

GAWLER RIVER FLOODPLAIN MANAGEMENT AUTHORITY

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Dear Member,

NOTICE OF SPECIAL MEETING

Notice is hereby given pursuant to Clause 6.3 of the Charter that a Special Meeting for the GRFMA Board has been called for:

DATE: Tuesday 12 May 2020

TIME: 9:30 AM

PLACE: Audio visual meeting (via <https://zoom.us/>)

The purpose of this Special Meeting is to consider

1. Recent discussions with the Stormwater Management Authority regarding requirement for a Gawler River Stormwater Management Plan; and
2. The Northern Floodway Project Proposal and recent developments following media coverage by the GRFMA and subsequent response from David Speirs MP, Minister for Environment and Water.



David E Hitchcock

EXECUTIVE OFFICER

AGENDA

GAWLER RIVER FLOODPLAIN MANAGEMENT AUTHORITY BOARD

SPECIAL MEETING

9:30 AM 12 May 2020

Audio visual meeting (via <https://zoom.us/>)

1. Meeting of the Board

- 1.1 Welcome by the GRFMA Chairperson
- 1.2 Present (please indicate attendance to the meeting host)
- 1.3 Apologies
- 1.4 Appointment of Observers
- 1.5 Declarations of Interest

2. Gawler River Stormwater Management Plan

3. Northern Floodway Project Proposal

4. Closure

Agenda Item:	2
Committee:	Board – Special Meeting
Meeting Date:	12 May 2020
Title:	Gawler River Stormwater Management Plan

Recommendation:

That:

- 1. The GRFMA receives the report.**
 - 2. Further direction relating to the report be deferred pending discussion of agenda item 3: Northern Floodway Project.**
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At the 16/4/2020 GRFMA meeting the following resolution was carried:

20/27 - That the GRFMA:

- 1. Receives the report.*
- 2. Authorises the GRFMA Chair and Executive Officer to facilitate an information update of GRFMA advocacy endeavours and GRFMA frustrations at lack of action in responses, regarding the Northern Floodway Project to local media and relevant land holders of the Lower Gawler River.*

Following the meeting the GRFMA Chair and Executive Officer (EO) provided a media release to media outlets. See further details at Agenda item 3 - Northern Floodway Project Proposal.

Separately the GRFMA Chair and EO met with the Presiding Member and Executive Officer of the Stormwater Management Authority regarding their previous correspondence advising requirement for preparation of a Stormwater Management Plan for the Gawler River.

At that meeting it was agreed that the GRFMA already has considerable resources by way of reports and flood mapping information that could be utilised in any appropriate Stormwater Management Plan (SMP) requirements.

It was further agreed that the Executive Officer of the Stormwater Management Authority would develop a “gap analysis” document of plan content requirements and current available information in relation to developing a SMP for the Gawler River.

Upon receipt of the “gap analysis” document the GRFMA Chair suggested that it would be beneficial to have the document analysed by Mr Geoff Fisher, Australian Water Technologies (AWT), on the basis of his extensive involvement and detailed flood mapping experience within the Gawler River environs.

In summary it is considered that a specific lower Gawler River, Stormwater Management Plan could feasibly be undertaken within the order of a 12-month time frame.

Costs for preparation of the plan including the consultation aspects and allowing for a riparian survey and water quality modelling, might be something between \$100K to \$150k.

The collated “gap analysis” responses (SMA and AWT) was then considered by the 5 May 2020 Stormwater Management Authority (SMA) meeting.

The SMA has now provided a response to the document advising that it is the Board's view that preparation of a lower Gawler River SMP would deliver benefits including:

- The development and documentation of a detailed and costed works program for the Northern Floodway Project, including defined delivery stages.
- Integration with surrounding SMP's including those for the Gawler Township, Two Wells and Smith Creek Catchment.
- The incorporation of issues as outlined in the SMA's Stormwater Management Planning Guidelines.

The SMA suggests that the GRFMA should now submit an application for funding to support preparation of a SMP and the application should also identify aspects of the Northern Floodway Project that might need early funding such as survey and design work.

SMA Presiding Member, Mr Stephen Hains, has also indicated availability to attend a meeting of the GRFMA Board at the next available opportunity.

See attached for a copy of the “gap analysis” document and 6 May 2020 correspondence from the Stormwater Management Authority.



DEW-D0013633826

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Dear Mr Baldwin

Gawler River flood mitigation

At its meeting held 5 May 2020, the board of the Stormwater Management Authority (SMA) considered information provided by consultants Water Technology on behalf of the Gawler River Floodplain Management Authority (GRFMA), in respect of a stormwater management plan (SMP) for the lower Gawler River. It remains the board's view that the preparation of an SMP for the lower Gawler River (or a section of the river) would deliver benefits including:

- The development and documentation of a detailed and costed works program for the Northern Floodway project, including defined delivery stages.
- Integration with surrounding SMPs including those for the Gawler township, Two Wells and Smith Creek Catchment.
- The incorporation of issues as outlined in the SMA's Stormwater Management Planning Guidelines.

