February 2024 | Bunuru Nestport Program Update

Taking a closer look at some of the science, thinking, and technical processes behind one of Western Australia's largest ever infrastructure projects.



Message from the MD

Why Kwinana is the best location for WA's new port facilities

Kwinana is part of Fremantle Ports' thriving Outer Harbour, which already hosts eight major wharfs and a variety of industries requiring marine infrastructure for import and export of commodities. Approximately 850 ships and carriers visit the Outer Harbour annually.

Kwinana makes great business sense as the location to grow WA's import and export industry. It's an established industrial area with the potential to consolidate industry and warehousing away from more populated residential areas such as Fremantle. Kwinana also presents the opportunity to provide purpose-built road and rail connections to and from the new port facilities that are not in the heart of the metropolitan area and will not be built out and constrained by housing. Currently, there is a single rail line into and out of Fremantle that goes through highly urbanised areas including the tourism district. Whilst this rail line is functional and still has some capacity, modelling indicates that before the mid-2030s, it will reach capacity resulting in all additional freight being trucked across Stirling Bridge and along Leach Highway.

Relocating container trade to Kwinana creates the opportunity for an overhaul of Perth's freight network, to introduce better efficiency, a greater share of containers on rail, support the safe movement of large trucks, and ensure the network is scalable over time.

Moving to Kwinana also catalyses the growth of the Western Trade Coast. This major industrial area contributes about \$18 billion annually to our economy and is already seeing increasing interest and activity in defence industries, ship building, critical mineral processing, and renewable hydrogen. The location of the new port facillities in Kwinana has long been a priority for local industries.

WESTPORT

In this edition of Navigate, we look at how Westport is considering the workforce and innovation opportunities created by relocating container trade to Kwinana, discuss Westport's Business Case, highlight ongoing community engagement activities, and focus on some of the science underway as part of the WAMSI-Westport Marine Science Program.

Patrick Seares

Managing Director, Westport

Readying WA for the construction, transition, and operation of Westport

In planning for future stages of Westport, we must ensure we have the right number of workers, with the right skills, available at the right time to support construction, transition, and operations of the new port facilities. In February, Westport released a tender document calling for assistance in developing a Workforce Strategy. The Workforce Strategy project will baseline the existing workforce and estimate future workforce numbers, participation rates, and skills gaps. This will also include an assessment of current and future major construction projects across Western Australia.

Westport will develop this strategy in consultation with key stakeholders and agencies, with the final strategy expected later this year.

Westport's research and innovation approach

We know there are many exciting innovations and new supply chain technologies currently under development across the globe. Recognising this, we have commenced a project to assess innovations, gaps, and opportunities to consider in the future design, construction, and operation of Westport.

Potential innovation opportunities include:

- Predictive analytics and digital platforms that help build resilient networks, streamline operations, and optimise efficiency (as opposed to historical analogue systems).
- New design features and operational models that improve the capacity, efficiency, reliability, and scalability of new infrastructure.
- Identifying and leveraging new materials such as recycled constituent materials for concrete.
- New processes and industries such as clean manufacturing, transforming energy generation, storing carbon, and facilitating resilient cities.
- Advancements in cargo and vessel handling technology, container storage or zero-emission freight transportation options.

 Data-sharing commercial and governance arrangements, including the development of new supply chain systems which ensure better integration of real-time operations, improved efficiency, and increased reliability.

We are aware that we are planning for port facilities that won't be operating until the late 2030s at the earliest, and we don't know what new technologies will have emerged by then. So, we are avoiding recommending any specific product or technology and instead ensuring our designs offer as much flexibility as possible by considering a broad range of potential opportunities.

Going forward, we will be engaging with stakeholders from across the port and supply chain to identify and test new innovations identified by Westport. Westport is only one part of a bigger picture, so we are working with port and supply chain operators to lead the adoption of new technologies.

Community events

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You can view the recordings from our webinars below:

- Westport Community Webinar 1 Westport Overview
- Westport Community Webinar 2 An overview of the marine EIA process

Each webinar will include a presentation and time for audience Q&A. All webinars will be recorded and uploaded to our YouTube channel.

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To learn more about webinars and other upcoming events please visit us at: https://westport.wa.gov.au/engagement/community/

Market briefing

Westport is receiving considerable interest from companies who want to know more about working with Westport. We will be holding a market briefing in the first half of 2024. This briefing will provide an update on Westport, noting that the delivery for the project has not yet been approved. In mid-2024, Westport's Business Case will be submitted to the WA Government for consideration.

To ensure you are on the invite list, please email enquiries@westport. wa.gov.au and request to be added to the Market Briefing Register.



Westport's market briefing in 2021

Westport's Business Case

Westport's Business Case is on track for completion in mid-2024. It will be submitted to the State Government for consideration, who will also refer it to Infrastructure WA (IWA) and Infrastructure Australia (IA) for their independent advice.



Westport's Business Case will outline recommended design, timing, the commercial framework, and a high-level cost estimate, and will include the analytical process and evidence-based approach that informed these recommendations.

IA will evaluate Westport's submission against the following criteria:

- 1 Strategic Fit is there a clear rationale for the proposal?
- 2 Societal Impact what is the value of the proposal to society and the economy?
- Deliverability can the proposal be successfully delivered?

