



**STATE
PLANNING
COMMISSION**

GUIDELINES

For the preparation of an

AMENDMENT to the ENVIRONMENTAL IMPACT STATEMENT

**‘Mannum Waters’ Marina and Residential
Development – Holiday Village and Adventure
Water Park**

Tallwood Pty Ltd

Endorsed 5 December 2019

State Planning Commission

Department of Planning, Transport and Infrastructure

www.saplanningportal.sa.gov.au

Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
GPO Box 1815
Adelaide South Australia 5001

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1. BACKGROUND

The 'Mannum Waters' Residential Marina proposal was declared a Major Development in 2005 and was the subject of an Environmental Impact Statement (EIS) process. The EIS was released for public consultation in 2006. The proposal was granted a Provisional Development Authorisation by the Governor on 30 October 2008. Construction started in June 2010, with the major earthworks, marina basin, boat ramp, constructed wetlands and initial stages of the residential land-division now completed.

The major development site has also been rezoned by the Mid Murray Council and a series of zones and policy areas have been established. The role of these zones is to guide the staged construction of the approved development and to provide planning polices for Council to assess aspects of the development that were not captured by the declaration (such as applications for dwellings, tourist accommodation and commercial buildings).

The proponent for the marina development - Tallwood Pty Ltd, now wishes to modify the layout plan and design of the site to incorporate a proposed holiday village and adventure water park. This would require the current development authorisation to be varied to approve the additional land uses. In order for the Minister for Planning to consider granting such an approval (as the delegate of the Governor), a relevant EIS would be required. Thus, the EIS would need to be amended pursuant to Section 47 of the *Development Act 1993*. An amended Assessment Report would also be required for decision-making. Prior to this process being undertaken, the 2005 major development declaration would need to be varied to capture the proposed land uses.

On 18 March 2019 the proponent wrote to the Department of Planning, Transport and Infrastructure (the Department) seeking to vary the existing major development declaration to specifically include provision for a holiday village and adventure water park. A variation to the declaration, to insert *recreational and tourist development*, was gazetted on 1 August 2019.

On 22 August 2019, the proponent provided a Review of the EIS document as part of the amendment process to inform the preparation of Guidelines.

The State Planning Commission (SPC) is responsible for setting the level of assessment required (Environmental Impact Assessment, Public Environmental Report or Development Report) and provides Guidelines for the preparation of the assessment document. For this proposal, an EIS has previously been set as the level of assessment. The previous Guidelines issued in November 2005 for the residential marina did not address the proposed two new components. Thus, revised Guidelines need to be issued for the preparation of an Amendment to the EIS.

Due to the nature of proposal, the need for a broader assessment and investigation of the following is required:

- The strategic tourism / recreational and economic benefits of establishing a holiday village and adventure water park within the existing marina development site, the Mannum township and the region.
- Impact upon the River Murray, especially water quality and water allocation requirements.
- Impact on existing marina residents (especially noise and traffic)
- Impact on the local road network.

Following consideration of the potential implications of the proposal, the State Planning Commission has now prepared Guidelines (this document) for the proposed holiday village and adventure water park based upon the significant issues relating to the proposed development. The Amendment to the EIS should be prepared in accordance with these Guidelines and should describe what the proponent wants to do, what the environmental effects will be and how the proponent intends to manage the project.

The Amendment to the EIS should cover both the construction and ongoing operation of the development and, where possible, should outline opportunities to incorporate best practice design and management.

For the purposes of environmental impact assessment under the *Development Act 1993*, the meaning of 'environment' is taken to include an assessment of environmental (biological and physical), social and economic effects associated with the development and the means by which those effects can be managed.

In this context this document is the guidelines as set by the State Planning Commission specifically prepared for this application. The guidelines have been developed to properly define the expected impacts (extent, nature and significance) associated with the proposal in the manner suggested, the proposed mitigation strategies, and on balance whether such impacts are acceptable.

The documentation and analysis from the assessment process will then be used by the Minister (as the delegate of the Governor for this application) in the decision-making process, pursuant to Section 48 of the *Development Act 1993*, to decide whether the proposal can be approved, and the conditions that would apply.

The Commission's role in the assessment process is now completed. From this point the Minister will continue with the assessment under Section 47 of the Act.

2. DESCRIPTION OF PROPOSAL

The proposal is to establish a holiday village and adventure water park at the south-western end of the marina site. The approved layout plan identifies this land as being an undeveloped future stage of the residential land division (site of the holiday village) and proposed open space comprising a constructed wetland and revegetation area (site of the water park). The land is currently disused grazing land (cliff top) and dairy flat (floodplain) that adjoin the marina basin and constructed wetland area.

The Holiday Village would comprise:

- Reception office, small store and Manager's residence.
- 61 cabins of various sizes.
- 41 powered caravan / motorhome sites.
- 15 powered camping sites and 15 unpowered camping sites.
- Associated facilities, including recreation rooms, camp kitchens, amenities blocks, laundry etc.
- Caravan and boat storage area.
- Boat ramp.

The existing residential waterway adjacent the marina would be expanded at the western end to create a recreational lake for the holiday village. This would be integrated with the existing constructed wetland beside the River Murray (i.e. which is used for maintaining water quality through natural filtration).