The SMA considers that the development and documentation of a detailed works program within an SMP would facilitate the prioritisation and timing of funding from multiple potential sources including the Stormwater Management Fund. Accordingly, and in order to facilitate early progress on this matter, it is suggested that the GRFMA submits an application to the SMA, for funding support to prepare an SMP for the lower Gawler River. This application should also identify aspects of the Northern Floodway project that might need early funding (such as survey and design work), for consideration by the SMA.

I would welcome an opportunity to attend a meeting of the GRFMA board at the next available opportunity to discuss this issue and the ways in which the SMA can support the Northern Floodway project, and other flood mitigation works in the Gawler River catchment.

Please contact me to discuss directly on telephone 0401 984 807, or contact the General Manager, Mr David Trebilcock, on telephone 8124 4787 or email david.trebilcock2@sa.gov.au.

Yours Sincerely

p.p. Stephen Hains
PRESIDING MEMBER

Date: 6 May 2020



MEMORANDUM

To David Hitchcock, GRFMA
From Geoff Fisher
Date 02 May 2020
Subject SMP Requirements

Thank you for the opportunity to provide the following advice with respect to the preparation of a stormwater Management Plan to support the Northern Floodway works. We offer the following comments in relation to your queries below.

1. What extent of area location would likely be required to be included?

We consider the SMP area could be constrained to the area downstream of Gawler, and need only extend from the top of bank either side of the river but then also have regard to the 1 % AEP floodplain (ie the receiving environment for flood waters) and develop strategies to minimize the impact on the adjoining floodplain. This is because the floodplain areas north and south of the river do not contribute to flow in the Gawler River. Drainage to the north of the river typical flows towards Salt Creek and hence only minor very local inflows adjacent the river from that area are likely to enter the Gawler River. These could be addressed individually and incorporated once their catchments are defined as their contributing catchments areas would be very small. To the south of the river there is the Town of Gawler and environs SMP and the Smith Creek SMP that are both in preparation hence the Gawler River SMP should not overlap with these in area but should simply have regard to those adjoining SMPs. The Gawler River SMP could be used to establish targets for discharges from adjoining areas that naturally would not have entered the river but through artificial now do. Those targets should be reflected in the adjoining areas SMPs, but the Gawler River SMP need not, in our view, determine how those targets should be achieved through the adjoining SMPs.

The SMP could then identify the contributions that the major contributing inflows make to the flow down the river along with pollutant loads that are transported to the sea.

2. Comments on David Trebilcock SMP Requirements

We have stepped through these comments and added suggestions on how each of these might be addressed, as well as identifying the main information gaps. Refer the table attached to this memo.

The main gaps will relate to water quality and water harvesting assessments. This will require additional modelling but that could be done at a high level and need not be particularly onerous or expensive. Some additional flood modelling runs would be required to incorporate higher intensity rainfall under climate change but that should be a relatively straight forward piece of modelling, given we have an established model and the climate



change scenario is equivalent to sensitivity testing of that model. In all I'd anticipate no more than 6 weeks of effort for all new modelling including hydrological, floodplain modelling, water quality and water harvesting.

The condition assessment could draw on previous work which has been completed by AWE with the use of new drone coverage to identify any new areas of concern – that process may take about a month to complete and document.

We have provided much more detail in the attached table, with the above simply summarizing the key pieces of new technical work. None of the new work is particularly complex nor is likely to become protracted investigations. Local drainage issues are either not relevant to the Gawler River or are addressed through adjoining SMPs that have either been completed or are in preparation.

Possibly the most challenging aspect will be the consultation component. But again, there has already been a large amount of community involvement in the northern floodway concept development and previously there has been communications with stakeholders regarding environmental management, as well as the other mitigation options.

