West Beach Sand Replenishment February–July 2025

What works are taking place?

Additional sand is being delivered to West Beach via the access ramp just north of the Adelaide Sailing Club and distributed along the beach from the ramp to an area just north of the West Beach Surf Club (Rockingham Dunes). Sand delivery for this stage of works will be complete by end of June 2025.

Why are the works taking place?

Keeping our metropolitan beaches sandy and ensuring that there is a large enough sand buffer on the beach to protect infrastructure like homes, businesses and roads, requires ongoing management.

Wind and wave action naturally moves sand northward along Adelaide's coastline in a process called longshore drift. This is a common occurrence in beaches around the world. Infrastructure built in the past has created barriers to this natural movement, therefore having an impact on where sand is building up - or not building up - on respective sections of the beach. At West Beach, sand moves away from the active beach zone at approximately 90,000 cubic metres (m^3) per year on average, depending on seasonal conditions.

A commitment has been made to restore West Beach with 550,000m^3 of sand from outside of the system to restore West Beach by 2030 using sand from outside the metropolitan Adelaide beach system. The quarry sand delivery is part of the ongoing management to maintain West Beach.

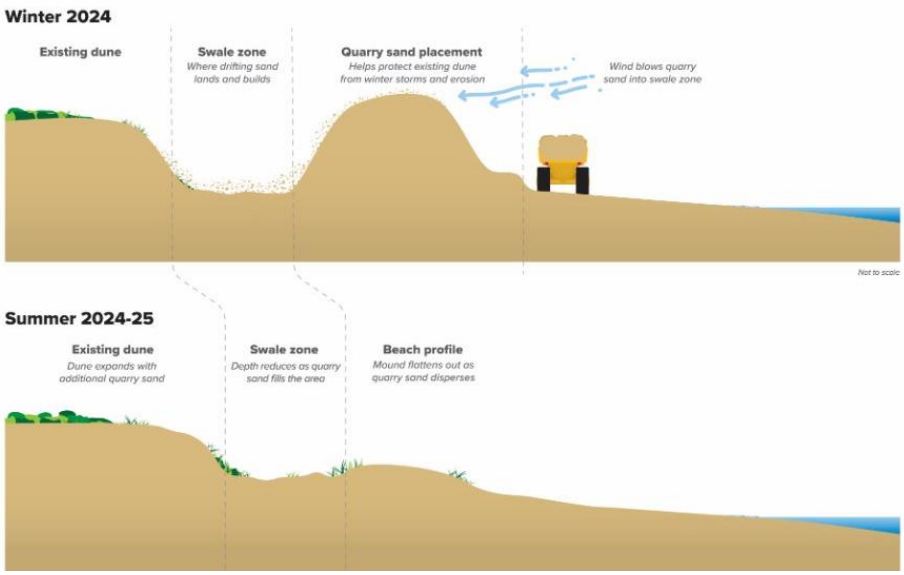
Delivery of quarry sand is occurring in two stages:

- Stage 1: 100,000m^3 at West Beach commenced end July completed mid-December 2024 (complete)
- Stage 2: 100,000m^3 at West Beach commenced early February to be completed end of June 2025 (underway)

How is sand being placed?

The aim is to evenly distribute the sand on the beach from Adelaide Sailing Club to West Beach Surf Life Saving Club. Sand is placed as close to the existing dune as possible, and the tide and winds help naturally shape the beach. If erosion hot spots emerge then those areas are targeted with additional sand deliveries.

Cross section of West Beach dune system



Where are the works taking place?

Sand will be placed on the beach between the Adelaide Sailing Club and the West Beach Surf Life Saving Club, and if needed, at the Rockingham dunes just north of the West Beach Surf Life Saving Club. Trucks will access the beach via the Adelaide Sailing Club ramp.

A temporary project site hut has been set up adjacent the ramp. Trucks and machinery will occupy parking areas at Adelaide Sailing Club during works and will remain parked in designated areas on weekends. Heavy machinery will also remain on the beach at the end of the boat ramp overnight, on weekends and public holidays.

When are the works taking place?

The current stage of quarry sand delivery began on 24 February and is due for completion by end of June 2025, subject to weather and operational requirements. Delivery will occur between 7am and 5pm, Monday to Friday, and will not take place on weekends, public holidays or during school holidays.

