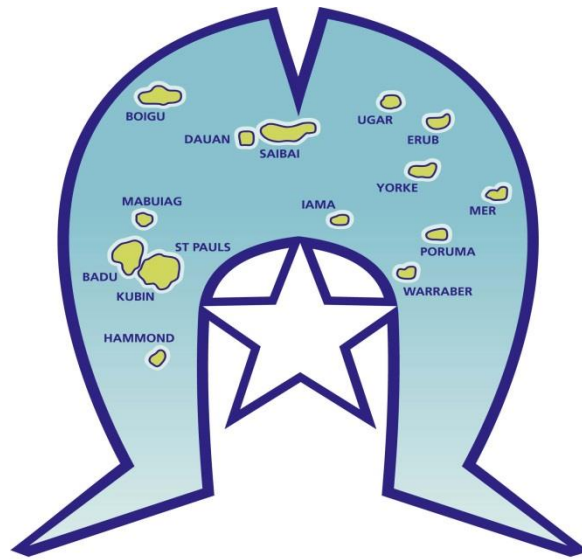




Torres Strait Island
REGIONAL COUNCIL

AGENDA

CLIMATE CHANGE ADAPTATION AND ENVIRONMENT COMMITTEE

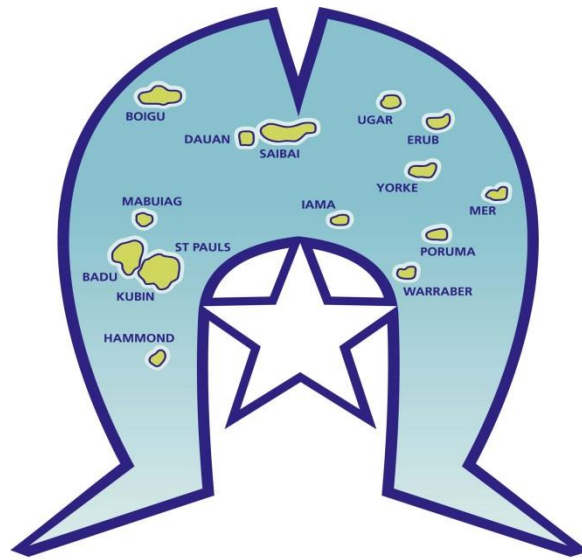
Date: Thursday, 27 April 2023

Time: 2.00pm to 3.30pm

Venue: Video Conference #8 – 0299 165 402
(Guest PIN #6905)

Agenda

1. Welcome (Chair)
2. Opening Prayer
3. Apologies
4. Declaration of Conflict of Interest (COI) (Prescribed and Declarable)
5. Noting of previous Ratified Minutes – 17 January 2023
6. Action Items List
7. Containers for Change: Official launch on Badu (*verbal update*)
8. Ghost Nets Innovative Solutions Fund – Torres Strait Marine Debris Task Force Project
9. SOURCE Hydropanel Technology
10. INFORMATION REPORT: CHAS Workshop Update
11. General/Other Business (on notice)
12. Next meeting date – 22 June 2023
13. Closing Prayer



Torres Strait Island
REGIONAL COUNCIL

Ratified Minutes

CLIMATE CHANGE ADAPTATION AND ENVIRONMENT COMMITTEE

Date: Tuesday, 17th January 2023

Time: 10:08am – 1:18pm

Venue: Video Conference #7 – 0299 165 401

PRESENT:

Cr Hilda Mosby – Chair, Division 12 – Masig (Yorke)
Cr Seriako Dorante – Committee Member, Division 8 – Kirirri (Hammond)
Cr Kabay Tamu – Committee Member – Division 10 – Warraber

APOLOGY:

Mayor Phillemon Mosby

STAFF:

Mr David Baldwin, Executive Director Engineering Services
Ms Noeleen Selke, Executive Director Corporate Services
Mr Jarrah Doran-Smith, Waste and Sustainability Engineer
Ms Julia Mauro, Senior Legal Officer
Ms May Mosby, Acting Secretariat Officer

Agenda

1. Welcome (Chair)

Chair, Cr Hilda Mosby welcomed everyone to the meeting which is a catch-up meeting from December last year. Cr Hilda Mosby also welcomed our new Executive Director Corporate Services, Ms Noeleen Selke to the meeting.

2. Opening Prayer

Cr Seriako Dorante opened the meeting in prayer at 10:08am.

3. Apology

Mayor Mosby due to a prior meeting engagement on Thursday Island.

4. Declaration of Conflict of Interest (COI) (Prescribed and Declarable)

Cr Hilda Mosby declared her conflict of interest on the following position:

- Board member of Torres Strait Island Regional Authority and holds the Environmental portfolio.
- Indigenous First Nation Climate Change Committee Member

5. Noting of previous Ratified minutes – 16th August 2022

The Committee notes the previous Ratified Minutes of 16th August 2022.

6. Action Items List

Executive Director Engineering Services, Mr David Baldwin provided the Committee with an update of the outstanding action items from August 2022.

Mr David Baldwin also mentioned that he included in the discussions at the June Workshop last year on the Centre of Excellence where there is approximately \$16m of funding. A meeting is held on Thursday Island tomorrow (Wednesday) that Noeleen is attending.

10.30am – Executive Director Corporate Services, Ms Noeleen Selke left the meeting.

7. Information Report – QLD Decarbonisation Strategy

Executive Director Engineering Services David Baldwin spoke to the report and gave Mr Jarrah Doran-Smith an opportunity to speak further on the topic.

The purpose of this report is to provide an update and overview to the Climate Change Adaptation and Environmental Committee in relation to the energy options and solutions

proposed at different levels of government, including the Queensland Energy and Jobs Plan, and Energy Queensland / Ergon Isolated Networks Strategy 2030.

Further discussions took place on this topic.

RESOLUTION:

Moved: Cr Hilda Mosby; Second: Cr Kabay Tamu

That the Climate Change Adaptation and Environmental Committee notes this report.

MOTION CARRIED UNANIMOUS

8. Marine Ghost Nets Innovative Solutions Fund

Executive Director Engineering Services, Mr David Baldwin spoke on the report. Seeking Committee's support for funding from this round. This grant round is in relation to the Ghost Nets Innovative Solutions Fund. This fund was established to improve the management of ghost nets and other litters that are in our waters and our beaches in northern Australia. A grant application was submitted back in late December for \$403k to establish a Marine Debris Task Force in the Torres Strait. The application will include project management plan, risk plan and budget. If successful a marine debris coordinator will be appointed to work hand in hand with the rangers and other agencies.

RESOLUTION:

Moved: Cr Seriako Dorante; Second: Cr Kabay Tamu

That the Climate Change Adaptation and Environmental Committee supports the project, Torres Strait Marine Debris Task Force under the Ghost Nets Innovative Solutions Fund.

MOTION CARRIED UNANIMOUS

9. TSIRC Metal Waste Legacy Stockpile Clean-Up Project Continuation.

Executive Director Engineering Services, Mr David Baldwin spoke to the report. This report will inform the approach for undertaking metal waste clean-up activities in the remaining five communities to ensure financial control under the current budget.

RESOLUTION:

Moved: Cr Hilda Mosby; Second: Cr Seriako Dorante

That the that the Climate Change Adaptation and Environmental Committee notes the report and support the content to be referred to full Council at the February 2023 Council Ordinary Meeting.

MOTION CARRIED UNANIMOUS

10. COMMITTEE MOVES INTO CLOSED BUSINESS

RESOLUTION:

Moved: Cr Kabay Tamu; Second: Cr Seriako Dorante

That in accordance with Section 254J of the *Local Government Regulation 2012* (Qld) it is resolved for the meeting to go into closed business to discuss matters of the following nature:

(e) legal advice obtained by the local government or legal proceedings involving the local government.

(g) negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government.

MOTION CARRIED UNANIMOUS

- 11. Seawalls Projects Continuation
- 12. Climate Change Case and Data Requested.
- 13. Presentation – Mirabou Energy

Cr Kabay Tamu declared a Conflict of Interest as he is a member of the Torres Strait 8.

11:25am – Mr James Reynolds and Ms Novita Jurry joined the meeting to present to the Committee.

11:28am – Chief Executive Officer, Mr James William joined the meeting.

11:50am – Chief Executive Officer left the meeting.

12:20pm – Mr James Reynolds and parties dialled out of the meeting.

14. COMMITTEE MOVES OUT OF CLOSED BUSINESS AND RESUME IN OPEN BUSINESS

RESOLUTION:

Moved: Cr Seriako Dorante; Second: Cr Hilda Mosby

That Council resolves to move out of closed business and resume in open business.

MOTION CARRIED UNANIMOUS

12:22pm – Mr David Baldwin, Executive Director Engineering Services left the meeting.

12:22pm – Cr Hilda Mosby left the meeting.

12:24pm – Mr David Baldwin re-joined the meeting.

12:25pm – Cr Hilda Mosby re-joined the meeting.