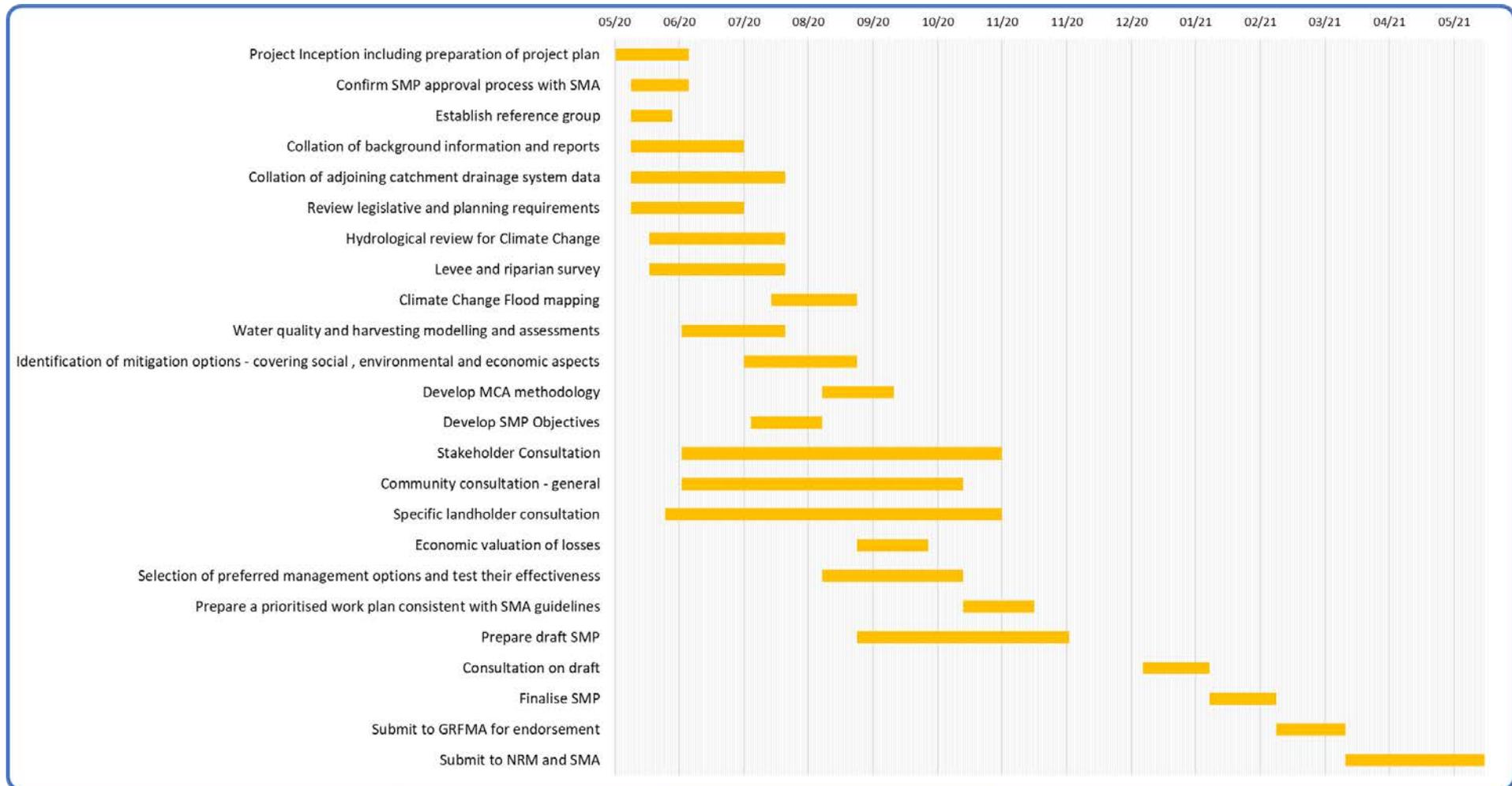
We have suggested a two-level consultation process with most effort being required on those landholders who's property works will be undertaken. We understand that a level of discussion with those people has already been undertaken. There are probably only a small number of landholders who will require more specific follow up consultation but it will be important that consultation with these people/organisations is undertaken during the preparation of the SMP (eg Walker Corp).

3. Can an SMP be delivered in 12 months?

Given that much of the information is already available and the main areas for new technical work is limited, then the bulk of the assignment that remains is collating the existing reference material and developing criteria assigning priorities. We think that this is achievable, along with the consultation aspects within a 12-month period.

4. Thinking of 3 above is it feasible to map out a likely time frame and process to develop the SMP.

We provide a project delivery timeframe below for your consideration. We have assumed a start date in mid May 2020 with the draft SMP prepared by end of November 2020. Consultation on the draft plan, finalization and submission for SMA approval then proceeds through to May 2021, allowing for a 4 week break in December 2020.



We trust the above information will be of assistance. Further comments are also provided in the attached table of comments that are provided in response to the memo from the SMA's General Manager.

Geoff



KEY SMP ELEMENTS EXTRACT FROM SMA MEMO WITH WATER TECHNOLOGY COMMENTS INSERTED

Key SMP Element	Description	Comment(s)	Water Technology Comments
Details of how the Plan was Developed	The SMP should describe how the plan was developed, including details of the project governance, stakeholder engagement and involvement, and community consultation undertaken.	<ul style="list-style-type: none"> The development of a Gawler River SMP would be able to draw on a wealth of knowledge obtained by or available to GRFMA. There should be no need to establish a separate governance structure if this can be provided through GRFMA's existing institutional arrangements. However, GRFMA should determine early on whether the development of the plan (and the sharing in its costs) should be undertaken jointly by all GRFMA constituent councils or only those within the defined catchment area. The full and unconditional support of the relevant councils is critical. There is a strong potential for and history of SMPs becoming mired in local government politics The Authority may exercise powers to direct a council (or group of councils) to prepare the Gawler River SMP. The Authority would be reluctant to exercise this power, but it is an option. Councils within the GRFMA have undertaken recent SMP consultation processes and would be well placed to provide GRFMA with advice on what worked well and what did not. The Authority only requires council(s) to follow their own consultation policies. 	<ul style="list-style-type: none"> There have been numerous flood hydrology assessments, some environmental flow assessments, riparian surveys, levee inspections, biodiversity assessments in key areas, and a high-level cultural assessment. There have been no water quality assessments undertaken apart from salinity assessments for the Gawler River. Some water harvesting work has been previously undertaken. Would expect that the constituent Councils of the GRFMA would need to agree to the SMP being prepared but the SMP itself should only require signoff by Town of Gawler, APC, CoP and LRC. Member councils have been consulted on the key outcomes from the Mk2 work, and subsequent further work relating to the Northern Floodway. Representative Landholder consultation has taken place regarding the Northern Floodway. This would probably need to be augmented with one on one consultation with directly affected landholders. The vast majority of these would be beneficiaries from works undertaken on their property. The experience of other Councils has been that unless people are directly affected there is little interest from the wider community.



