is also impractical from a cost, planning and engineering perspective.</p> <p>As such, a total ban on stormwater emptying into creeks, rivers and the ocean is considered undesirable. Maintaining a balanced flow regime is important for natural system function and is a key consideration of the Strategy (see references). To improve the health of our waterways, it is important that stormwater is appropriately managed and treated before entering waterways and the ocean.</p>	<p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 4 – Growth • Page 6 – Liveability • Page 8 – Strategic Objectives 1, 3, 4 and 6 • Page 9 – Strategic Outcomes 1 and 3 • Page 14 – LoS Functionality and Environmental Sustainability
	Total ban on building residential or commercial on floodplains.	<p>Development within floodplains can present significant risk to life and property. This includes floodplains of all types – rivers, creeks, and even coastal flats. Historic development practice (globally) has seen floodplains developed due to their accessibility and gentle gradients. However, this has led to buildings becoming flooded during flood events.</p> <p>Council is committed to providing safe, sustainable development. New habitable residential or commercial buildings must be 'built up' above the 1% AEP level as predicted at 2100 (i.e. with Climate Change). This ensures the risk of flooding is significantly reduced (i.e. less than 1% chance of flooding for any given year) without making development impractical or unrealistically expensive.</p> <p>Existing buildings may have been historically developed in floodplain areas. Council is investing in engineering tools (such as detailed flood models) to understand where flood risk is highest and should be addressed as a priority. As this type of flood mitigation can become very expensive, Council weighs options using a Multi-Criteria Assessment (MCA) to ensure value for money.</p>	<p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 4 – Growth • Page 5 – Flood Risk • Page 8 – Strategic Objectives 1, 2, 5 and 6 • Page 10 – Strategic Outcomes 5, 6 and 8 • Page 12 – MCA framework criteria

Submission	Submission Comments	Council Response	Reference to SMS
		<p>Council's Planning Scheme seeks to ensure that new, 'Greenfield' development avoids areas susceptible to flooding in the defined flood event (e.g. the 1% AEP level, with climate change). In such areas it may be possible to manage the extent of flooding through works undertaken as part of the development. Any such works would need to ensure there is no worsening of flooding impacts elsewhere in the catchment.</p>	
2	<p>Is Palmers Creek crossing at Avoca Street between McLucas Street & MacPherson Court included in the Stormwater Strategy?</p>	<p>Palmers Creek and all other urban creeks are included in the Strategy. Urban creeks have generally been modified to support urban development and need careful consideration to maintain their function in a safe, sustainable manner. This is a global challenge in stormwater management.</p> <p>Palmers Creek, particularly where it meets residential areas, is analysed in the Strategy. Future options will be weighed using Council's Multi-Criteria Assessment (MCA) to ensure value for money.</p>	<p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 4 – Growth • Page 5 – Flood Risk • Page 8 – Strategic Objectives 1, 2, 5 and 6 • Page 10 – Strategic Outcomes 5, 6 and 8 • Page 12 – MCA framework criteria
3	<p>Nothing is getting done with the drain down from Lathouras Court. Water from that street runs into Baldwin reserve – the drain has a dangerous, unprotected opening.</p> <p>Two Councillors have looked at it, but nothing has been done. We are worried a person may fall into it at night and break limbs or back.</p>	<p>Washpool Creek (the drain west of Lathouras Court) is considered within the Stormwater Strategy. The concrete drain forms a focus of asset management and is considered as the highest funding priority in Council's stormwater investment.</p> <p>Council is currently working on developing financially and environmentally sustainable options for managing concrete lined creeks in the region, which includes their renewal, replacement and even re-design such as 'creek naturalisation' to achieve more sustainable results.</p> <p>Council has received \$2.78 million in funding through the Queensland Reconstruction Authority to restore the Washpool Creek drain back to a natural waterway. Following completion of design, the Washpool Creek drain and associated pipe outlets (including the drain down from Lathouras Court) will be remediated. The design of the project will focus on transforming the Washpool Creek corridor into an integrated open space which provides a stormwater drainage function and delivers a useable and safe open space for public use. This project is anticipated to be completed by June 2022.</p> <p>Furthermore, Council is also undertaking a new initiative to proactively assess the condition and safety of stormwater assets (including open drains), to inform the need for future improvements and works, e.g, before they reach the point of failure.</p>	<p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 4 – Ageing Infrastructure • Page 6 – Liveability • Page 8 – Strategic Objectives 1, 2 and 6 • Page 10 – Strategic Outcomes 4 and 7 • Page 13 – Our commitment to managing stormwater assets

