

# *Healthy Coorong, Healthy Basin*

Coorong Infrastructure Investigations  
Draft Feasibility Assessment Report Consultation | February 2022

## **Coorong Infrastructure Investigations Project: Infrastructure Options Considered**

**Phil Staniford**

KBR, Manager - Water, Environment and Industrial SA & WA



Australian Government



Government of  
South Australia



# Coorong Infrastructure Investigations Project Infrastructure Concepts Considered

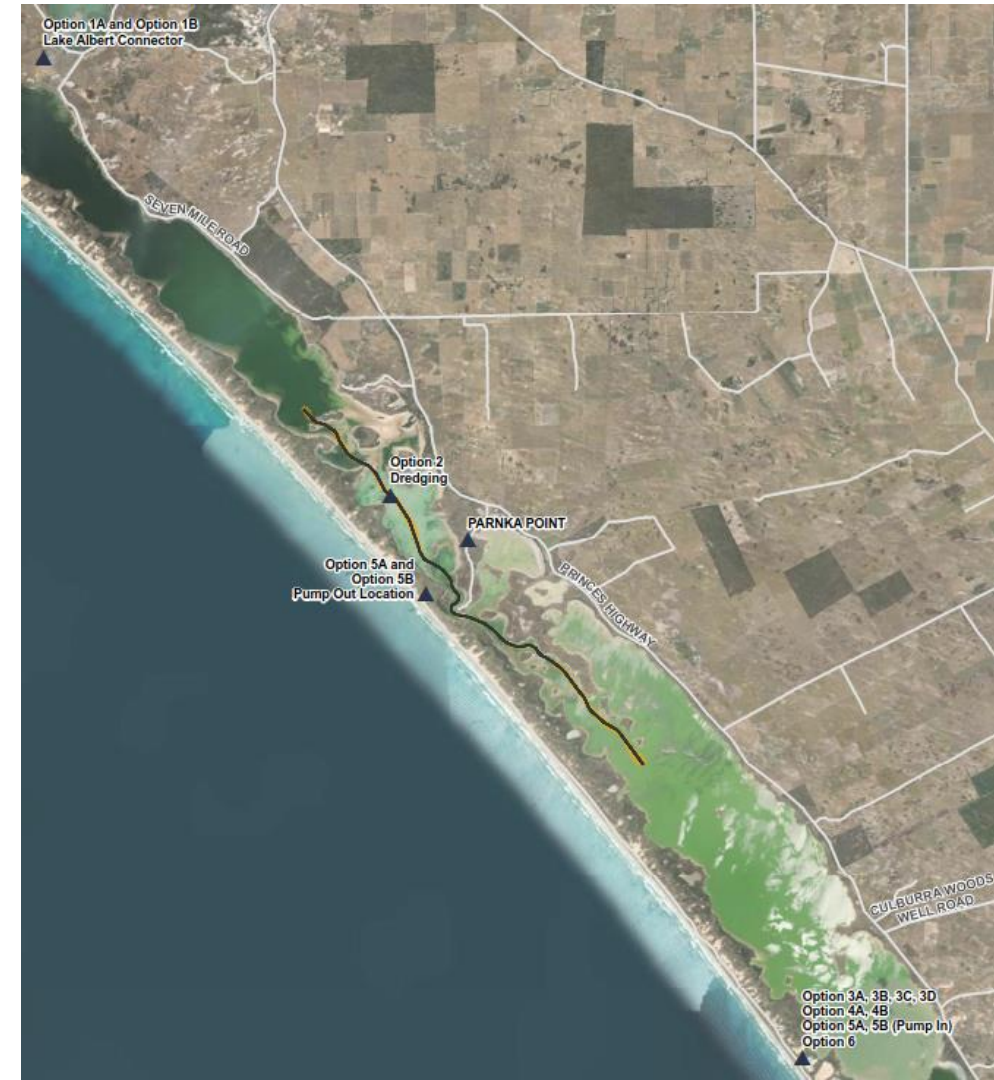
Feasibility Assessment Report Consultation –  
3 & 4 February 2021

Proud history, bright future.



# Concept Design Sites

- Four separate sites
  - Lake Albert Connector sites
  - Coorong lagoon dredging site
  - Coorong to Southern Ocean Connector (north)
  - Coorong to Southern Ocean Connector (south)
- Alignment selection has considered:
  - Cultural heritage surveys (preliminary)
  - Access considerations
  - Power supply considerations
  - Width of Younghusband Peninsula
  - Avoidance of significant islands and bird breeding habitat