Key SMP Element	Description	Comment(s)	Water Technology Comments
<p>Description of the Areas Covered by the Plan</p>	<p>The SMP should include a description that identifies and characterises the area to which the plan applies. The use of maps, figures and tables is encouraged.</p> <p>This section should describe the key economic, environmental, social and cultural values relating to the area. The physical area should be described in terms of its:</p> <ul style="list-style-type: none"> • Administrative boundaries • Topographic features (including details of receiving waters) • Climate and hydrology (including significant historic events that have impacted the area) • Geology and soils • Land use and population centres. 	<ul style="list-style-type: none"> • Constraining the geographical scope of the Gawler River SMP will be key to its successful and expedient delivery. • The catchment could logically be defined as the ‘Gawler River proper’, being the main channel below the confluence of the North Para and South Para Rivers. While this catchment definition will focus attention on the main areas of flood risk in the Gawler River, it will still be necessary to describe the hydrological influence of the North Para and South Para River and identify any mitigation options in the upstream catchment that could benefit the downstream catchment. • Describing the administrative, topographic and anthropogenic features of the Gawler River should not be too onerous. There is some existing background information in AWE 2014a, AWE 2015, AWE 2017a and Tonkin Consulting 2018. • Where appropriate, and to avoid duplication, the plan should reference the neighbouring Smith Creek, Two Wells and Gawler (town) SMPs. 	<ul style="list-style-type: none"> • The SMP area should be constrained to that described by the SMA ie from Gawler Junction downstream to the Buckland Park outlet and from top of bank to top of bank either side. The SMP should however have regard to the inundation caused by spills from the river and hence have regard to flood flows within the 1% AEP floodplain. Local drainage issues where they occur in those areas should be or are captured by adjoining SMPs. • The SMP should then have regard to inflows from upstream – be these the North or South Para or outfalls from council drainage systems. Council infrastructure plans should be able to support the identification of these outfalls and any mitigation works than have been undertaken to manage flows rates and water quality from these outfalls. If there are no mitigation measures then some high level modelling could be undertaken to set aspiration targets for these outfalls so that the GRFMA is able to liaise with the relevant Council to implement works or measures as part of their own SMP processes to work towards these targets. • The administrative, topographic and anthropogenic features of the Gawler River can be readily described. • SMPs and similar documents are available for CoP, ToG, APC areas that would be of relevance to the Gawler River SMP in terms of external influences whilst still laying outside the immediate SMP area.



Key SMP Element	Description	Comment(s)	Water Technology Comments
<p>Description of the Stormwater System(s)</p>	<p>The SMP should provide an overview of the stormwater system(s) in the catchment, including a description of any key pieces of infrastructure, and how the system(s) interact with other stormwater system(s) (e.g. upstream, downstream and adjacent).</p>	<ul style="list-style-type: none"> • There is little formal drainage structure that would need to be described, however, any existing levees do constitute 'stormwater infrastructure'. The existing levees should be surveyed and documented. As this task needs to occur before Northern Floodway construction can commence, it is likely that there would be no 'no regrets' in pursuing this task immediately. The Authority does not ordinarily fund the collection of asset data (considered to be a normal part of a council's business) but exceptional circumstances could be considered. Consider also if this activity might be eligible for support from the forthcoming Commonwealth Government Emergency Response Fund Program. • The levee survey could be combined with a watercourse condition assessment to achieve cost savings with respect to undertaking these activities in isolation. • The Bruce Eastick Dam and South Para Reservoir, and their operation, should be described in the SMP but this need not be in great technical detail. • There is formal drainage 'outfalls' into the river at Angle Vale and Gawler that will need to be described. The City of Playford and Town of Gawler would hold asset information on these respectively. 	<ul style="list-style-type: none"> • The levees upstream of Pederick Road are in the main natural river levees that form the natural geomorphology of a perched river system. Hence, we would consider that they should fall with the normal scope of an SMP data collection process. • Downstream of Pederick Road but upstream of Port Wakefield Road the levees are a mixture. They have been previously surveyed many years ago for their condition and found to be in of poor engineering structure and condition. Targeted inspections post the 2016 floods confirmed the poor condition of the levees and observations during the flood were that the levees are prone to failure, excessive leaking and need to be rebuilt. This simply needs to be documented in the SMP and so a survey per say is in our opinion not required for much of the river. • AWE has previously been undertaken a watercourse condition survey from Gawler to the sea. We would suggest that any subsequent survey could be done remotely via a drone so that and any specific areas of interest or concern could be identified and then inspected. The final assessment process would then utilise information from all three of these sources. • The drainage outfall information can be described as indicated, in addition we would advise that the GRFMA use the SMP for the Gawler River to establish targets for the future management of these outfalls and to manage any further requests for installing new outfalls. Many interstate Councils for example have mandated that there be no new outfalls to sensitive receiving waters in their areas.



