

**Northern Water Supply Project
Stakeholder Reference Group Meeting
10.00am – 12.30pm Thursday 4 May 2023
Westland Hotel Motel, Whyalla and MS Teams**

Meeting Presentation – Appendix A

Attendees – Appendix B

1. Welcome and introductions

Josephine Telfer welcomed all attendees to the meeting and gave an Acknowledgement of Country. Attendees were asked to provide any conflicts of interest via email.

2. Review of meeting notes from previous meeting

The notes from the SRG Meeting held on 15 February 2023 were accepted.

3. Review actions from previous meeting

1. *SRG members to provide any further feedback on the question below to JT:*
“What local community benefit/impacts do you think could easily be missed or not well understood that you would like to see highlighted in the SIA?”
Feedback provided to JT was incorporated into the SIA.

2. *AW to consider whether reports that inform the EIS can be shared with the SRG.*
Yes, these can be shared as they become available.

4. Project Update – Mike Morgan

- The Business Case has been completed and reviewed through an independent Assurance Process, and received a Green/Amber rating.
- The Business Case and Independent Review will be submitted to State Cabinet for consideration with a decision expected in late May.
- The completion of these two reports concludes the work for which InfrastructureSA was engaged.
- Assuming the project and funding is approved to proceed, which is highly likely, the project team will continue with the environmental studies and engineering work, as well the stakeholder engagement process.
- A final project investment decision is expected in late 2024.
- The process to date has not been without its challenges:
 - There are some concerns regarding the actual desalination plant location.
 - It has been challenging to access the required skills and resources to progress the project.
 - We are still working though fully understanding the commitment from end users.
- While the focus has been on Mullaquana as the preferred site, an investigation has commenced into an alternative site at Cape Hardy as a potential shortlisted site.

Questions

Is there any update on the savings on the draw from the GAB and RM?

- While a key objective of the project is to provide savings on the draw from these sources, there are ongoing discussions with water users to determine their water requirements and how it will be used.

5. Stakeholder Engagement Summary Report – Josephine Telfer

Josephine Telfer provided an overview of the Draft Stakeholder Engagement Summary Report (see presentation) which provides a summary of the engagement approach with stakeholders throughout the development of the Business Case.

The Cabinet decision is scheduled for an upcoming Cabinet meeting, including the preferred site, although the date has changed several times. It is likely that the Stakeholder Engagement Summary Report will be released prior to the decision as it will not impact the outcome.

Questions

Could the decision regarding the site still change depending on environmental considerations?

- Yes, until we can demonstrate that the impacts of the plant can be managed at the preferred location, the site could still change.
- However, the work involved with environmental, engineering and other impact studies and assessments is long and expensive so the preference is to focus on a single site rather than multiple sites.

Has financial commitment been confirmed for Cape Hardy?

- No, this is part of the work that we will be undertaking in the lead up to a final investment decision. We will commence due diligence and master planning for the site over the next 9 months with a target FID date of early 2025.

How many people have participated in the community and stakeholder engagement process/surveys?

- Approximately 120 people have participated to date including 88 in the initial survey.

When and how will engagement commence on the Cape Hardy site?

- Early due diligence is still being completed on Cape Hardy and we are conscious of not extending engagement too widely until the economic and environmental feasibility of the Cape Hardy location can be determined. This is a difficult decision as the economic viability of the site is based on a single user who has a lot of work to do to progress to a point where this determination can be made.

What are the additional costs with Cape Hardy?

- While there are a range of savings associated with Cape Hardy, an additional 180kms of pipeline (from Mullaquana) to Cape Hardy would be required. The total additional cost for Cape Hardy is around \$350-500m.

6. Site Presentation – Mike Morgan and Antony Lockyer

Mike Morgan provided a summary of the shortlisting process and background on Cape Hardy:

- Several areas and sites across the Eyre and Yorke Peninsulas were considered.
- Sites were then eliminated based on water quality and where estimated costs were likely to be more than \$1bn over the base case (Pt Lowly).
- At that time, there was no indication of demand for water south of Whyalla and no customers had been identified to fund infrastructure.
- Mullaquana was \$500m over the base case and identified as having the greatest potential to be sustainable and the best site for further investigation.
- Preliminary engagement with Amp Energy and Iron Road commenced in October last year which indicated interest in a water supply to Cape Hardy at some point in the future via pipeline from Mullaquana. Since those initial discussions took place, Amp Energy and Iron Road have determined that there will be demand for water in the near term (production around 2028) and there has been material commercial progress between the two entities in this regard. The high likelihood of this significant demand has warranted further investigation of Cape Hardy as a potential shortlisted site. Cape Hardy would be \$350-500m above the base case.

Questions

Would end users now consider not proceeding with the SA Water plant and building a larger plant at Cape Hardy?

- We are engaging and working with SA Water as part of the potential relocation to Cape Hardy on the feasibility of an option that would negate the need for a desalination plant at Port Lincoln.
- The main issue is the timing of demand. Port Lincoln is likely to run out of water around 2025 whereas the Northern Water Supply Project has a 2027-28 timeframe, and is also not yet a fully committed project.
- From a water security perspective, Northern Water is not likely to be a viable alternative to what SA Water are planning. But this is ultimately a decision for SA Water.

Antony Lockyer presented a summary of the location and marine environment at Cape Hardy:

- Iron Road proposed a Deep Water Port in 2013. Habitat map and background information (see presentation) sourced from the EIS for the Port Development, 2015.
- We will continue to conduct environmental impact assessments of our own but this provides a level of information that we do not currently have.
- Access to deep water (>20m) closer to the shore, approximately 1km – significantly shorter tunnels.
- Lower salinities than USG – between 36-38 PPT as opposed to 38-42 PPT in the USG - beneficial from an intake and dilution perspective. SARDI are currently doing some modelling.
- Habitats - some sandy beach, rocky reef and seagrass. No mangroves.
- Cape Hardy is less likely to impact upon productive fishing grounds for prawns, blue crab or other commercially important species.
- Further south and greater distance from the new EPBC Listed Cuttlefish Heritage Site.

Questions

Does the brine dissolve once it is taken up with the current?

- The salt in the brine outfall is already dissolved in water, it is just a higher concentration than background salinity levels. Thus, the brine doesn't dissolve as such, it dilutes and disperses as it mixes with the water. Salinity levels will be within 'background levels' within 200m of the outfall outlet.
- Early results from the modelling at Mullaquana indicate there is unlikely to be accumulation of brine in the gulf. With the better flushing rate further south and greater connectivity to open shelf waters, it would be even less of a risk at Cape Hardy.

Will there be increases in water temperature?

- Whilst there may be a slight increase in temperature in the brine, the key concern is salinity.
- We are looking at how the results of the BHP studies can be incorporated into the analysis of the ecotoxicology data; however an independent review will still be conducted to inform the dilution requirements.
- The temperature difference between the outfall water and the back ground water temperature are expected to be well under 0.5 degrees.

Are marine creatures in the gulf tolerant of the brine?

- The impact of the brine at various concentrations across the gulf will be assessed. We will be looking for a value that protects at least 99% of species, with the dilution factor to inform the location of the 200-metre radius protection zone.

How are anti-scaling chemicals dispersed?

- The ecotoxicology review will incorporate an assessment of antiscalants but more detailed information will be required on the actual chemicals used.
- A component of the plant design is to look at mechanical ways to prevent scaling and to avoid using chemical antiscalants.
- The Adelaide desalination plant, for example, uses mechanical methods rather than chemicals.

What is the proximity of Cape Hardy to aquaculture zones?

The closest aquaculture zone to the desalination plant is the Port Neil aquaculture zone, approximately 1km from the outfall. However, this aquaculture zone currently has no active leases or licenses. The closest active aquaculture lease/license is within the Arno Bay aquaculture zone approximately 30 km north and an aquaculture license application has been submitted >30 km south within the Tumby Bay aquaculture zone.

What is the net cost differential between Mullaquana and Cape Hardy considering there are some marine impact savings but greater pipeline costs with Cape Hardy?

- Cape Hardy is expected to be in the order of \$350-500m (including the additional pipeline) over Mullaquana option.

What are the potential terrestrial impacts around Cape Hardy?

- The area around Cape Hardy has previously been used for cropping so there is not much native vegetation, and the land between Mullaquana and Cape Hardy is mostly cleared land; however flora and fauna surveys will still be conducted.

What are Barngarla's thoughts about Cape Hardy?

- Both options - Mullaquana and Cape Hardy - have been presented to Barngarla Determination Aboriginal Corporation and they have not indicated a preference.
- Cultural heritage surveys around which ever site is selected will be conducted which will be considered when planning the plant layout and pipeline route.

What is the extra production required for the Amp Energy/Iron Road development?

- Stage 1 and 2 will deliver 130ML/day each. The total capacity of 260ML/day is expected to cater for all users including Amp Energy/Iron Road and the growth in the hydrogen industry.

What impact does the inclusion of Cape Hardy as an option have on the project timeline?

- While this has not yet been explored in detail, it is unlikely that this will have a material impact on the overall project schedule.

7. Site Discussion

Attendees were invited to share their thoughts on the five topics below in relation to the Cape Hardy site considering the following two questions:

1. How does what we have heard to date apply for Cape Hardy?
2. What else needs to be considered for a potential Cape Hardy site?

Marine Impacts

- Greater distance from cuttlefish and blue crabs at Mullaquana but closer to seal and penguin colonies.
- Need to consider the value of the two ecosystems including carbon credits and supporting tourism and other industries.
- *Near shore accumulation of EPBC migratory birds – North Franklin Harbour potentially impacted.
- PIRSA report indicates a decline in USG water quality – this will be incorporated into the environmental impact assessment.
- Snapper breeding is shifting south per SARDI modelling.
- Oysters are closer to Cape Hardy.
- Port interactions and impacts with shipping and other water traffic.

Economic Impacts and Opportunities

- Changes the distance for work. Desal plant construction becomes more of a FIFO scenario which may reduce the economic benefits for Whyalla. Camp accommodation would take business from USG cities and local businesses.
- Changes the dynamic.