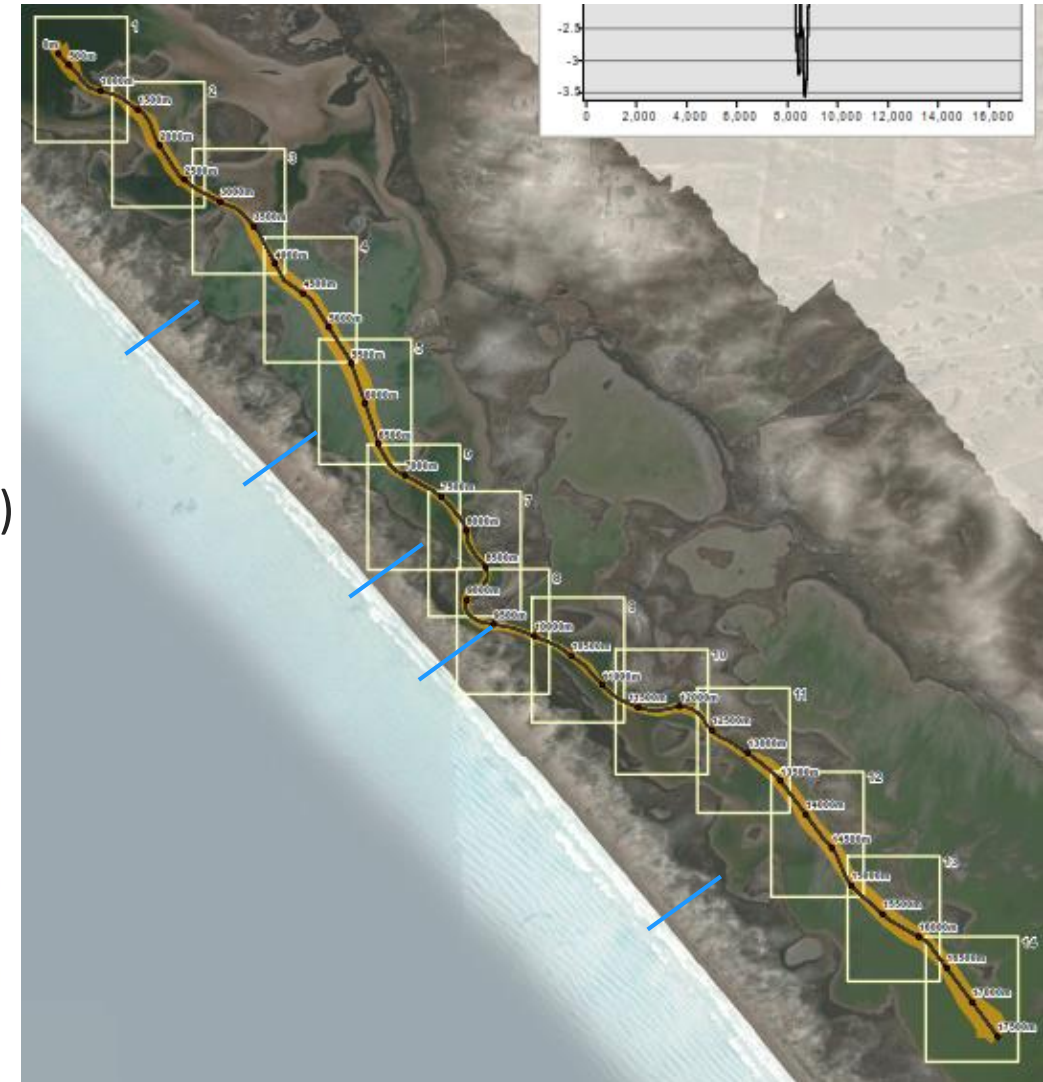
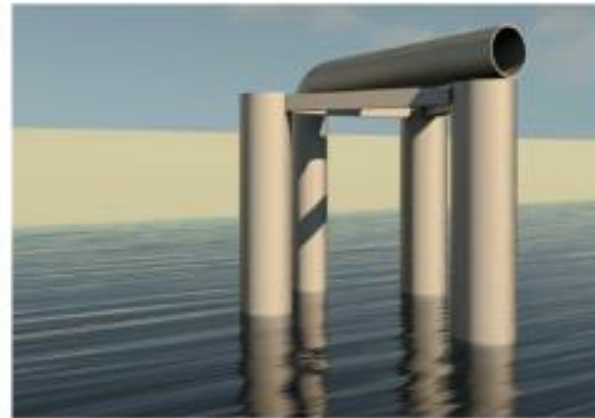
# Concept Designs – Option 1A & Option 1B

- Option 1A (open channel connection)
  - 13.3 m base width
  - Trapezoidal channel
  - Target flow rate of 1,000 ML/d
  - Regulator and fishway at Narrung Road crossing
  - Dredging required into both Coorong North Lagoon & Lake Albert
- Option 1B (piped connection)
  - Seven DN2100 buried concrete pipes
  - Target flow rate of 1,000 ML/d
  - Regulator at Narrung Road crossing
  - Dredging required into both Coorong North Lagoon & Lake Albert
- Both options are also considered with the inclusion of dredging



# Concept Designs – Option 2

- Approximately 17.5 km long
- Target invert depth of -1.2 mAHD to -1.4 mAHD
- Varying width (up to 300 m)
- 2.25M m<sup>3</sup> total dredge volume
- Disposal of dredged material to nearshore zone
- Potentially five disposal locations (three months per location)
- Temporary HDPE pipe through dunes (shown in blue)

