Outer Harbour Port Development, Kwinana

Proposal Content Document

Table 1: General proposal content description

Proposal title	**Outer Harbour Port Development, Kwinana**
Proponent name	The Director General of the Department of Transport on behalf of the State of Western Australia
Short description	The Proposal is to construct and operate a new multimodal port in the Kwinana Industrial Area (KIA), approximately 30 km south of Perth (**Figure 1**). The Proposal includes: • A port facility. • Adjacent areas of landside development. • An offshore breakwater. • Dredging for a second main channel from the Indian Ocean to Cockburn Sound, which will be additional and parallel to the existing Success Channel. • Dredging for access channels, turning basins and berthing areas adjacent to the port facility. • Use of dredge material for beneficial re-use (primarily reclamation) and, where required, placement in approved marine placement areas. • Removal of the disused Kwinana Bulk Berth 1 (KBB1) Jetty. • Removal of the KBB2 Jetty, with replacement infrastructure to be constructed as a component of the port facility. • Connections to road and rail infrastructure up to the vicinity of Rockingham Road. • Relocation, removal or upgrade of existing infrastructure, structures and buildings. • Temporary construction infrastructure. • Maintenance of all infrastructure and assets, including maintenance dredging. The Proposal has a total development envelope (DE) of approximately 1683 hectares (ha), comprising two discrete areas; the port DE (841 ha) and the second main channel DE (842 ha). The terrestrial elements of the Proposal are located within an area of existing heavy industrial land uses within the KIA, serviced by existing road and rail infrastructure. The marine elements of the Proposal are primarily located within Cockburn Sound adjacent to the KIA, whilst the second main channel extends from the northern boundary of Cockburn Sound to the Indian Ocean.

Table 2A: Proposal content – physical elements

Proposal element	Location / description	Maximum extent, capacity or range
Physical elements		
Port facility	Reclamation area adjacent to KIA, refer **Figure 2**.	Indicative footprint of up to 276 ha. Area to be reclaimed using material from the Proposal's capital dredging program.
Offshore breakwater	Adjacent to port facility, refer **Figure 2**.	Indicative footprint of up to 22 ha, length up to 2.6 km and width up to 115 m.
Landside development	Within KIA, refer **Figure 2**.	Indicative footprint of up to 89 ha.
Access channels, turning basins and berthing areas, including navigational aids	Adjacent to port facility, refer **Figure 2**.	Indicative footprint of up to 235 ha, with a variable depth up to a maximum of -17.4 m chart datum.
Second main channel, including navigational aids	From Indian Ocean to Cockburn Sound, refer **Figure 3**.	Indicative footprint of up to 626 ha, length up to 21 km. The minimum channel width is 250 m along its entire length (including batters). Some channel sections are wider to accommodate navigational requirements, up to a maximum width of 470 m (including batters). The minimum channel depth is -17.9 m chart datum. Some channel sections are deeper to accommodate navigational requirements, up to a maximum depth of -19.5 m chart datum.

Table 2B: Proposal content – construction elements

Proposal element	Location / description	Maximum extent, capacity or range
Construction elements		
Capital dredging	Within indicative footprints. Dredge material placement at port facility and approved marine placement area/s.	Up to 35 million cubic metres (M m^3) of material to be dredged (including vertical and horizontal over-dredging allowances). Beneficial re-use of dredge material primarily through placement within the port facility reclamation area and, where required, placement within approved marine placement area/s.
Port facility reclamation works	Port facility	Indicative footprint of up to 276 ha.
Offshore breakwater reclamation works	Offshore breakwater	Indicative footprint of up to 22 ha.
Terrestrial bulk earthworks	Port facility (following reclamation) and landside development area	Indicative footprint of up to 365 ha.
Pile driving works	Port facility quay lines	Combination of sheet and tubular piles.
Relocation, removal or upgrade of existing infrastructure, structures and buildings	Where required within the port development envelope	-
Temporary construction infrastructure	Where required within the port development envelope	-

Table 2C: Proposal content – operational elements

Proposal element	Location / description	Maximum extent, capacity or range
Operational elements		
Maintenance dredging	Second main channel, access channels, turning basins and berthing areas. Beneficial re-use of dredge material or placement at approved marine placement area/s.	As required to support future port operations and maintain capital dredge depths.