Submission	Submission Comments	Council Response	Reference to SMS
4	<p>We have lived on the drain for 30-years and the drain never used to flood into our yard. It seems now it floods into our yard most times it rains now. We believe it is due to more development and a lot of the work done in Boundary Street and sends the water more our way.</p> <p>I have looked at the proposal and think the water needs to be held up and slowed down somehow as the pipes outside our house cannot cope with the volume of water. When we bought our land 30-years ago we were told the 4 pipes in the drain would be changed to 1 big pipe, but this has never happened. That would get the water away a lot quicker.</p> <p>We cannot use the bottom part of our yard as it floods all the time, and everything gets washed away.</p>	<p>Development in the upstream catchment can also affect flood behaviour, however it is generally designed so that there is no discernible difference. Changes in observed flooding over a 30-year period is most likely due to the volume and intensity of rainfall falling over the catchment and changes in local rainfall patterns.</p> <p>Flooding (including overland flooding) in Bundaberg is highly variable due to the nature of our climate. This means many years (e.g. 15 years) may pass where minimal flooding occurs. In contrast, changes in climate can bring several large events to pass, even in close succession.</p> <p>The Strategy identifies urban drains and channels as important components of creeks – natural assets for the Bundaberg community. This area is part of Washpool Creek. The channel throughout this area has been concreted to maximise capacity for urban development. Whilst this can reduce the flooding in localised locations, it can also increase the flood extent downstream due to the water arriving faster.</p> <p>The Strategy approaches complex flooding issues in urban creeks from a holistic, whole of catchment perspective. Changes in one location effect downstream behaviour. To this end, Council is progressing with a list of actions from the Strategy which will better inform overland flood risk, issues, and possible solutions. This includes options such as increasing pipe sizes to prevent houses and property from flooding. These options will be weighed using Council’s Multi-Criteria Assessment (MCA) to ensure high-risk flooding is addressed first.</p> <p>The Strategy also highlights a clear need to focus on high-risk flooding (such as flooded houses) before low-risk flooding (such as water in yards). To reduce the impact of flooding at locations such as this, stormwater awareness and education resources are being prepared to:</p> <ul style="list-style-type: none"> • Explain overland flood behaviour and types of urban drainage. • Provide advice for community safety relating to overland flooding. • Reducing property loss by informing residents of where it can be expected to flood frequently (e.g. at least once every 5-years). • Explain the natural function of creeks and the important benefits that come from this. • Advise the community on how to work with our creeks, rather than against them: 	<p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 5 – Flood Risk • Page 6 – Liveability • Page 8 – Strategic Objectives 1 and 5 • Page 10 – Strategic Outcomes 5, 6 and 8 • Page 12 – How we will prioritise stormwater projects • Page 14 – health and Safety, Community Involvement, Capacity and Environmental Sustainability

Submission	Submission Comments	Council Response	Reference to SMS
		<ul style="list-style-type: none"> - Viewing creeks as an asset, which add value to the surrounding land and broader community. - Maintaining 'space for the creek' to prevent natural systems from being filled in and exacerbating long-term issues. - Planting and maintaining native vegetation along creek banks, which slow the flood wave and protect the banks from being damaged. 	
5	<p>Integrate stormwater quantity management strategies along with the identified stormwater quality objectives.</p> <p>Master planned areas and (current and future) areas zoned for future development to be pre-planned for stormwater quality and quantity (align with planning scheme objectives). Compensate landowners for the land required for regional stormwater management. Integrate stormwater quality and quantity with parkland.</p> <p>Future planning. Before land is rezoned, appropriate stormwater management provisions should be made for integration of catchment wide strategies (as per above). Planning scheme renewal expected 2031 (refer planning scheme part 1.1).</p>	<p>Stormwater quantity and quality must be managed together to achieve legislative objectives. The Strategy approaches stormwater management with this mindset and adopts a holistic approach to catchment management. It also moves beyond compliance-based outcomes, which alone do not protect, maintain, and nourish our catchments.</p> <p>A key recommendation of the Strategy is to plan infrastructure / trunk corridors ahead of development. This is also a strategic objective of Council's Planning Scheme.</p> <p>To enable this, Council is investing in catchment-scale models and tools to better plan infrastructure requirements. Council is also considering trunk corridor requirements ahead of development to ensure natural assets can be protected and effectively utilised for stormwater treatment and flood control. This includes value adding on opportunities to integrate multi-use areas (parks and the like) with floodplain / wetlands.</p> <p>Together, the improved tools and forward focus will allow Council to continually develop a forward-looking pipeline of infrastructure which is aligned to the Stormwater Vision and Strategic Objectives.</p> <p>As above.</p> <p>The Strategy also identifies a need to review and update Council's planning scheme and policy in line with the Strategic Vision and Outcomes. To this end, Council is proposing to undertake further investigations into catchment-based strategies. It is expected that as these strategies are completed, they would inform future amendments to Council's planning scheme and infrastructure planning.</p>	<p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 6 – Liveability • Page 8 – Strategic Objectives 1 and 6 • Page 9 – Strategic Outcome 3 • Page 14 – Environmental Sustainability <p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 4 – Growth • Page 8 – Strategic Objectives 1, 4 and 6 • Page 9 – Strategic Outcomes 1 and 3 • Page 14 – Functionality and Capacity <p>Stormwater Management Strategy Report:</p> <ul style="list-style-type: none"> • Page 8 – Strategic Objective 6 • Page 9 – Strategic Outcome 1