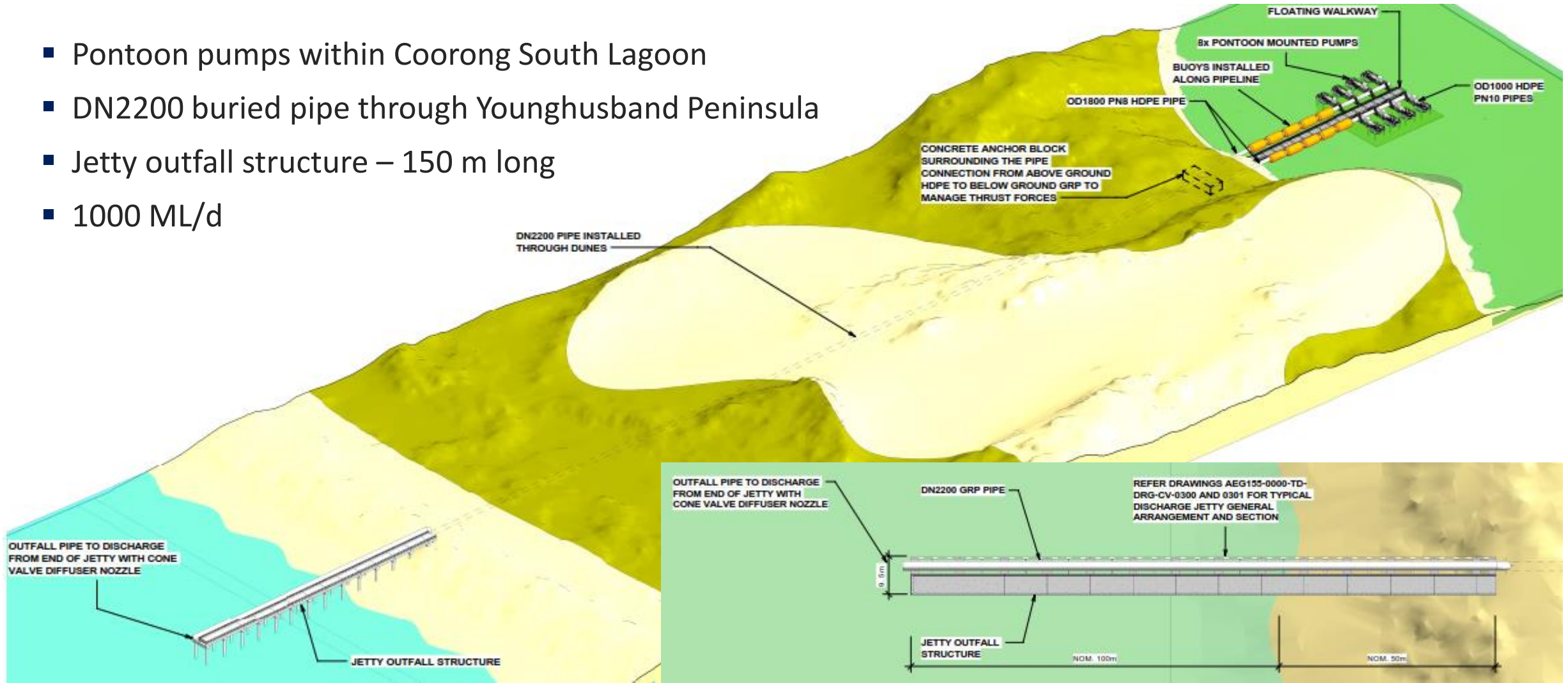


# Coorong South Lagoon to Southern Ocean Locations



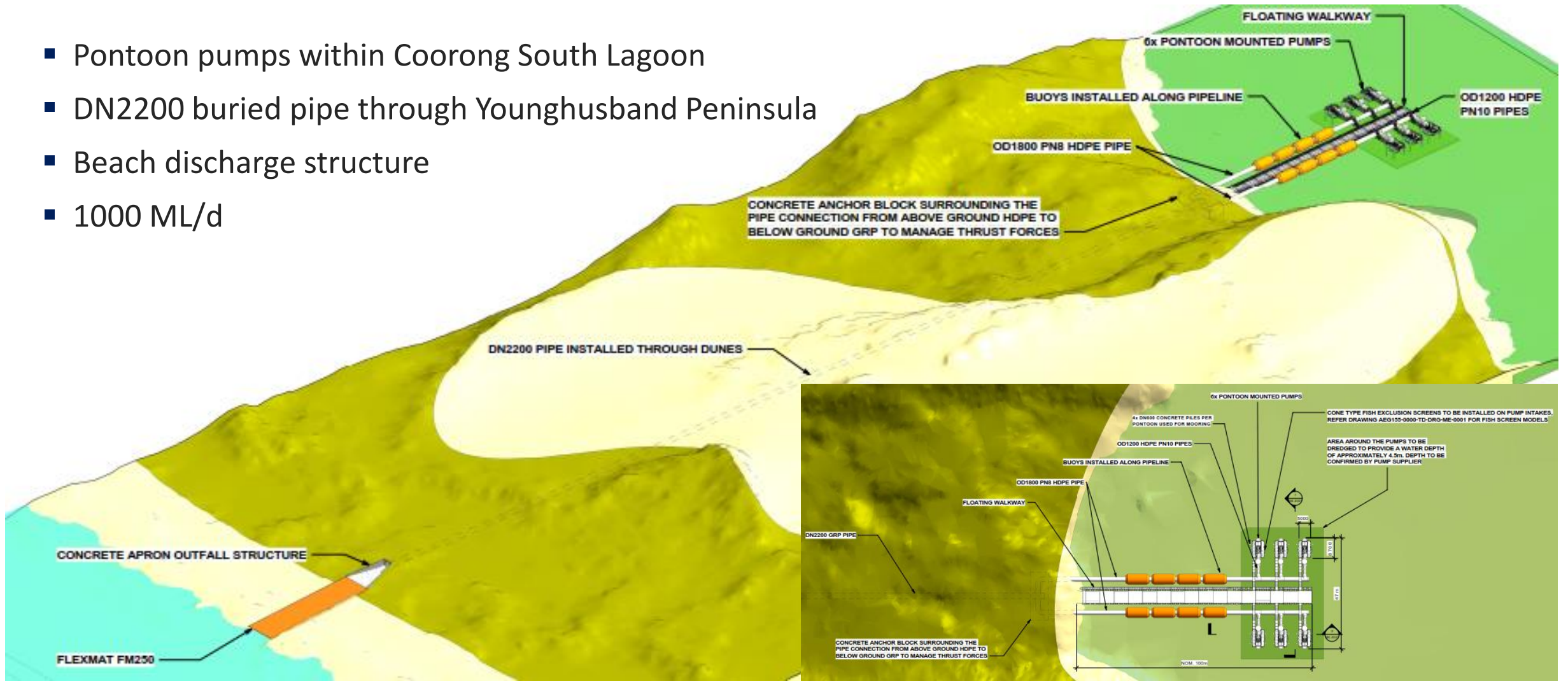
# Concept Designs – Option 3A

- Pontoon pumps within Coorong South Lagoon
- DN2200 buried pipe through Younghusband Peninsula
- Jetty outfall structure – 150 m long
- 1000 ML/d