15. Agenda Report (TSIRC and Alluvium co-presenting) - CHAS Engagement Briefing.

12:25pm – Mr Michael Rosenthal, TSIRC CHAS Project Manager Alluvium dialled in.

12:27pm – Ms Marika Seden, Alluvium Consulting dialled in.

Chair, Cr Hilda Mosby welcomed Marika and her team to the meeting and gave the opportunity to Marika to present to the Committee on CHAS.

ACTION:

Executive Director Engineering Services to look into dates for a CHAS forum over 2 day during Council's workshop in May.

RESOLUTION:

Moved: Cr Seriako Dorante; Second: Cr Kabay Tamu

RATIFIED Meeting Minutes – Climate Change Adaptation and Environment Committee –
17.01.2023

(Ratified at Council Ordinary Meeting held in February 2023)

That the Climate Change Adaptation and Environmental Committee supports the undertaking of a TSIRC hosted Coastal Hazard Adaptation Strategy (CHAS) Two-Day Forum in May.

1:10pm – Ms Marika Seden and team left the meeting.

16. General/ Other Business (on notice)

No General Business

17. Next meeting date – 23rd March 2023 (to be advised)

To take on notice upon advice from Governance as this meeting date will clash with Council Ordinary Meeting at Warraber.

18. Closing Prayer

Chair, Cr Hilda Mosby thanked everyone for their attendance and participation at today's meeting and invited Cr Seriako Dorante to close the meeting in prayer.

MEETING CLOSED – 1:18PM

.....
Mr James William
Chief Executive Officer
Torres Strait Island Regional Council
Date:

.....
Cr Phillemon Mosby
Mayor
Torres Strait Island Regional Council
Date:



CLIMATE CHANGE ADAPTATION & ENVIRONMENT COMMITTEE

ACTION ITEMS AS AT APRIL 2023

Meeting Date/Agenda Item	Action	Action Area	Current Status
17 Jan 2023 AI 15	ED Engineering Services to look into dates for a CHAS forum over 2 days during Council's workshop in May 2023.	ED Engineering Services	CHAS Workshop to be held on 11-12 May 2023 in Cairns.

TORRES STRAIT ISLAND REGIONAL COUNCIL

AGENDA REPORT

STANDING COMMITTEE: Climate Change Adaptation and Environment Committee

DATE: Monday 24th April 2023

SUBJECT: Ghost Nets Innovative Solutions Fund

AUTHOR: Jarrah Doran-Smith – Waste & Sustainability Engineer

Recommendation:

That the Climate Change Adaptation and Environmental Committee supports and notes the Torres Strait Marine Debris Task Force project under the Ghost Nets Innovative Solutions Fund. The project aims to strengthen Council's capacity to manage ghost nets and marine debris throughout the Torres Strait region and enhance stakeholder collaboration.

Purpose:

The purpose of this report is to provide an update and overview to the Climate Change Adaptation and Environmental Committee in relation to the funding application for the Ghost Nets Innovative Solutions Fund.

Background:

The Torres Strait is home to a rich marine ecosystem that is vital to the livelihoods and cultural practices of the Indigenous communities living in the region. However, the area is also prone to marine debris, which poses a significant threat to the health of the ecosystem and the well-being of the communities. The debris includes discarded fishing gear, plastics, and other waste materials that are either dumped or washed up on the beaches.

To address this issue, the Australian Government established the Ghost Nets Innovative Solutions Fund. The fund supports projects that aim to reduce the impact of ghost nets and other forms of marine debris on the marine environment and the livelihoods of Indigenous communities in northern Australia.

The Torres Strait Island Regional Council (TSIRC) via the Engineering Services Department has been successful in securing a \$403,000 grant through Parks Australia's \$3 million Ghost Nets Innovative Solutions grants program. The funding is intended to manage ghost nets and marine debris across the Torres Strait, in collaboration with project partners such as the Salty Monkeys, Tangaroa Blue, the Torres Strait Regional Authority and Meriba Ged Ngalpun Mab. An Information Report at the time of grant application was presented to the Committee in January 2023

TSIRC has received the largest grant possible under this project, which will enable Council and its project partners to undertake a significant two-year program to perform wide-scale clean-up projects.

The Minister for the Environment and Water, the Honourable Tanya Plibersek MP held a media event with Council and project partners/stakeholders in Cairns on Friday 21 April to announce the funding.

Project Description

The Torres Strait Marine Debris Task Force project is one of the initiatives supported under the Ghost Nets Innovative Solutions Fund. This collaborative project is focused on identifying, tracking and removing debris and encouraging community participation in beach and ocean clean-ups. The aim is to support the long-term capacity of the Torres Strait communities to exercise culturally appropriate management of their land and sea.

The project will be overseen by a newly created position of Marine Debris Coordinator who will report to The Torres Strait Marine Debris Task Force comprising representatives from TSIRC, Salty Monkeys, Torres Strait Regional Authority and Tangaroa Blue.

The Torres Strait Marine Debris Task Force will work to remove foreign materials from the region in hopes of reducing the instances of death in marine sea life and restoring the coral population. Ongoing community education and awareness will work to enforce an improved perception of waste over time, reducing the environmental impacts of pollution in our seas.

This innovative and inspiring project utilises drones, GPS technology, and data collection software to create a safer, more sustainable future for the people and culture of the Torres Strait.

Objectives

The project has several objectives, including:

1. Developing a comprehensive understanding of the types, sources, and distribution of marine debris in the Torres Strait region.
2. Building the capacity of Indigenous communities to manage marine debris and participate in monitoring and reporting activities.
3. Developing and implementing strategies to reduce the amount of marine debris in the region.
4. Developing partnerships with government agencies, non-governmental organizations, and other stakeholders to support the project's objectives.

Marine Preservation

TSIRC hopes this project will spark generational inspiration for marine preservation for years to come.

The environmental and biodiversity of the Torres Strait region are unique and should be protected to ensure its longevity. The region is home to some of the largest dugong and sea turtle populations in the world.

Hunting for dugong and turtles is an important part of the traditional way of life and livelihood of Torres Strait Islanders and is a major source of protein in our diet.

This project will build capacity and understanding of the risks of ghost nets and marine debris in the region and encourage traditional means of hunting to restore culture and decrease environmental impacts.

Experience

Council is experienced in delivering waste recovery services as it enters the second year of the TSIRC Metal Waste Clean-up.

TSIRC understands the complexities of sea waste management due to the vastness of our region, hence the importance of collaboration with key regional partners and stakeholders Salty Monkeys, Torres Strait Regional Authority Rangers, Tangaroa Blue, Meriba Ged Ngalpun Mab, and the Department of Agriculture Fisheries and Forestry.

Conclusion

The Torres Strait Marine Debris Task Force project is an innovative initiative that will demonstrate community-based approaches to managing marine debris. By involving project partners and stakeholders Salty Monkeys, Torres Strait Regional Authority Rangers, Tangaroa Blue, Meriba Ged Ngalpun Mab, and the Department of Agriculture Fisheries and Forestry and the communities in monitoring and management activities, the project will build capacity to protect the marine environment and contribute to economic and social well-being.

The project's success will provide a model for other regions facing similar challenges and will highlight the importance of partnerships and collaboration in addressing complex environmental issues. With continued support and investment, the Torres Strait Marine Debris Task Force project has the potential to achieve even greater impact and inspire similar initiatives in other parts of the world. By working together, we can protect our oceans and ensure a sustainable future for all.



Author:

Jarrah Doran-Smith

Waste & Sustainability Engineer



Approved:

David Baldwin

Executive Director – Engineering Services

TORRES STRAIT ISLAND REGIONAL COUNCIL

AGENDA REPORT

STANDING COMMITTEE: Climate Change Adaptation and Environment Committee

DATE: Monday 24th April 2023

SUBJECT: SOURCE Hydropanel Technology

AUTHOR: Jarrah Doran-Smith – Waste & Sustainability Engineer

Recommendation:

That the Climate Change Adaptation and Environmental Committee supports and notes the proposed SOURCE Hydropanel project in collaboration with Torres Strait Regional Authority (TSRA). That the Committee agrees to in-principle agreement and provide input into suitable site locations for 2 x Hydropanels arrays..

Purpose:

The purpose of this report is to provide an overview to the Climate Change Adaptation and Environmental Committee in relation to the proposal for SOURCE Global to donate and install their SOURCE Hydropanel technology to one or two Torres Strait Island Communities.

Background:

The Torres Strait Island communities face significant challenges when it comes to accessing clean, safe, and reliable drinking water. The communities are also highly dependent on bottled water, which is often transported long distances and creates significant environmental issues, including plastic pollution and carbon emissions.

SOURCE Global and partners Patty Mills, NBA player and one of Australia's leading sportspeople, developed the Community Water Project to bring a renewable supply of clean drinking water to areas of remote Indigenous Australia.