The Adventure Water Park would comprise a variety of low to high intensity activities. The park would include a reception office, shops and café. Activities would include water slides, Zorb balls, cable ski / wakeboarding area, flyboard / jetpack area and zip-lines. The activities would be undertaken within a series of constructed water bodies (i.e. 'pools' / artificial lakes / waterways) located adjacent the existing constructed wetland. The park pool water would be filtered by natural biological processes and renewed from the River Murray. Discharges would be minimal and would be integrated with the existing constructed wetlands for the control of water quality and salinity. It is estimated to operate for 102 full open days during each calendar year.

The proposal is intended to compliment the recreational and tourism uses associated with the marina, which has become an attraction for Mannum and the region (especially due to the boat ramp and base for houseboats). The proposal would establish a Holiday Village with water frontage and access to the River Murray, plus an Adventure Water Park of a scale not present in the State. Bringing new visitors to the development may also encourage increased residential and commercial allotment sales to help complete the overall development.

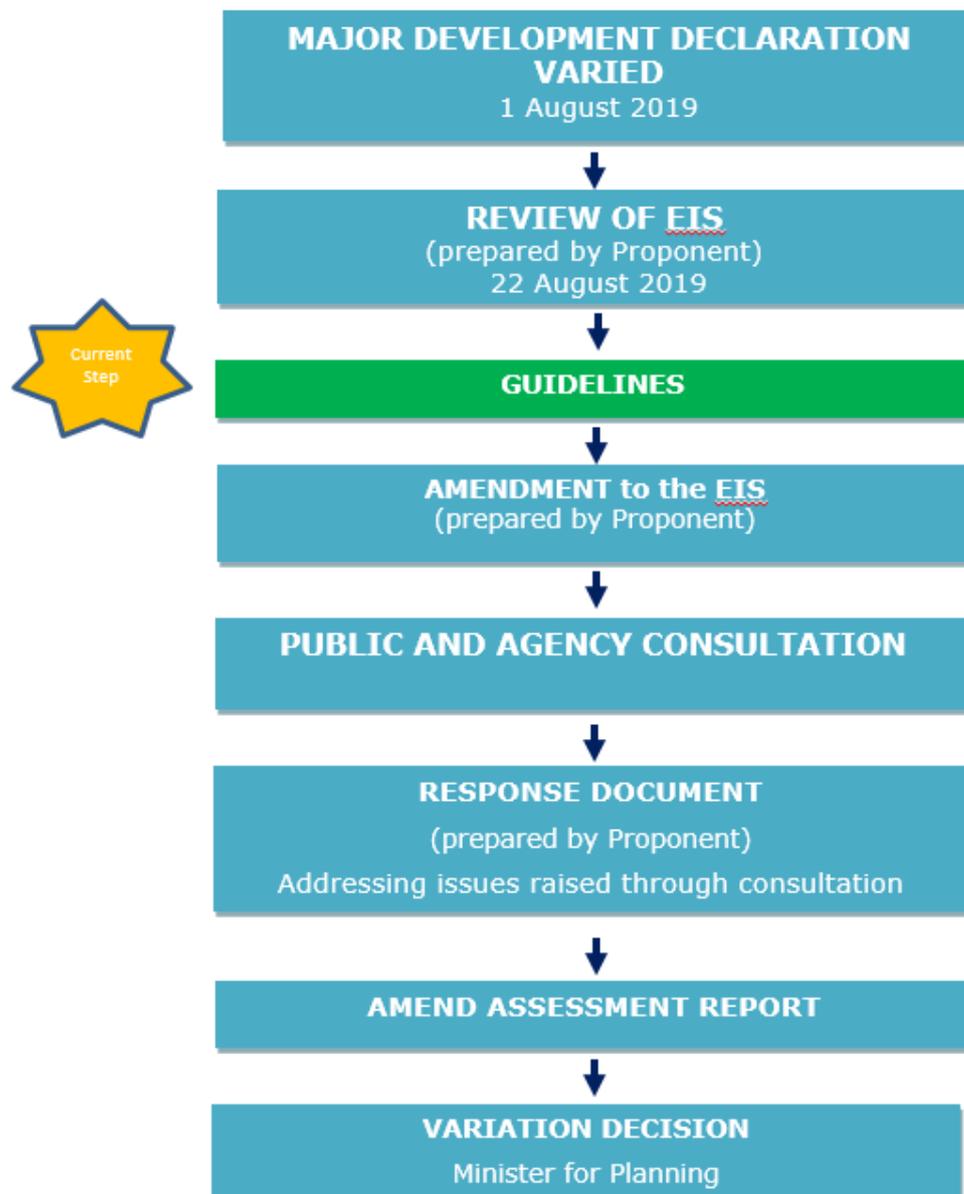
The capital expenditure for the proposed development is \$7M and is expected to generate substantial employment opportunities for the region.

3. MAJOR DEVELOPMENT PROCESS AND ROLE OF GUIDELINES

The Major Development assessment process enables the Minister for Planning to utilise impact assessment as a strategic tool.

Impact assessment enables the holistic consideration of proposals that might otherwise be of a nature or scale that is not expected through the regular development assessment process and/or Council Development Plan(s).

The major development assessment process has several steps:



These Guidelines are prepared to inform the preparation of the Amendment to the EIS. They set out the assessment issues associated with the proposal along with their scale of risk as determined by the State Planning Commission.