# Concept Designs – Option 3B

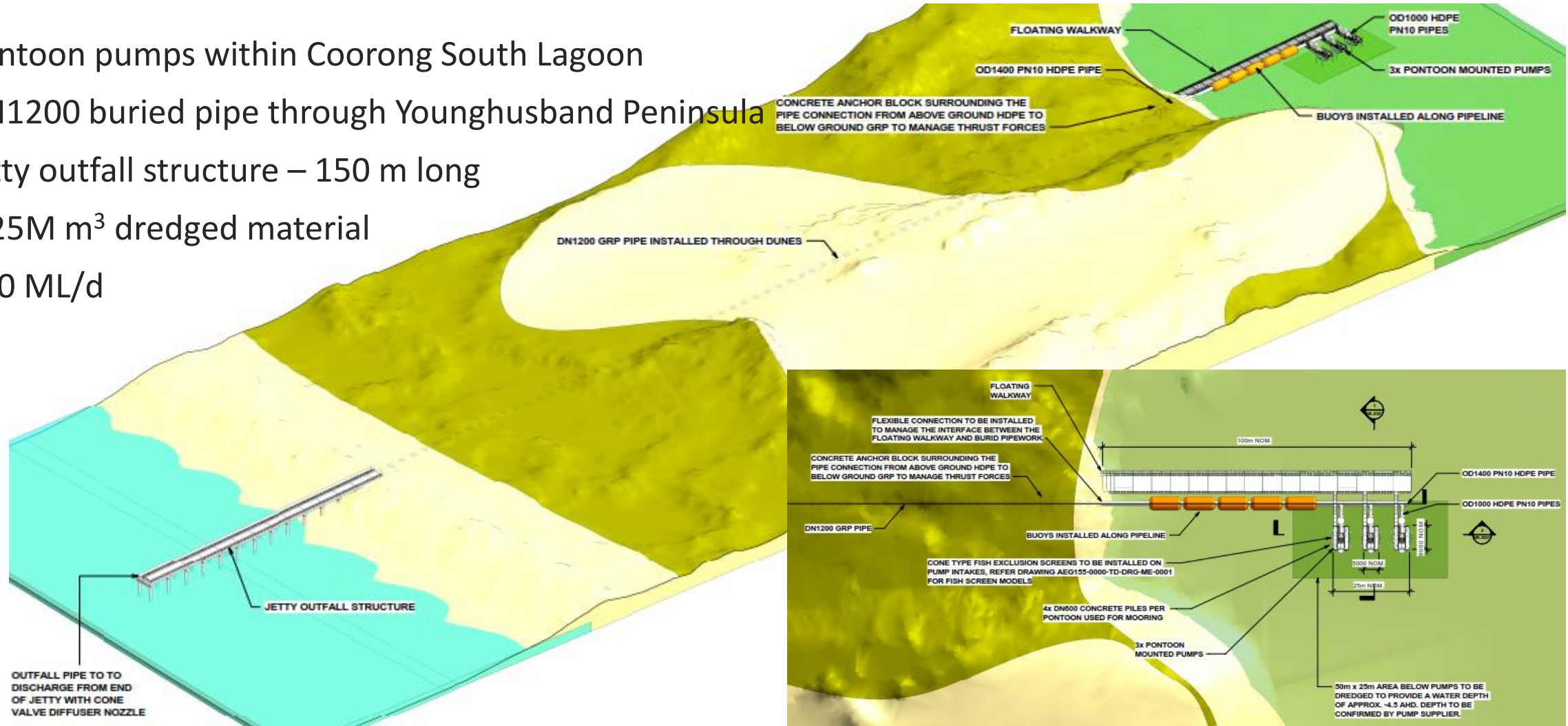
- Pontoon pumps within Coorong South Lagoon
- DN2200 buried pipe through Youngusband Peninsula
- Beach discharge structure
- 1000 ML/d