The project in collaboration with TSRA, aims to provide clean, safe and reliable drinking water to one or more sites in the Torres Strait Island Communities. It will offset plastic PET bottle consumption and the associated carbon miles from transportation.

Project Description

SOURCE Global have proposed to donate their SOURCE Hydropanel technology as well as provide in-kind installation assistance with an ongoing local sustainability program for use at one or two sites in the Torres Strait Communities, such as Masig Island and/or another location of Councils choosing. TSRA have agreed to help fund elements of the local logistics and install.

The proposed project will look to install 24 Hydropanels over one or more sites. The Hydropanels use solar power to extract water vapor from the air, which is then purified to provide clean drinking water. Up to 5 L of cool clean water can be produced per panel each day which is up to 120 L per day.

Funding and Next Steps

SOURCE would like to prepare an in-principle agreement with the TSIRC and TSRA regarding funding support for the logistical, shipping, and installation elements of this project. The below

summarises expected costs, along with a list of project assumptions for the 24-panel project below:

- 24 Hydropanels – Donated
- Delivery to chosen community via SeaSwift: AUD \$71,000
- Installation (Includes dispensers, site surveys, engineering, commissioning): AUD \$78,720
- Ongoing Warranty, Parts, Support and Education Program: AUD \$17,280
- TOTAL: AUD \$ 167,000

Due to the limited information on the actual condition of the sites, additional contingencies have been added with the below assumptions:

- Costs excludes GST
- Ground mounted installation at the 2-sites (Array 1: 15-panels, Array 2: 9-panels)
- Internet connectivity (3G/4G/LTE) available at both sites
- Land provided at no cost by TSIRC (~240m²)
- Land grading and council permits/requirements by TSIRC
- Labour for install provided by TSIRC (~8 pax - 15 working days) to be also trained for O&M
- 13 x Concrete Slabs constructed as per the design drawing attached by TSIRC
- Last mile logistics support with container sideloader and/or trucks and labor on Masig Island provided by TSIRC
- Accommodations and vehicle transport on the island for 2 pax supported by TSIRC

Considerations

Council should consider the following for site feasibility aspects:

1. Suitability of the site/s to install the Hydropanels. Close to community centre, airport, sports field or another popular public place.
2. The panels are 1.2 m W x 2.4 m L x 1.1 m H (based on 45 degree angle required). They weigh approximately 154 kg.
3. Given the size of each panel, engineering approval will need to be sought if mounting on building structure.

By considering these factors, the Council can make an informed decision on where to proceed with the installation of SOURCE Hydropanels in the Torres Strait Island community.

Conclusion

In conclusion, the proposal for SOURCE Global to donate and install their SOURCE Hydropanel technology in one or two Torres Strait Island Communities in collaboration with the Torres Strait Regional Authority (TSRA) is a promising initiative that may significantly enhance water security and sanitation. The project aims to provide clean, safe, and reliable drinking water to communities and offset plastic PET bottle consumption and carbon miles from transportation. The proposed 24-panel project can produce up to 120 litres of cool, clean water per day.

However, before accepting the proposal, the Council should consider the suitability of the site/s for installation, engineering approval for mounting on building structures, and logistics and installation costs.

Overall, this project can have a positive impact on the health and wellbeing of the Torres Strait Island communities, and the Council should carefully consider the proposal and its potential benefits.

Attachments

- SOURCE Global_TSIRC Hydropanel Demonstration 2023
- SOURCE-Tech-Spec-Sheet
- 10-panel Concrete Mount Drawings



Author:

Jarrah Doran-Smith

Waste & Sustainability Engineer



Approved:

David Baldwin

Executive Director – Engineering Services

PROPOSED INSTALLATION OF 10 SOURCE HYDROPANELS, CONCRETE SLAB.

DRAWING LIST

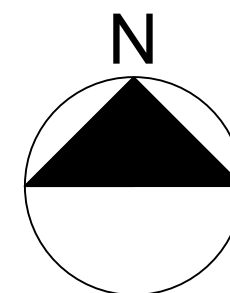
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MAC-0	COVER SHEET	0	25 MAY 2022	FOR APPROVAL
MAC-1	OVERALL SITE PLAN	0	25 MAY 2022	FOR APPROVAL
MAC-2	PANEL OVERVIEW	0	25 MAY 2022	FOR APPROVAL
MAC-3	PILE DETAIL	0	25 MAY 2022	FOR APPROVAL
MAC-4	SLAB DETAIL	0	25 MAY 2022	FOR APPROVAL
MAC-5	SLAB DETAIL 2	0	25 MAY 2022	FOR APPROVAL

APPENDIX

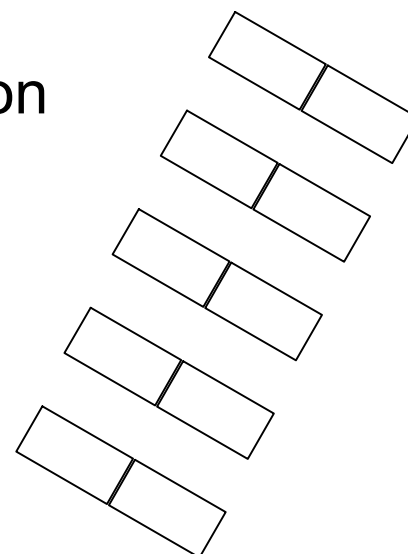
DWG	DRAWING NAME	REVISION	ISSUE DATE

SOURCE GLOBAL, PBC
1465 N. Scottsdale Rd., #600
Scottsdale, AZ 85257
+1-855-796-9283

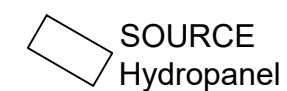
DWG NO.	MAP-0
REVISION	0
DATE	25 MAY 2022



Exact Location
TBD



Legend



Note:

Dimensions in mm
Azimuth 30° Zenith 15°

No.	Date	Description

Sub-Contractor:

SOURCE Global PBC

Client:

Project:

10 Panel Install

Drawing Title:

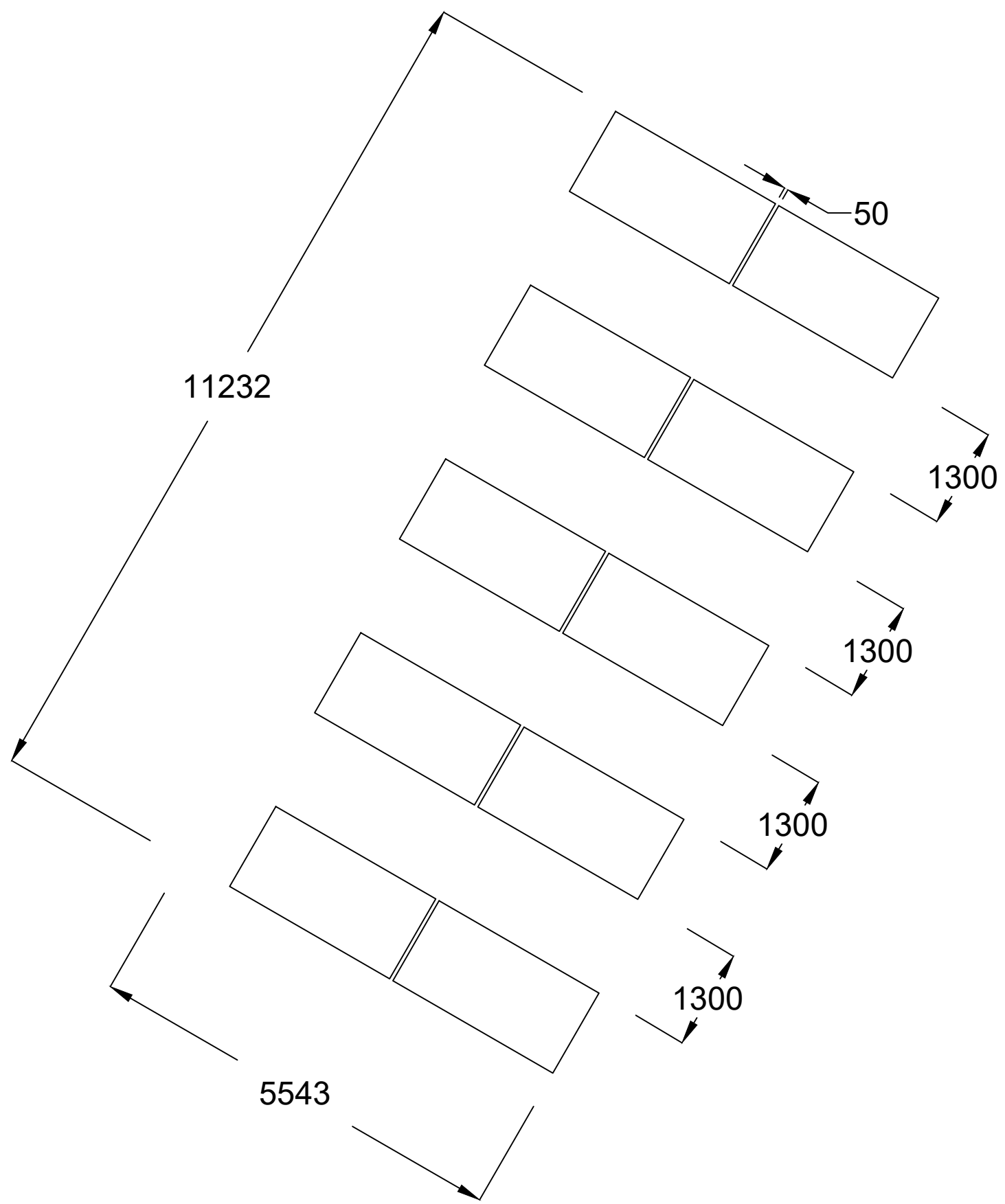
Overall Site Plan

Drawn By:

