

Meeting Title: EP Desal Project – Site Selection Committee Meeting 13

Project Name: Eyre Peninsula Desalination Plant Project

Meeting Purpose: Provide an update on project activities

Date: Tuesday 25 October 2022

Time: 2.00pm – 4.30pm

Location: Port Lincoln Hotel

Attendance:

Name	Role	Present
Peter Treloar	Chair	Yes
Steve Dangerfield	Engagement Facilitator	Yes
Jemma Silvester	Community Engagement	Yes
Isaac Glonek	Minute Taker	Yes
Hazel Austin	Project Manager	Yes
Nancy Nguyen	Assistant Project Manager	Yes (online)
Shaun Ambrose	District Leader, SA Water	Yes

Guests:

Name	Role	Present
Hon Susan Close MP	Deputy Premier and Minister for Climate, Environment and Water	Yes
David Ryan	Chief Executive, SA Water	Yes

Committee:

SSC Member	Role	Present	Proxy
Andy Dyer	President, SA Mussel Growers Association	Yes	
Brad Flaherty	Mayor, City of Port Lincoln Council	Apology	
Brian Jeffriess	Chief Executive, Australian Southern Bluefin Tuna Industry Association Ltd	Apology	Kirsten Rough
Bryan Trigg	Chair, Regional Development Australia Eyre Peninsula	Yes	
Claire Webber	Executive Officer, South Australian Sardine Industry Association Inc.	Yes	
Clare McLaughlin	President, Eyre Peninsula Local Government Association	Apology	
Delfina Lanzilli	Chief Executive, District Council of Lower Eyre Peninsula	Apology	Leith Blacker
Gary Neave	Independent Project Director, TSA	Yes (online)	Peter Seltikas
Hannah Allen-Jordan	Acting Mayor, District Council of Tumby Bay	Apology	
Jack Ritchie	Member, Port Lincoln Chamber of Commerce and Tourism	Yes	
Jo-Anne Quigley	Mayor, District Council of Lower Eyre Peninsula	Apology	
Jonathan Clark	General Manager, Eyre Peninsula Landscape Board	Yes	
Mark Whitfield	Chair, Eyre Peninsula Landscape Board	Yes	
Matthew Morgan	Chief Executive, City of Port Lincoln Council	Apology	
Peter Scott	Executive Officer, Eyre Peninsula Local Government Association	Apology	
Rebecca Hayes	Chief Executive, District Council of Tumby Bay	Apology	
Rob Gratton	Chief Executive, Clean Seas Seafood Limited	Yes	
Ryan Viney	Chief Executive, Regional Development Australia Eyre Peninsula	Apology	Trevor Smith
Sam Telfer	Member for Flinders	Yes	

Shane Hodgins	Director, RecFish SA	Apology	
Thomas McNab	President, Abalone Industry Association of South Australia Inc	Yes	
Tom Hyde	Member, Australian Abalone Growers Association	Yes	

We acknowledge the Traditional Custodians of the Eyre Peninsula. We acknowledge their elders past and present, noting in particular their spiritual and cultural connection to the lands and coastal waters of the Eyre Peninsula.

1. Welcome and introductions

The Chair gave an Acknowledgement of Country and welcomed attendees.

Attendees were reminded that face masks are at the discretion of the individual.

The Chair noted the purpose of the meeting was to:

- Provide an update on the project team's work at the SSC's preferred site – Sleaford West Variation:
 - Risks and opportunities
 - Engineering options and solutions
- Provide an update on the second-ranked site, Point Boston
- Provide an update on the configuration of the base case site, Billy Lights Point
- Provide an update on the funding pathway and activities to secure additional funding for Sleaford West Variation
- Update on next steps.

The Chair welcomed Hon Susan Close MP, Deputy Premier and Minister for Climate, Environment and Water, and David Ryan, Chief Executive of SA Water.

The Chair noted that the Deputy Premier and David Ryan had toured the Sleaford West Variation site, Point Boston, and the base case site at Billy Lights Point prior to the meeting.

2. Address from Deputy Premier

Deputy Premier Close thanked the Chair and broader SSC for the time and effort dedicated to the site selection phase of the project.