The Business Case will include all the information required for decision makers to provide any necessary approvals and determine the next steps of Westport's proposal.

Westport's Business Case will align with IA's framework to provide confidence in Westport's processes and final recommendations.

IA stage	Westport's alignment
Stage 1 Defining problems and opportunities	Westport Stage 1 (2017)
	Westport was established in 2017 to identify the location for Perth's future container terminal. As part of this WA's future container needs were reviewed.
Stage 2 Identifying and analysing options	Westport Stage 2 (2017 – 2020)
	In Stage 2, Westport explored 25 options for port locations and supply chain scenarios across Fremantle, Bunbury, and Kwinana. After extensive engagement and consideration of options, Kwinana was identified as the preferred location in August 2020.
Stage 3 Developing a business case	Westport Stage 3 (2020 – 2024)
	Building on the work from Stage 2, Westport has considered over 30 design options for a new container terminal in Kwinana and Perth's future freight network. This longlist was slowly refined to the preferred design announced in November 2023. This design will be further refined and costed for input into the Westport Business Case.

WAMSI-Westport Marine Science Program Highlights

WAMSI has published its February 2024 Research Highlights brochure. We've provided a snapshot of some of highlights from this brochure, including projects addressing recreational fishing and penguins.

To learn more about WAMSI or view the brochure in full, please visit: https://wamsi.org.au/research/programs/wamsi-westport-marine-science-program/

Once finalised, and following a thorough peer-review process, all WAMSI Westport Marine Science Program reports will be published on the WAMSI website: wamsi.org.au/research/programs/wamsi-westport-marine-science-program

To learn more about projects that comprise the WAMSI Westport Marine Science Program visit: https://westport.wa.gov.au/environment/wamsi-project-status/

Read the full Research Highlights brochure https://wamsi.org.au/wp-content/uploads/2024/02/ RESEARCH-HIGHLIGHTS-FEB-2024-WEB.pdf





Recreational fishers' surveys

Healthy snapper stocks and seagrass restoration were among the top priorities for recreational fishers surveyed as part of the WAMSI-Westport Marine Science Program.

The surveys provided an important opportunity to talk to fishers in Cockburn Sound and understand their views on the proposed contained port.

The research team spoke with fishers at boat ramps and on beaches within Cockburn Sound about a range of topics, including what attracted them to the area, their thoughts on Westport, and potential opportunities to enhance their recreational fishing experience.

Seagrass restoration was the most preferred way of enhancing fishing experiences, followed by new artificial reefs and re-stocking programs.

"It shows fishers really care about the marine environment beyond what they can catch, and they have an appreciation of the habitat of these fish." Dr Navarro, the project's lead, said. "Cockburn Sound is close to a lot of people so it's convenient, but it's also sheltered so it provides people with a safe place to go fishing."

The fishers were surveyed about whether they were concerned about an impact on their fishing experience from a container port.

"There was a large amount of uncertainty in the fishing community about the container port and a wide range of views about its potential impacts on fishing experiences.

"We asked the surveyed fishers their reasons for concern and almost half (46 percent) said it was because of impacts on their catch, with most fishers mentioning impacts on snapper specifically. They were also concerned about impacts on seagrass and its flow-on effects," Dr Navarro said.

Social values projects under Theme 6 of the WAMSI-Westport Marine Science Program are ongoing and will be published on the WAMSI website once finalised.

Volunteer beach walkers help with penguin surveys

The WAMSI-Westport Marine Science Program is undertaking research to improve our understanding of the diet, causes of mortality, foraging habitat and home range of little penguins using Cockburn Sound.

The project has engaged volunteer beach walkers to survey Cockburn Sound for deceased or injured little penguins. These volunteers have completed more than 700 beach surveys since the initiative started.

Project lead Dr Belinda Cannell, from the University of Western Australia's School of Biological Sciences, said the eastern foreshore was divided into one kilometre stretches which each volunteer committed to walking along once a week.

Any deceased penguins found were taken to the Department of Primary Industries and Regional Development for necropsy.

Dr Cannell said although no dead penguins had been found by volunteers during the surveys, several penguins had been discovered by other people showing injuries consistent with being hit by boats.

An injured penguin was found deceased in the water in Cockburn Sound, and an injured live penguin was found on a beach in Madora, further south. "These particular penguins were not found as part of the surveys but highlight the very real threat of boat injuries to little penguins." Dr Cannell explained.

The Little Penguin project is ongoing, and the first report is now available to view on the WAMSI website here: wamsi.org.au/project/apexpredators-and-iconic-species



Photo credit: WAMSI

How we are applying the WAMSI science to Westport

The science delivered through the WAMSI-Westport Marine Science Program, including the projects detailed above, are playing a vital role in informing key aspects of the Westport Program. We are using project findings to:

- Inform the design, planning, and construction of port infrastructure in a way that avoids and minimises impact on the environment to the greatest extent possible.
- Help develop a targeted environmental program, including largescale seagrass restoration and establishing new seagrass meadows, in a way that has the greatest chance of success.
- Support a rigorous environmental impact assessment (EIA) process.

The community will be able to learn more about potential impacts and mitigation activities, and provide feedback, through the EIA process. For more information on Westport's EIA process, and to keep updated on the opportunities for public comment, visit: westport.wa.gov.au/ environment/environmental-impact-assessment