Xue Yuan

Approved By:

Scale at A4:	Date:	Drawing No: MAC-1
SO No:	Rev: 0	Date Rev: 25 May 2022



Legend

 SOURCE Hydropanel

Note:

Dimensions in mm

No.	Date	Description

Sub-Contractor:

SOURCE Global PBC

Client:

Project:

10 Panel Install

Drawing Title:

Panel Overall Layout

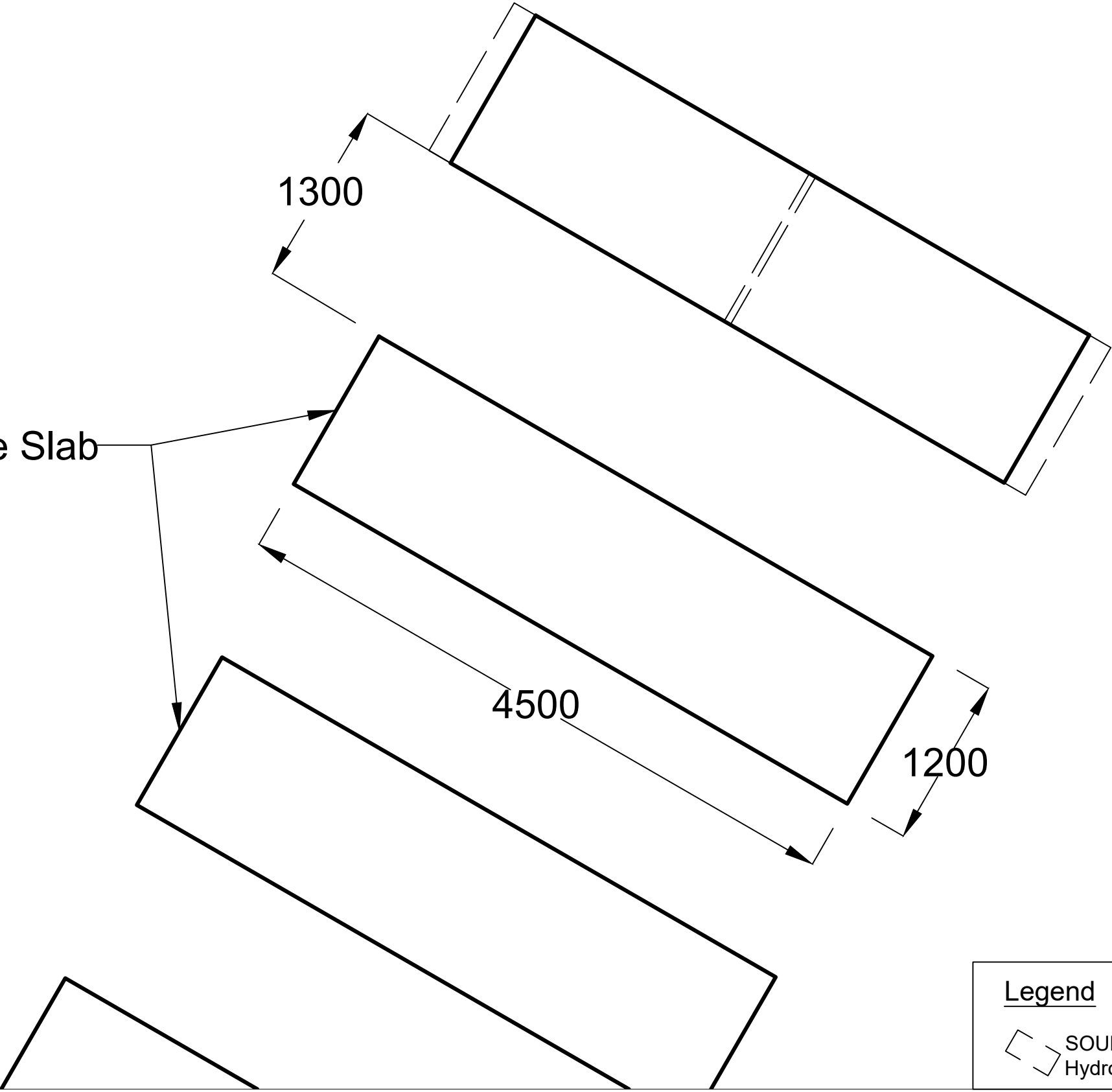
Drawn By:

Xue Yuan

Approved By:

Scale at A4:	Date:	Drawing No: MAC-2
SO No:	Rev: 0	Date Rev: 25 May 2022

Concrete Slab



Legend

 SOURCE
Hydropanel

Note:

Dimensions in mm

No.	Date	Description

Sub-Contractor:

SOURCE Global PBC

Client:

Project:

10 Panel Install

Drawing Title:

Concrete Slab Overview

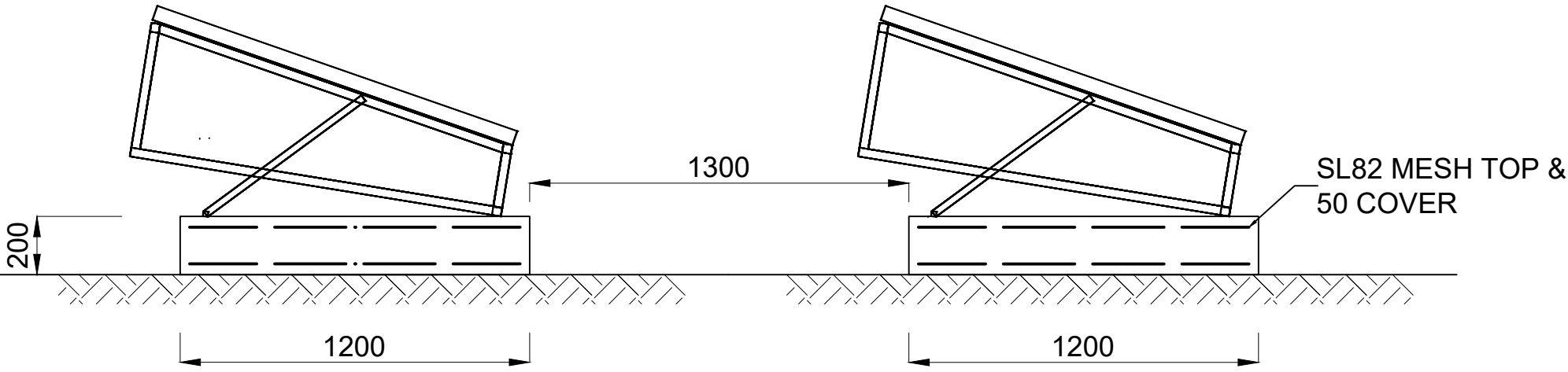
Drawn By:

Xue Yuan

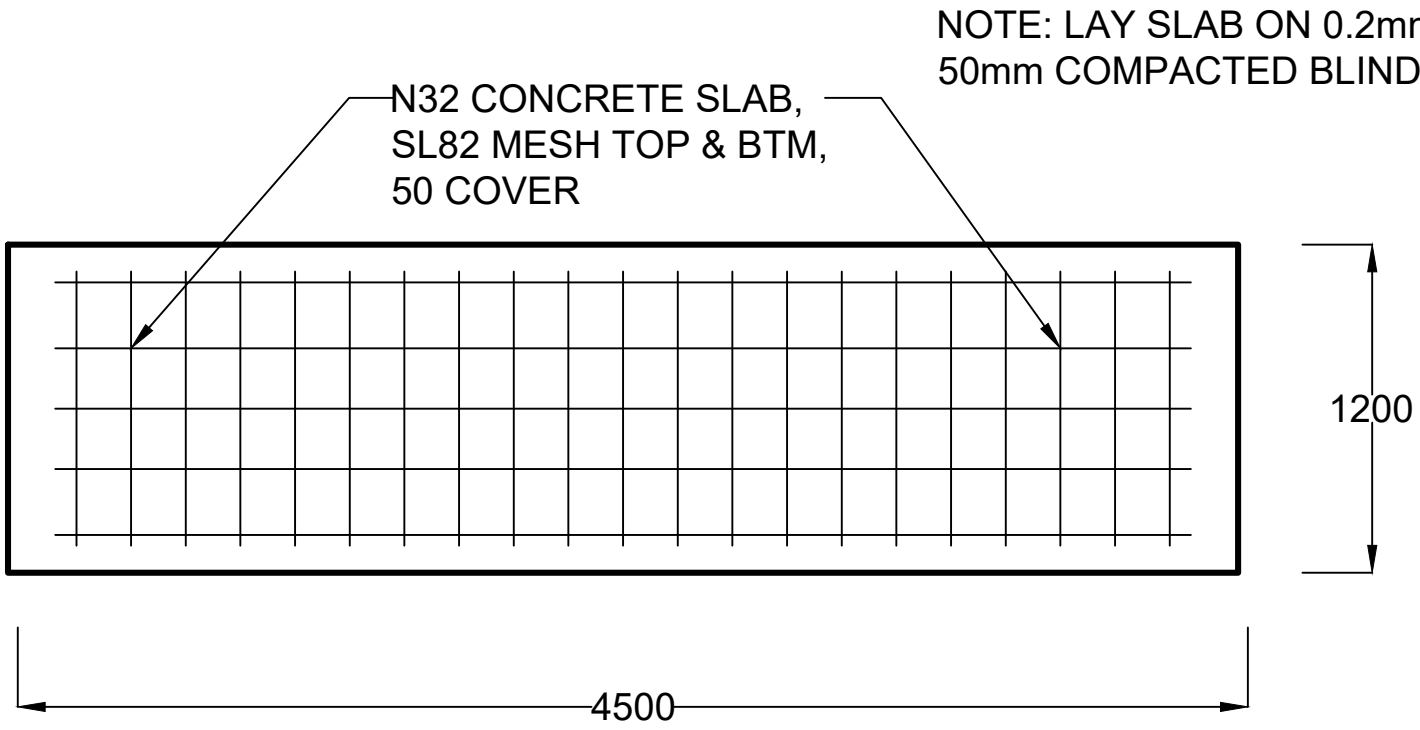
Approved By:

Scale at A4:	Date:	Drawing No: MAC-3
SO No:	Rev: 0	Date Rev: 25 May 2022

Side View



Typical Slab Detail



Note:

No.	Date	Description

Sub-Contractor:

Client:

Project:

10 Panel Install

Drawing Title:

Slab Detail

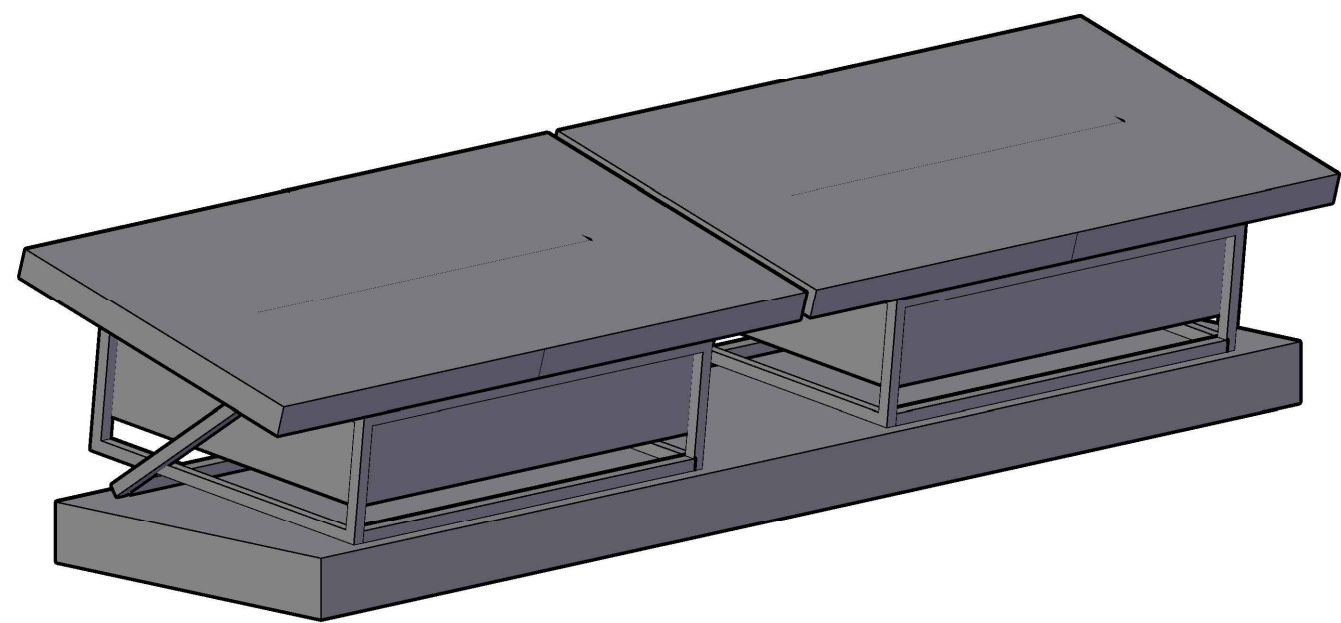
Drawn By:

Xue Yuan

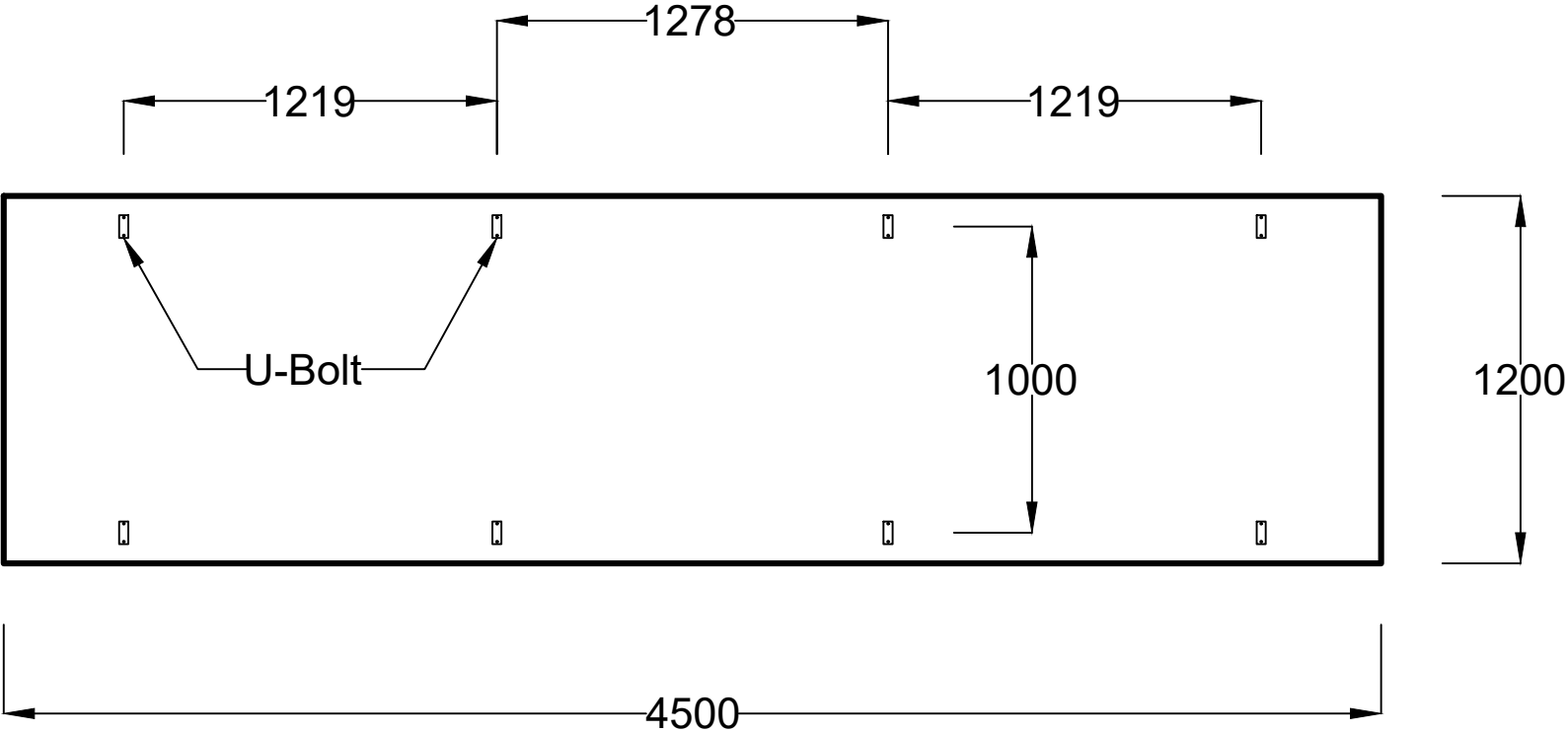
Approved By:

Scale at A4:	Date:	Drawing No: MAC-4
SO No:	Rev: 0	Date Rev: 25 May 2022

Isometric View



Typical Slab Detail



Note:

No.	Date	Description

Sub-Contractor:

Client:

Project:

10 Panel Install

Drawing Title:

Slab Detail 2

Drawn By:

Xue Yuan

Approved By:

Scale at A4:	Date:	Drawing No: MAC-5
SO No:	Rev: 0	Date Rev: 25 May 2022

21 April 2023

Mr Jarrah Doran-Smith
Waste and Sustainability Engineer
Torres Strait Island Regional Council
Level 3, 111-115 Grafton Street
CAIRNS QLD 4870

Sent via email – Jarrah.Doran-Smith@tsirc.qld.gov.au

Dear Mr Doran Smith,

Thank you for your ongoing interest, time, and assistance regarding our collaboration with the Torres Strait Regional Authority (TSRA), and our desire to partner with the Torres Strait Island Regional Council (TSIRC) to improve the quality and access of drinking water available across your region.