Deputy Premier Close noted that there are many challenges to do with the state of the world, particularly climate change and the need to be more sensitive to the effect we have on the natural environment. These challenges often mean that there is no obvious and easy solution, rather, significant effort is required to find the best path forward.

Deputy Premier Close noted that the site selection process has brought together scientists, engineers, businesses, primary production experts, environmental experts, and the community.

Deputy Premier Close noted that no site satisfies all of the relevant criteria, and as such, we need to be clear about the merits of each site – hence the due diligence work that is being undertaken.

Deputy Premier Close noted that the Chair has been working with the Department for Environment to identify whether a funding pathway involving the Federal Government is possible or not.

The Chair invited David Ryan to address the SSC.

David Ryan noted that while the site selection process has had its challenges, the fact remains that the Eyre Peninsula needs a climate-independent source of drinking water. This will allow the Eyre Peninsula community to prosper and grow.

David Ryan noted that the Site Selection Committee's Working Group have been very active with regard to developing a pitch to source additional funding for the project.

Several SSC members noted that they have been impressed with the site selection process and the way in which key stakeholders have been connected and empowered.

3. Apologies and proxies

Brad Flaherty was noted as an apology.

Brian Jeffriess was noted as an apology, with Kirsten Rough attending as a proxy.

Clare McLaughlin was noted as an apology.

Delfina Lanzilli was noted as an apology, with Leith Blacker attending as a proxy.

Hannah Allen-Jordan was noted as an apology.

Jo-Anne Quigley was noted as an apology.

Matthew Morgan was noted as an apology.

Peter Scott was noted as an apology.

Rebecca Hayes was noted as an apology.

Ryan Viney was noted as an apology, with Trevor Smith attending as a proxy.

Shane Hodgins was noted as an apology.

It was noted that a number of members, notably representatives of the Councils and the RDA, were attending a Space Forum in Adelaide.

4. Acceptance of minutes of previous meetings

The minutes of Meeting 11 held on 04/08/2022 and Meeting 12 held on 08/08/2022 were accepted.

5. Project activity update

Steve noted that the Chair, on behalf of the SSC, made a formal recommendation to SA Water and the Deputy Premier following Meeting 12:

- The SSC recommended a new site at Sleaford West as being best placed to deliver water security to the region while minimising impact on the environment, community and related industries
- The site had the support of community leaders, seafood industry, local government, business, property owners critical to the site proceeding, and the local community
- The SSC acknowledged that the site would likely be more expensive than Billy Lights Point and further work was required to fully understand the risks and to understand the potential gap in funding
- The four sites that were the subject of the SSC assessment process were listed in the correspondence in order of ranking:
 1. The new Sleaford West site (Sleaford West Variation)
 2. Point Boston
 3. Sleaford West
 4. Sleaford North

Steve noted the SA Water Board's response to the SSC's recommendation:

- Acknowledged the work of the SSC and the recommendation made
- Commenced more detailed investigations and costings/scheduling for the SSC's recommended site

- In light of the uncertainties surrounding the existing water supply and the urgency to provide a secure source of water, SA Water decided to also undertake further investigations at Point Boston
- As an insurance measure, SA Water also advised that they would purchase the land at Billy Lights Point, noting that it remains the base case for future deliberations and purchase of the land does not imply that this will be the location of the plant
- Welcomed the convening of the Working Group with a focus on securing funding and committed to working together to examine various funding avenues.

Steve noted that work is currently being undertaken to confirm the cost estimates for Sleaford West Variation, Point Boston, and the base case site at Billy Lights Point.

Sleaford West Variation

Steve noted the key activities undertaken by the project team for the Sleaford West Variation site since the last SSC meeting:

- Project team comprises SA Water, TSA and WSP/Tonkin staff
- Team has primarily focused on Sleaford West Variation (including various modifications as needed) in order to deliver a solution that mitigates the risks and can be feasibly constructed:
 - Landowner meetings
 - Sleaford Community meeting
 - Native vegetation assessment
 - Aboriginal Cultural heritage assessment
 - Geological investigations and sample drilling
 - Marine engineering review by WSP experts flown in from South Africa
 - Meetings and discussions with Peter Treloar, Brad Flaherty and the Deputy Premier, as well as the Chair of the SA Water Board and Chief Executive of SA Water
 - Cross government agency briefings (to discuss both funding and technical issues)
 - Plant configuration and design
 - Transfer pipeline alignments (and negotiations with property owners)
 - Liaison with SAPN and discussions with property owners about tolerances (above ground/below ground power)
 - Whale migration implications
 - Pricing and schedule (December 2024 remains the objective, subject to site and approval pathway).

