July 2024

South West Water

Par Desalination Project (phase one)

Public consultation information booklet

Phase 1 location

Water is a precious resource that we cannot take for granted. Climate change, a growing population and the significant influx of visitors to the region each year have made water resources more in demand than ever, especially in Cornwall.

The Met Office is predicting that by 2070, our summers will get even drier and therefore as a responsible business we must plan ahead.

Our regulators require us to be prepared for the next drought, and that is exactly what we are doing by bringing forward proposals for desalination.

We are making huge investments and taking forward a whole range of solutions which will boost Cornwall's water supply by approximately 45% by 2025.

Our Proposals (Phase 1)

Due to the complexities of this project, the sensitivities around marine impacts and the pressing need to secure resilient water supplies, it has been necessary to phase delivery of desalination in Cornwall.

For this project, (phase 1) we will still need to go through a the statutory planning and regulatory approval process.
This will include planning applications for the following:

- A desalination plant on land at Par docks **(which avoids need to construct new pipelines into the marine environment)**
- A Nature Based Solution lagoon and Integrated Constructed Wetland (NBS)
- An extension to Restormel Water Treatment Works
- South West Water still has the need to develop a viable scheme which will meet water resilience required for the future. This will be subject to separate planning applications and regulatory scrutiny.

What about the Phase Two Scheme?

We have listened to the feedback we have received from our customers so far, and you have told us that you have concerns regarding the potential marine and environmental impacts of desalination. That is why we are taking more time to fully understand the complex and sensitive marine environment.

However, as a responsible business we must ensure that we plan ahead and have a drought resilient water resource for 2025 that meets our customers expectations of us. That is why this project (Phase 1) is required.

When we are satisfied that we have a viable scheme that meets all requirements, this will be subject to separate planning applications, public consultation and regulatory scrutiny.

How it will work?

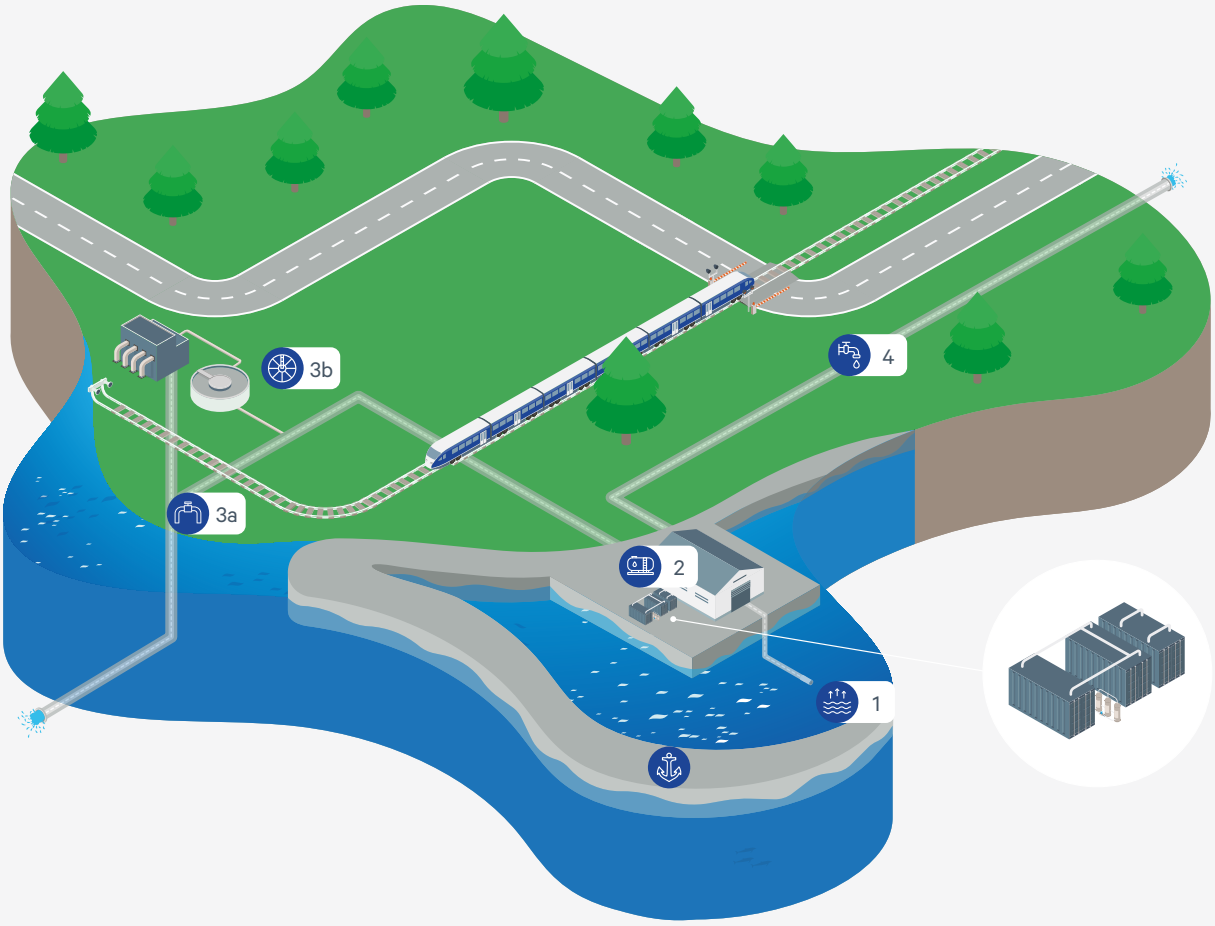
Desalination is a process that removes salt and other impurities from seawater, making it safe and suitable for human consumption, irrigation, or industrial use. The primary goal of desalination is to provide a clean, safe source of freshwater in locations where traditional water resources may, at certain times, be insufficient.