An Amendment to the EIS must be prepared by the proponent in accordance with the Guidelines and should specifically address each guideline.

Each guideline is intended to be outcome focused and may be accompanied by suggested assessment approaches. These suggestions are not exhaustive, and may be just one of a wide range of methods to consider and respond to a particular guideline.

The Amendment to the EIS should detail any expected environmental, social and economic effects of the development, and the extent to which the development is consistent with the provisions of the Councils Development Plan, the Planning and Design Code, the Planning Strategy and any matter prescribed by the Regulations under the Act.

Whilst not mandatory for this Amendment to the EIS due to it being declared under the Development Act, the proponent may wish to address the State Planning Policies given they are now a relevant planning instrument.

The completed Amendment to the EIS is submitted (by the proponent) to the Minister for public release, and is subsequently referred to the relevant Council(s) and government agencies for comment.

An opportunity for public comment will occur when the completed Amendment to the EIS is released. Public exhibition is undertaken for 20 business days. An advertisement will be placed in the *Advertiser* and local newspapers inviting submissions.

Copies of the submissions from the public, Council and relevant government agencies will be provided to the proponent.

The proponent must then prepare a 'Response Document' to address the matters raised during the public exhibition period.

An Amendment to the Assessment Report is then prepared. The amended Assessment Report and the Response Document will be available for inspection and purchase at a place determined by the Minister for a period determined by the Minister.

Availability of each of these documents will be notified by advertisements in *The Advertiser* and local newspapers. A copy of the Amendment to the EIS, Response Document and the Amendment to the Assessment Report will be provided to Council.

When a proposal is subject to the EIS process, from 1 July 2019 the Minister for Planning makes the final decision under Section 48 of the Act having regard to Regulation 11 (3) of the *Planning, Development and Infrastructure (Transitional Provisions) (Code) Variation Regulations 2019*.

In deciding whether the proposal will be approved and any conditions that will apply, the Minister for Planning must have regard to:

- provisions of the appropriate Development Plan or Planning and Design Code
- the Development Act and Regulations
- if relevant, the Building Code of Australia
- The South Australian Planning Strategy, including the Integrated Land Use and Transport Plan
- the Amendment to the EIS, Response Document and the Minister's Amendment to the Assessment Report
- if relevant, the *Environment Protection Act 1993*
- any other relevant government policy and/or legislation.

The Minister for Planning can at any time indicate that the development will not be granted authorisation. This may occur if the development is inappropriate or cannot be properly managed. This is commonly referred to as an **early no**.

4. AMENDMENT TO THE ENVIRONMENTAL IMPACT STATEMENT (AEIS)

The AEIS should be presented in terms that are readily understood by the general reader. Technical details should be included in the appendices.

The report must include the following:

Assessment of expected environmental, social and economic effects

The assessment of effects should include all issues identified in these Guidelines and cross referenced to supporting technical references.

Consistency with Government policy

The *Development Act 1993* requires the AEIS to state the consistency of the expected effects of the proposed development:

- with the relevant Development Plan, Planning and Design Code and Planning Strategy.
- with the objects of the *Environment Protection Act 1993*, the general environmental duty and relevant environment protection policies, and
- with the objects of the *River Murray Act 2003*, the Objectives for a Healthy River Murray and the general duty of care.

Avoidance, Mitigation, Management and Control of adverse effects

The proponent's commitment to meet conditions proposed to avoid, mitigate, satisfactorily manage and/or control any potentially adverse impacts of the development on the physical, social or economic environment, must be clearly stated as part of the AEIS.

The design of the proposal should be flexible enough to incorporate changes to minimise any impacts highlighted by this evaluation or post-operation monitoring programs.

The report should include the following:

Summary

The AEIS should include a concise summary of the matters set out in Section 46B of the *Development Act 1993* and include all aspects covered under the headings set out in the Guidelines, in order for the reader to obtain a quick but thorough understanding of the proposal and the resulting environmental impacts.

Introduction

The introduction to the EIS should cover the following:

- background to, and objectives of, the proposed development
- details of the proponent
- staging and timing of the proposal, including expected dates for construction and operation
- relevant legislative requirements and approval processes
- purpose and description of the AEIS process

Need for the Proposal

A statement of the objectives and justification for the proposal, including:

- the specific objectives that the proposal is intended to meet, including market requirements
- expected local, regional and state benefits and costs, including those that cannot be adequately described in monetary or physical terms (e.g. effects on aesthetic amenity)
- a summary of environmental, economic and social arguments to support the proposal, including the consequences of not proceeding with the proposal.

Description of the Proposal

The description of the proposal should include the following information:

- the nature of the proposal and location
- a project plan to outline objectives, constraints, key activity schedule and quality assurance
- site layout plans (including indicative land division plan, if relevant)
- the construction and commissioning timeframes (including staging)
- a description of the existing environment (including the immediate and broader location)
- a description of the current land use activities occurring in the area
- details of all buildings and structures associated with the proposed development
- details of any other infrastructure requirements and availability
- details of the construction methods to be used
- details on the operation of the proposed development, including proposed maintenance programs
- the relevant Development Plan zones
- management arrangements for the construction and operational phases (including Environmental Management and Monitoring Plans)
- a contingency plan for delays in construction.