As discussed, SOURCE Global, PBC has agreed to donate our SOURCE Hydropanel technology as well as provide in-kind installation assist with an ongoing local sustainability program for use on Masig Island, or another location of your choosing in the council area.

We are looking to finalise our logistics, shipping, and installation to ideally time with the Torres Cape Indigenous Council Alliance (TCICA) – “3rd Indigenous Local Government Disaster Resilience Forum” held in Cairns on 11 May 2023. As noted, TSRA have agreed to help fund elements of our local logistics and install.

This installation will enable TSIRC, TSRA and SOURCE to showcase how sustainable technologies can improve drinking water supplies for remote communities by improving access, wellbeing and reducing local waste.

ABOUT SOURCE GLOBAL PBC

SOURCE Global (SOURCE) is a Public Benefit Corporation (PBC) and is the manufacturer of SOURCE Hydropanels, an advanced, innovative, and sustainable water technology that provides high-quality, safe drinking water for a variety of applications. SOURCE provides communities with a drought-proof, sustainable and off-grid drinking water solution to supplement other water supplies, especially in places where water is scarce and/or faces contamination risk. Our Hydropanels use a combination of solar energy and material science to extract pure water vapour from the air and convert it into the highest-quality potable water. The water then flows into a reservoir where it is mineralised before being delivered to a tap or dispenser.

Attachment A explains how the Hydropanels work. SOURCE water is remotely monitored by our Network Operation Centre (NOC) which ensures consistent high-quality and production.

OUR JOURNEY IN AUSTRALIA

In 2018, a demonstration grant from the Australian Renewable Energy Agency (ARENA) allowed the technology to be proven in a variety of climates across the country, from Lady Elliot Island in Queensland to the Pilbara in Western Australia. In 2019, the NSW Aboriginal Housing Office (AHO) installed SOURCE on more than 1,000 homes in regional towns across NSW including Walgett, Broken Hill, Wilcannia and Menindee. This project addressed issues of water quality, taste and supply. Today, these installations provide clean, high-quality drinking water for over 3,500 people and will offset up to 73 million plastic water bottles over a 10-year period.

In early 2020, SOURCE Hydropanels were installed in remote Indigenous communities in Queensland, New South Wales, South Australia, Western Australia, and the Northern Territory in collaboration with the U.S. National Basketball Association (NBA) and Australian Basketballer Patty Mills. The installation addressed residents' concerns about low and poor-quality water supplies which were also contaminated by nitrates, uranium, and lead in some areas. Building on our commitment to remote Indigenous communities, SOURCE has collaborated with the Mapoon Aboriginal Shire Council to install Hydropanels on their council buildings in 2022, and recently completed an installation with NGO Children's Ground at the Northern Territory community of Irrkerlantye (White Gate) where the residents previously had no supply of running water. Attachment B provides additional details on our projects.

FUNDING AND NEXT STEPS

SOURCE would like to prepare an in-principle agreement with the TSIRC and TSRA regarding funding support for the logistical, shipping, and installation elements of this project. The below summarises expected costs, along with a list of project assumptions for the 24-panel project below:

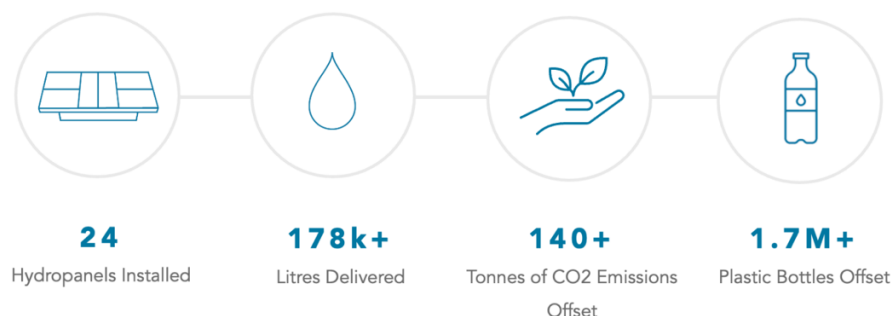
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Due to the limited information on the actual condition of the sites, additional contingencies have been added with the below assumptions:

- Costs excludes GST
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- Internet connectivity (3G/4G/LTE) available at both sites
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- Labour for install provided by TSIRC (~8 pax - 15 working days) to be also trained for O&M
- 13 x Concrete Slabs constructed as per the design drawing attached by TSIRC
- Last mile logistics support with container sideloader and/or trucks and labor on Masig Island provided by TSIRC
- Accommodations and vehicle transport on the island for 2 pax supported by TSIRC

SOURCE Hydropanels have significant positive sustainability impacts related to offsetting PET bottle consumption and associated carbon miles from transportation. The image below demonstrates the potential impact this project could have over its lifetime.

HYDROPANEL IMPACT OVER 20 YEARS



Following confirmation of the above costs, SOURCE will work with the TSIRC and local community leaders to ensure optimal locations are chosen, as well installing signage in your region's local language to explain the technology to residents and visitors alike. Attachment C provides an example of the recent 10-panel installation at Irrkerlantye (White Gate) as well as signage in both English and Arrernte.

This project has also generated significant interest, with the TSRA releasing a media statement announcing the project, and Australian Basketballer Patty Mills visiting an initial demonstration site on Horn Island (see link to article [here](#)). We would be grateful to involve your organisation in future advocacy, as well as discussing the possibility of extending our service to other areas of your Council that also face drinking water access challenges through the Queensland Government and Community Enterprise Queensland.

It is our hope that we can receive your in-principle agreement and support as soon as possible, so that planning and installation can commence in the next few weeks. Our collaboration will help raise awareness of drinking water access and contamination challenges in Australia, while meaningfully benefitting your local community.

If you would like further information or to arrange a meeting, please don't hesitate to contact me on 0405 367 020 or at alex.polson@source.co

Kind regards,

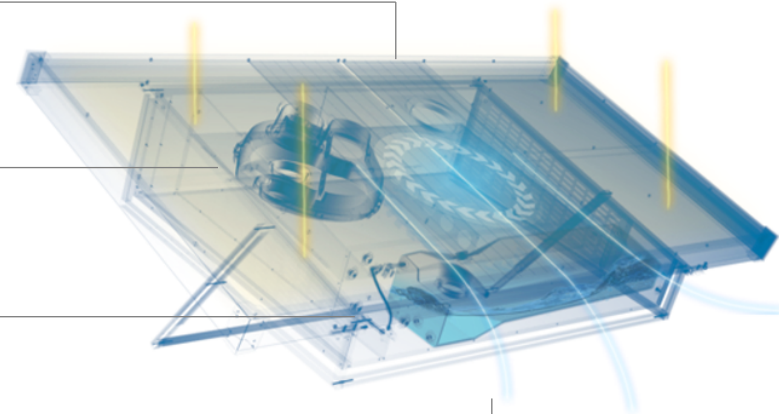
Alex Polson

Alex Polson
Director, Market Development
SOURCE Global PBC

ATTACHMENT A: HOW SOURCE HYDROPANELS WORK

HOW DOES SOURCE WORK?

- 1** Using solar PV, SOURCE takes in ambient air via fans and collects water vapour from that air onto a hygroscopic material.
- 2** Heat generated from solar thermal drives a process of condensation inside the Hydropanel, converting the adsorbed water vapour into pure, liquid water.
- 3** Because the special materials inside SOURCE only attract water molecules, SOURCE water starts pure, similar to distilled water.
- 4** This pure water flows into the SOURCE reservoir where it is mineralised with magnesium and calcium. |



ATTACHMENT B: EXAMPLE QLD INSTALLATIONS



VALKYRIE STATE SCHOOL, VALKYRIE, CENTRAL QUEENSLAND

In Queensland, close to 200 schools are not connected to town water supply. At Valkyrie State School, the children relied on water bottled in single-use plastic for nearly six years and, at one point, the school's tanks ran dry, leaving students and staff with no running water at all.