Steve noted the opportunities and risks at the Sleaford West Variation site (as at July 2022):

Opportunities

- The majority of local residents are supportive
- Delivers water security and quality to all EP customers with risk to proposed timeframes
- Landowner willing to sell
- Excellent site for a plant close to the coast
- Resolves issues presented by the Sleaford West site
- Anticipated to be more cost effective than Sleaford West and possibly Sleaford North dependent upon risks.

Risks

- Geotechnical constraints unknown
- Aboriginal cultural heritage interests unknown
- Native vegetation unknown
- Presence of whales
- Distance from the network – opportunity to consider shorter transfer main through private property
- Abalone presence
- EPBC referral unknown and may depend upon exact marine entry location – timeframe challenges if EPBC concern triggers further response from regulatory bodies.

Steve noted that despite any challenges with the site, the project team will deliver to the SSC a viable desalination plant solution at Sleaford West subject to funding.

Steve noted the opportunities and risks identified at the Sleaford West Variation site since it was selected as the SSC's preferred site:

- Landowner very cooperative and willing to sell – very supportive of the project
- Good road access into the site, above ground power possible
- Transfer main likely unable to proceed through preferred alignment which will require different alignment and surge vessels
- Majority neighbour support remains – some challenges
- Areas of Aboriginal cultural heritage significance identified in coastal zone
- Geological investigations revealed 140 MPa granite and a rare geological formation in coastal zone, which has drawn the interest of the Geological Society of Australia (SA Division)
- Rare species of native flora in coastal zone
- Challenging topography for marine entry given other constraints
- Very difficult oceanic conditions (8-metre swell) potentially impacting construction timeframes and type of equipment needed.

Steve noted that various challenges have rendered the original plant location for the Sleaford West Variation site unviable, and as such, the project team are now considering a site slightly south of the Variation site.

Steve shared a high-level plan of the southern plant location.

Regarding marine engineering for the Sleaford West Variation site, including the southern plant location, Steve noted the following:

- Construction within Sleaford Bay requires the favourable convergence of a number of elements – appropriate plant/equipment availability, suitable weather windows, absence of marine mammals in the area. This adds a degree of risk with respect to more complex geotechnical conditions, which has led to higher design and construction risks
- The engineering team has considered a range of options to enter the marine environment at the Sleaford West Variation site (and the new southern site) and determined that a tunnelling installation of the intake and outfall is the most appropriate given the ocean conditions and geotechnical realities of the location (140 MPa granite)
- Outfall approximately 800m offshore
- Initial preference was to open trench the terrestrial sections of the intake and outfall pipework near the existing creek (due to easy grade to ocean)

- Hard rock led to consideration of blasting the excavation rather than using traditional excavation methods, however due to the various constraints (including presence of marine mammals) this was not considered viable
- Horizontal Directional Drilling was another option considered – however an HDD of the size and length needed to drill below the seabed in this location was considered high risk and has not been done before to the knowledge of the team
- Tunnelling gives more time and cost certainty, as this size and length under the seabed is not extraordinary
- Tunnelling of this scale requires significant plant and equipment (similar to that used in the Adelaide Desalination Plant), which comes with increased costs.

Steve noted the following regarding the suggestion of putting marine pipework over the cliffs:

- The desal project delivers critical water security to the region
- The coastline at Sleaford is an active, high-energy environment
- The wave analysis undertaken has identified that there are significant forces that prevent the safe installation of a pipeline adjacent the coast
- The durability and robustness of such installation cannot meet the required design life expected of these pipelines to ensure continuous water supply security
- If there was a way to safely construct down the cliff face, the pipe would still need to be trenched into the sea floor to be able to withstand the wave forces near the shore, and then laid out to the ultimate intake/outfall location
- Once out to the ultimate intake/outfall location, a jack up barge will still be required to construct the intake structure and outfall diffuser
- Ultimately, little would be gained by constructing down the cliff face, and it would introduce significant safety risks and water security risks to the project.