- Where will the skills come from? Linking to education – workforce skill development lead in times.
- What does it mean for local supply chain? Can USG still be serviced by shifting?
- Maintaining regional airports with increase in number of flights.
- Does it make the ferry more viable?
- *Two major projects concurrently in the same area.
- Public project reliant on one private project.
- Are there more opportunities around Cape Hardy to tap into?
- Gives USG a competitive edge, including Port Lincoln.

Cape Hardy General Considerations

- Supply chain and housing.
- Integration with Iron Road work – maximise benefits and avoid duplication.
- Impact on Port Lincoln desalination - opportunity to consolidate Cape Hardy and Port Lincoln plants.
- *Vegetation and clearing impacts (for all potential projects including additional mining and hydrogen development).
- *Cleared site - could be options for improvements.

Decision Making and Engagement Processes

- Need full transparency around allocation demand including savings and offsetting on current use of GAB and RM.
- Look at MCA process.
- Ensure complete and extensive and avoid rushing. Ensure that this late development is not used as a reason to short-circuit the studies and work that needs to be done.
- Financial impact and cost allocation of the move.

** Denotes Land Impacts*

Online attendees participated in a general group discussion which included the following key points:

- Makes sense to incorporate with other development at Cape Hardy.
- Good if not better than Mullaquana.
- There are value-adds to existing Cape Hardy development (no development at Mullaquana).
- DC Tumby Bay supports and expects Cape Hardy will have social licence.
- Need to consider flow on effects for commercial/industrial land and housing in local area.
- RDA Eyre Peninsula echoes views that concentrating development in this precinct makes sense.
- Fisheries - deep water, better mixing, lower salinity look to make it a better site - interested in investigating further.
- Greater distance from cuttlefish and mangroves is a positive - need to investigate local marine life.

Allan Hall of RecFishSA provided the following statement from a meeting held in Port Lincoln on 3 May 2023:

“Port Lincoln itself can survive indefinitely on existing water supply. The fact that they are supplying a good part of the Eyre Peninsula is what is depleting existing supply. Cape Hardy to supply Eyre Peninsula could negate the need for a desalination plan at Billy Light Point altogether (not required).”

Questions

How does the change of site impact on the original customers and end users in Whyalla and Far North?

- This is a key part of discussions at the moment, noting the project was always designed to be user funded. The move is not likely to have any impact on end users in Whyalla and Far North, and will enable water supply to other potential users on the EP.

8. Stakeholder Engagement Next Steps – Josephine Telfer

Josephine Telfer provided a summary of the draft Stakeholder Engagement Plan (see presentation) including the Vision, the Approach and a Roadmap for engagement through to 2024. SRG members are encouraged to provide feedback to Josephine on the draft Plan.

Questions

Is there potential to supply the areas north and west of Roxby Downs?

- Yes, we are looking at supply to the neighbouring towns of Roxby. Once the consultation with underwriting partner is underway, we will explore who else we can connect with in those areas. Ultimately will depend on whether the project can economically meet the various demand requirements.

Will Cape Hardy go through the same MCA process?

- We may look at how Cape Hardy scores against Mullaquana, rather than a review of all four sites. We are also keen to hear feedback from the community on Cape Hardy.
- There are some concerns for the beaches either side of Cape Hardy as these are popular beaches for families and the community.

Is there a rough estimate of the required workforce for Cape Hardy? And how will it be serviced given Tumby Bay is a much smaller town than Whyalla which would have serviced the workforce at Mullaquana.

- An initial estimate of the workforce required for construction of the plant and pipeline is approximately 3,500.
- The workforce post-completion to run the plant is minimal.

What data is available for the assessment of Cape Hardy?

- Existing data is being reviewed now including water quality sampling data from the Iron Road EIS.
- If Cape Hardy is confirmed as the preferred site, the water quality monitoring equipment currently at Mullaquana will be moved the Cape Hardy to complete all the necessary testing for the EIS.

9. Other Business

Nil

Meeting Actions

1. Provide feedback on the draft Stakeholder Engagement Plan to Josephine Telfer at Josephine.Telfer2@sa.gov.au.

Next Meeting

The next meeting will be held on **Wednesday 5 July 2023 via MS Teams**.

Northern Water Supply

Sustainable water to unlock wealth in South Australia

Stakeholder Reference Group

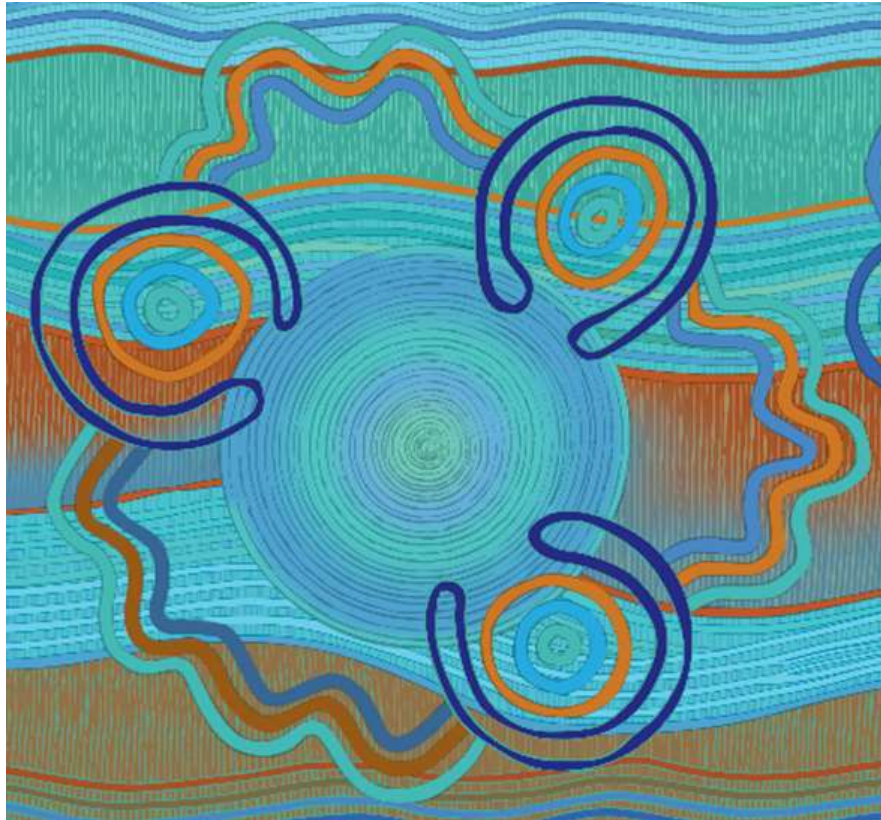
4 May 2023

Whyalla



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Acknowledgement of Country



We acknowledge the traditional owners of the land on which we meet today and pay our respects to Elders past, present and emerging and extend that respect to other Aboriginal and Torres Strait Islander people who are present.

We also acknowledge the project is located on the traditional land of the Kokatha and Barngarla people.



Agenda

Topic	Presenter
1 Welcome and introductions	Josephine
2 Review of meeting notes from previous meeting	Josephine
3 Review actions from last meeting	Josephine
4 Project Update	Mike
5 Stakeholder Engagement Summary Report	Josephine
6 Site Presentation	Mike/Antony
7 Site Discussion	Groups
8 Stakeholder Engagement Next Steps	Josephine
9 Other Business	All
10 Next Meeting: Wednesday 7 June 2023, Teams	

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House keeping

- Conflict of interest declaration
- Turn off distractions
- Hybrid meeting
- Comments and questions use the Teams chat box or raise hands
- Soft close at 12:30 with a stretch break at the mid point

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New Members

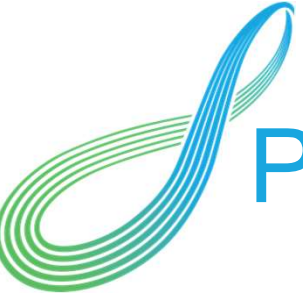
- Louise Foote, Global Maintenance USG

Guests

- Rebecca Hayes, District Council of Tumby Bay
- Tim Breuer, LandscapeSA, EP
- Alli Carter, Global Maintenance USG



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Previous meeting notes

- Any questions or concerns arising from notes from previous meeting





Actions from Previous meeting

1. SRG members to provide any further feedback on the question below to JT - josephine.telfer2@sa.gov.au.

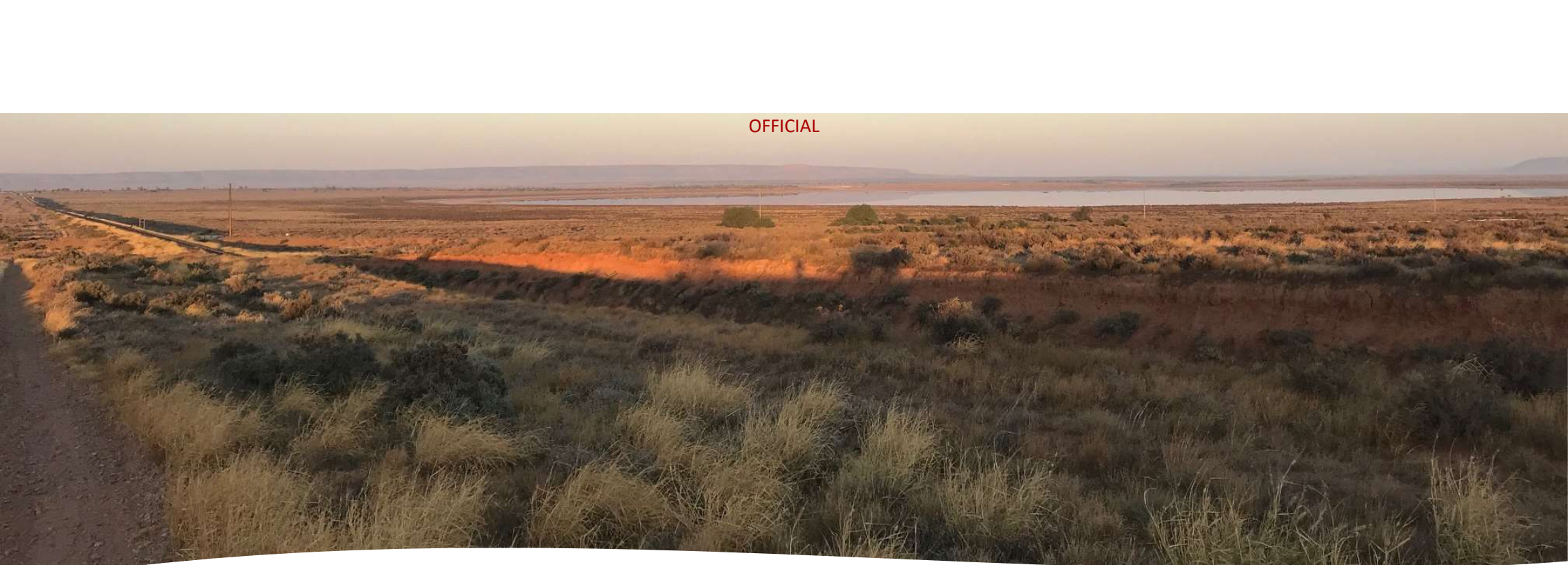
What local community benefit/impacts do you think could easily be missed or not well understood that you would like to see highlighted in the SIA?