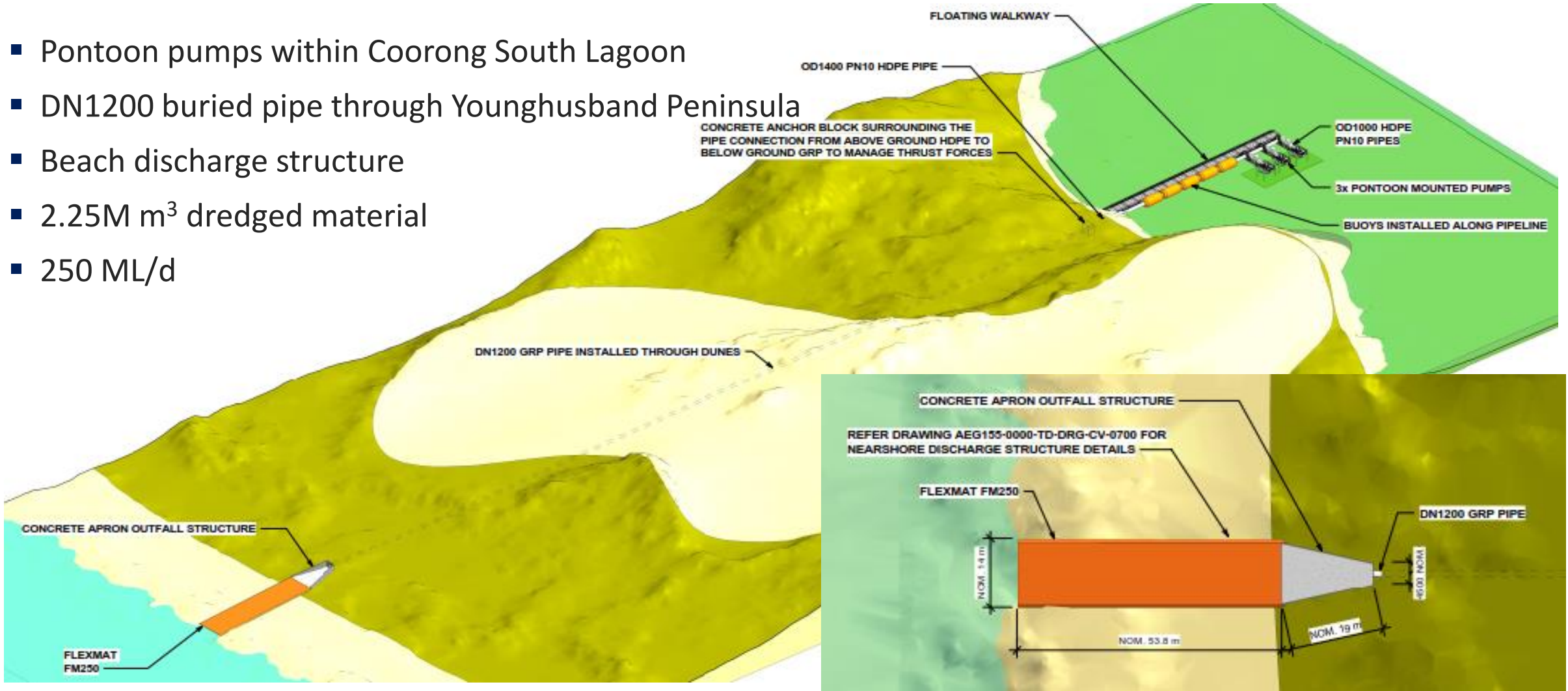
# Concept Designs – Option 3C + Option 2

- Pontoon pumps within Coorong South Lagoon
- DN1200 buried pipe through Youngusband Peninsula
- Jetty outfall structure – 150 m long
- 2.25M m<sup>3</sup> dredged material
- 250 ML/d



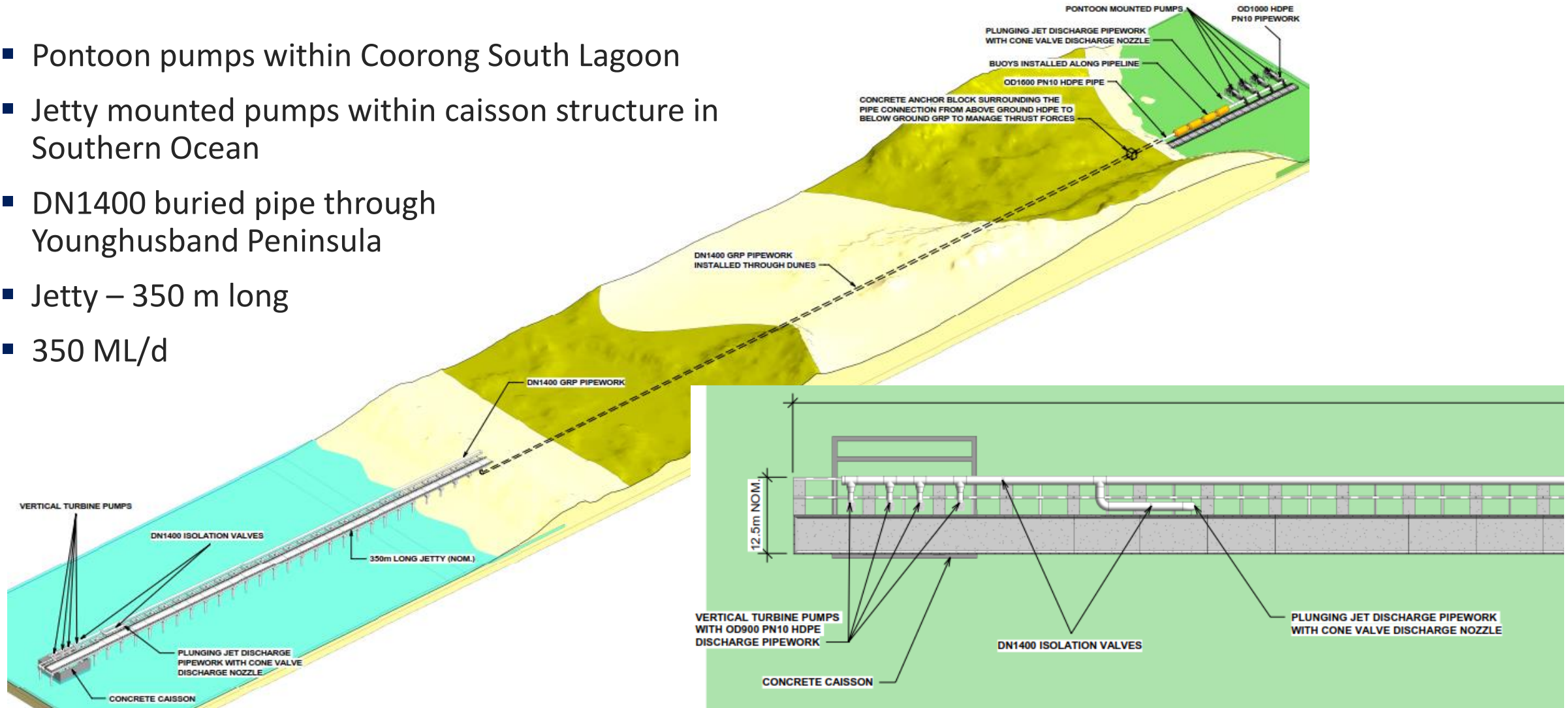
# Concept Designs – Option 3D + Option 2

