

# Darwin Harbour Advisory Committee

## Meeting Minutes

**Date:** Thursday 10 November 2022  
**Time:** 8:30am – 2:00pm  
**Chair:** Dr Claire Streten, Australian Institute of Marine Science

**Location:** Northern Australia Conference Room, 1<sup>st</sup> Floor, 76 Esplanade, Darwin  
**Secretariat:** Carmony Leso, Executive Officer – Committees (DEPWS)

**Attendees:** David Ciaravolo – *Teams*  
Ian Niblock  
Jared Sellwood - *Teams*  
Josh Corbett - *Teams*  
Karen Gibb  
Kirsty Howie – *Teams*

Amateur Fisherman’s Association  
Darwin Port  
Power and Water Corporation  
INPEX  
Charles Darwin University  
ECNT

**Guests:** Alaric Fisher  
Brydie Hill  
Claire Punch  
Chad Wilson – *Teams*  
Jo Townsend  
Kathryn McFarlane – *Teams*  
Lachlan McArthur  
Michael Marren  
Nick Fewster – *Teams*

Flora and Fauna Division  
Flora and Fauna Division  
Minister Moss’s Office  
Santos  
CEO, DEPWS  
Santos  
Santos  
Santos  
RCWAC Chairperson

**Apologies** Alan Roe  
Jamie Carle  
Jim Smith  
Sam Buchanan  
Wayne Sharp

Territory Natural Resource Management  
INPEX  
Sea Darwin  
Paspaley  
Power and Water Corporation

No.	Item	Action (e.g. Noting / Discussion / Decision)
	<b>Meeting opened</b>	The Darwin Harbour Advisory Committee meeting commenced at 8:45am
1	<b>Welcome attendance and apologies</b>	Chairperson, Dr Claire Streten, opened the meeting and welcomed members. Apologies were noted from Alan Roe, Jamie Carle, Jim Smith, Sam Buchanan and Wayne Sharp.
2	<b>Conflicts of Interest</b>	No conflicts were declared.
3	<b>Discussions with Minister Moss</b>	Minister Moss was unable to attend the meeting but Claire Punch - Engagement and Communication Advisor attended on her behalf. Dr Claire Streten presented the proposed funding models for the Darwin Harbour Integrated Report Card (DHIRC). Claire recommended a Cabinet

		<p>Submission be put up requesting funding for 2023 – 2028 with some of that funding coming from the Middle Arm Sustainable Development Precinct Project. From 2028 onwards it is recommended that the funding come from both industry and government.</p> <p><i>Discussion: Claire Punch advised that the Minister is supportive of the DHIRC. Jo Townsend advised that the DHIRC is a priority for the department and that she will be putting up a cabinet submission for it. Jo recommended that Claire write to Minister Moss and Minister Lawler outlining the funding proposal. Jo advised that she will also write a letter to the Ministers about the proposal.</i></p> <p><i>Action: Claire to write a letter to Minister Moss and Minister Lawler regarding the DHIRC funding proposal.</i></p>	
4	<b>Minutes of the previous meeting</b>	The minutes of the previous meeting on 25 August 2022 were circulated to the Committee members prior to the meeting for comments / edits. The minutes were accepted with no amendments.	
<b>Actions arising from the previous meetings</b>			
No.	Action	Action Officer	Status / Update
1	Carmony to organise for Santos to present to the DHAC meeting on the Carbon Capture and Storage Project.	Carmony Leso	<b>Complete</b> On the agenda
2	Follow up on a new Larrakia Development Corporation representative	Claire Streten and Carmony Leso	<b>Outstanding</b> Suggestion to approach Steven Dawson
3	Report back to the committee about the expert working group to oversee the social, cultural and economic research for a Strategic Social Impact Assessment for the Middle Arm Sustainable Development Precinct.	David Ciaravolo and Shar Molloy	<b>Outstanding</b>
4	Organise an out of session workshop with DHAC and Alaric Fisher to discuss the Mangrove Retention Plan.	Carmony Leso	<b>Complete</b> Refer to item 5.3
5	Organise an out of session workshop with DHAC and Alaric Fisher to discuss the Waste Discharge Strategy.	Carmony Leso	<b>Pending</b>
6	Organise a presentation with Simon Flowers and Lisa Bradley to discuss the Dredge Management Strategy.	Carmony Leso	<b>Pending</b>
7	Circulate the Middle Arm presentation to DHAC members.	Carmony Leso	<b>Complete</b>
8	Come up with some funding models for the DHIRC and circulate them to the committee out of session for their feedback.	Claire Streten	<b>Complete</b>
9	Meet with Tracy Ward from the Department of Health to discuss their data around water and air quality.	Karen Gibb	<b>In progress</b>