Key SMP Element	Description	Comment(s)	Water Technology Comments
<p>Stormwater Issues, Risks and Opportunities</p>	<p>The SMP should describe the stormwater management issues, risks and opportunities identified through analysis using accepted tools and techniques, and supported by evidence wherever possible.</p> <p>The plan should consider not only current risks, issues and opportunities, but also those that are emerging or could potentially emerge in the future as a result of, for example, land-use change, urban development and climate change.</p>	<ul style="list-style-type: none"> • An SMP should consider issues, risks and opportunities with respect to drainage and flooding, water quality and stormwater reuse. This has largely been satisfied with respect to drainage and flooding through AWE 2015. • It is not known to what degree AWE 2015 considered climate change. Some sensitivity testing of the flood model might be appropriate. • Water quality modelling may be able to be avoided, but some discussion should be included on watercourse condition and coastal discharges of sediments, nitrogen and phosphorous. • Opportunities for stormwater reuse need to be considered in the context of NAIS and market supply/demand. 	<ul style="list-style-type: none"> • Drainage and flooding issues, we consider have been addressed in previous studies so that information will simply need to be collated. • Climate change was considered in 2015 – sea level rise incorporated into the modelling, rainfall intensity was not at that point because there was sufficient doubt at that time on any quantum of increase. This could be relatively easily addressed through a sensitivity run of the hydrological model to provide updated inflow boundary conditions for the floodplain model. • It is hard to see how water quality modelling could be avoided. It will be necessary to quantify outfall exports to the marine environment and also to enable the upstream inputs to be quantified and apportioned to different catchment sources. That is typically a bare minimum in SMPs. That task is however not a major one and could be readily addressed in the SMP. • Water harvesting opportunities will be very limited given the resource is prescribed, there are water allocation limitations, and the environmental water requirements of the river and Buckland Park lake are typically not met in most years. The SMP would also need to have regard to the existing water harvesting system (Bunyip Water) and other upstream water harvesting systems. We envisage that this issue could be addressed in parallel with the water quality modelling and so need not be a major task. There have also been previous water yield assessments undertaken for the Gawler River by AWE that we would utilise as reference documentation as well. NAIS, water logging issues, and demand limitations would also constrain harvesting opportunities.
<p>Objectives for Stormwater Management</p>	<p>The SMP should clearly articulate the objectives for stormwater management in the catchment, along with the approach that was taken to develop and refine these objectives</p>	<ul style="list-style-type: none"> • Objectives should be set before solutions are settled on, so these would be somewhat retrospective. Nevertheless, it would be appropriate for GRFMA to adopt some broad stormwater management objectives. A set of model objectives is appended to this document, noting that not all may be relevant to the Gawler River catchment. • In setting objectives for stormwater management, the community needs to be realistic about the level of flood protection that is afforded versus its willingness to pay. 	<ul style="list-style-type: none"> • It is anticipated that the SMP objectives would be consistent with GRFMA constituent Council levels of service, industry standards and regulatory requirements. The SMA also has a “standard” set of objectives which could be adapted as well. • Flood damage estimates could be readily updated utilising more recent crop survey information if that could be supplied through Primary Industries. That data would be helpful in terms of quantifying Benefit Cost ratios but we would also advocate that a MCA approach be applied so that as a minimum social, environmental, water quality, harvesting, safety, recreation, political, and economic aspects are all considered when identifying and prioritising mitigation actions.



Key SMP Element	Description	Comment(s)	Water Technology Comments
<p>Stormwater Management Options and Strategies</p>	<p>The SMP should contain a detailed discussion of the stormwater management approaches and options considered, culminating in a strategy for adoption. Ideally a broad range of options will be considered that includes structural and non-structural options. These options should be supported by analysis to demonstrate their feasibility, efficacy, costs and benefits.</p> <p>The rationale for the selected options should be clearly described, and a high-level implementation plan provided for the adopted strategy that details priorities for implementation, cost estimate and timeframes.</p> <p>Priorities for implementing projects and activities are to be clearly tabulated together with summary information relating to capital and recurrent costs, timeframes and quantified benefits.</p>	<ul style="list-style-type: none"> • Various structural options for flood mitigation have previously been considered in AWE 2014b, AECOM 2017 and AWE 2017b, • Non-structural flood mitigation options (enhanced flood warning, planning controls, land use decisions) are discussed in AWE 2014b. • Previously identified options need to be drawn together into a clear strategy with a rationale for their selection. • Cost estimates and an implementation approach are already available for some options (AECOM 2017 and Tonkin Consulting 2018). • It is recognised that there is some community contention over the prioritisation of 'downstream' options vs 'upstream' options. It is also recognised that these options are not necessarily mutually exclusive and could be delivered at different times. Settling on a prioritised strategy and achieving consensus among stakeholders will be arguably the most difficult part of the whole project. • Nevertheless, the decision by GRFMA to pursue the Northern Floodway project represents an implied strategy. The SMP will require justification as to why this project has been prioritised above others. 	<ul style="list-style-type: none"> • Structural flooding options are well covered in other documents and would simply need to be summarised and cross referenced. Water harvesting is unlikely but could be covered with a downstream wetland option within the Northern Floodway that would also have water quality and biodiversity benefits. Water quality and ecology options also are available through the Buckland Park Lake and a riparian works program. • Non structural options are well covered elsewhere so these could be readily summarised – there would need to be consideration of the new planning system and any implications that might be associated with that. Water Allocation Planning and WAA Permitting issues would also need to be captured through referencing the appropriate legislation and plans. • The MCA approach raised above would be a useful tool to assist with the prioritisation process. An important criterion for managing flood risk is flood exposure frequency. The Northern Floodway option is likely to be ranked high given it protects properties that are currently at risk from flooding for events at the 10% AEP level and above, whereas the remainder of the catchment is protected for floods up to (but not including) the 2% AEP event. The benefit cost data would also assist in establishing priorities for flood mitigation works. From a technical perspective this task should not be that complicated and any concerns that constituent councils may have with the Northern Floodway could be offset one might expect if specific township protection measures associated with the Gawler River that form part of their SMPs were also endorsed or encapsulated in the Gawler River SMP. • There would need to be community consultation but that could be focussed very much on those directly impacted (as implied above) and managed closely by the GRFMA. A wider consultation process could be readily addressed through on-line survey techniques – that is our experience from the recent CoP SMP work.