- Pontoon pumps within Coorong South Lagoon
- DN1200 buried pipe through Younghusband Peninsula
- Beach discharge structure
- 2.25M m<sup>3</sup> dredged material
- 250 ML/d



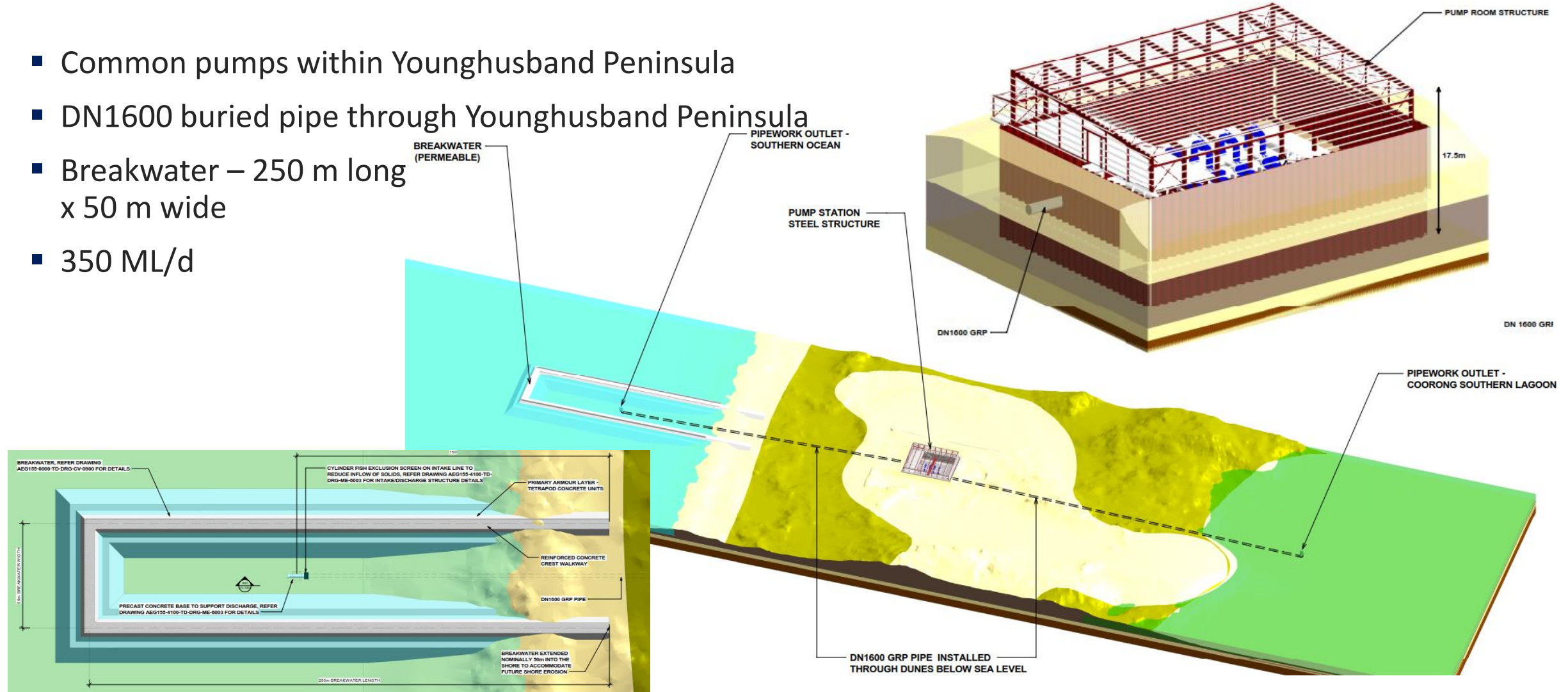
# Concept Designs – Option 4A

- Pontoon pumps within Coorong South Lagoon
- Jetty mounted pumps within caisson structure in Southern Ocean
- DN1400 buried pipe through Younghusband Peninsula
- Jetty – 350 m long
- 350 ML/d