Plans and Forms

- Current Certificate(s) of Title.
- **Context and locality plans** should illustrate and analyse the existing environment and site conditions and the relationship of the proposal to surrounding land and buildings. The plan should be drawn to a large scale and be readily legible. The plan(s) should indicate:
 - any neighbouring buildings, infrastructure or facilities, including identification of all nearest sensitive receptors and the likely use of existing or proposed neighbouring buildings (e.g. dwelling, farm outbuildings, shop, office)
 - location of any watercourse, dams, underground wells and/or any other environmentally sensitive areas
 - location of any state heritage and cultural heritage in relation to the site
 - existing native vegetation, regulated or significant trees
 - known sites for protected, threatened or vulnerable species, including migratory species, on the site, the adjoining land and riverine environment
 - existing roads and access tracks (public & private)
 - any other information that would help to set the context for the locality
- **Site plan(s)** clearly indicating all proposed buildings, structures and works (drawn at a scale of 1:100 or 1:200).
- **Elevations** (drawn at a scale of 1:100 or 1:200) showing all sides of the buildings, structures and works with levels and height dimensions provided in Australian Height Datum.
- **Cross sections** of the buildings, structures and works (including any stockpile and storage facilities) showing ground levels, floor levels, ceiling heights and maximum height in Australian Height Datum.
- Any technical or engineering drawings and specifications including geotechnical data, details of cut and fill and depth to groundwater.

Specialist Reports and Details

- A **Water Quality Management Plan** prepared by an appropriately qualified consultant or engineer that includes hydrodynamic modelling of water circulation in the constructed main lake and the maintenance of suitable water quality for recreational users and the environment (including any discharges to the marina waterways, constructed wetlands or the Murray River). The Plan must outline measures to manage and monitor water quality.
- A **transport and access impact assessment** prepared by a suitably qualified traffic and access planner/engineer. The assessment should evaluate current and proposed access arrangements including the effect on the arterial road network and car parking, as well as vehicle interface with the local road network. Any assessment must include the traffic and

access impact for the construction period as well as any ongoing operations and maintenance including details of the traffic/transport vehicle sizes/movements outside of normal gazetted heavy vehicles.

- A **waste management and minimization plan (for construction and operation)** detailing the sources of waste including spoil and removed vegetation, the location of waste management storage areas (including the separation of waste streams, such as recyclables, hard waste and e-waste) and disposal facilities located on site or within laydown areas and provide details of how these facilities will be serviced.
- A **noise assessment** prepared by a suitably experienced, professional acoustic engineering consultant¹ to moderate external and environmental noise disturbance and amenity impacts for residents and other sensitive uses within the immediate area as a result of the proposed development (primarily during construction).
- Details of any proposed **wastewater management**, including segregation, collection, treatment, storage, reuse and disposal of wastewater.
- A **construction environmental management plan (CEMP)** that describes how construction will be managed to mitigate negative environmental impacts to the environment, and public health and the amenity, and how those environmental management requirements will be implemented. Any CEMP should include consideration of a soil erosion and drainage management plan such as details of proposed stormwater management, including any opportunities for retention and reuse.
- A **fire hazard management plan** that considers requirements both during the construction and operational phases - including measures to minimise fire risk at and to/from the site, resources and training required, sources of water to fight fires (and how this water will be accessed), options to utilise and coordinate with other operations in the region/area, and cost recovery.
- A **operational environmental management plan (OEMP)** that describes how operations, in particular maintenance regimes, will be managed to mitigate negative impacts to the environment, and public health and the amenity, and how any ongoing environmental management requirements will be implemented. Any OEMP should include risk management plan which includes consideration of minimising maintenance works during fire danger season.

Sources of Information

- All sources of information (e.g. reference documents, literature services, research projects, authorities consulted) should be fully referenced, and reference should be made to any uncertainties in knowledge. Where judgements are made, or opinions given, these need to be clearly identified as such, and the basis on which these judgements or opinions are made need to be justified. The expertise of those making the judgements including the qualifications of consultants and authorities should also be provided.
- Any technical and additional information relevant to the EIS that is not included in the text should be included in appendices.
- It is **RECOMMENDED** that the AEIS consider issues that may generate concerns based on inaccurate or outdated perceptions. The information provided should explain key concepts in a factual manner. This can help to provide base level information to assist with community understanding of the proposal.