Key SMP Element	Description	Comment(s)	Water Technology Comments
Monitoring, Evaluation and Reporting	The SMP should describe a proposed strategy for monitoring the effectiveness of proposed elements of the SMP once they have been implemented, and the overall progress of implementation of the SMP.	This should not be particularly onerous and presumably would align with GRFMAs monitoring and reporting against its strategic, business and asset management plans.	<ul style="list-style-type: none"> We would agree that should be a simple process with some monitoring systems already in place or having previously been in place.

1 REFERENCES

This list includes references available to DEW/SMA and is not exhaustive. It is known that GRFMA has commissioned other reports in the past that may be useful to informing a Gawler River SMP.

Key SMP Element	Note(s)
AECOM 2017, <i>North Para Dam Raise Feasibility Assessment Stage 3</i>	<ul style="list-style-type: none"> Details one potential mitigation option which would most likely be considered in the overall SMP strategy
AWE [Australian Water Environments] 2014a, <i>Hydrology Review</i>	<ul style="list-style-type: none"> Catchment background Key source of hydrology information to inform SMP
AWE 2014b, <i>Mitigation Options Findings Working Paper</i>	<ul style="list-style-type: none"> Contains discussion of structural and non-structural mitigation options
AWE 2015, <i>Gawler River Floodplain Mapping Report</i>	<ul style="list-style-type: none"> Catchment background Key source for identification of flood risks and issues to inform SMP
AWE 2017a, <i>Gawler River 2016 Flood Review. Hydrology Review</i>	<ul style="list-style-type: none"> Further informs the understanding of flood risk for the SMP
AWE 2017b, <i>Gawler River 2016 Flood Review. Project Report</i>	<ul style="list-style-type: none"> Contains discussion and recommendations for a number of mitigation options. Useful justification for selection of options that are ultimately adopted as part of the overall SMP strategy
Tonkin Consulting 2018, <i>Norther Floodway Project Prospectus</i>	<ul style="list-style-type: none"> Catchment background Details one mitigation option which would almost certainly be considered in the overall SMP strategy



2 MODEL OBJECTIVES FOR A STORMWATER MANAGEMENT PLAN

Objective	Target(s)
Provide an acceptable level of flood protection for public and private assets	No over-floor flooding of habitable dwellings in a flood event with an annual exceedance probability (AEP) of 1% or less
	Safe vehicle access (defined by low hazard category) along state and local arterial roads in a flood event with an annual exceedance probability (AEP) of 1% or less
	No private property is subject to high or extreme hazard in a flood event with an annual exceedance probability (AEP) of 1% or less.
	No roadways or properties in residential zoned areas are subject to high or extreme hazard in a flood event with an annual exceedance probability of 20%
	No roadways or properties in commercial/industrial zoned areas subject to high or extreme hazard in a flood event with an annual exceedance probability of 10% or more
	Adequate flood warning systems are in place and information regarding flood risk is provided to the community
	Effective emergency management arrangements are in place and engage all relevant agencies, staff and affected communities
Improve quality of runoff to terrestrial and marine receiving waters	Compared to the 'untreated' case, achieve a reduction in total suspended solids of 80%
	Compared to the 'untreated' case, achieve a reduction in total Phosphorous of 60%
	Compared to the 'untreated' case, achieve a reduction in total Nitrogen of 45%
	Compared to the 'untreated' case, achieve a reduction in litter/gross pollutants of 90%
	Manage flow rates, volume, duration and frequency of stormwater entering watercourses to mimic natural flow regime
Increase the beneficial use of stormwater	Increase use of recycled stormwater in the catchment by X%
	Maximise the capture and re-use of stormwater runoff at and near source
Improve the condition of riparian ecosystems	Maintain and where possible restore water-dependent ecosystems by providing their water needs and addressing detrimental impacts from water affecting activities
	Maintain hydrological and hydrogeological systems, including natural discharge and recharge between water resources
Planning for new developments provides for open space, recreation and amenity	Ensure planning and design policies and procedures are in place which effectively manage development to minimise impact of flooding on new and existing development
	Ensure planning and design policies and procedures are in place which promote integrated planning, design and management of stormwater systems to maximise the potential to achieve multiple outcomes for water management in new development, as well as redevelopment, retrofits, upgrades and extension works.
	Ensure planning and design policies are provided which provide for protection and enhancement of natural features and systems wherever possible
Sustainable asset management of stormwater infrastructure	All (100%) of stormwater assets are identified and recorded in an asset management system and/or asset management plan
	All (100%) of WSUD assets have an operation and maintenance plan in place