Rural Aid, Stanmore Resources, and Central Queensland Mining Rehabilitation Group have installed 15 Hydropanels at the school, giving children a permanent, drought-resilient source of clean drinking water. Over their lifetime, the Hydropanels will offset more than a million plastic bottles which otherwise would have gone into landfill.

"They heard our call for help they were more than willing to come onboard and fund and install this project. For a small school we sometimes do feel forgotten about. We are forever grateful!" – Kristin Michelmore, parent and P&C president, Valkyrie State School



MAPOON ABORIGINAL SHIRE COUNCIL, MAPOON, QUEENSLAND

Each dry season communities in the Cape and Torres Strait face water shortages, reduced water quality and water restrictions.

Ten hydropanels were installed behind the new cultural centre in Mapoon to make clean, safe drinking water. Providing storm resilient and infrastructure-free high-quality drinking water, even functioning in incredibly dry climates.

"It's another step towards the Mapoon community becoming more sustainable and resilient."
"Our vision for Mapoon is to be one of Queensland's healthiest, most culturally rich, and sustainable remote regions." – Aileen Addo, Mapoon Mayor.

ATTACHMENT C: EXAMPLE OF LOCAL SIGNAGE AT OUR NGO PARTNER SITE - IRRKERLANTYE (WHITE GATE), ALICE SPRINGS

SOURCE



children's
ground
Ange-juwa-Matja
Pityritjar

THIS TECHNOLOGY
PROVIDES OUR COMMUNITY'S
DRINKING WATER.

It's made from the air and sunlight all around us. Please help to take care of it.



SAFE &
DELICIOUS



RENEWABLE



OFF-GRID



WATER
INDEPENDENCE

These ten Hydropanels will offset over
500,000 PLASTIC BOTTLES IN THEIR LIFETIME

SOURCE



children's
ground
Ange-juwa-Matja
Pityritjar

TECHNOLOGY NHENHELE

APMERE ANWERNE-KENHE KWATYE MWERRE
ANWERNE ANTYWETYEKE MPWAREME.

Kwatye nhenhe alkerenge-ntyeye mpwareme ante uternetyele.
Anwerne mwantyele arntante aretyeke kwatye mwerre anwerne-kenhe.



KWATYE MWERRE ANWERNE-KENHE
ANWERNE MWANTYE
MWANTYE ILETYEKE



SELF AKNGARTE
IWELHEMELE ANEME



SELF AKNGARTE
IWELHEME



KWATYE ARNTANTE
ARETYEKE

Nhenhe tenpale Hydropanels kwenhe offset-eme ileme
500,000 PLASTIC BOTTLE
akwete anthurre anetyeke in their lifetime



What Is SOURCE[®]?

SOURCE is a solar-powered and infrastructure-free drinking water solution. As a non-extractive water resource, SOURCE Hydropanels represent a first in transparency, resiliency, security, and quality. Whether at homes, schools, hospitals, or other institutions, SOURCE advances drinking water ownership, bypassing the need for other drinking water alternatives.

SOURCE is powered by an integral combination of solar photovoltaics and high-efficiency solar thermal. The electrical and thermal power is used to efficiently produce water in a modified psychrometric cycle even in some of the driest deserts in the world.

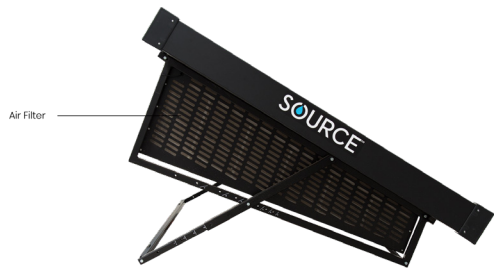
How Does SOURCE Work?

- 1 Using solar PV, SOURCE takes in ambient air via fans and collects water vapour from that air onto a hygroscopic material
- 2 With heat from the sun, SOURCE converts water vapour collected into liquid water, made pure
- 3 The pure water is mineralised with magnesium and calcium to achieve an ideal taste profile
- 4 Sensors in each Hydropanel monitor and optimize the water to maintain quality

Hydropanel Front View

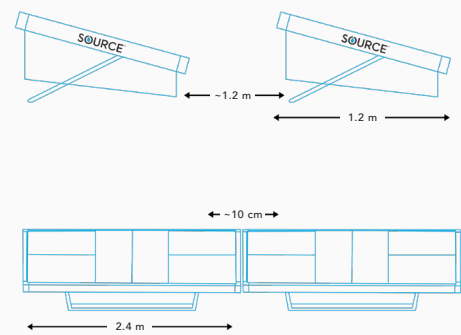


Hydropanel Side View



Installation

BASIC ARRAY DIMENSIONS



WIND LOAD CONSIDERATIONS

When considering wind loads alone (w/o snow or seismic load combinations), the following correlates to max tilt angles.

- No limitations from 0-150km/hr
- 35° @ 180km/hr
- 25° @ 285km/hr

SPECIFICATIONS

- Dimensions:** 4' x 8' x 3'8" / 1.2 m x 2.4 m x 1.1 m (@45°)
- Weight:** 340 lbs / 154 kg
- Lifespan:** 15 years
- Sterilization:** on-board ozone generation and injection
- Mineralization:** Magnesium and Calcium are added for optimal taste
- Water Pump:** 80 PSI
- Operating Temperature Range:** 1 to 55° C and 10 to 100% Relative Humidity
- Operational Angles:** 5° to 45° from horizontal ±5° North-South mounting tolerance
- Water Production:** 2-5 Liters per day

HYDROPANEL DECIBEL RATINGS

Operating Mode	Distance from Unit	Total Unit Sound Rating (dBA)	Max Unit Sound Rating (dBA)
Normal	1 metre	73.5	76
	5 metres	67.3	69
	10 metres	65	65
Low Noise*	1 metre	71	73
	5 metres	66.5	68
	10 metres	64	64

* Results in decreased water production

Hydropanel Components

All components of the Hydropanel are tested to IEC 61215 equivalency beyond Hydropanel lifetime:

- Solar Thermal Assembly
- Lower Housing Assembly
- Internal Components: LiFePO4 backup battery, cellular radio, fans, motors, sensors, control board, Photovoltaic panels
- The body and frame of the Hydropanel are powder-coated steel
- All wetted parts materials have been tested to meet the NSF 61 standard criteria

Network Operations Center

Each SOURCE Hydropanel is connected wirelessly to the Network Operations Center (NOC) for alert management, service and troubleshooting. The NOC manages system-prompted issues automatically and responds to customer-prompted issues via phone or email at support@source.co, +1 (855) 796-9283, and (02) 9055 3994 in Australia.

Required Maintenance

Annual

Air Filter
Water Filter (3650 litres)

5 Years

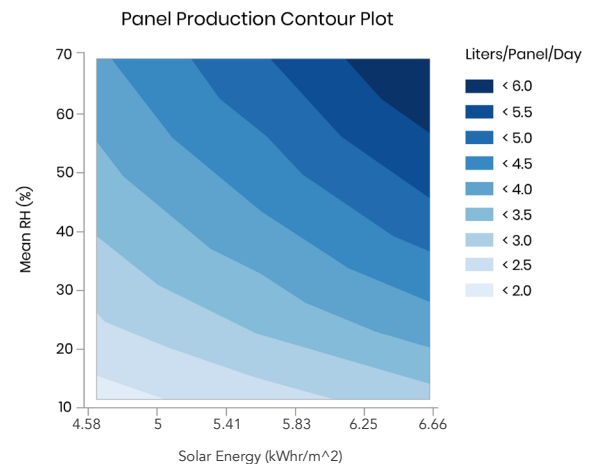
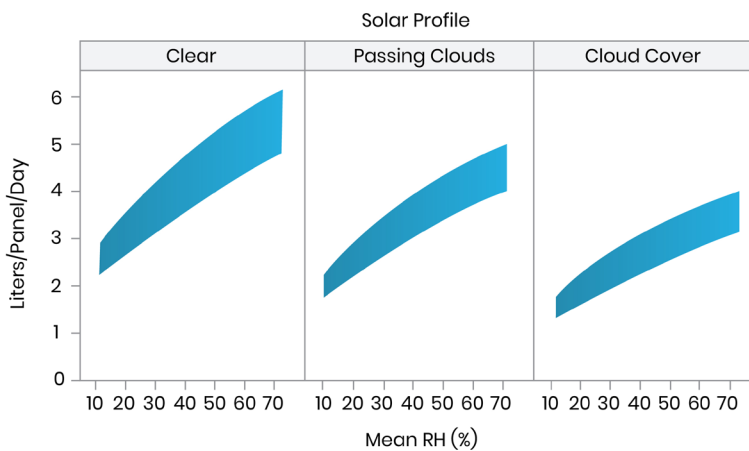
Mineral Cartridge (9125 litres)

Warranty

Standard Warranty – 1 year
Extended Warranty – 5 years

Water Production

Water produced by the SOURCE[®] Hydropanels is dependent on local environmental conditions of relative humidity (RH) and solar energy (kWh). SOURCE performs predictive analytics to predict the water production in any area of interest. The data is populated into a model to predict SOURCE[®] Hydropanel water production at any particular location. On average, each Hydropanel produces 90-150 liters of high quality drinking water per month.