Key points:

- The process is clean and provides water that is both safe to drink and of high quality
- Desalination is practiced globally, a preferred method of many countries.
- We will use this resource to add capacity to our raw water network, which we can rely on when required.

Key

- Desalination Plant
- Transfer Pipeline to Restormel Water Treatment Works (WTW)
- Par Docks
- Par Waste Water Treatment Works (PWWTW)



The plant

The proposed plant at Par docks will deliver the following:

- A desalination plant (comprised of approximately 5 shipping container sized units) capable of producing up to 2.5 million litres of desalinated water per day.
- Two 1.2km above ground pipelines between the desalination plant and Par Waste Water Treatment Works, to avoid the need for new infrastructure out to sea.
- Protecting and enhancing the environment and minimising the impact of this project on the local area is our key priority.

Abstraction and discharge

We have carefully considered how water can safely be extracted and discharged from the proposed desalination plant, whilst avoiding any impact to the marine environment. We're committed to safeguarding the environment whilst providing a wholesome and plentiful supply of water, by avoiding the need to construct any new infrastructure within the bay.

Key environmental considerations include:

Abstraction

Abstraction will be done via a suction pipe in Par harbour. It will be screened in accordance with Regulations to prevent marine life entering the system.

Discharge

Two 1.2km above ground pipelines will be used to pump the diluted brine to the existing outfall. The wastewater processes will then go to the existing Par Wastewater Treatment Works for treatment.

Permits

The abstraction license will be subject to an application being made to the Environment Agency for assessment.

We will need to also apply to the Environment Agency to modify the existing discharge license at Par Waste Water Treatment Works to facilitate this.

Key considerations

From the outset of this project, we have carefully considered how to deliver this important project in a way that is sensitive to our natural environment and the local community.

We are continuing to access and carry out surveys which has helped informed this project and will continue to develop in terms of any future projects.

Environmental

Protecting the environment and minimising the environmental impact of this project is a key priority.

A Environmental Impact Assessment (EIA) screening request was submitted to Cornwall Council on 26 April 2024.

Whilst this confirmed that a full EIA is not required for this project (phase 1), we are committed to ensuring that we protect the environment wherever possible.

Marine

Phase 1 will not include the construction of any new marine pipelines, avoiding any impact on seagrass and maerl.

Energy

The plant will not operate 24/7 and will be powered by electricity supplied by National Grid Electricity Division

We have a 100% renewable energy supply contract which is supported by Renewable Energy Guarantees of Origin (REGO).

The Phase one proposals, when operating at full capacity, we anticipate the plant will require just over 1.25MW of energy.