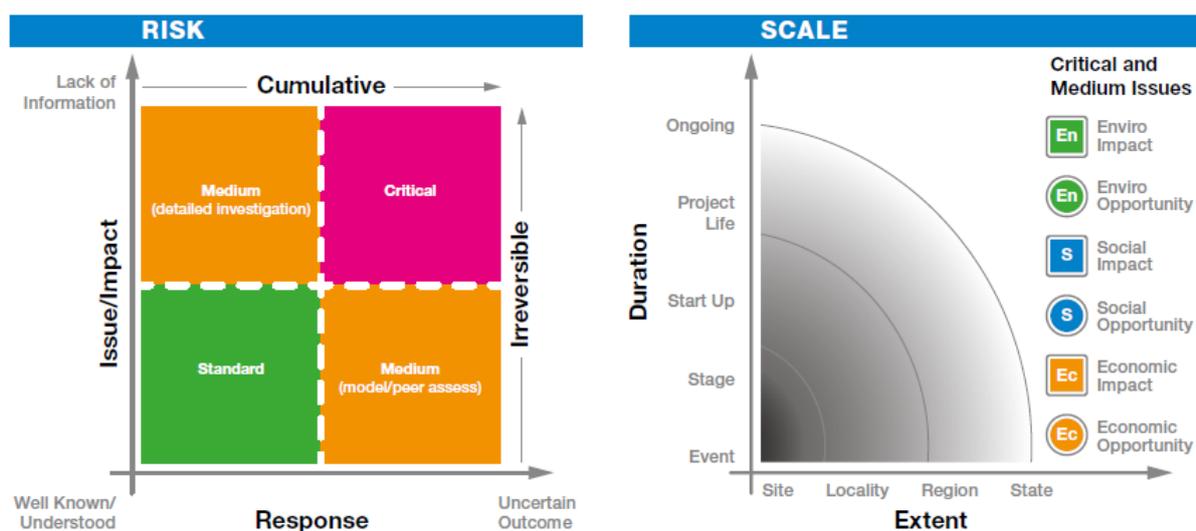
¹ An acoustic engineer is defined as a person eligible for full Member status of both Engineers Australia and the Australian Acoustical Society

5. ASSESSMENT

Impact assessment is an important tool that enables the consideration of projects that might otherwise struggle to be addressed properly or fairly under the 'normal' assessment system.

In setting these Guidelines, the State Planning Commission has considered the scale of issues associated with the project and determined whether they represent issues or opportunities. The potential impacts and issues have then been organised according to the level of work and type of attention required by the proponent: either standard, medium or critical:

- Where the issue is well known and the response is well understood then the risk assessment is classed as '**standard**'
- Where work is required to address the issue but the risk is likely to be manageable with additional information then the risk assessment is classed as '**medium**'.
- Where information about the issue is lacking and the response is unclear, the issue is classed as '**critical**'.



The issues and impacts identified by the Commission as requiring standard, medium or critical level assessment are listed below. Each requirement includes a description of the issue/impact and a description of the action or investigation needed.

To assist with the assessment of the AEIS the proponent is requested to provide a table (as an appendix) that cross references each Guideline requirement (action or investigation needed) with the relevant section and page of the EIS.

NOTE: The investigative requirements of the AEIS do not negate the need for the proponent to obtain all necessary licences, permits and/or management plans prior to undertaking any investigations or works in relation to this AEIS. It also does not negate the need for the proponent to comply with any legislative obligations or duty of care under the relevant legislation.

No	Issue/Impact	Description	Risk		Scale		Level of assessment
			Issue/Impact	Response	Duration	Extent	
1	Land Use and Economic Effects	The proposal will have an impact on the local and regional economy during construction and operation and may result in immediate and long terms effects on marina residents, land owners and surrounding uses.	<p>The proposal is expected to have a positive impact in terms of employment and contribution to the local economies during construction.</p> <p>Potential impacts on existing and future residents / landowners could include construction effects (especially dust and noise) and ongoing noise and traffic effects during operation (especially due to increased visitation and recreational activities).</p>	The proponent needs to provide an analysis of employment generation opportunities and the economic benefits of the proposal, including flow on effects for the marina development and the region.	During construction and ongoing.	Local and Regional	<p>More information required on:</p> <ul style="list-style-type: none"> • Strategic tourism related benefits. • Employment opportunities • Multiplier/flow on effects. • Impact on surrounding land uses. <p>= CRITICAL</p>
2	Effect on the River Murray	The proposed development is located on the floodplain next to the River Murray, which is an important environment and water resource for South Australia.	<p>The proposal would require the use of river water to fill and maintain water bodies.</p> <p>The management of waterbodies would need to ensure water quality in the river is not detrimentally affected, especially to protect downstream users.</p> <p>The proposed uses would introduce a substantial level of human activity that could cause disturbance the natural environment (especially the Baseby Wetlands)</p>	The proponent would need to detail how water would be sourced and how water quality would be protected.	During construction and ongoing.	Regional and State	<p>The River Murray water resource could be negatively impacted by potential threats to water quality. Need for further assessment, including any interaction with the existing marina development or discharges to the river.</p> <p>= CRITICAL</p>
3	Effect on Water Quality	The proposal includes the construction and operation of artificial water bodies for recreational use.	<p>The waterbodies need to be designed and managed to ensure safe use, especially water quality standards.</p> <p>The waterbodies may also interact with the existing waterways.</p>	The proponent needs to detail the design and operational requirements and standards applicable for recreational use and to protect the environment.	Design and ongoing.	On-site and surrounding environment.	<p>Protecting the health and safety of recreational users is essential. Hydrodynamic modelling for the main lake would need to demonstrate how suitable water quality would be maintained.</p> <p>= CRITICAL</p>
4	Effect on the Physical Environment	The proposed development has the potential to substantially disturb landforms, soils and groundwater and to affect storm water run-off.	Construction activities (especially for the waterbodies) has the potential to cause erosion (wind and water), sedimentation and the alteration of natural drainage patterns. Waterbody excavations could also intercept groundwater that may be saline.	Whilst the 2006 EIS adequately described the physical environment, the proponent will need to provide a detailed description of the potential effects of the proposed works.	Primarily during construction.	Local	<p>Issue is well understood, but more specific information is required.</p> <p>=MEDIUM</p>