2. Ongoing action: SRG members to provide feedback to JT on potential agenda items or deep dive topics for SRG meetings.

3. AW to consider whether reports that inform the EIS can be shared with the SRG.

- *Yes these can be shared as they become available.*





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Project Update

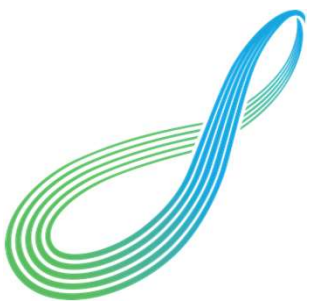
Mike Morgan

Business Case submitted

Undertook independent Assurance Process

Awaiting instruction regarding next steps

Investigation into Cape Hardy as a potential short listed site



The Northern Water Supply project is one of a number of projects being considered for the Upper Spencer Gulf as part of the State Government's plan to decarbonise local industry, provide for future jobs and economic development, and position the region as a global leader in the net-zero economy.

The NWS project recently completed a Business Case which assessed the potential for a new and sustainable water supply for the Far North of SA and Upper Spencer Gulf. The project aims to sustainably support regional communities and industries now and into the future.

Significant engagement with stakeholders informed the Business Case. This is a summary of the engagement approach, what we heard and how stakeholder feedback has been incorporated.

“
THIS IS A ONE-OFF OPPORTUNITY TO GET THIS RIGHT. WE HAVE A DUTY OF CARE TO THE ENVIRONMENT AND THE RIGHTS OF FUTURE GENERATIONS.
”

What was being decided

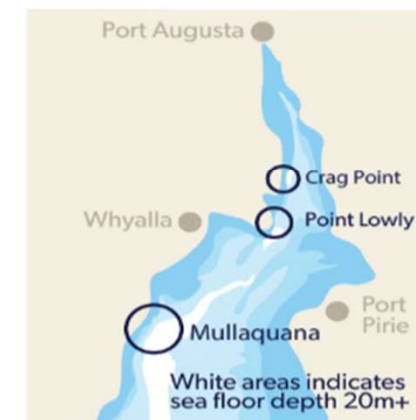
The Business Case evaluated the environmental, social and economic benefits and impacts of building a seawater desalination plant in the region, along with a 450 km pipeline to transport the desalinated water to communities and industries across the region, including the emerging hydrogen industry.

Part of the business case process involved looking at where might be the most suitable site to conduct in-depth studies on the feasibility of building a desalination plant. Stakeholder input was a critical part of identifying issues, risks, opportunities and benefits that should be considered as part of the site assessment process and captured in the Business Case.

Ten sites for the desalination plant were initially considered across a wide region covering the Eyre Peninsula and Yorke Peninsula. Sites were then eliminated where they were found to be unfeasible due to environmental constraints or significant cost increase.

Following this process, three potentially feasible sites were identified

SITE 1	Crag Point
SITE 2	Point Lowly
SITE 3	Mullaquana



*Information and data on this figure is an artist impression and is not to be used as a detailed design.

How we engaged

Stakeholder engagement commenced in March 2022 with the announcement of the Business Case study. Engagement increased from September 2022 and continued to the end of February 2023.

A targeted engagement approach was delivered to ensure key stakeholders were given significant opportunity to participate in the engagement process. A wider community engagement approach provided various ways for community members to give feedback on potential sites and the project.

KEY REPRESENTATIVES STAKEHOLDERS



METHOD

- site analysis workshop
- briefings and presentations
- Multi Criteria Analysis (MCA) Workshop
- face-to-face meetings
- Stakeholder Reference Group
- direct engagement



STAKEHOLDERS

- landowners
- commercial fisheries and aquaculture
- broader industry
- maine advocacy
- environment/conservation groups
- recreational fishers
- Traditional Owners
- local councils
- State Government
- Federal Government



INFORMATION SHARED WITH NETWORKS

ACTIVE OUTREACH



METHOD

- postcards
- project briefings
- YourSAy
- surveys
- meetings
- phone calls
- emails



STAKEHOLDERS

- shack owners
- marine industry
- affected residents, businesses and landowners

GENERAL COMMUNITY



METHOD

- MCA Survey
- Site Selection Survey
- NWS Survey
- YourSAy
- project telephone and email
- stakeholders social media
- posters
- postcards
- networks

POTENTIAL DELIVERY PARTNERS



METHOD

- commercial negotiations
- market sounding
- Project Participants Working Group

STAKEHOLDER ENGAGEMENT SUMMARY REPORT

What we heard

“

**A NEW WATER SOURCE
COULD PROVIDE WATER
AND OPPORTUNITIES
FOR REGIONAL AND
REMOTE COMMUNITIES
TO BE GREENER AND
MORE LIVEABLE.**

”



What we heard

SUMMARY

- Overall feedback was supportive of a new water supply, including the benefits and opportunities it could bring:
 - reducing or replacing the use of climate-vulnerable or non-renewable water sources such as the Great Artesian Basin, Mound Springs, and River Murray
 - providing a reliable, sustainable water source
 - providing water and opportunities for regional and remote communities to be greener and more liveable.
- A new water supply should not be at the expense of the health of the Upper Spencer Gulf and surrounding region.
- The potential impact on the marine environment as a result of brine disposal, the resulting impact on the fishing and tourism industries, and the habitat and ecology of the Upper Spencer Gulf were of paramount concern.
- Mullaquana was generally supported as a suitable site for further investigations because:
 - it was considered that potential marine impacts would be most likely to be able to be suitably managed here due to its location closer to the mouth of the Gulf and deep water to improve brine dispersal
 - there is a greater availability of land
 - there is a greater distance from existing shack settlements and accessible coastline.
- It was clear that stakeholders and the community consider the two northern-most sites of Crag Point and Point Lowly to be unacceptable for further investigation. This was largely due to their location in the top of the Gulf, where circulation and tidal movements were considered less likely to disperse outfall and social and recreational impacts would be greater. The impact of the physical development on these areas was also considered to be undesirable.
- Some respondents did not consider a desalination plant, or at least any return of brine to the Gulf, appropriate in any circumstances. While the number of people who communicated this perspective was relatively low, the level of commitment to this view was strong within that smaller group.
- Alternative potential desalination plant sites outside of, or lower in the Spencer Gulf and other water supplies to consider were suggested.

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STAKEHOLDER ENGAGEMENT SUMMARY REPORT

“
**THERE IS A NEED
FOR A NEW WATER
SUPPLY FOR THE
UPPER SPENCER GULF
AND FAR NORTH SA,
HOWEVER, ANY NEW
WATER SUPPLY
SHOULD NOT BE AT
THE EXPENSE OF
THE HEALTH OF THE
UPPER SPENCER GULF**
”

MARINE IMPACTS

What we heard



CONCERNS

- Potential impacts of the construction and operation of a desalination plant on the marine environment.
- Impacts of seawater intake and brine outfall and the importance of selecting a site that would minimise these impacts.
- Unique tidal features of Upper Spencer Gulf affecting brine outfall impacts.
- Potential impacts on cuttlefish.
- Marine environment of the Gulf was considered to already be in a poor condition and highly vulnerable to environmental changes.
- Further deterioration of Gulf health through cumulative and long-term impacts of industry, build-up of hypersaline water, and outfall from a desalination plant.
- Potential impact to the sensitive ecosystem of the Gulf including mangroves and seagrass which provide habitat and important marine nurseries, as well as a direct impact to sea-life particularly on eggs, juveniles, and breeding.
- Importance of fishing and aquaculture in the Gulf for commercial or recreational fishing operations and associated industries and communities who rely on this resource.
- The importance of considering all species and understanding of their migration paths and connections.
- Impacts of infrastructure on exclusion zones and fish movement.
- Using subsurface intake and the ability for a desalination plant to be optimised depending on timing or tides was seen as a potential way to minimise impacts.
- Amount of water to be drawn from the Gulf.
- Impact on shorebirds.
- Impact on sand drift.
- High expectations that marine investigations would be conducted early in the process, be subject to independent peer review and full public scrutiny, conducted openly and transparently, be rigorous and defensible, and be informed by scientific evidence.
- Other plans, studies and proposed projects in the area were highlighted.

94%

**OF RESPONDENTS
TO THE SITE SURVEY
CONSIDERED AVOIDING
OR MINIMISING IMPACTS
ON THE MARINE
ENVIRONMENT AN
IMPORTANT ASPECT OF
CHOOSING A SITE**

MARINE IMPACTS

Project response



MULLAQUANA WAS IDENTIFIED AS THE SITE WITH THE BEST POTENTIAL FOR SUCCESSFUL MANAGEMENT OF MARINE IMPACTS FROM A LARGE-SCALE DESALINATION PLANT.