5	Matters arising	
5.1	<b>Darwin Harbour Integrated Reporting (DHIR) going forward</b>	<p>Nick Fewster, Chairperson of the Rapid Creek Water Advisory Committee attended the DHAC meeting to discuss the proposal to expand the Rapid Creek ecosystem health reporting within the DHIRC and discuss how this may be progressed to achieve alignment with the DHIRC and provide value to Darwin Harbour and Rapid Creek stakeholders.</p> <p><i>Discussion: The present DHAC members advised that they are supportive of having Rapid Creek incorporated into the DHIRC.</i></p> <p><i>Alaric advised that conceptually he like the idea of the incorporation but it's more about the mechanics of doing it as well as ensuring there is enough monitoring data to support it on a long term basis.</i></p> <p><i>Claire raised a number of questions - how will the committees bring the two together; what data does Rapid Creek have; how is this going to look; will this need to be workshopped; who will facilitate the workshop (i.e. Simon Costanzo).</i></p> <p><i>Claire suggested that RCWAC determine what the community values are of the Catchment first and then they can be matched up to the DHIRC to identify where the gaps are. Karen suggested a Survey be sent out to the community to gather this information and then table the results for workshopping.</i></p> <p><i>Nick advised that there is an Urban Rivers Program that RCWAC discussed with Luke Gosling and the committee is looking at putting up some priority areas for where they would like to receive funding which could potentially be incorporated into the DHIRC. Claire suggested Karen work with Nick to obtain grant funding.</i></p> <p><b>Action: Karen Gibb to work with Nick Fewster to obtain a grant for the RCWAC priority areas for the DHIRC</b></p>
5.2	<b>Carbon Capture and Storage Update</b>	<p>Michael Marren, Lachlan McArthur, Kathryn McFarlane and Chad Wilson from Santos presented to the Committee about the Timor Leste Carbon Capture and Storage Project.</p> <p>Carbon capture and storage (CCS) is the process of capturing CO<sub>2</sub> then safely storing it deep underground. CCS technologies have been in operation since the 1970s and are proven as a large-scale CO<sub>2</sub> storage solution. CCS provides a way to address emissions from existing assets, from hard to abate sectors and provides a cost effective pathway to scale up low-carbon hydrogen production and atmospheric CO<sub>2</sub> removal.</p> <p>Historic operations in the Timor Leste Bayu-Undan gas field have demonstrated significant injection potential to provide a carbon storage solution for a Darwin low emissions hub. The primary user of the Darwin CCS Hub will be Barossa Gas to begin with. The pipeline is good for 8 – 10 million Tonnes per annum of CO<sub>2</sub>. Barossa doesn't have that much CO<sub>2</sub> so they have been offering that service to help sequester other companies CO<sub>2</sub>.</p> <p>Bayu-Undan facility meets all the criteria as a strong storage candidate.</p> <p><b>Capacity:</b></p> <ul style="list-style-type: none"> <li>• Large capacity is demonstrated through years of hydrocarbon production.</li> <li>• Strong and laterally extensive aquifer acts as pressure sink.</li> </ul> <p><b>Injectivity:</b></p> <ul style="list-style-type: none"> <li>• High permeability available over large interval.</li> </ul>