Table 2D: Proposal content – GHG elements

Proposal element	
Proposal elements with greenhouse gas emissions	
Construction elements:	
Scope 1	Estimated annual GHG emissions, during construction: **18,832** tCO2-e/year Estimated total GHG emissions, during construction: **207,151** tCO2-e
Scope 2	Estimated annual GHG emissions, during construction: **0** tCO2-e/year Estimated total GHG emissions, during construction: **0** tCO2-e
Scope 3	Estimated annual GHG emissions, during construction: **105,454** tCO2-e/year Estimated total GHG emissions, during construction: **1,159,992** tCO2-e
Operation elements:	
Scope 1	Estimated annual GHG emissions, during operations: **1,092** tCO2-e/year Estimated total GHG emissions, over lifetime of operations: **58,111** tCO2-e
Scope 2	Estimated annual GHG emissions, during operations: **3,617** tCO2-e/year Estimated total GHG emissions, over lifetime of operations: **217,019** tCO2-e
Scope 3	Estimated annual GHG emissions, during operations: **10,501** tCO2-e/year Estimated total GHG emissions, over lifetime of operations: **524,211** tCO2-e

Table 2E: Proposal content – other elements

Proposal element		
Rehabilitation		
Where areas of the development envelope are impacted by temporary construction works only, opportunities for rehabilitation after construction activities have ceased will be considered.		
Commissioning		
Functional testing, performance and integration testing, documentation generation, operator training, and official handover.		
Decommissioning		
Given the long and ultimately uncertain operational timeframe (refer below), decommissioning elements of the Proposal are not able to be reasonably foreseen and considered.		
Other elements which affect extent of effects on the environment		
Proposal time	Maximum project life	The ultimate lifespan of the port is not defined and will be subject to future Government decision making. The port assets have a design lifespan of at least 50 years.
	Construction phase	The total capital works construction period will be approximately 15 years, inclusive of commissioning. Construction of different proposal elements will be implemented concurrently over variable timeframes, meaning some elements will be completed sooner than others.
	Operations phase	The port assets have a design lifespan of at least 50 years.
	Decommissioning phase	Not applicable, refer above.