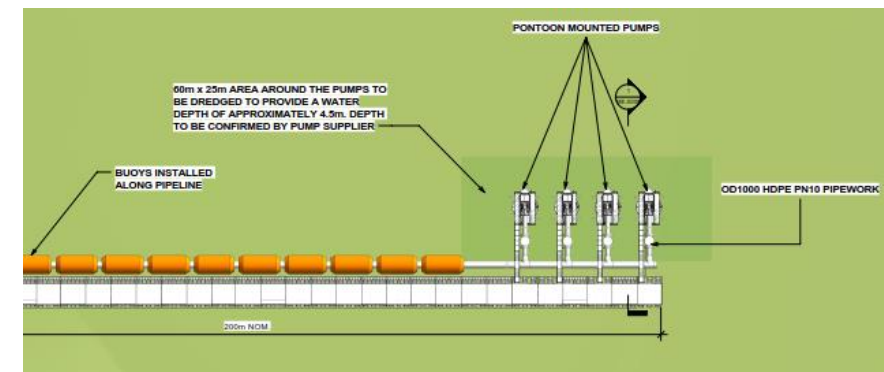
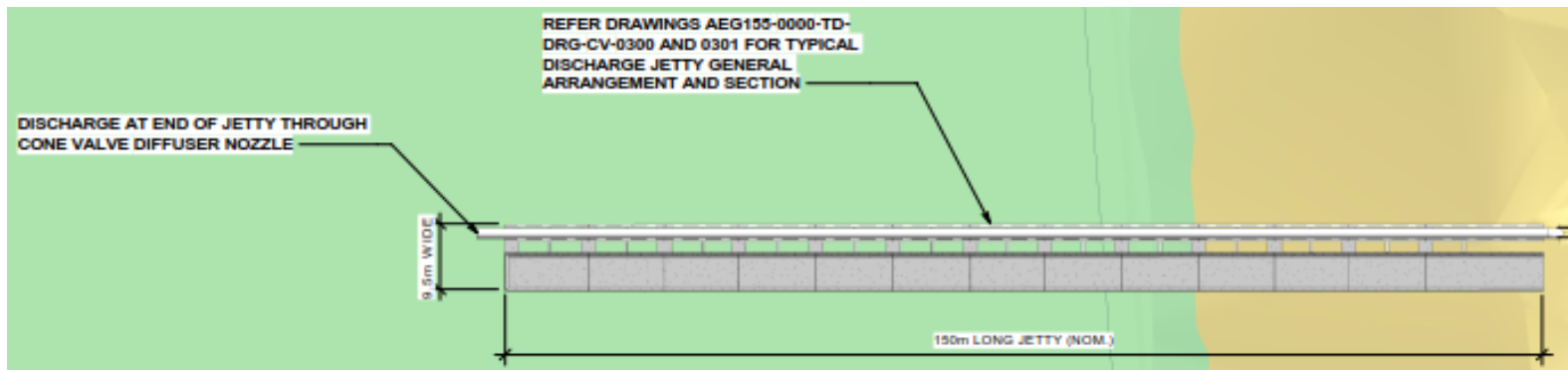
# Concept Designs – Option 4B

- Common pumps within Younghusband Peninsula
- DN1600 buried pipe through Younghusband Peninsula
- Breakwater – 250 m long x 50 m wide
- 350 ML/d



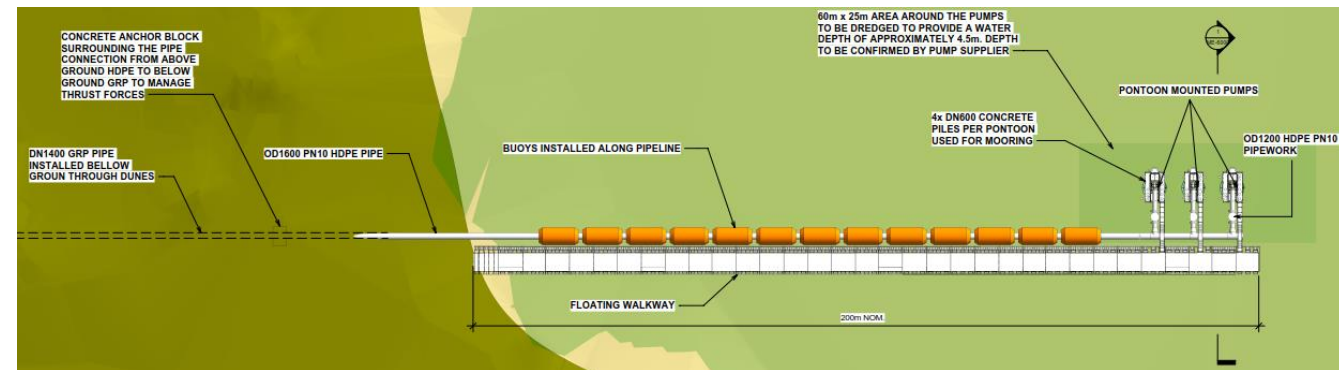
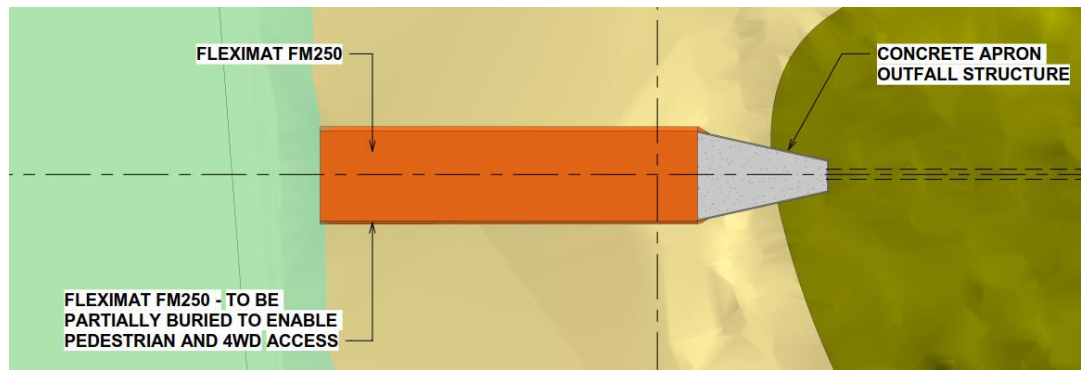
# Concept Designs – Option 5A

- Pontoon pumps within Coorong
- DN1400 buried pipe through Younghusband Peninsula x 2
- Jetty mounted pumps within caisson structure in Southern Ocean
- Jetty – 350 m long
- Jetty outfall structure – 150 m long
- 350 ML/d