Construction

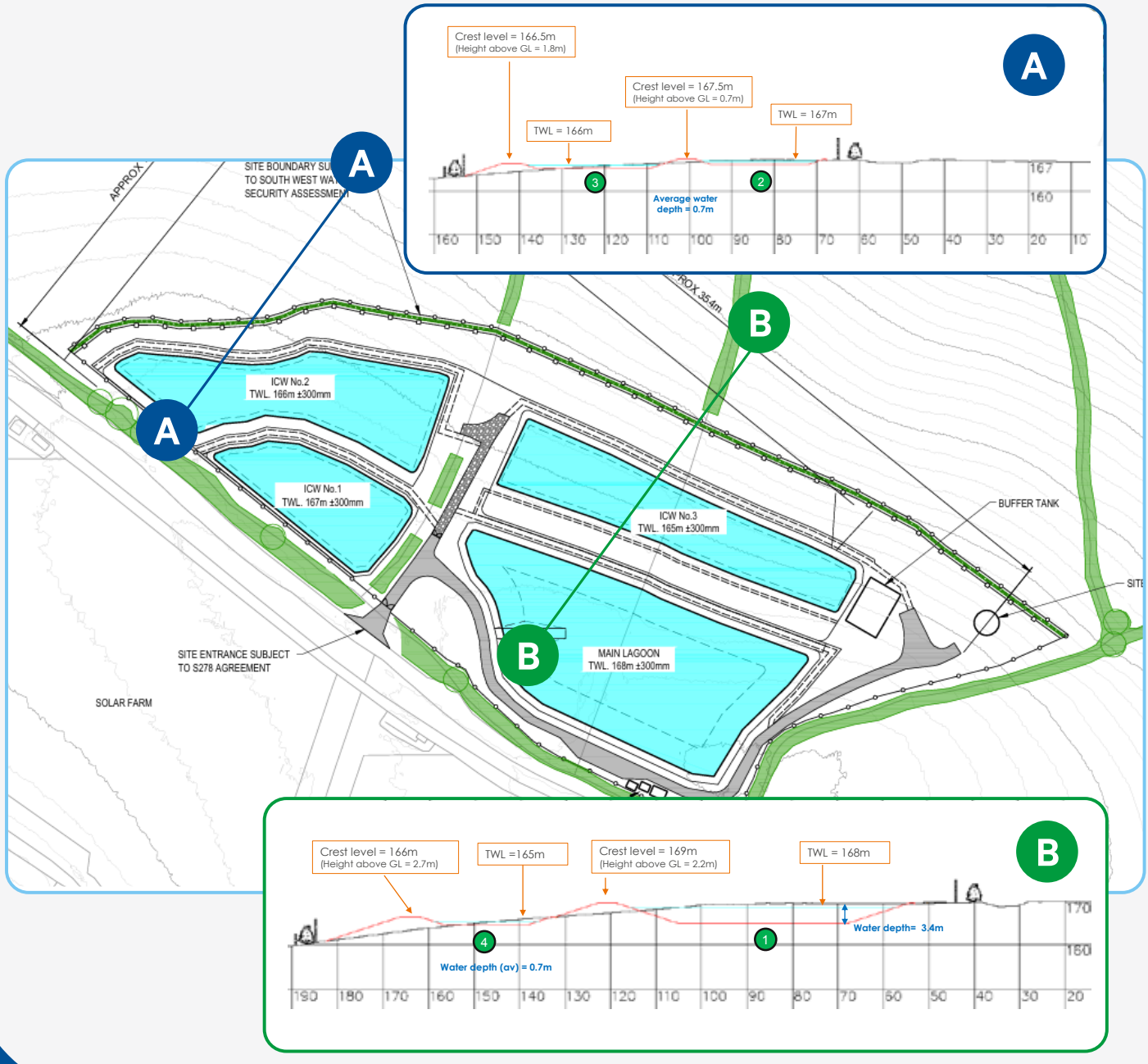
Construction would be managed very carefully to minimise impacts on the local area and people.