Steve noted that the engineering team have given consideration to an alternative configuration, with the marine pipework entering the ocean at Sandy Point:

- Given constraints and the potential cost of marine engineering required for the Sleaford West Variation sites (including the new southern site), the project team reassessed a beach entry solution as a potential option to reduce cost
- Two options were considered:
 1. Plant remains at Sleaford West Variation (southern) site with long intake and outfalls to the beach
 2. Plant is relocated to Sleaford West adjacent to the beach

Steve noted that there were various risks now associated with the Sandy Point beach location, including concerns from the landowner, the presence of hooded plovers, areas of Aboriginal cultural heritage significance, and a nearby ecotourism business. However, the team felt it worthwhile to assess this location from a technical and cost perspective, and, if favourable, would consider more intently how these risks could be mitigated.

Steve noted that an open cut trench method was considered and discounted for this location, due to the significant impact it would have on the beach. The tunnelling method (similar to the Sleaford West Variation site) was preferred as the technical solution for this location and the outfall would be approximately 800 metres in length.

An SSC member asked whether building a permanent jetty structure to take the marine pipework out to the ocean above the water has been considered.

It was noted that construction of a jetty capable of withstanding the marine conditions at Sleaford Bay, and piling into the hard rock under the seabed, is a far greater construction risk than tunnelling, and would therefore cost more and take longer.

An SSC member asked about the need for an 800m outfall given the energy in the ocean at this location.

It was noted that there are a number of reasons, including reaching the required water depth for dispersion and water quality as well as seabed geology suitable for a jack up barge.

Point Boston

Steve noted that the project team, per the SA Water Board's request, had been further investigating Point Boston should the funding required for the Sleaford West Variation site be unattainable and an alternative site needs to be considered.

Steve noted the opportunities and risks at Point Boston (as at July 2022):

Opportunities

- Point Boston Development Corporation Board has unanimously agreed to support the delivery of a desalination solution at Point Boston
- Potential community benefit opportunities (e.g., boat ramp, boat/caravan storage, walking trails)
- Native Title – can be addressed through an Indigenous Land Use Agreement (ILUA)
- Site has already achieved native vegetation clearance

Risks

- Industry concerns/dispute regarding perceived impact to existing aquaculture industry:
 - Science and engineering response
 - Brand and business beyond the science
- Need to work closely with Point Boston Development Corporation to have all residents accept any land arrangements (noting that the Board unanimously supports the initiative)

Steve noted the key activities undertaken by the project team for Point Boston since the last SSC meeting:

- Landowner meetings (review of processes to secure land)
 - Unanimous vote of 200+ members of Point Boston Development Corporation required for change of land use
- Cultural heritage discussions
- Marine engineering review by WSP experts flown in from South Africa
- Engineering options under consideration to mitigate concerns of aquaculture industry
- Pricing and schedule
- Engineering design is considering a range of options for intake and outfall including the original 1925m from shore outfall and an extended outfall to potentially address aquaculture industry concerns.

Steve shared a high-level plan of the Point Boston site, including an option with an extended outfall. The preferred method for installing the intake and outfall at this location would be to float the pipes out to the desired location and, using concrete blocks, lay the pipe on the seabed. This method is achievable in this location because of the calmer oceanic conditions.

Billy Lights Point

Steve noted the opportunities and risks for the base case site at Billy Lights Point (as at July 2022):

Opportunities

- Financially feasible
- Delivers water security and quality to all EP customers
- Engineering solution, based on MSRP review, to address key industry concerns

- Undergrounding the power and the pipeline
- Includes increased plant capacity of 5.3 gegalitres per annum
- SA Water had an option on the land at Billy Lights Point

Risks

- Industry concerns regarding impact to existing aquaculture industry
- Risk of litigation and disputes with the aquaculture industry that could potentially impact on project timelines and therefore on water security due to continued extraction from Uley South Basin at current levels
- No social licence

Steve noted the key activities undertaken by the project team for the base case since the last SSC meeting:

- Land purchased by SA Water
- Engineering configurations (outfall and intake to the east)
- Pricing and schedule

Steve shared a high-level plan of the base case site.

