

## 5.11. RIBBON AVENUE DRAINAGE UPGRADES

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**GENERAL MANAGER:** Scott Hahne, Acting General Manager Operations

**DEPARTMENT:** Infrastructure

### RECOMMENDATION

**That Council resolves:**

- 1. Pursuant to section 262 of the *Local Government Regulation 2012*, to repeal the resolution of 15 May 2018, clause 9.4, to adopt option 8 as the preferred upgrade option for Ribbon and St Crispins Avenues drainage;**
- 2. To proceed to detailed design and documentation of option 3 (optimised) following stakeholder consultation; and**
- 3. Delegates authority, in accordance with section 257 of the *Local Government Act 2009*, to the Chief Executive Officer to finalise any and all matters associated with the detailed design and documentation.**

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### EXECUTIVE SUMMARY

Ongoing inundation of residential properties in Ribbon Avenue Port Douglas at a frequency that does not meet the accepted community standards has instigated investigations to provide an acceptable solution to the issue.

Council, at its 15 May 2018 meeting, resolved to further explore one of these options. It became apparent that whilst the option considered provided the best engineering solution it was likely to have a large social impact. This option was therefore considered not to be the best overall solution.

In order to further explore another option in greater detail, a repeal of the 15 May 2018 resolution and a request to proceed to detailed design forms the basis of this report.

### BACKGROUND

During rainfall events in 2017, several residential properties located in Ribbon Avenue, Port Douglas were inundated by stormwater runoff.

Council undertook to investigate and the consulting engineering firm Trinity Engineering was commissioned in October 2017 to review the drainage network in the area, ascertain the cause of inundation and identify options to address inundation risks.

Before the review was complete, Port Douglas was affected by the associated heavy rainfall and flooding from Ex - Severe Tropical Cyclone Nora. Reef Park, located adjacent to Ribbon Avenue, recorded approximately 500 mm of rainfall between 24 and 29 March 2018. Ribbon Avenue residences were again inundated.

Trinity Engineering's report confirmed that if no drainage improvements were made, there was a very high risk of residential properties being inundated every year. The report

recommended that Option 8 was the most appropriate engineering solution option to pursue, however since it involved the acquisition of private property it was presented to a Council Meeting on 15 May 2018 for endorsement.

Council adopted the recommendation and as part of the detailed design process, began detailed consultation with the relevant stakeholders.

## **COMMENT**

It became apparent that whilst Option 8 was the most appropriate engineering solution option, that it was not the most appropriate social solution and an alternative option needed to be investigated further.

A compromise option, named Option 3 (optimised) was determined to be the most suitable and requires further analysis to determine its overall acceptability to mitigating the inundation issue.

As the previous 15 May 2018 Council resolution on the matter made reference to Option 8, and this is now not considered to be the most acceptable option, the 15 May 2018 resolution needs to be repealed, so that Option 3 (optimised) detailed design can commence.

## **PROPOSAL**

This project consists of the detailed design and documentation of Option 3 (optimised) which consists of:

- Detailed survey of the relevant areas;
- Installation of new underground drainage system to capture the external catchment area by utilising the road reserves of Endeavour Street and St Crispins Avenue;
- Re-profiling the existing drainage easement to direct and control overland flow to St Crispins Avenue; and
- Upgrading capacity in the existing drainage network from St Crispins Avenue through to the lake.

Refer to the attached sketch for details.

## **FINANCIAL/RESOURCE IMPLICATIONS**

The current budget for Ribbon Avenue investigations and interim upgrades is \$120,000. Current expenditure is \$5,936 with a further \$28,500 committed, primarily for the design component of the current interim scope. Hence the current remaining budget is \$85,564. The construction component of the interim scope is expected to exceed this amount however the quantum is unknown at the time of the report.

To undertake the above detailed design and documentation of Option 3 (optimised) including survey, an allocation of \$100,000 is anticipated to be required from the 2018/2019 capital budget. It is proposed to consider this amount as part of the mid-year budget review process.

Construction costs for the Option 3 (optimised) works would need to be sourced from the 2019/2020 capital works budget and potentially other external funding opportunities. Having a "shovel ready" project is paramount to enable staff to source grant funding to finance this project and reduce the reliance on rate payer funds.

## RISK MANAGEMENT IMPLICATIONS

The existing stormwater drainage network does not meet the accepted standard for service levels within an urban environment for Ribbon Avenue.

Whilst an engineering solution that does meet these standards is available, the social impacts are large, and a compromise solution is to be explored further.

Detailed design and documentation will allow a better understanding of the engineering, social and cost implications if this option is implemented. Further refinement of Option 3 (optimised) version is anticipated to occur during the design process.

## SUSTAINABILITY IMPLICATIONS

**Economic:** Council has two pending claims from residents whose houses have been inundated due to recent rainfall events. As previous investigations have highlighted, that without intervention to the drainage system, flooding risks will continue.

**Environmental:** Recent rainfall events and this drainage project highlights the importance of land use planning and building control systems, and offers tangible examples of risks to the social, built, economic and natural environments in our Shire.

**Social:** Council has an obligation to ensure that infrastructure under its control provides an acceptable level of service to the community. Furthermore, the community expects solutions when issues like these arise.

## CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

### Corporate Plan 2014-2019 Initiatives:

#### Theme 5 - Governance

*5.1.1 - Establish and develop long term financial, resource and infrastructure planning to ensure ongoing capacity to fund operations and capital works programs.*

## COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

**Asset-Owner** Meeting the responsibilities associated with owning or being the custodian of assets such as infrastructure.

## CONSULTATION

**Internal:** Councillors, Senior Staff and Property Services

**External:** Directly affected stakeholders  
Engineering Consultants.

## ATTACHMENTS

1. Drainage Option 3 Optimised **[5.11.1]**

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# DRAINAGE OPTION 3 OPTIMISED (2 \* Q100 INLETS)