- Marine impacts were considered as part of the site selection MCA.
- Site selection was considered by stakeholders as the first and most important measure for mitigating marine impacts from the project.
- The Project Team has been working closely with commercial fishing associations, environmental groups and recreation fishers to understand concerns and manage impacts.
- Environmental Impacts Assessment (EIA) scope will include studies of potential impacts on commercial and recreational marine species including cuttlefish.
- Significant resources are being invested to better understand the oceanographic characteristics of the Gulf and the implications for dispersion and flushing. This includes:
 - additional monitoring (multi-site and multi-depth) of current conditions
 - bathymetry surveys
 - improved modelling of the water flow within the Gulf.
- Significant research will also be undertaken during the assessment phase to understand the potential distribution and impact of brine discharge to the Gulf.
- Additional management options for discharge being considered include pre-mixing the saline water with seawater to reduce the salinity differential at the point of discharge.
- Ecotoxicology studies will be included as part of the marine investigations to be undertaken.
- Potential impacts will be modelled based on the maximum capacity of the desalination plant. This will include modelling potential intake and outfall impacts.
- Seabed surveys will be undertaken to help understand the potential impacts.
- Options for onshore treatment or use of brine have been explored with no economically or environmentally viable options currently identified.
- The physical layout of the desalination plant will be designed to allow for a future connection and off take for land-based use of the post-process brine should an option become available in the future.

MARINE IMPACTS



AS PART OF SCOPING THE PROJECT REQUIREMENTS FOR MARINE STUDIES INTO THE POTENTIAL IMPACTS ON THE MARINE ENVIRONMENT, THE PROJECT TEAM HAS MET WITH A RANGE OF EXPERTS IN MARINE SCIENCE INCLUDING STAKEHOLDERS FROM THE MARINE INDUSTRY AND ENVIRONMENTAL SECTORS

- Exclusion zone area around the intake and outfall sites will be minimised to the intake and outfall points, and not the full pipe length.
- Adelaide University was engaged to undertake a literature review of all the academic research related to potential impacts of desalination plants in the Gulf. This has informed the scope for further studies on potential marine impacts.
- All studies of the marine environment will be independently peer reviewed and made publicly available.
- Adelaide University will coordinate and oversee independent peer review of all scientific studies undertaken for the project relating to the marine environment. This level of peer review is above and beyond the level of review required as part of the legislative approval process.

LAND

What we heard

83%



OF RESPONDENTS TO THE SITE SURVEY CONSIDERED AVOIDING OR MINIMISING IMPACTS ON THE LAND AN IMPORTANT ASPECT OF CHOOSING A SITE

- Environmental impacts to land should be avoided or otherwise minimised.
- Select a site and pipeline route that considers impacts on habitat, protected species, and surface water flows.
- Utilise existing infrastructure corridors, particularly roads or powerlines to reduce landscape impacts and disturbance.
- Studies and baseline data collection needs to be undertaken during the appropriate season.
- Co-location with other industry was seen to have both advantages and disadvantages.
- Shared resources and utilising land already industrialised was seen as a benefit, however this could also restrict future expansion access to coastal beaches in the local area.
- Concerns about potential impact on terrestrial species and birds.

12

LAND

LAND

Project response



- Terrestrial environmental impacts were considered as part of the site selection MCA.
- Flora and fauna surveys will be undertaken to reduce the risk of construction to any vulnerable species.
- The project is proposing to underground the pipeline where feasible, which will mean revegetation of disturbed areas can be maximised.
- The project is seeking opportunities to undertake local environmental offset projects.
- Pipeline corridor has been designed to follow existing infrastructure corridors wherever practicable.
- Visual amenity of the proposed infrastructure will be considered in the environmental impact assessment process.
- Physical access to the coastline will not be impacted.



THE PROJECT IS SEEKING OPPORTUNITIES TO UNDERTAKE LOCAL ENVIRONMENTAL OFFSET PROJECTS AND FOR THE PROJECT TO RESULT IN A NATURE POSITIVE OUTCOME



13



77%

**OF RESPONDENTS
TO THE SITE SURVEY
CONSIDERED THE
OPPORTUNITY TO OFFSET
CLIMATE-DEPENDENT
WATER SOURCES AN
IMPORTANT ASPECT OF
CHOOSING A SITE**

OPPORTUNITIES

What we heard

The importance of securing a new water supply was **highly supported** and considered necessary.

The importance of and the opportunity to reduce draw from the Great Artesian Basin and consequentially its mound springs was particularly highlighted due to their cultural and ecological value and concerns of environmental unsustainability.

OTHER POTENTIAL PROJECT BENEFITS IDENTIFIED AND SUPPORTED INCLUDED:

- providing a water supply to nearby communities and settlements
- opportunity for greening of the Whyalla community that could not be done with current water supplies
- seeking opportunities for utilisation of brine
- connection to pastoral properties
- more reliable water supply that facilitates sustainable growth
- improving liveability and unlocking tourism and industry opportunities that otherwise would not be available
- reduce reliance on the River Murray and Great Artesian Basin
- The Northern Water Supply project could defer the need for a desalination plant at Port Lincoln
- connectivity to Southern Middlebank Range Iron Duke processing plants
- potential development of horticulture and intensive agriculture
- new water supply is critical for mineral resource development.

CONCERNS:

- Expansion of businesses and increased use of water should not be encouraged as it makes communities even more reliant on water and further increases need that is not sustainable.
- Actual potential for the project to support green hydrogen and the development of transition to a decarbonised economy.
- 'Green washing' to get approval for a project which ultimately would not achieve an environmental benefit.

OPPORTUNITIES

Project response

- The Project Team will continue to work with communities to identify and realise project benefits.
- Options for onshore treatment or use of brine have been explored with no suitable onshore options currently available.
- The physical layout of the desalination plant will be designed to allow for a future connection and off take for land-based use of the post-process brine should an option become available in the future.

DECISION MAKING PROCESS

What we heard



- Consider long-term and short-term outcomes in decision making.
- Short-term economic, stakeholder, political and mining considerations should not take precedence over long-term environmental and social considerations.
- Preserve the fishing industry and local amenity.
- Some indicated a low level of trust of other organisations, and in decision makers based on previous experiences.
- The project and decision-making process should be independent of identified water customers.
- Learn from past experiences and processes.
- A commitment to a transparent assessment process is desired.
- Concerns regarding the integrity of planning processes and a lack of accountability for decision makers and government.
- Concerns that the process seemed predetermined before consultation had been undertaken and did not respond to alternative scientific evidence.

DECISION MAKING PROCESS

Project response

- Stakeholders were invited to participate in the MCA process as part of site selection.
- The project will be subject to a approval processes required under legislation.
- In addition to the legislative requirements the project is committed to open and transparent engagement with stakeholders.
- Independent peer review of all marine environmental impact studies will be undertaken.
- Project Team will continue to work with stakeholders in the identification and assessment of potential issues.
- The project will make all relevant environmental studies undertaken public.
- The project is committed to an open and transparent process.



**THE BUSINESS CASE
WILL CONSIDER
ENVIRONMENTAL,
ECONOMIC AND SOCIAL
IMPACTS AND BENEFITS
IN ITS ASSESSMENT**

ENGAGEMENT PROCESS

What we heard

AN ENGAGED, HEARD AND UNDERSTOOD COMMUNITY WAS CONSIDERED A MEASURE OF PROJECT SUCCESS.

- Ongoing engagement with stakeholders is important.
- Accessibility and communication of data was considered essential to public understanding and scrutiny, particularly during any environmental impact assessment process.
- Support was expressed for the approach undertaken and for engagement with targeted stakeholders.

CONCERNS ABOUT THE ENGAGEMENT PROCESS:

- The language of the engagement seems to be promoting the process and misleading.
- The general public do not care enough to consider the impacts.
- Difficulty accessing the YourSAy website.
- Lack of transparency and distribution about the consultation process.

ENGAGEMENT PROCESS

Project response

The Northern Water Supply project is committed to an open and transparent assessment process. This commitment is supported through:

- uploading all relevant marine and other environmental studies undertaken as part of the project
- sharing marine monitoring data captured in the Gulf as an open resource
- explaining the project rationale as an important part of the engagement process
- involving of stakeholders in the MCA process as part of selecting the study site
- regular updates on the project YourSAy webpage
- providing support to community members to access the YourSAy webpage.

In undertaking work on the project, the team has identified many opportunities afforded by the project as well as a range of issues which require further assessment. These have both been shared and comments invited.

REGULAR MEETINGS WITH THE SRG TO PROVIDE UPDATES, GAIN INPUT AND PROVIDE FEEDBACK ON HOW INPUT HAS INFORMED THE PROJECT

ALTERNATIVES

What we heard

SUGGESTIONS FOR ALTERNATIVE WATER SUPPLIES TO THE NORTHERN WATER SUPPLY

- Use of recycled wastewater or recycled water from the region to replace or supplement desalination.
- Build a pipe from the Adelaide desalination plant.
- Further drawing on the River Murray at increased rates during flood periods like the current flood to feed an auxiliary supply to water needs.
- Build only a pump station in the Upper Spencer Gulf and pump saline water to be desalinated at in-situ desalination plants at Olympic Dam, Carrapateena and Prominent Hill.
- Need to consider other emerging technologies that do not produce a waste problem and are less energy intensive.

ALTERNATIVE PROJECT SERVICE AREA SCOPE

- Need for a state-wide strategic plan for water security and opportunities as opposed to individual solutions in isolation was suggested.
- The Northern Water Supply should include consideration for the provision of water to Port Lincoln and surrounds.

ALTERNATIVE LOCATIONS

- West Coast of the Eyre Peninsula, Elliston, Ceduna
- Port Augusta to reduce the amount of pipeline required
- Cape Hardy or a location somewhere lower in the Gulf.



The Northern Water Supply Business Case considers a new water source for the Upper Spencer Gulf and the Far North of South Australia.

- The Northern Water Supply project initially considered 68 different options for providing a water supply to the far north of South Australia. Options included new or expanded use of River Murray water, treated wastewater, integration with the Adelaide Desalination Plant and a range of other options. Pumping untreated seawater was also considered.
- Following the options analysis, it was found that a coastal seawater desalination plant was the best solution in terms of reliability to meet demand requirements, climate change resilience, environmental impact and cost.
- The business case considered 10 areas for potential desalination plants. These included Cape Hardy, and the West Coast of the Eyre Peninsula.