Site pack down, such as removal of machinery at the site, is aiming to be completed by 4 July 2025. Minor repair works to the beach access ramp and concrete pad will be undertaken following completion of sand delivery. These repair works are expected to be completed by 11 July 2025.

What is the active beach zone?

The "active beach zone," also known as the active coastal profile or littoral active zone, is the part of the beach where sand is constantly being moved and redistributed by waves, tides, and wind. Watch the video about coastal monitoring on our website: https://www.environment.sa.gov.au/topics/coasts/protecting-coastal-environment/monitoring-beaches-coast

Why is seagrass wrack being placed on the beach?

As part of the West Beach restoration project, seagrass wrack is being moved by truck from Glenelg and placed on the beach at West Beach. While it may look different from clean sand at first, wrack plays an important role in strengthening the beach. It traps wind-blown sand and kick-starts plant growth, both of which help create stronger, more resilient dunes that can better withstand storms.

Image of seagrass wrack at West Beach 2025

What impact will the works have on community?

While the works are underway, heavy machinery and approximately 80 trucks per day will frequent local roads, the Adelaide Sailing Club carpark, and the beach between the Adelaide Sailing Club and the West Beach Surf Life Saving Club, on weekdays between 7am and 5pm.

Residents and beachgoers should take care during works and follow safety signage. Trucks must give way to any other traffic on the beach, including pedestrians and animals. Traffic spotters will be in attendance to support public safety at the coastal path cross over.

DEW meets regularly with the Adelaide Sailing Club and the West Beach Surf Life Saving Club to manage operational matters and any overlaps with beach events and activities.

We acknowledge the impact the truck deliveries are having on local communities, clubs and businesses at West Beach and thank them for their patience and understanding while the works take place.

Who is driving the trucks and what speed should they be going?

Sand movement works on Adelaide's beaches are undertaken by a contractor on behalf of DEW. Safety is of paramount importance when undertaking works along our beaches. As such, the contract includes stringent conditions regarding the speeds that the equipment (trucks and other machinery) can operate at when moving along the beach. Speed of vehicles on the beach shall not be greater than:

- 40 km/h unless within 50 metres of any person or animals
- 25 km/h between 10 metres and 50 metres of any person or animals
- Must stop within 10 metres of any person or animal

These truck speed limits are compliant with the recent changes to the *Road Traffic Act 1961*. The department also has a supervisor monitoring compliance with these conditions. Like cars and other vehicles, trucks may also be equipped with dash cams and GPS monitoring.

What measures are in place to protect the environment?

DEW works closely with Birdlife Australia prior to and during beach replenishment operations to minimise any potential impacts on Red-capped and Hooded plovers during breeding season. DEW is updated regularly by Birdlife Australia with regards to shorebird activity along the metropolitan coastline. If required, DEW contracts the services of a trained Birdlife spotter who remains present on the beach during operations.

The sand from quarries needs to have certain characteristics to be suitable for beach replenishment. The sand also needs to have a low percentage (less than 0.5%) of silt and clay particles to avoid adding fine material to the marine environment after the sand is placed on the beach.

Regular testing is undertaken of the quarry sand being placed and sand composition must meet strict Environmental Protection Authority (EPA) guidelines. A successful trial was conducted at West Beach which demonstrated that commercial quarries are a viable source of high-quality external sand with low environmental risks.

What happens after these works are complete?

The long-term approach for restoration and recycling has not been finalised and once a decision has been made by Government this will be communicated to impacted communities.

Information on other sand works

Henley Beach:
https://cdn.environment.sa.gov.au/environment/docs/Factsheeet_Henley-Beach-South-replenishment-May-2025.pdf

Glenelg to Kingston Park:
https://www.environment.sa.gov.au/topics/coasts/managing-adelaides-beaches/sand-pumping

More information

Information about Adelaide beach management is available on the Department's website:

https://www.environment.sa.gov.au/topics/coasts

Videos showing how West Beach is being restored:

https://www.environment.sa.gov.au/topics/coasts/managing-adelaides-beaches/faqs/delivering-external-sand-to-west-beach

Sign up to Our Coastal News:

https://www.environment.sa.gov.au/topics/coasts/contact-us

If you require further information, please contact Dave Primer, Community Engagement Advisor – Coasts via email David.Primer@sa.gov.au or phone 0448 169 428