Agenda Item:	3
Committee:	Board – Special Meeting
Meeting Date:	12 May 2020
Title:	Northern Floodway Project Proposal

Recommendation:

That the GRFMA

- 1. Receives the report.**
 - 2. Considers further actions in relation to progressing the Northern Floodway Project.**
-

The 16 April 2020 GRFMA Board meeting authorised the GRFMA Chair and Executive Officer to facilitate an information update of GRFMA advocacy endeavours and GRFMA frustrations at lack of action in responses, regarding the Northern Floodway Project to local media and relevant land holders of the Lower Gawler River.

Following that meeting media articles regarding the Northern Floodway Project have been facilitated via an ABC News television segment which included Cr P Rentoulis and the GRFMA Northern Floodway Advocacy Media release.

To date responses to the GRFMA media release have resulted in a:

- 2/5/2020 Saturday Advertiser Article titled “Flood funding High and Dry”.
- 5/5/2020 ABC Radio interview with GRFMA Executive Officer, Mr Sam Dilena, Town of Gawler and the Minister for Environment and Water, David Speirs MP.

See attached for a copy of the 2/5/2020 Advertiser article and refer to the following link for the podcast recording of the 5/5/2020 ABC Radio interview <https://www.abc.net.au/radio/adelaide/programs/mornings/mornings/12195426> (GRFMA item starts at the 37.45 minutes mark).

From the perspective of the GRFMA Executive Officer the clear messages from Minister Speirs were:

- The State Government is willing to contribute funding to the Northern Floodway Project (via the Stormwater Management Authority # GRFMA EO subsequently confirmed this with the Minister’s Policy adviser).
- GRFMA/Councils will need to also make a funding contribution to the cost of constructing the Northern Floodway Project (and in addition to any maintenance or ongoing management costs once completed).
- GRFMA/Councils need to have at least formal design plans completed and land tenure arrangements in place before any government would consider contributing funding to the project.

It is suggested the GRFMA Board should now consider the Minister’s comments and seek to determine a view or policy framework to establishing a pathway that will achieve GRFMA objectives of delivering the Northern Floodway Project.

It is further suggested that some matters for GRFMA consideration might be:

- The Authority with support of all 6 Constituent Councils has endorsed the project based on securing State and Federal Government funding for the capital costs and has committed to undertake the ongoing management and maintenance of the water way and levy system once completed.
How might this policy be now considered in light of the Minister's comments that GRFMA/Councils will need to make financial contribution to the project (in addition to any maintenance or ongoing management costs once completed).
- Meeting Agenda item 2 indicates opportunity to achieve some funding for a Stormwater Management Plan for the lower Gawler River (Northern Floodway Project) that will assist in achieving early completion of design plans, start the process of land tenure/access and possibly commence vegetation management of the river channel.
*Such works are currently unbudgeted by the GRFMA.
It is likely that completion of design plans and land tenure arrangements would place the Northern Floodway Project in "shovel ready" project considerations for any future infrastructure or stimulus funding opportunities.*
- To date the Australian Government has not indicated any definitive funding opportunities for the Northern Floodway Project.
It is feasible that the Australian Government will also require design plans and land tenure arrangements before making funding contributions.
- The Northern Floodway Project has received positive support from Adelaide Plains food cluster representatives and the Walker Corporation.
How might this support be utilised to assist the GRFMA in achieving its objectives of delivering the Northern Floodway Project.

Separately, following presentation by GRFMA Chair, Mr Ian Baldwin, to the Town of Gawler, Mayor Karen Redman has provided copy of her correspondence to Nick Champion MP, Federal Member for Spence, seeking support for Federal Government funding for the Northern Floodway Project. See attached for a copy of the correspondence.

OFFICE OF THE MAYOR

Gawler



Contact: Mayor Karen Redman

Ref: CC20/199

1 May 2020

Mr Nick Champion MP
Federal Member for Spence
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SMITHFIELD SA 5114

Town of Gawler Administration Centre

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Gawler East SA 5118
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Dear MP Champion

RE: GAWLER RIVERS – INFRASTRUCTURE DELIVERY TO SECURE ECONOMIC GROWTH FOR OUR REGION

I write further to our recent discussions on how you could assist the Gawler River Floodplain Management Authority (GRFMA) in seeking funding for two (2) vital infrastructure projects required on the Gawler River. Once delivered these projects will provide for continued economic growth and investment in our broader region. Council sees these projects as critically important, even more so with COVID-19 and its effects being felt across our region.

The GRFMA, with support for all six (6) constituent Councils, has a two (2) project concepts ready for implementation which will improve the flood resilience of Gawler Rivers. These projects are the:

- \$27M Northern Floodway Project
- \$92M Bruce Eastick North Para River Flood Mitigation Dam Raise

\$27M Northern Floodway (162 Jobs created)

The Northern Floodway Project is currently valued at \$27M (\$2018) and will improve existing flood levees, construct new ones and create a floodway to channel flood flows at its western end under Port Wakefield Road. These flows will then continue through to the Adelaide International Bird Sanctuary National Park - *Winaityinaityi Pangkara* providing improved ecological benefits to that area.