- Sites were excluded where there were environmental concerns due to water quality and the potential for the receiving environment to be able to tolerate discharge, or if the cost was significantly higher than alternative options to meet the required supply demands of the project scope.
- These studies found that the West Coast options are not feasible with a cost increase of more than \$2 billion greater than other potential sites.
- A joint concept study into water supply pipelines between the proposed Northern Water Supply desalination plant and Cape Hardy was announced in December 2022. This study is being undertaken as a standalone concept and is not part of the primary business case for the Northern Water Supply project.
- Supply to Cape Hardy is dependent on firm and material demand.

HERITAGE

HERITAGE (ABORIGINAL AND NON-ABORIGINAL)

What we heard

79%



OF RESPONDENTS TO THE SITE SURVEY CONSIDERED AVOIDING OR MINIMISING IMPACTS ON HERITAGE (ABORIGINAL AND NON-ABORIGINAL) AN IMPORTANT ASPECT OF CHOOSING A SITE

- It is important that Aboriginal Cultural Heritage areas are protected.
- Areas with non-aboriginal heritage value should also be protected including natural and built heritage.
- The project presents an opportunity to add value to, or reinvest in heritage sites.

87%

OF RESPONDENTS TO THE SITE SURVEY CONSIDERED AVOIDING OR OR MINIMISING IMPACTS TO HUMAN HEALTH AN IMPORTANT ASPECT OF CHOOSING A SITE

HERITAGE

Project response



The project will seek to avoid impacts of both aboriginal and non-aboriginal heritage.

The project will work directly with Traditional Owners to identify areas of cultural significance and measures to avoid or effectively manage impact on these areas. This will involve:

- Cultural Heritage surveys
- development of a Cultural Heritage Management Plan
- other agreements to be made with the relevant Traditional Owner groups.

SOCIAL LICENCE' VS 'SOCIAL IMPACT'

Acceptable management of key issues raised in the engagement process will affect the level of 'social licence' the project has in the community

20

AMENITY

AMENITY

What we heard

71%



OF RESPONDENTS TO THE SITE SURVEY CONSIDERED AVOIDING OR MINIMISING IMPACTS ON AMENITY (VISUAL, NOISE, VIBRATION) AN IMPORTANT ASPECT OF CHOOSING A SITE

CONCERNS

- Impacts:
 - to landowners
 - to recreational use
 - of increased housing demand in an already tight rental market
 - to important recreational areas and activities.
- Cumulative impacts of existing and increasing infrastructure projects.
- Noise, vibration, light, and increase in traffic.
- Local amenity could be destroyed for benefit elsewhere.

SOCIAL SUSTAINABILITY AND LIVEABILITY OPPORTUNITIES

- Providing job opportunities to bring locals with appropriate skills back to the region.
- Providing a water supply to nearby communities and settlements.
- Improving liveability and unlocking tourism and industry opportunities that otherwise would not be available.
- Connection to pastoral properties.
- More reliable water supply that facilitates sustainable growth.
- Achieving community greening outcomes within and beyond Whyalla that could not be done on current water supplies.

AMENITY

Project response



- Visual amenity of the proposed infrastructure will be considered in the environmental impact assessment process.
- Visual impacts considered in site selection MCA.
- Impacts to be managed and assessed as part of the Environmental Impact Assessment.

21

ECONOMIC CONSIDERATIONS

What we heard

85%


OF RESPONDENTS TO THE SITE SURVEY CONSIDERED AVOIDING OR MINIMISING IMPACTS ON EXISTING INDUSTRIES IMPORTANT IN SELECTING A SITE.

- Existing economic activities and growth, including recreational and commercial fishing, pastoral, tourism and future industries should not be compromised by a desalination plant or further industrialisation.
- State and local governments seem to place more importance on particular industries and to economic development at the expense of other industries and of environmental assets.
- Minimising construction costs and maximising economic growth opportunities was considered an important aspect of choosing a site by only 29% of respondents of the site survey.
- Concern that local economic activities and associated industries would be compromised to benefit mining.
- Major companies that will benefit from a new water source should subsidise water for the communities they operate in.
- Desire for the project to be economically self-sufficient in the long term.



- A review of potential impacts on existing industry will be incorporated as part of the Environmental Impact Assessment scope.
- Impact on existing industries was considered in the site selection MCA.
- A funding model is being developed to ensure users cover the cost of their water use.



EXISTING ECONOMIC ACTIVITIES AND GROWTH INCLUDING RECREATIONAL AND COMMERCIAL FISHING, PASTORAL, TOURISM AND FUTURE INDUSTRIES SHOULD NOT BE COMPROMISED BY A DESALINATION PLANT OR FURTHER INDUSTRIALISATION

Site feedback

MULLAQUANA

WAS FELT TO HAVE THE GREATEST POTENTIAL TO BE SUSTAINABLE AND WAS GENERALLY SUPPORTED AS THE BEST SITE FOR FURTHER INVESTIGATION.

OPPORTUNITIES

- Less constraints and avoided any interface with Defence activities.
- Proximity to Cowell, Port Lincoln and Whyalla would be a benefit and make it more accessible to potential customers and opportunities on the Eyre Peninsula.
- Further away from cuttlefish breeding sites and other important marine areas.
- Closer to open ocean, with wider deep water near enough offshore and significantly higher capacity to flush brine.
- Relatively high marine connectivity to the Point Lowly region exists during winter months.
- Being further away from Port Pirie and Whyalla would mean the intake water would be less polluted and less saline.
- Site would have less impact on:
 - future tourism, recreational, industrial, pastoral activities
 - natural and built heritage
 - flora and fauna types with less unique species to the area.

CONCERNS

- Marine impacts.
- Importance of the area to yellowfin whiting (*Sillago schomburgkii*) and key juvenile prawn sites.
- The potential increased cost for transport, distance from other infrastructure and further distance required for pipeline.

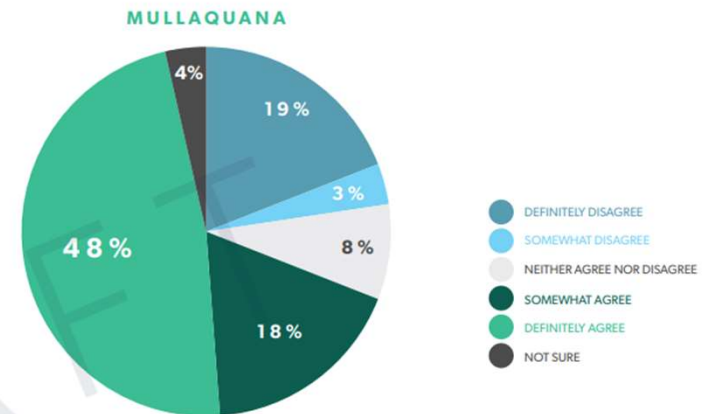
Project response

- Comments received from the community were included as part of the information used to inform the MCA site assessment process.
- Mullaquana was used as the site for the Business Case.

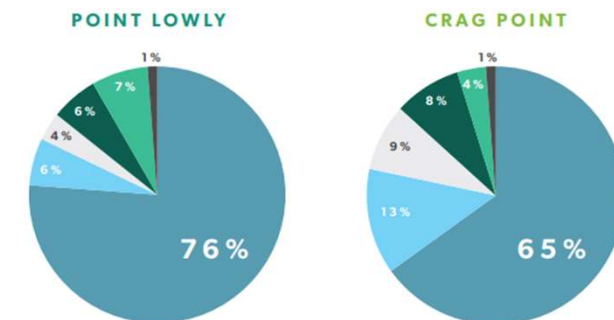
What we heard

SITE FEEDBACK

LEVEL OF AGREEMENT THAT SHORT-LISTED SITES ARE A SUITABLE STUDY SITE



HIGH LEVELS OF COMMUNITY CONCERN TOWARDS POINT LOWLY AND CRAG POINT OPTIONS AS A STUDY SITE



Site feedback

What we
heard

POINT LOWLY

POINT LOWLY WAS NOT GENERALLY SUPPORTED FOR FURTHER INVESTIGATION AS A POTENTIAL SITE.

CONCERNS

- Lower capacity to manage the brine outfall due to already high salinity and lower circulation of water.
- Strong opposition still exists in the community from the previous consideration of the site for similar project proposals.
- Strong desire to protect the character and amenity of Point Lowly.
- The area is an important recreation area for the community for fishing, camping, swimming, picnics and day trips.
- Close proximity of multiple marine life nursery sites, protected marine areas and importance of particular species including cuttlefish, crabs, snapper and prawns.
- Potential access restrictions to the coastline for tourism and recreation activities.
- Potential restrictions to recreational and commercial fishing due to intake/outfall pipelines.
- Co-location with several existing industrial and tourism operations was seen to have both advantages and disadvantages.

OPPORTUNITIES

- Marine impacts could be reduced by extending the pipeline into the deeper channel marine impacts and offset investment could reduce impacts on land.
- Not all respondents thought salinity would be a concern for the cuttlefish.



SITE FEEDBACK

CRAG POINT

CRAG POINT WAS NOT GENERALLY SUPPORTED FOR FURTHER INVESTIGATION AS A POTENTIAL SITE.

CONCERNS

- Water is more saline.
- Unique tidal movements of the gulf are more prevalent.
- Water quality at this site would be more saline and polluted.
- High heritage, cultural and foreshore values at this site including the Shingleback Ridge.
- Difficult terrain and greater potential for hills-face disturbance.
- Greater interface with Department of Defence operations.
- Visual impacts to the area but also to the entire region.

OPPORTUNITIES

- Less impact on people.
- Less social and environmental impacts.
- Shorter pipeline route.
- Could result in improved access to residential freehold properties.
- Visual impacts could be reduced by siting a plant in the valley.

Next steps

RECOMMENDATIONS FOR THE MANAGEMENT OF KEY ISSUES

Should the Northern Water Supply project continue, it will be critical that the key issues raised continue to be incorporated into the ongoing development of the project.