			Risk		Scale		Level of assessment
5	Effect on Native Vegetation and Fauna (Terrestrial and Aquatic)	Construction would require the clearance of some native vegetation / fauna habitat and disturbance to fauna species.	Based on the information provided in the 2006 EIS, construction would involve a small amount of clearance of native vegetation that has been degraded by past agricultural uses and salinity (and is of low habitat value). Ecologically important riverine habitat would not be affected. Local fauna would be disturbed by human activity, especially when the water park is in use.	The proponent would need to calculate the amount and type of native vegetation clearance. The level of human disturbance to fauna (especially from noise) would need to be determined.	During construction and operation.	Local	Whilst the receiving environment can be sensitive to change, the issue is well understood, but more specific information is required = MEDIUM
6	Effect on Cultural Heritage.	The proposed development has the potential to impact on sites / locations of Indigenous heritage through disturbance during construction.	The proposed development may have impacts on recorded and unrecorded Aboriginal heritage sites, objects and remains, which may be located on the site.	The 2006 EIS provided a detailed description on existing Aboriginal heritage matters. During construction of the existing marina, several identifies sites of significance had to be managed in accordance with the requirements of the Aboriginal Heritage Act.	During construction	State	Issue is well understood, but more specific information is required = MEDIUM
7	Hazard Risk	The construction and operation of the proposed development involves a range general and specific risks.	Associated risks include: <ul style="list-style-type: none"> • Erosion and land contamination. • Acid Sulphate soils. • Public health and safety associated with waterbodies. • Contamination of waterbodies (including algal blooms). • Flood protection. • Road safety. 	The proponent will need to provide a detailed risk assessment.	During construction and operation.	Local	Issue is well understood, but more specific information is required on level of risk. = MEDIUM
8	Traffic Effects	The proposal requires temporary site access during construction and a permanent access point during operation.	During construction local traffic may be affected, especially for the delivery of materials and infrastructure. During operation local traffic may be affected by increased traffic volumes, especially during peak visitation periods.	The proponent will need to provide a detailed description of traffic impacts and how they would be managed.	During construction and operation.	Local	More information is required, but impacts would be manageable. = STANDARD
9	Introduction/spread of exotic plant and animal species	The proposed development has the potential for the spread of introduced or nuisance plants and animals.	Construction activities could increase the abundance of pest plants or animals (especially weeds). During operation the pest or nuisance species could be attracted (especially scavengers).	The proponent will need to provide a detailed description of the risk and effect of introduced or nuisance plant and animal species to terrestrial and aquatic environments.	During construction and operation.	Local	More information is required, but impacts would be manageable. = STANDARD

		Risk		Scale		Level of assessment	
			The waterbodies would need to be managed to minimise pest species populations (especially aquatic weeds and European Carp).				
10	Construction, Operation and Maintenance Effects	The construction and operation of the proposal would require a range of impacts to be minimised, mitigated and monitored through an environmental management plan framework.	A range of standard and specific impacts would need to be adequately addressed (including consultation with stakeholders and the adoption of a risk analysis approach and relevant industry standards).	The proponent will need to outline the proposed construction and operational management techniques and measures.	During construction and ongoing.	Local and Regional	More information is required, but impacts would be manageable. = STANDARD
11	Legislation, Policies and Strategies	A range of planning, environmental and energy related statutory requirements would need to be met for the construction and operation of the proposed development.	The proposal will need to comply with relevant State and Australian government legal requirements, policy directions and strategic objectives.	The proponent will need to provide a detailed description of all relevant requirements.	During construction and ongoing.	N/A	Issue is well understood, but more specific information is required. = STANDARD



CRITICAL ASSESSMENT

Land Use and Economic Effects

Assessment Requirement 1: The proposal will have an impact on the local and regional economy during construction and operation and may result in immediate and long term effects on marina residents and surrounding uses.

1.1 Identify the main land uses in the area and the level of impact on residents / landowners and land uses in the immediate and surrounding environs during construction and operation.

1.2 Describe the proximity of the proposal to existing and future dwellings and any potential impacts of the proposal on quality of lifestyle

1.3 Outline any mitigation measures to alleviate or avoid impacts on surrounding residents / landowners and land uses.

1.4 Provide a full economic analysis of the proposal including details on the economic effects in terms of the benefits to the existing marina development, the Mannum township and the broader region during the construction and operational phases of the proposed development (including the 'multiplier effect').

1.5 Describe potential employment opportunities and the expected impacts on communities.

1.6 Identify potential economic effects on tourism and recreation.

1.7 Identify any economic implications for the region if the proposal does not proceed.

1.8 Describe the visual effect on the amenity of the local communities, tourism values / experiences and landscape quality (especially the River Murray).

Effect on the River Murray

Assessment Requirement 2: The proposed development is located on the floodplain within close proximity of the River Murray, which is an important water resource.

2.1 Calculate the amount of water that would be taken from the river to initially fill the constructed waterbodies and on an annual basis to maintain them (i.e. due to evaporation).

2.2 Outline the arrangements for securing a water allocation for the filling and maintenance of water levels in the waterbodies, including the location where the allocation could be sourced from.