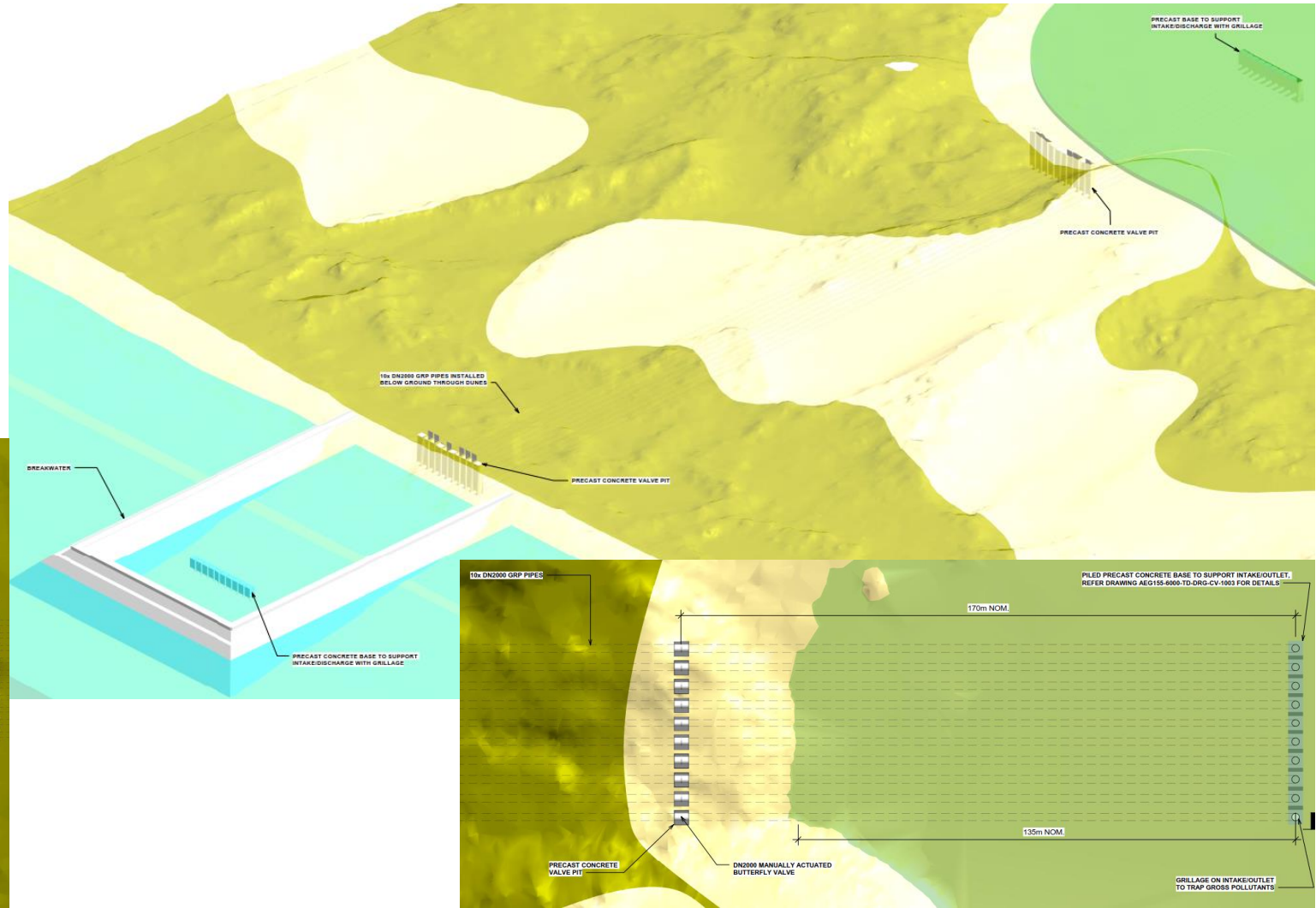
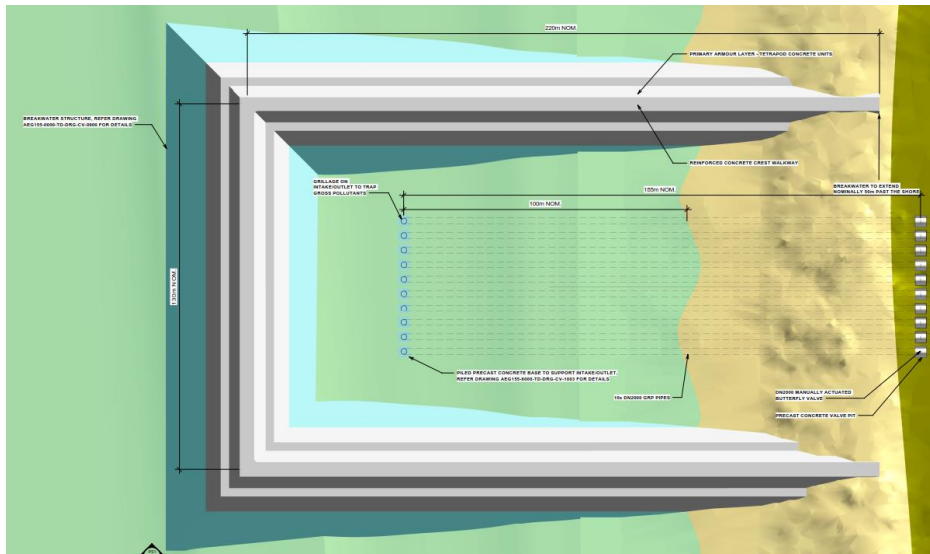
# Concept Designs – Option 5B

- Pontoon pumps within Coorong
- DN1400 buried pipe through Younghusband Peninsula x 2
- Jetty mounted pumps within caisson structure in Southern Ocean
- Jetty – 350 m long
- Beach discharge structure
- 350 ML/d



# Concept Designs – Option 6

- DN2000 buried pipes through Younghusband Peninsula x 10
- Breakwater – 220 m long x 130 m wide
- Varying gravity flow (no pumps)



The South Australian Government's  
***Healthy Coorong, Healthy Basin Program***  
is jointly funded by the Australian and  
South Australian governments.



Australian Government



Government of  
South Australia