DECISION MAKING AND ENGAGEMENT PROCESS

- Continued open and transparent decision making, and ongoing engagement with stakeholders and the community is critical for community acceptance of the project.
- Ongoing dialogue following a pattern of listening, responding and feeding back how input has been integrated.

SITE SELECTION

- Communications to clearly explain the basis for short-listing sites as well as why a final study site was selected.
- Communicate to stakeholders and the community how the project intends to address the concerns raised by stakeholders and the community during the business case for the selected study site.

REALISATION OF PROJECT BENEFITS

- Accurate reporting, and peer review of expected environmental benefits is critical as part of any Environmental Impact Assessment process.
- Focus early stakeholder and community engagement on how community and environmental benefits can be achieved as a core component of the project's objectives.

LOCAL AMENITY IMPACTS

Early engagement with landholders and local community to understand and properly manage potential amenity impacts.

TERRESTRIAL ENVIRONMENTAL IMPACTS

Terrestrial environmental issues have been largely overshadowed by potential marine impacts in engagement to date, however, areas of concern are expected to arise as more attention is given the pipeline route planning and impact assessment.

Engagement should include:

- full transparency regarding environmental impacts, offsets, management and monitoring
- genuine engagement on issues of concern and detailed responses when appropriate from the project
- quantify and communicate the significant environmental benefits that the desalination plant will deliver
- demonstrate and promote compliance with environmental, native title and cultural heritage legislation.

IMPACTS ON THE MARINE ENVIRONMENT – INCLUDING CUTTLEFISH PROTECTION AND MARINE INDUSTRY IMPACTS

- Continue to engage with stakeholders in the development and review of studies looking at the impact of the proposed development on the marine environment.
- Undertake the engagement activities that focus on communicating the relevant scope and outcomes of technical investigations, and their peer review for wider critique.
- Share information in a timely manner and early in the environmental assessment process to allow responses to be informed by scientific evidence. This will ensure that studies are transparent and accountable to the wider public.
- Significant focus should be placed on accurately communicating the outcomes of marine studies, including peer reviews on the water quality of the Gulf, including early identification of concerns and issues so that this can be fed back into follow-up investigations and studies.
- Invite key stakeholder group representatives to review and comment on research, as well as provide input into the assessment process.
- All relevant marine environmental studies and reports independently peer reviewed and made publicly available.
- Continued engagement with fishing associations to ensure they are satisfied their concerns are being appropriately addressed.
- Ensure marine environmental studies consider all relevant species.

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Questions or comments



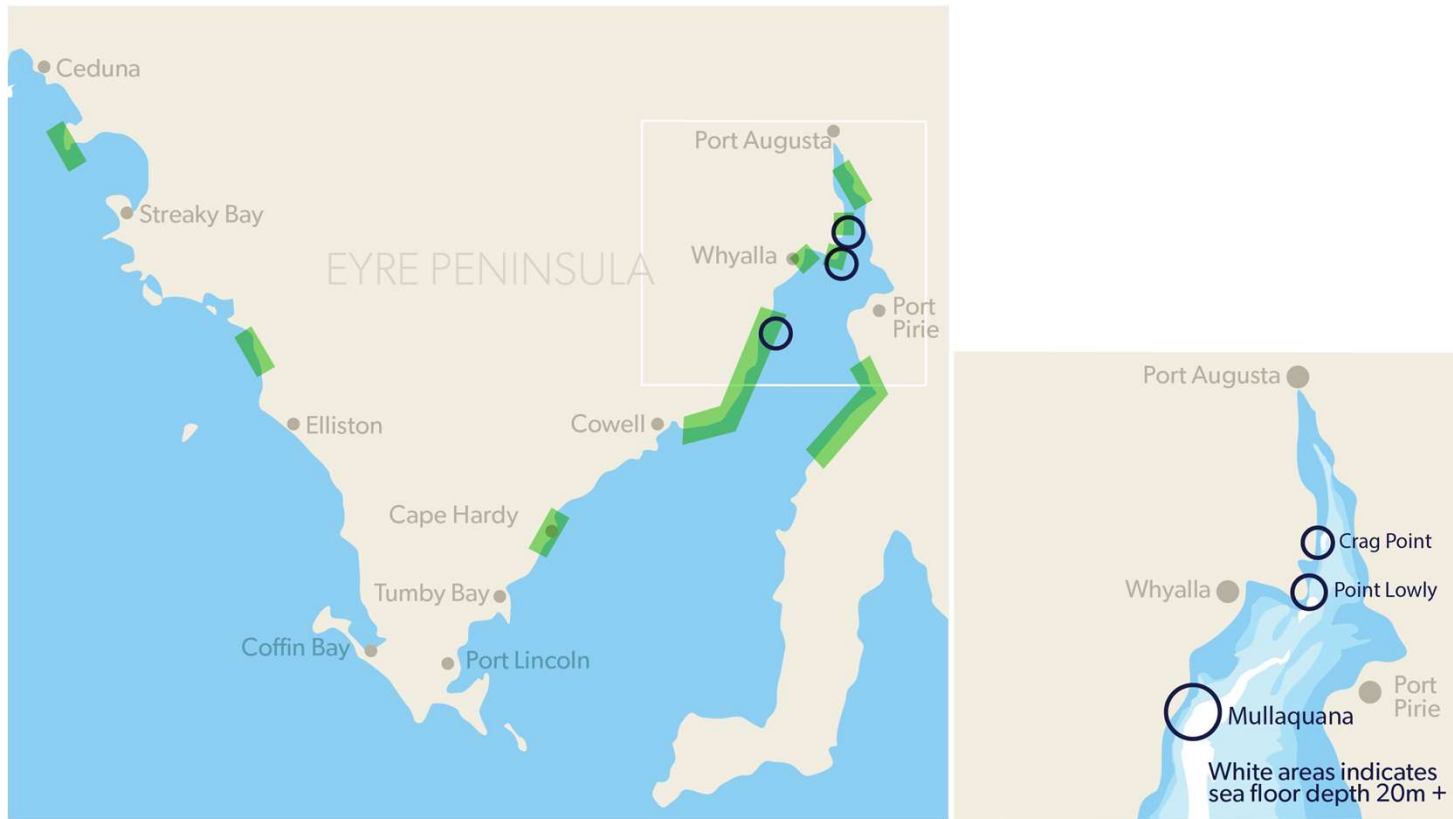
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Alternative site consideration

Mike Morgan / Antony Lockyer

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Background

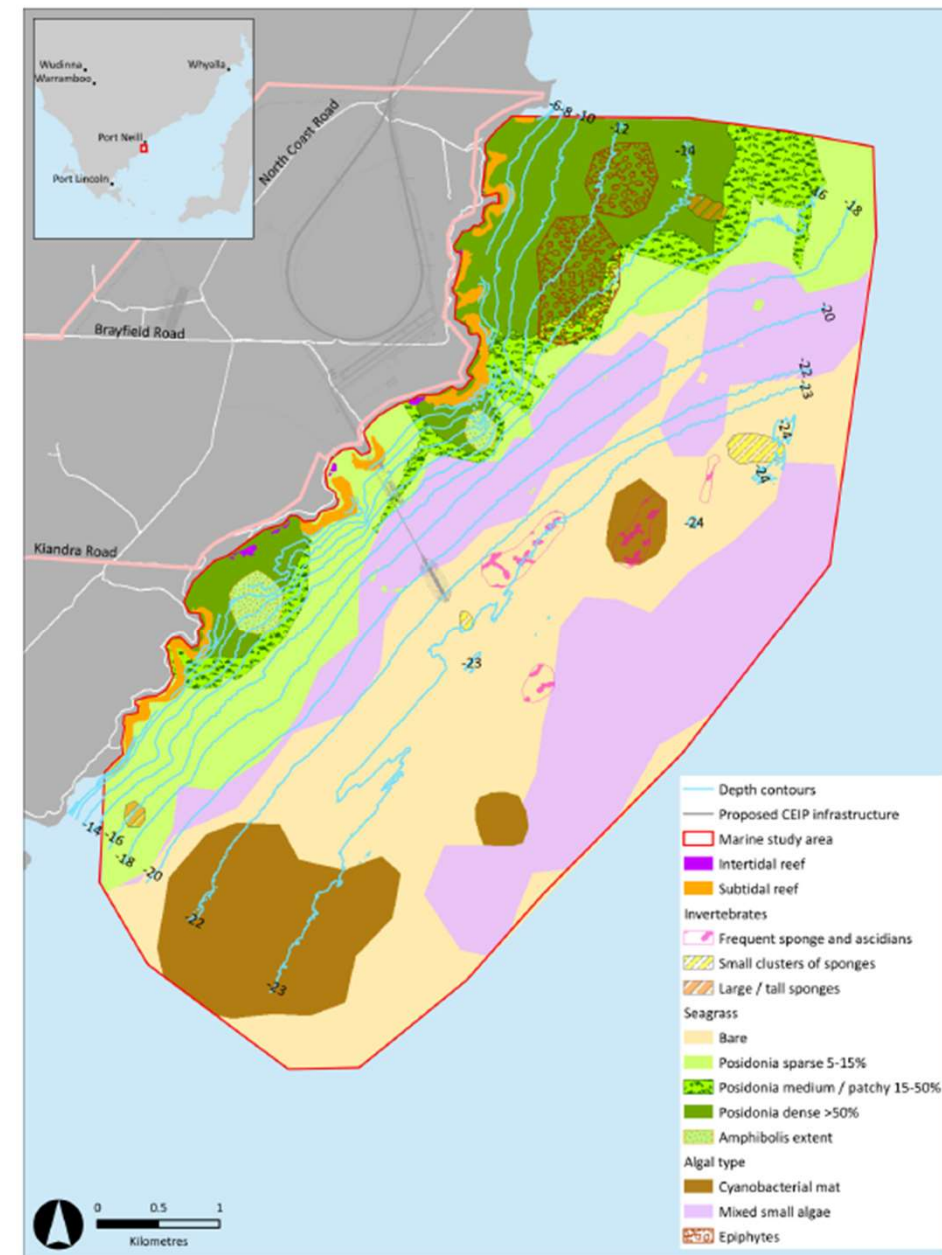


Cape Hardy

What we know...