Commitment to Water Quality

The SOURCE Hydropanel is designed and tested to produce high quality drinking water. SOURCE water meets or surpasses the primary drinking water standards set by the US Environmental Protection Agency (EPA) and the World Health Organization drinking water guidelines.

ABOUT SOURCE

At SOURCE, we found that perfect water isn't found on Earth – it's found above it. Truly exceptional water is captured in its true flawless state. It does not have to be filtered or purified so not a single drop is wasted. Perfecting water brings quality and sustainability together – no pipes, no grids, no electricity – all made possible with SOURCE Hydropanels. When you choose SOURCE, you choose clean, sustainable drinking water with no compromises.

LEARN MORE ABOUT SOURCE

Visit: source.co

Call: +1 (855) 796-9283

Email: contact@source.co

@source [f](#) [@](#) [in](#) [v](#)

[sourcewaterco](#) [t](#)

TORRES STRAIT ISLAND REGIONAL COUNCIL

INFORMATION REPORT

STANDING COMMITTEE: Climate Change Adaptation and Environment Committee

DATE: Monday 24th April 2023

SUBJECT: CHAS Two-day Council Workshop

AUTHOR: Jarrah Doran-Smith – Waste & Sustainability Engineer

Recommendation:

That the Climate Change Adaptation and Environmental Committee supports and notes this report.

Purpose:

The purpose of this report is to seek support for the CHAS two-day Councillor workshop agenda on the for the Torres Strait Island Regional Council. The workshop aims to enhance council members' understanding and gather input on the Coastal Hazard Adaptation Strategy.

Background:

The Torres Strait Island Communities are vulnerable to the impacts of climate change, particularly the consequences of tidal inundation and erosion on the Communities. The Council is developing a CHAS to address these challenges and ensure the resilience of the region.

The 2-day workshop will provide an opportunity for Council members to learn more about the CHAS and provide their input on its implementation. The workshop will include presentations from expert consultants in the field, group discussions, and interactive exercises.

CHAS Two-day Councillor Workshop

Consultation with Councillors, Council staff, and other stakeholders has confirmed the desire to hold a multi-day workshop to support the development of the TSIRC CHAS. The workshop has been planned to align with the planned May Ordinary Meeting and workshops (May 15-27), with the CHAS workshop taking place May 11-12 in Cairns.

The intended attendees for this workshop will be all Councillors. Key guest speakers and other stakeholders to be invited as determined at a later date in consultation with Mayor Mosby and Chair of CCA&E Committee Cr H Mosby. Key Council officers who may be involved in the ongoing development of the CHAS and supporting both administrative and elected arms of Council in the implementation of the strategy may also be invited.

The intent of the workshop will be to focus on coastal hazard adaptation options in the TSIRC LGA while fostering collaboration with a wide range of Torres Strait stakeholders via discussions about internal adaptation and implementation needs, barriers, and opportunities. It will also provide an opportunity to clarify how the CHAS will align with regional adaptation efforts.

The desired outcome of the workshop is to gather collaboratively designed input into regional, council-wide, and community specific adaptation actions. This will enable the TSIRC CHAS to contain specific, implementable and community supported adaptation plans that will guide action for the short, medium and long term.

Funding for Workshop

The QCoast Board have approved additional funding to cover the costs of the Councillors to attend the 2 day workshop and for other workshop related expenses.

The items and corresponding amounts that have been approved, are provided below noting this request includes accessing the remaining contingency that was available for councils to access.

	Unit cost	Days	People	Total cost
Accommodation	\$ 200.00	3	16	\$ 9,600.00
Travelling Allowance	\$ 180.00	4	16	\$ 11,520.00
Venue Hire	\$ 500.00	2	Per day	\$ 1,000.00
Morning/arvo tea	\$ 500.00	2	Per day	\$ 1,000.00
Taxi allowance	\$ 100.00	na	16	\$ 1,600.00
TOTAL				\$ 24,720.00
Current unused contingency				\$ 2,444.00
Total additional funding required				\$ 22,276.00

Draft agenda for CHAS Councillor Two-Day Workshop

The following is a proposed agenda for the CHAS Two-Day Workshop. This has been designed to allow for sufficient time to discuss important elements of coastal hazard adaptation in the Torres Strait and facilitate the gathering of information needed to design a useful Adaptation Strategy.

This agenda has the potential to be refined to reflect input from the Mayor and CC&E Committee and the project team.

Date and time	11-12 May 2023
Venue	TBC Cairns
Purpose	The purpose of this two day workshop is to: • Raise internal and external awareness about the project and its importance to Council • Share the work completed to date and its implications for TSIRC and island communities • Co-design regional, council wide, and community specific adaptation actions • Provide an opportunity for Councillors to engage with the project to ensure their perspectives are considered when developing a CHAS implementation plan • Explore how the TSIRC CHAS relates to regional climate change and adaptation efforts

Invitees	• Councillors • Key Council staff
Project Team Members	Marika Seden , Alluvium (Lead facilitator) Michael Rosenthal , Alluvium (Project Manager & co-facilitator) Adam Brook , Alluvium (Senior Coastal Engineer & co-facilitator) Stephanie Doumstis , Alluvium (Workshop & technical support)
Possible co-facilitators (TBC)	CC&E to provide input. Colin (pastor) Sel Sultman (DES)

Agenda

Time	Agenda item	Description
Day 1 – 8:00 AM arrival and registration, 9:00 AM start (coffee and brekky provided)		
9:00 – 9:30 30 mins	Opening Prayer Welcome, acknowledgements and introductions	Establish group mindset State our purpose in prayer Talk about who is here and their roles over the two days
9:30 – 10:30 60 mins	Why are we here?	Statement on coastal hazards and climate change in Torres Strait. What is a CHAS and how can it help? - In/out of scope - What does the final strategy look like and how will it be used? Themes and principles - Positive messaging, fostering hope for a thriving future in the Torres Strait - Learning from the past, preparing for the future - What has been done in the past, and what is possible in the future - Take advantage of the moment - Council wide vs. community specific - Adaptation pathways
10:30 – 11:00 30 mins	Morning tea	
11:00 – 12:00 60 mins	Technical overview	Intro to blank map QGIS workspace overview
12:00 – 1:00 60 mins	Lunch	

Time	Agenda item	Description
1:00 – 1:30 30 mins	Prelude into detailed discussion	What are we hoping to yarn about and learn over the two days? - Themes and principles - Tough conversations - Communication - Education - Monitoring - Planning - Resilient assets - Nature based adaptation - Engineering - Roles and responsibilities, governance and funding
1:30 – 3:30 120 mins	Tough conversations	Understanding climate change projections Relocation vs staying in place Protecting culture Imagining the Torres Strait of the future
3:30 – 4:00 30 mins	Afternoon tea	
4:00 – 5:00	Recap and preview of Day 2	Provide draft community specific plans to each Councillor. Walk through content in draft community plans. Set expectations for Day 2 discussion.
5:00	Close Day 1	

Time	Agenda item	Description
Day 2 – 8:30 AM arrival, 9:00 AM start (coffee and brekky provided)		
9:00 – 9:15 15 mins	Recap of Day 1	Reinforce themes and principles
9:15 – 9:30 15 mins	How today will work	Note draft adaptation plans for each island Deep dive into adaptation options Small groups and big group
9:30 – 10:30 60 mins	Adaptation pathways discussion	Pros and cons of different options Lessons learnt Pathways to implementation
10:30 – 11:00 30 mins	Morning tea	
11:00 – 12:30 90 mins	Adaptation pathways discussion (continued)	Resilient assets and planning Pros and cons of different options Lessons learnt Pathways to implementation
12:30 – 1:30 60 mins	Lunch	

Time	Agenda item	Description
1:30 – 2:30 60 mins	Communication and Education	Who, what, when, how? What do the leaders need to initially get the information out? What next?
2:30 – 3:30 60 mins	Monitoring	Who, what, when, how? Existing tools and monitoring programs
3:30 – 4:00 30 mins	Afternoon tea	
4:00 – 4:30 30 mins	Roles and responsibilities, governance and funding	Who, what, when, how? What next?
4:30 – 5:00 30 mins	Recap, next steps, and close Day 2	Summary of key discussion Finalise the CHAS Public exhibition and Council endorsement

Conclusion

It is recommended that the Climate Change Adaptation and Environmental Committee supports and notes the agenda for the CHAS two-day Councillor workshop. The workshop will provide council members with the necessary knowledge and skills to effectively implement the CHAS and reduce the risks associated with coastal hazards in the Torres Strait Island Region.



Author:

Jarrah Doran-Smith

Waste & Sustainability Engineer



Approved:

David Baldwin

Executive Director – Engineering Services