2.3 Describe how the development could affect the water resource values and users of the River Murray, particularly downstream water supply intakes.

2.4 Outline the visual effects from the River Murray and environs of the proposed development in this locality, especially the appearance and built form of buildings and structures.

2.5 Describe the effect of the proposed development on riverine environment, especially as a result of any discharges from the waterbodies and by increased human activity.

2.6 Describe any effects of the proposed development on the biological diversity and conservation significance of the Baseby Levee Wetland system.

2.7 Describe the general impact of increased recreational activities, including pollutant loads and noise.

2.8 Describe how the constructed water bodies would be managed during times of manipulated high and low river levels.

2.9 Detail the measures to protect the river and wetlands during and after construction.

2.10 Describe how public access to the river front would be managed.

Water Quality

Assessment Requirement 3: Suitable water quality maintained within the constructed waterbodies for recreational uses and to protect the environment.

3.1 Outline measures to protect and maintain suitable water quality in the proposed water bodies, particularly the management of run-off and salinity and the control of sediment, micro-organism and pollutant sources (including nutrients, herbicides, pesticides and any chemical treatments).

3.2 Detail how sufficient water turn-over rates and flushing will be achieved for the waterbodies, especially through the use of modelling for the main recreational lake. Integration with the current management of waterbodies and wetlands should also be detailed.

3.3 Outline measures to protect and maintain suitable water quality in the existing waterways and constructed wetlands (including current management and monitoring).

3.4 Describe the impact that water discharged from the waterbodies may have on water quality and the health of the river.

3.5 Describe water sensitive urban design measures that could be adopted.

3.6 Describe the approach to water sustainability, including ways in which mains water supply use can be minimised or supplemented and opportunities for recycling water (particularly stormwater).

MEDIUM ASSESSMENT

Effect on the Physical Environment

Assessment Requirement 4: The proposed development has the potential to disturb landforms, soils, groundwater and to affect surface water run-off.

4.1 Describe the existing groundwater and land related environmental conditions, especially salinity.

4.2 Describe the short and long term effects of fill placement and the construction of waterbodies on land and/or groundwater quality and movement, including measures to manage salinity.

4.3 Identify any risks and implications of causing or exacerbating land degradation (especially soil erosion) and the impacts of dust emissions during construction.

4.4 Describe potential changes to hydrology (e.g. drainage patterns or groundwater characteristics), including the implications of these changes on aquatic and terrestrial environments.

4.5 Outline mitigation measures and their likely effectiveness in minimising or avoiding disturbance to the physical environment (including surface waters and groundwater) during construction and operation.

4.6 Describe stormwater and wastewater management and the potential impact on land and/or groundwater.

Effect on Native Vegetation and Fauna (Terrestrial and Aquatic)

Assessment Requirement 5: Construction would require limited clearance of native vegetation (and reduction of fauna habitat) and disturbance to fauna species.

5.1 Describe the location, extent, condition, habitat value and significance of native vegetation species and communities that may need to be cleared or affected during construction.

5.2 Describe the location, extent, condition and significance of native fauna species and populations that may be affected during both construction and operation (especially disturbance due to noise or human activities).

5.3 Outline measures to mitigate the effects on native vegetation and fauna.

5.4 Describe the establishment and management of aquatic and fringing vegetation (natural, planted or introduced) associated with the constructed waterbodies.

Effect on Cultural Heritage

Assessment Requirement 6: The proposed development has the potential to impact on sites / locations of Aboriginal heritage through disturbance during construction.

6.1 Identify any effects on Aboriginal sites of archaeological or anthropological significance (including but not limited to those listed in the Register of the National Estate and the SA Register of Aboriginal Sites and Objects). Indicate any consultation with local Aboriginal organisations that have an interest in the area.

6.2 Outline measures adopted to avoid or minimise impacts on Aboriginal sites of archaeological or anthropological significance.

Hazard Risk

Assessment Requirement 7: The construction and operation of the proposal involves a range general and specific risks.

7.1 Detail procedures to be adopted to identify whether acid sulphate soils are present and management measures that would be required during construction and operation.

7.2 Detail procedures to be adopted to identify whether the land is contaminated and management measures that would be required during construction and operation.

7.3 Describe strategies for ensuring public safety during construction and operation, including the management of boats and jet skis.

7.4 Describe any hazardous materials, with reference to storage, use, handling and disposal of these materials during construction and operation.

7.5 Describe procedures and strategies to prevent, manage and mitigate pollutant spills, sewage leaks or algal blooms, including the ability to isolate the water bodies from the river and constructed wetlands.

7.6 Detail the relevant requirements of the flood protection policies in the Development Plan and how compliance would be achieved.

7.7 Describe strategies to ensure public safety on and around the water bodies, especially the recreational use of water bodies in accordance with relevant health standards.

STANDARD ASSESSMENT

Traffic Effects

Assessment Requirement 8: The proposal requires access for the transportation of construction materials and infrastructure to site and a permanent access point for ongoing operation.

8.1 Describe all traffic types and volumes during the construction and operational phases (especially during peak periods) and traffic management measures.

8.2 Identify any potential effects of traffic on communities, including, road safety, convenience, noise and dust.

8.3 Describe any requirements where traffic infrastructure requires temporary or permanent modifications and access requirements that may be needed for local and /or arterial roads during construction and for ongoing traffic volumes.