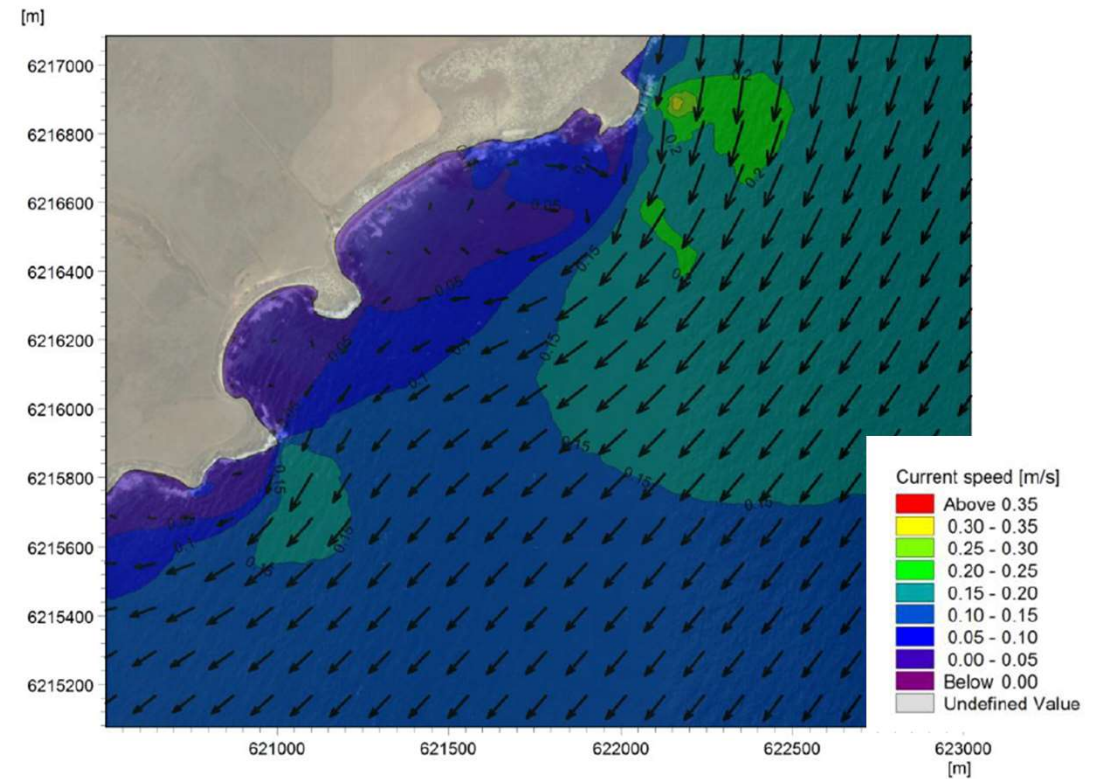
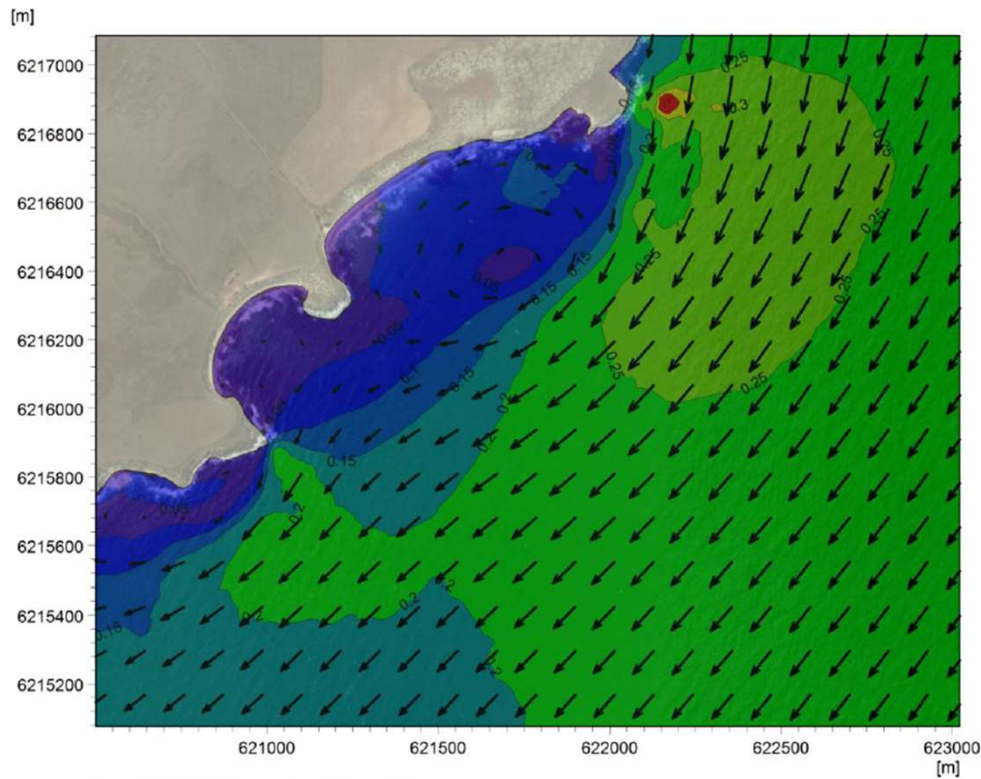
- Proposed Deep Water Port – Iron Road, 2013
- EIS for the Port Development – background information, 2015
- Access to deep water (>20m) closer to the shore, approximately 1km – significantly shorter tunnels.
- Lower salinities than USG – between 36-38 PPT as opposed to 38-42 PPT in the USG - beneficial from an intake and dilution perspective.
- Habitats: Some sandy beach, rocky reef and seagrass. No mangroves.
- Cape Hardy is less likely to impact upon productive fishing grounds for prawns, blue crab or other commercially important species.
- Further South, greater distance from the newly EPBC Listed Cuttlefish Heritage Site

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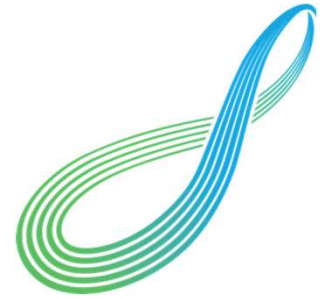


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Hydrodynamic Conditions

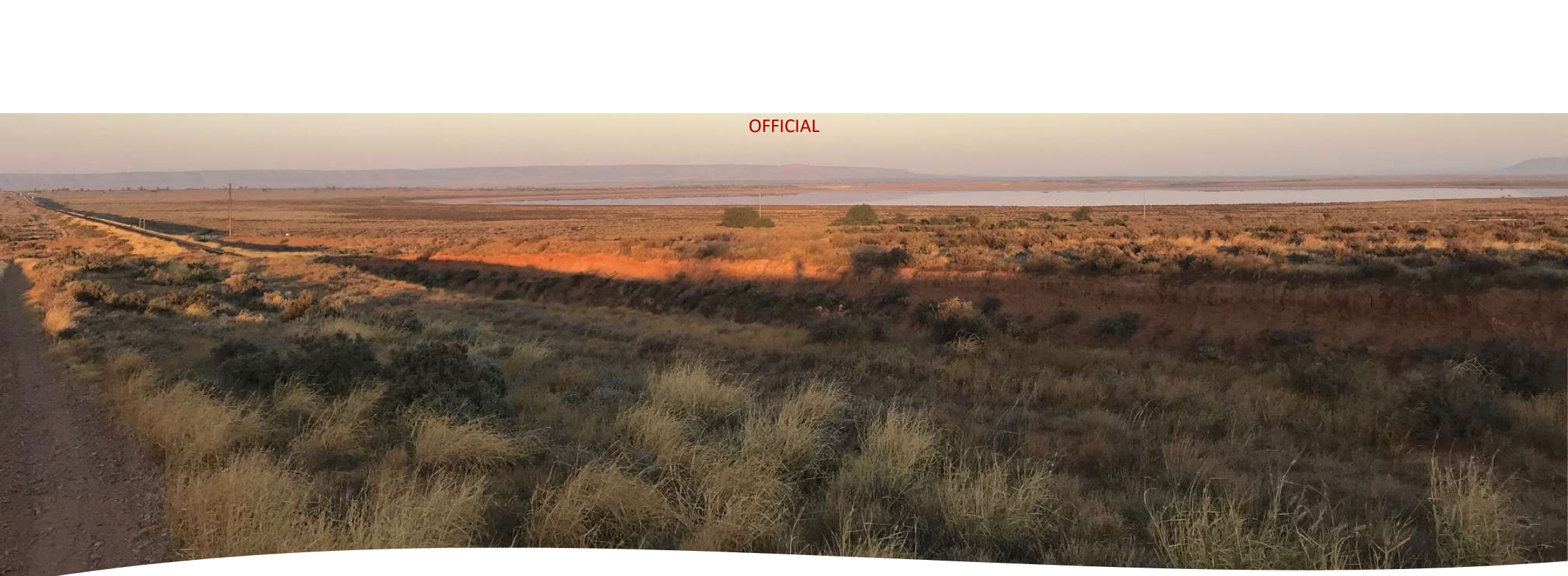


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STRETCH BREAK





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Cape Hardy discussion

How does what we have heard to date apply for Cape Hardy?

What else needs to be considered for a potential Cape Hardy site?