This project was developed following the 2016 flooding of the lower Gawler River which caused an estimated \$51M in damages and economic loss to highly productive agricultural activities in that area.

The Northern Floodway Project will provide significant protection for this community from future flooding, specifically:

- Protection of 211 of the 248 properties estimated to be flooded in 2016.
- Substantially reduced flooding across high value horticultural lands around Virginia, effectively saving people's businesses and livelihoods; and
- No flooding of the Virginia township or re-zone residential / deferred urban areas within the Virginia Growth Precinct.

A Project Prospectus on the Northern Floodway which provides a detailed breakdown on the project deliverables and the next steps required to realise its implementation can be located on the GRFMA website via the following web link.

https://www.gawler.sa.gov.au/_data/assets/pdf_file/0022/217318/northern-floodway-prospectus-final-june-2018.pdf .

The key obstacle now to delivering this high priority project is funding only. The current approach being reliant on both the Federal and State Government funding upfront and then the Constituent Councils ongoing funding to maintain these works and lower river system ongoing thereafter (estimated at \$300,000 per year).

\$92M Bruce Eastick North Para River Flood Mitigation Dam Raise (552 jobs created)

The Bruce Eastick North Para River Flood Mitigation Dam Raise Project will raise the height of the existing dam wall by 10m. This work will provide a 1 in 100 year level of flood protection to the Township of Gawler and further downstream in the Gawler River. It will work in parallel with the Northern Floodway project to effectively seek to flood proof a large extent of the Gawler Rivers system.

Studies have been undertaken by the GRFMA to develop this concept, which are outlined below;

- A Dam Raise Feasibility Assessment and Concept determining that this dam raise was possible.
- An upper level cost of \$92M (\$2017) is estimated for this work
- A 1 in 100 year flood would result in \$182M damages (\$2016) to the private properties along the Gawler River in the Township of Gawler and further downstream.

Studies undertaken which provide further detailed information on this project are available on the GRFMA website via the following web links;

https://www.gawler.sa.gov.au/_data/assets/pdf_file/0021/219018/memo-north-para-dam-raise-feasibility-assessment-stage-3-2017.pdf

https://www.gawler.sa.gov.au/_data/assets/pdf_file/0030/218496/north-para-10m-raise-cost-estimate-stage-3-2017.pdf

https://www.gawler.sa.gov.au/_data/assets/pdf_file/0020/219233/nth-para-dam-10m-raise-feasibility-assessment-drawings-stage-3-2017.pdf

I now seek your assistance in lobbying for funding to deliver these regionally vital infrastructure projects directly with the Hon Michael Mc Cormack Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development or any other channels that are available to you.

Now more than ever, infrastructure investment in this region is necessary. This will provide an economic stimulus through creating much needed jobs (estimated **714** total new construction jobs + tertiary flow on employment opportunities) and reigniting business confidence to invest in this State significant urban growth and food bowl region.

On behalf of the Council, any efforts you could make to assist with further considerations for funding of these key infrastructure projects for our region would be greatly appreciated.

Kind regards



Karen Redman
Mayor

Direct line: (08) 8522 9221
Email: Mayor@gawler.sa.gov.au

cc: Ian Baldwin, Chairman, GRFMA

Flood funding high and dry

MILES KEMP

A \$27 MILLION plan to flood-proof Adelaide's food bowl remains unfunded nearly four years after storms devastated the region – and councils have had enough of the delays.

Northern Adelaide councils are demanding state and federal governments invest in a flood mitigation project devised after the September 2016 floods damaged 727 greenhouses, inundated homes and destroyed \$51 million in crops

across areas including Virginia.

The Gawler River Floodplain Management Authority said it was frustrated that no money had been delivered for the project.

"All the politicians engaged with have noted the importance of fixing this recurring flooding issue, however, now



approaching the four-year anniversary of the last flood event, the authority's proposed Northern Floodway Project remains unfunded," GRFMA chairman Ian Baldwin said.

The authority said the investment would protect 211 properties on the lower reaches of the Gawler River from the next similar flood event.

It argued the area was of "high value" for the state's horticulture.

But state Environment Minister David Speirs, pic-

tured, said the six councils that made up the authority had offered nothing for the project, despite local authorities being responsible for flood mitigation.

"They have their hand out to state and local government and we will make a contribution," he said.

"The six councils need to put money on the table and it needs to be led by the councils."

Mr Baldwin said the project was of state significance and

should not be funded by the group, competing with other projects for funds.

"This should not be a contested grant approach," he said.

"The Northern Floodway Project should be allocated state and federal funding as a means of future-proofing against costly flooding damages and stimulating the economy, creating jobs, reigniting business confidence and delivering critical infrastructure projects."

Mr Baldwin said the auth-

ority, with funding from all six councils, would make a contribution after the works were completed.

"(This is) based on securing state and federal government funding for the capital costs, and (councils) have committed to undertake the ongoing management and maintenance of the waterway and levy system once completed," he said.

Mr Speirs said much of the project's delay had been because of councils arguing about funding.