Introduced Plant and Animal Species

Assessment Requirement 9: The proposed development has the potential for the spread of introduced or nuisance plants and animals

9.1 Identify the potential for the introduction or dispersal of new pest or nuisance plant and animal species, and the associated implications for native species, habitat and agricultural land.

9.2 Identify the potential for increased distribution and abundance of existing pest or nuisance plant and the associated implications for terrestrial and aquatic environments.

9.3 Outline mitigation measures and their effectiveness in reducing or avoiding the introduction or spread of pest or nuisance plant and animal species.

Construction, Operation and Maintenance Effects

Assessment Requirement 10: The construction and operation of the proposal would require a range of impacts to be minimised, mitigated and monitored through an environmental management plan framework.

10.1 Provide a site construction plan (including construction techniques and the timing of construction activities) and outline strategies to minimise effects on residents, the community and the local environment. The plan should also outline any on site infrastructure required during construction (e.g. site compounds, storage areas etc.), including the management and decommissioning of these sites.

10.2 Describe the proposed methodology and frequency for floodplain excavation (or dredging), earthworks drainage, the disposal of excavated material, maintenance activities and the impacts on the environment (particularly turbidity and water quality).

10.3 Identify the source and origin of any construction materials, including revetments and fill for land forming.

10.4 Describe the implications of placing a large amount of fill on the floodplain, particularly contamination and implications for natural drainage, water circulation and flood management.

10.5 Identify measures for the control of stormwater run-off, mud (including drag out onto public roads), vibration, litter, dust, noise, odour (including from rotting aquatic vegetation, algal blooms and organic soils) and other emissions during construction.

10.6 Outline waste management strategies and the potential for incorporating recycling and resource recovery.

10.7 Describe the impact the proposed development will have on any gas, electricity, water, sewerage, stormwater management and telecommunication systems infrastructure.

10.8 Describe the use of amenity/landscape plantings (including lawn areas) and broad scale revegetation, especially the opportunities for the use of locally endemic species. The effectiveness of existing revegetation works around the marina should be considered.

10.9 Identify the implications for maintenance dredging or removal of aquatic plant growth, including disposal options and impacts on the environment and community.

10.10 Provide information on the expected levels of noise associated with the operation of the facility, identifying all potential noise sources, and describe the extent to which these noise emissions could be reduced and contained to minimise the effects upon the environment, the residential community and the wider locality.

10.11 Outline measures to be adopted to control nuisance insects, particularly mosquito populations and other potential disease vectors that could pose a risk to human health.

10.12 Detail measures to ensure that residential, recreational and commercial activities would be conducted in an environmentally sustainable manner, particularly to protect water quality.

10.13 Identify opportunities for energy and water conservation.

10.14 Outline the proposed environmental management measures that would be adopted to deal with the identified construction, operational and maintenance effects. Include reference to any baseline studies, monitoring programmes, training programmes and reporting mechanisms (internally and to public authorities). Outline the effectiveness of mitigation measures for perceived and recognised impacts. Include consideration of previously demonstrated best practice or approaches which may have been used for similar works in similar habitats, which may be of benefit and/or have been endorsed for their proven low impact effects.

10.15 Describe the proposed monitoring of impacts during and after construction, particularly water quality (including consideration of the existing data collection).

Planning and Environmental Legislation and Policies

Assessment Requirement 11: A range of planning and environmental related statutory requirements would need to be met for the construction and operation of the proposed development.

11.1 Describe the proposed development in terms of its consistency with the relevant Development Plans, Planning and Design Code, the Planning Strategy and the State Planning Policies.

11.2 Describe the proposed development in terms of its consistency with relevant State and Commonwealth legislation, including the River Murray Act 2003 and the Murray Darling Basin Agreement.

APPENDIX 1 – USEFUL DOCUMENTS

Legislation

- *Development Act 1993*
- *Development Regulations 2008*
- *Public Health Act 2011*
- *Environment Protection Act 1993*
- *Native Vegetation Act 1991*
- *River Murray Act 2003*
- *Natural Resources Management Act 2004*
- *Native Title Act 1994*
- *Aboriginal Heritage Act 1988*
- *National Parks and Wildlife Act 1972*
- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999.*

Strategy & Policy

- Development Plans and Planning and Design Code
 - Mid Murray Council
- Region Plans
 - Murray and Mallee Region Plan
- State Planning Policies, 2019
- Water Allocation Plan for the River Murray Prescribed Watercourse, 2019.
- Natural Resources South Australia Murray-Darling Basin Strategic Plan, 2014.
- Environment Protection (Noise) Policy, 2007
- Environment Protection (Water Quality) Policy, 2015
- Environment Protection (Air Quality) Policy, 2016
- Environment Protection (Waste to Resources) Policy, 2010
- South Australia's Waste Strategy 2015 – 2020, Office of Green Industries SA
- Building Code of Australia

Guidelines

- NHMRC Guidelines for Managing Risks in Recreational Water, 2008
- EPA Stormwater Pollution Prevention Code of Practice for the Building and Construction Industry, 1999
- EPA Construction Environmental Management Plans Guidelines, 2018
- Guide for Applications to Clear Native Vegetation, 2017