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STRETCH BREAK

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Stakeholder engagement

Josephine Telfer

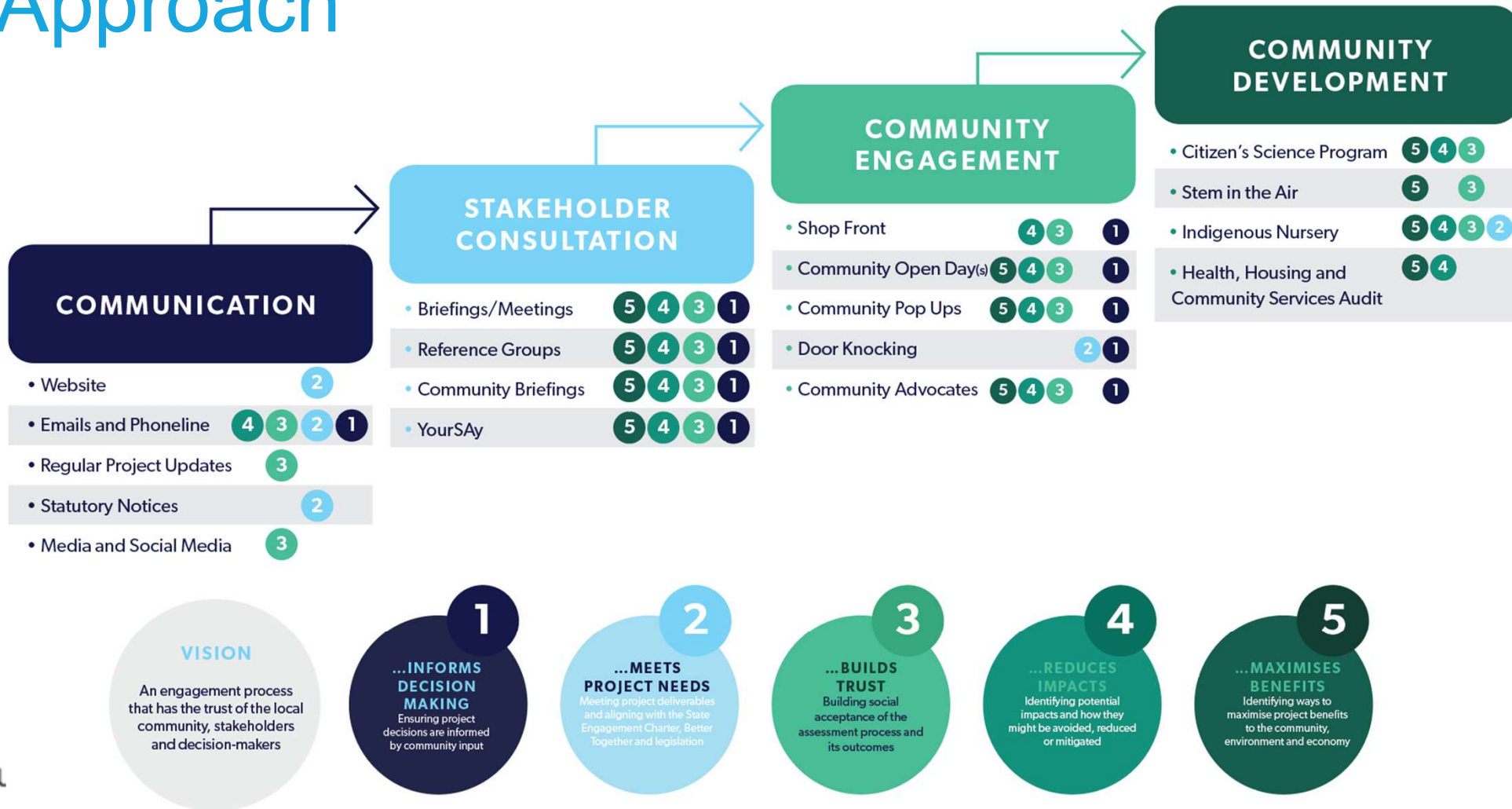


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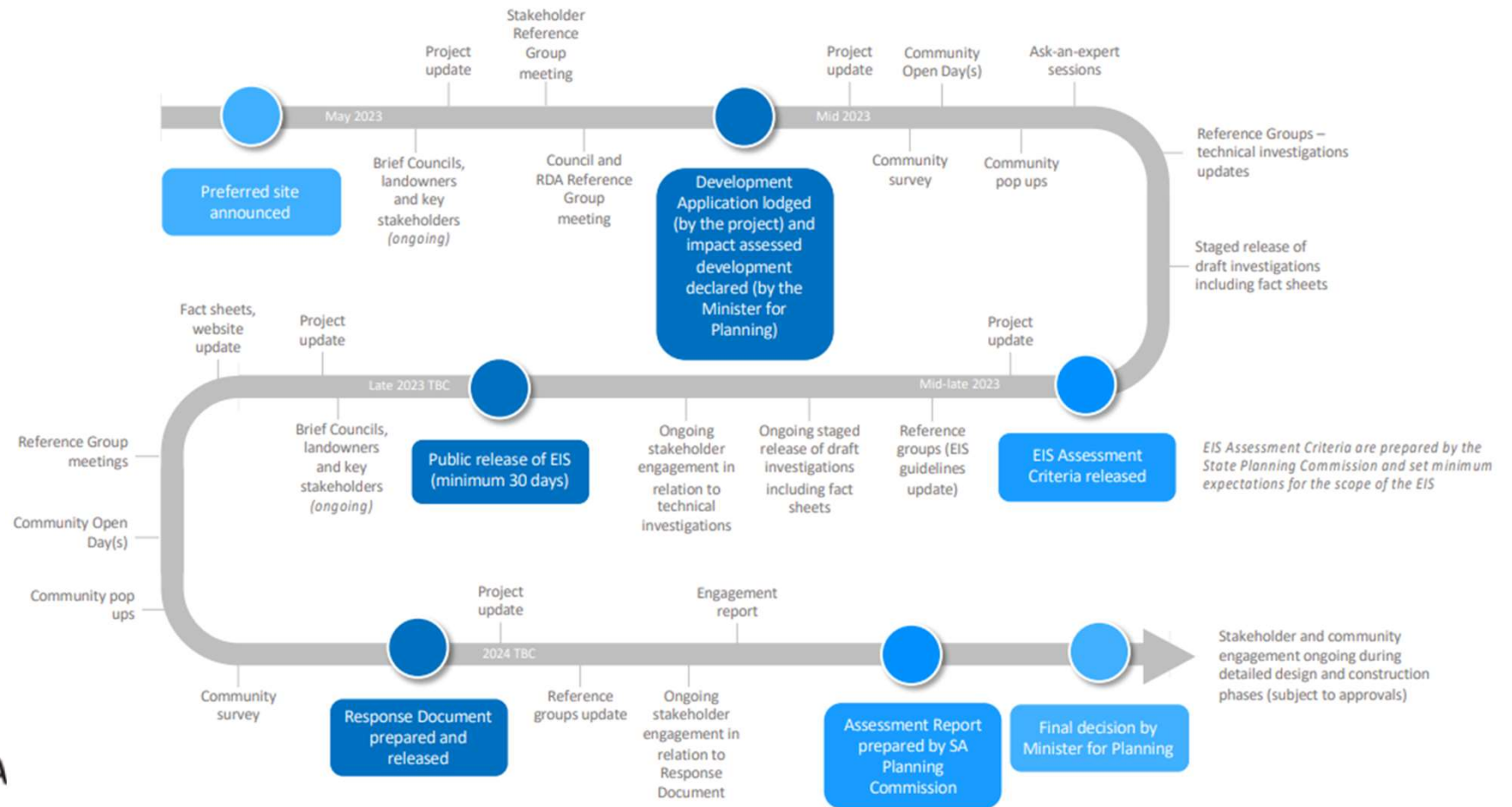
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Approach



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Roadmap



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Question or comments?

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Other Business

Josephine Telfer

- None received

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Next meeting

Josephine Telfer

5 July 2023 - Teams

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Northern Water Supply Project

northernwatersupply.sa.gov.au



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APPENDIX B

Northern Water Supply Project

SRG Meeting Attendees

4 May 2023

Stakeholders

Aaron Smith	Landscapes SA (SA Arid Lands)
Allan Hall	RecFish SA
Andrew Padgett	Regional Development Australia Far North
Barry Fryar	Department for Environment and Water (DEW) - Crown Lands SA
Claire Wiseman	Regional Development Australia Far North
Craig Wilkins	Conservation Council of South Australia
David Noonan	Conservation Council of SA
Jade Ballantine	Whyalla City Council
	Outback Communities
Joe Calvert	Authority
John Banks	Port Augusta City Council
Justin Commons	Whyalla City Council
Karren Hollomby	PIRSA - Fisheries and Aquaculture
Katrina Pobke	DEW - Eyre Far & West/National Parks and Wildlife Services
Kelly Pyke-Tape	Spencer Gulf and West Coast Prawn Fishermen's Association
Leonie Boothby	Upper Spencer Gulf Cities
Louise Foote	Global Maintenance USG
Matt Nelson	EPA
Mick Cresshull	PIRSA - Fisheries and Aquaculture/Whyalla Business and Tourism
Neil MacDonald	Marine Scale Net Fisherman's Association
Pat Tripodi	Marine Fishers Association of South Australia
Peter Scott	Eyre Peninsula Local Government Association
Robert Brandle	DEW - Regional Operations Flinders & Outback NPW
Roy Blight	Roxby Council
Ryan Viney	Regional Development Australia Eyre Peninsula
Shane Roberts	PIRSA
Shelley Paull	DEW - Eyre & Far North/National Parks and Wildlife Services
Sonja Morrison	Roxby Council
Steve Reynolds	Marine Life Society of South Australia
Sue Booth	Scuba Divers Federation of SA
Tony Bramly	Whyalla Diving Services
Wendy Campana	Upper Spencer Gulf Cities

Project Team

Joesephine Telfer	Joined Thinking	Facilitator and Stakeholder Engagement Lead, NWS
Alecia Wright	InfrastructureSA	Manager Land Approvals and Land Access, NWS
Mike Morgan	InfrastructureSA	Project Director, NWS
Lauren Gardener	InfrastructureSA	
Antony Lockyer		
Steph Hensgen	Joined Thinking	Stakeholder Engagement Advisor
Sarah-Jane Arnold	Rise & Scribe	Records Management
Sean Kelly	Whyalla Council	Manager Communications and Marketing

Guests

Alli Carter	Global Maintenance USG
Melissa Horgan	PIRSA
Rebecca Hayes	DC Tumby Bay
Tim Breuer	Landscapes SA (Eyre Peninsula)

Apologies

Barbara Derham	Whyalla Business and Tourism
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