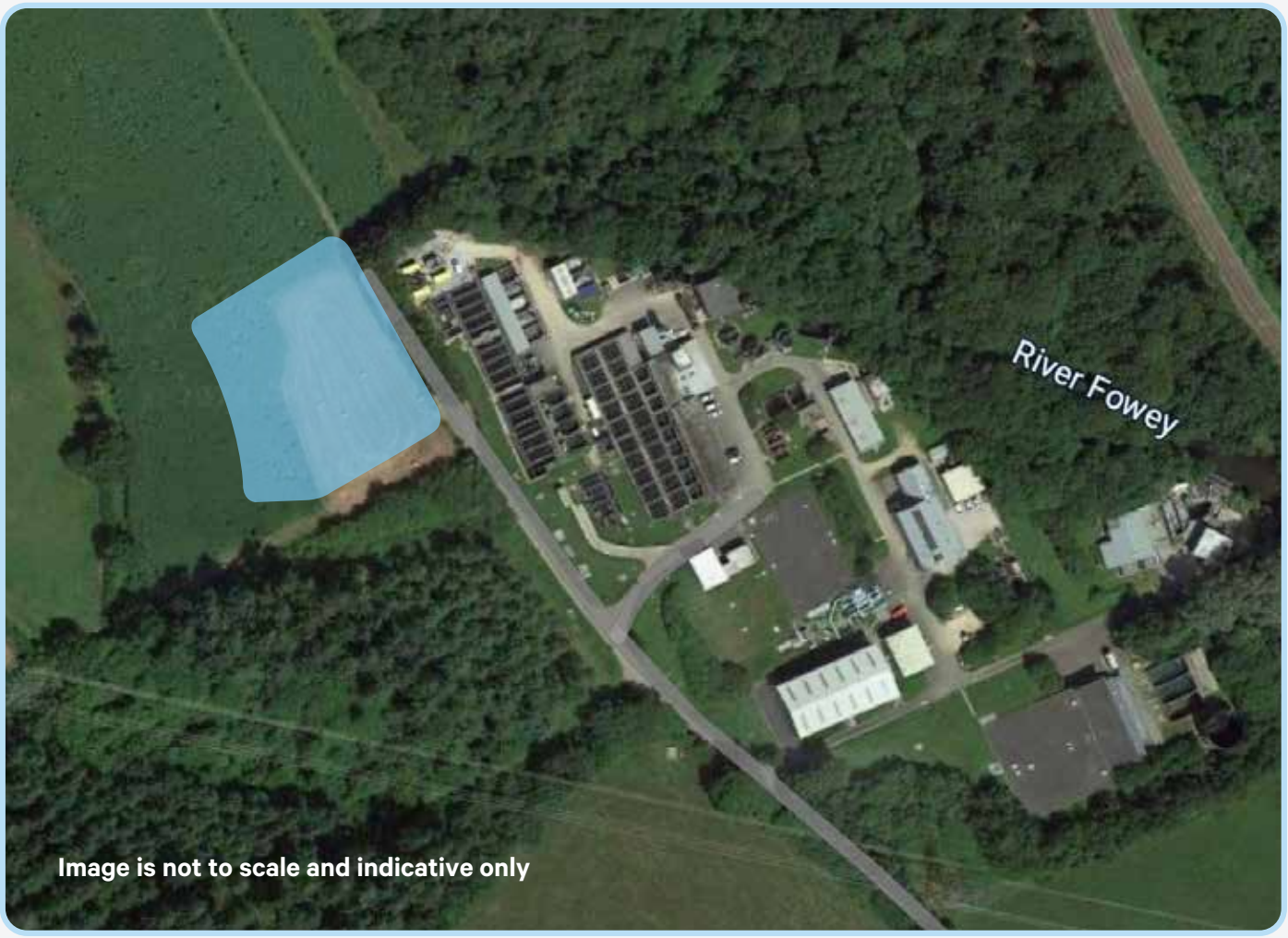
We will submit Construction Management Plans alongside our planning applications.

Our proposals for the NBS

As part of our proposals, and in line with the Drinking Water Inspectorate's requirements, we will construct a new NBS which will provide an environmental buffer to condition the desalinated water prior to it arriving at Restormel for further treatment.

We will be submitting a planning application for a Treatment wetland which will be located approximately 850m south of Restormel. The wetland will allow for desalinated water to be mixed with water from the River Fowey to natrualise the water prior to transfer to Restormel.





Our proposals for Restormel

As part of our proposals, we will be transferring the desalinated water from the plant at Par docks to our Restormel Water Treatment works via an underground buried pipeline.

To view a map of the pipeline route please visit our website **www.southwestwater.co.uk/desalination**

As part of our proposals, we will be submitting a planning application to extend the operational area of Restormel Water Treatment works.

This will allow us to incorporate the new plant and infrastructure which is required to integrate flows of water from the NBS with the water from the River Fowey.

Next Steps

Thank you for taking the time to view our proposals today. We do hope that you have found the consultation event helpful.

Your feedback is important to us and will be considered carefully prior to the submission of planning applications.

We will continue to provide regular updates as the project progresses.

If you have any queries, please do not hestitate to contact us on:

Email: **info@SWWdesalination.co.uk**

Post: **FREEPOST - SWW DESALINATION**
(no stamp required)

South West Water