		<ul style="list-style-type: none"> <li>• Historic hydrocarbon gas injection provides confidence on infectivity.</li> </ul> <p><b>Containment:</b></p> <ul style="list-style-type: none"> <li>• Reservoir seals proven through hydrocarbon containment for tens of millions of years.</li> <li>• Structural trapping primary mechanism for containing CO2</li> </ul> <p>If the Bayu-Undan CCS Project goes ahead it will be the largest CCS project in the world.</p> <p><i>Discussion: Claire asked how long Santos will have to monitor the wells for. Chad advised that the monitoring requirements is different in every jurisdiction. Outside of the NT the reservoir is monitored until it reaches stability and then it gets monitored for a further 2 years before being capped and abandoned.</i></p> <p><i>Karen asked what kind of monitoring is going on alongside the physical in terms of microbiological. Chad advised that Santos takes fluid samples but there is also constant pressure monitoring and temperature monitoring.</i></p> <p><i>Alaric asked if the difficulty of injecting it changes over time as the reservoir gets filled up and if the cost changes. Chad advised that the cost doesn't change as its designed for the injection pressure. Chad advised all the CO2 projects show that there is in increase in injectivity in the first instance and then a bit of pressure builds up. All the modelling is done with the injection pressures and volumes that are targeted and then there are the safeguards and buffers in place to ensure the CO2 can be stored. Once there is CO2 in the well it gets easier to inject.</i></p> <p><i>Ian asked if the movements of tectonic plates affect the security of the storage. Chad advised that if they would have been activated, they would have been activated already. There is a fracture gradient but all clients for CCS stay well below that.</i></p> <p><i>Jared asked if there are risks of the CO2 escaping if there is corrosion or leaking etc. Chad advised that Santos don't know how long Bayu-Undan would need to be monitored for.</i></p>
5.3	Mangrove Retention Plan	<p>Brydie Hill – Senior Scientist (Flora and Fauna), attended the meeting to present to the committee on the progress of the development of the Mangrove Conservation Plan for Darwin Harbour. Part of the presentation included a workshop session to capture the views of the committee on the values of the mangroves communities of Darwin Harbour. To date progress has focussed on data capture for the biological and ecological values of the mangrove communities and collation into a spatial format.</p> <p>The values recorded at the workshop will be compared to those already captured by DEPWS to identify where there are remaining gaps.</p> <p>Brydie will send out the information captured from the workshop and will arrange a further meeting with the committee.</p> <p><b>Action:</b> <i>Brydie will send out the information captured from the workshop on the Mangrove Retention Plan. Brydie will arrange another meeting with the DHAC members.</i></p>
6 Other Business		
6.1	DHAC Strategy	No discussion held.

6.2	<b>DHAC Membership</b>	<p>The following positions on DHAC are currently vacant:</p> <ul style="list-style-type: none"> <li>• Larrakia Nation</li> <li>• City of Darwin</li> <li>• Santos</li> </ul> <p>Karen suggested to approach Steven Dawson at Larrakia as he is also a member of the Rapid Creek Water Advisory Committee.</p> <p>Jade Leask's replacement at City of Darwin is commencing soon, Carmony to follow up with Nick Fewster to get them appointed to the Committee. New Starter at Santos in the new year. Carmony will follow up and get them appointed.</p>
6.3	<b>Discussion about the proposed meeting with the NTEPA Chair, Paul Vogel</b>	<p>The committee discussed the option to meet with Paul Vogel – NTEPA Chairperson to discuss the EIA process for Middle Arm. The committee agreed 9 December at 11:00am is the best time to hold the meeting.</p> <p><i>Action: Carmony to send out a meeting invite to DHAC for their meeting with Paul Vogel.</i></p>
<b>7</b>	<b>Correspondence</b>	
7.1	<b>Outgoing</b>	
	<b>Communique to the Minister</b>	Noted.
	Incoming	
	<b>RCWAC Letter to DHAC re the DHIRC</b>	Noted.
8	<b>Communique items</b>	<p>The following items will be included in the Communique to the Minister:</p> <ul style="list-style-type: none"> <li>• DHIRC Funding</li> <li>• Presentation from Santos</li> <li>• Workshop on the Retention Plan</li> </ul>
9	<b>Next meeting</b>	The next meeting will be held in February 2023
	<b>Meeting closed</b>	The meeting concluded at 1:00pm

## Actions arising from the meeting

No.	Action	Action officer
1	Write a letter to Minister Moss and Minister Lawler regarding the DHIRC funding proposal	Claire Streten
2	Work with Nick Fewster to obtain a grant for the RCWAC priority areas for the DHIRC	Karen Gibb
3	Send out the information captured from the workshop on the Mangrove Retention Plan	Brydie Hill and Carmony Leso

No.	Action	Action officer
4	Arrange another meeting with the DHAC members around the Mangrove Conservation Plan	Brydie Hill and Carmony Leso
5	Send out a meeting invite to DHAC for their meeting with Paul Vogel	Carmony Leso