Steve noted that, for costing purposes, there has also been consideration of an extended outfall at the base case site.

An SSC member suggested that the outfall for all sites (Sleaford West Variation, Point Boston, and the base case) should be designed and costed at various lengths, in line with the 6, 12, and 24-hour flushing lines.

An SSC member, noting that the marine engineering and construction will be a significant cost in a high-energy area like Sleaford Bay, questioned if the Working Group has given consideration to whether a larger capacity desalination plant would help justify the marine construction cost from a funding point of view by providing future economic benefit (e.g., by attracting new industries).

The Chair noted that the Working Group has not given this suggestion specific attention.

Steve noted that a larger capacity plant would also require larger supporting infrastructure, including the intake and outfall pipes as well as the transfer main, and would add to the overall cost of the project.

An SSC member asked whether SA Water has considered a solution with an intake in Proper Bay that is designed to avoid impact to the mussel industry, with the outfall discharging directly over the cliffs at Sleaford (rather than being tunnelled out to sea).

Steve noted that this idea was briefly considered and discounted given the engineering difficulties with the length of outfall needed, the inability to discharge at the head of Sleaford Bay due to heritage interests, and the presence of the marine sanctuary zone.

With respect to the subsurface intake option, further work to test the viability of the technology for the purposes of water security would be required. It is preferred not to do this work if a more mainstream option can be delivered.

The focus of the team has been on the Sleaford West Variation site given that this was the preferred choice of the SSC.

Next steps

Steve noted that while the SSC has made its recommendation, further work is being undertaken to 'prove up' both the preferred option at Sleaford West Variation and the second ranked option at Point Boston – information to be finalised as follows:

- Further discussions with stakeholders (landowners, industry, Working Group)
- Update to the State of the Basin report to understand criticality of timings

- SARDI modelling report – being reviewed by MSRP by end of October 2022
- Cost estimating for Sleaford West Variation and Point Boston.

Steve noted that an update will be provided to the SA Water Board in late November 2022.

6. Funding pathway update

Working Group deliberations

Steve noted the following regarding the Working Group's progress:

- The Chair and Brad Flaherty met with the Minister for Climate, Environment and Water to discuss funding challenges and opportunities
- Approaches to other State Ministers in train
- Cross government agency meeting held on 19 September (DEW, EPA, PIRSA, ISA, DEM, SAW, DTF)
- Recommendation from cross government agency representatives that conversations resume with the National Water Grid Authority to explore funding pathways – that this should be done through the correct avenues of the South Australian Government
- Develop a pitch document and appendix – provides opportunity to approach the Federal government via DEW – noting that there is a deadline of February 2023 for submissions to the May 2023 Federal Budget
- Discussed the Eyre Peninsula Desalination Project's interface with the Iron Knob–Kimba pipeline reversal – noting that any bundled return of River Murray entitlement (1.7GL) would be viewed very favourably by the Federal Government and acknowledging that this would be a matter for State Government to consider how this could occur (given Northern Water and SA Water's existing customer demand in the Upper Spencer Gulf, as well as noting that it is SA Water's intention to reallocate this water to address existing demand)
- DEW liaising with Federal Government to arrange a face-to-face meeting in Canberra.

7. Media update

The Chair noted that he will consider media requirements and interest following this meeting.

8. Other business

Nil noted.

9. Next meeting and close

An agenda for the next meeting will be circulated prior to the next meeting, set for **Wednesday 9 November from 2.00pm to 5.00pm.**

With no further comments, the meeting closed at 4.48pm.

Open action items register

No.	Action Description	By Whom	Date Raised	Date Due	Status
1	Seek advice on alternative construction methodologies – concept design team to consider and engage with industry to identify synergies and leverage knowledge.	Project Team	03/03/22	TBC	Defer to when a site is selected
2	Assessment of the Northern Precinct as a separate project – independently from the functions of the SSC – to look at the viability of supporting economic development in the northern region.	Project Team	07/03/22	TBC	Open
3	Prepare a visual representation of the desalination plant and pumping station.	Project Team	07/06/22	TBC	Defer to when a site is selected