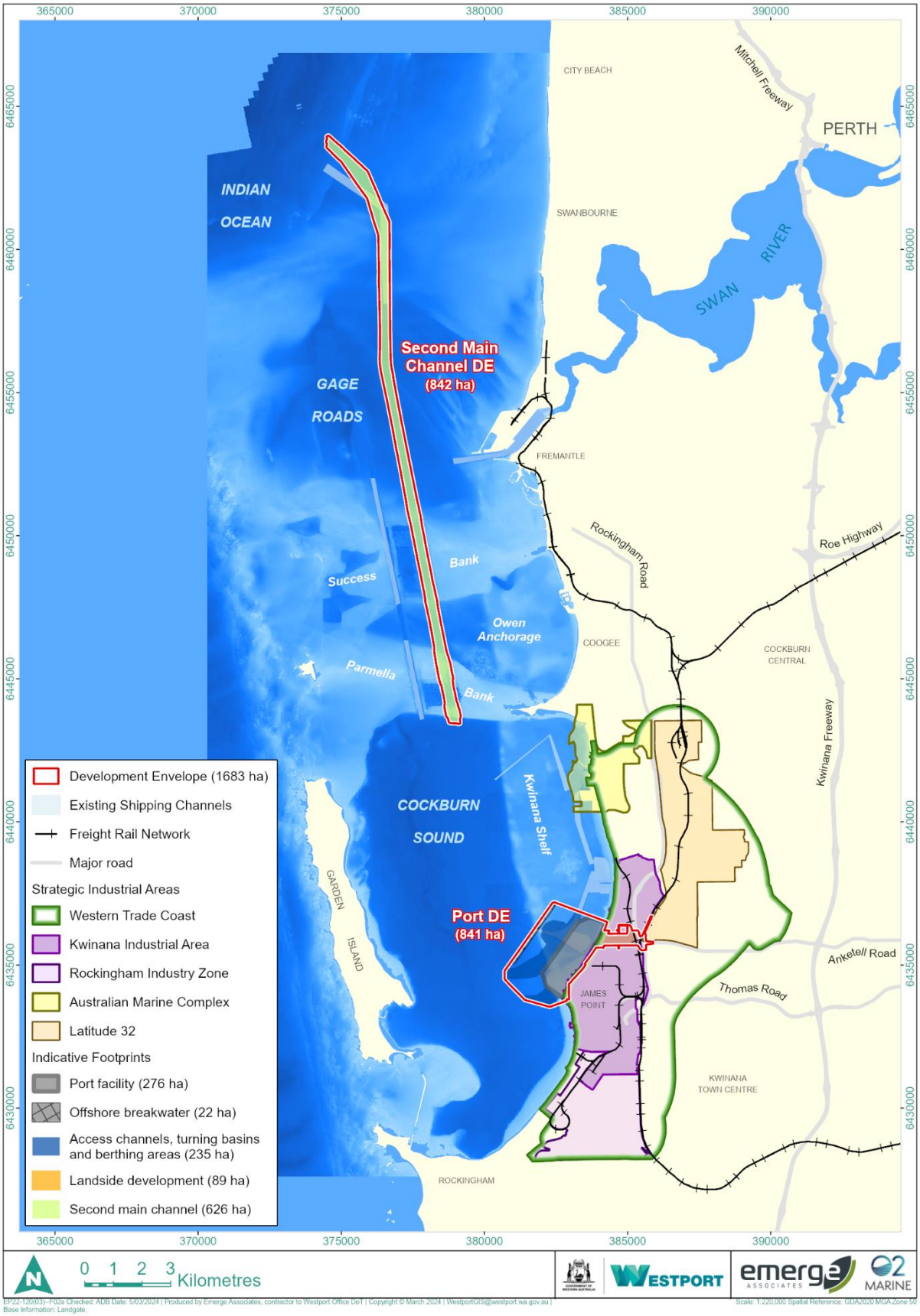

Figure 1: Proposal Location

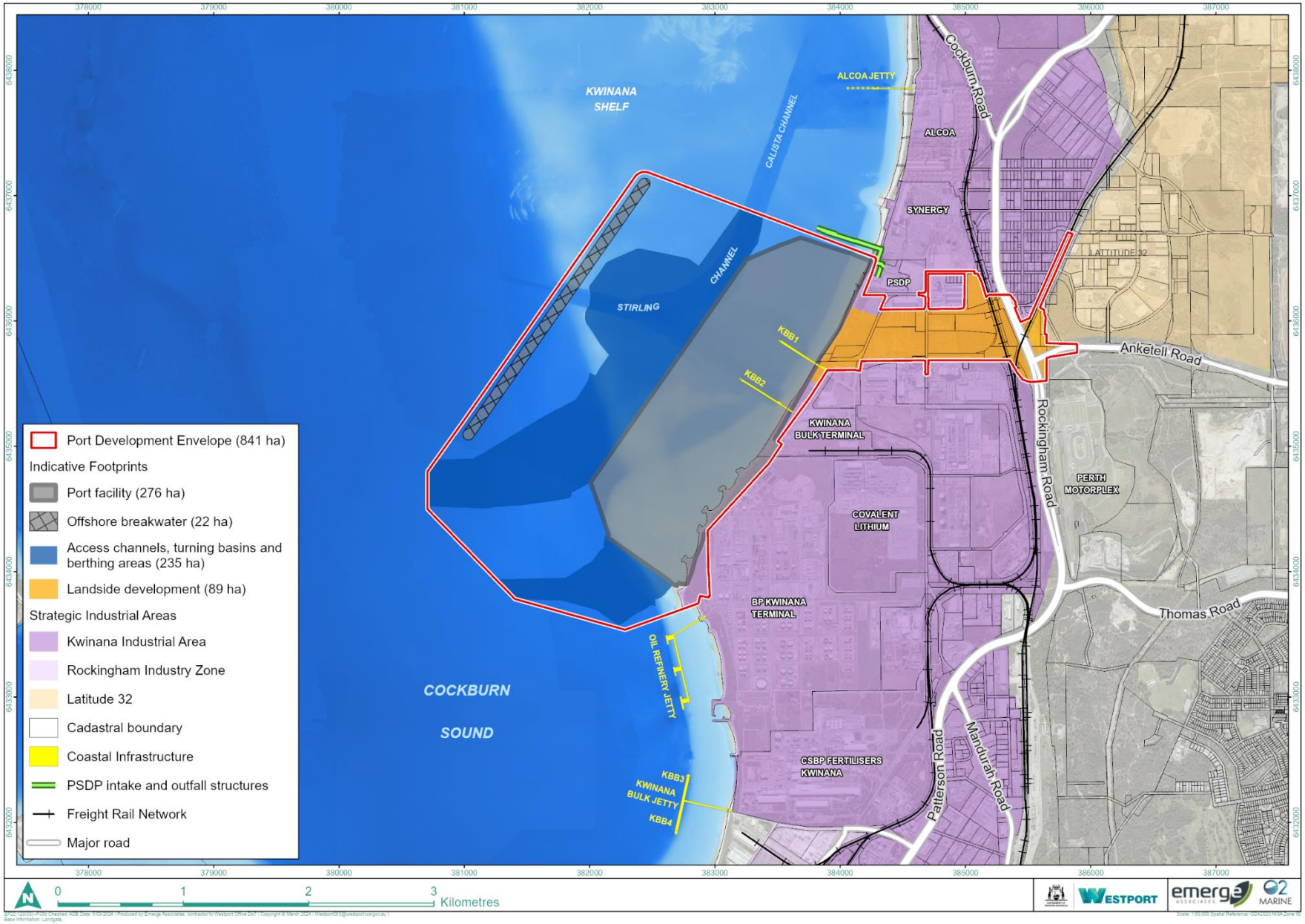

Figure 2: Port Development Envelope

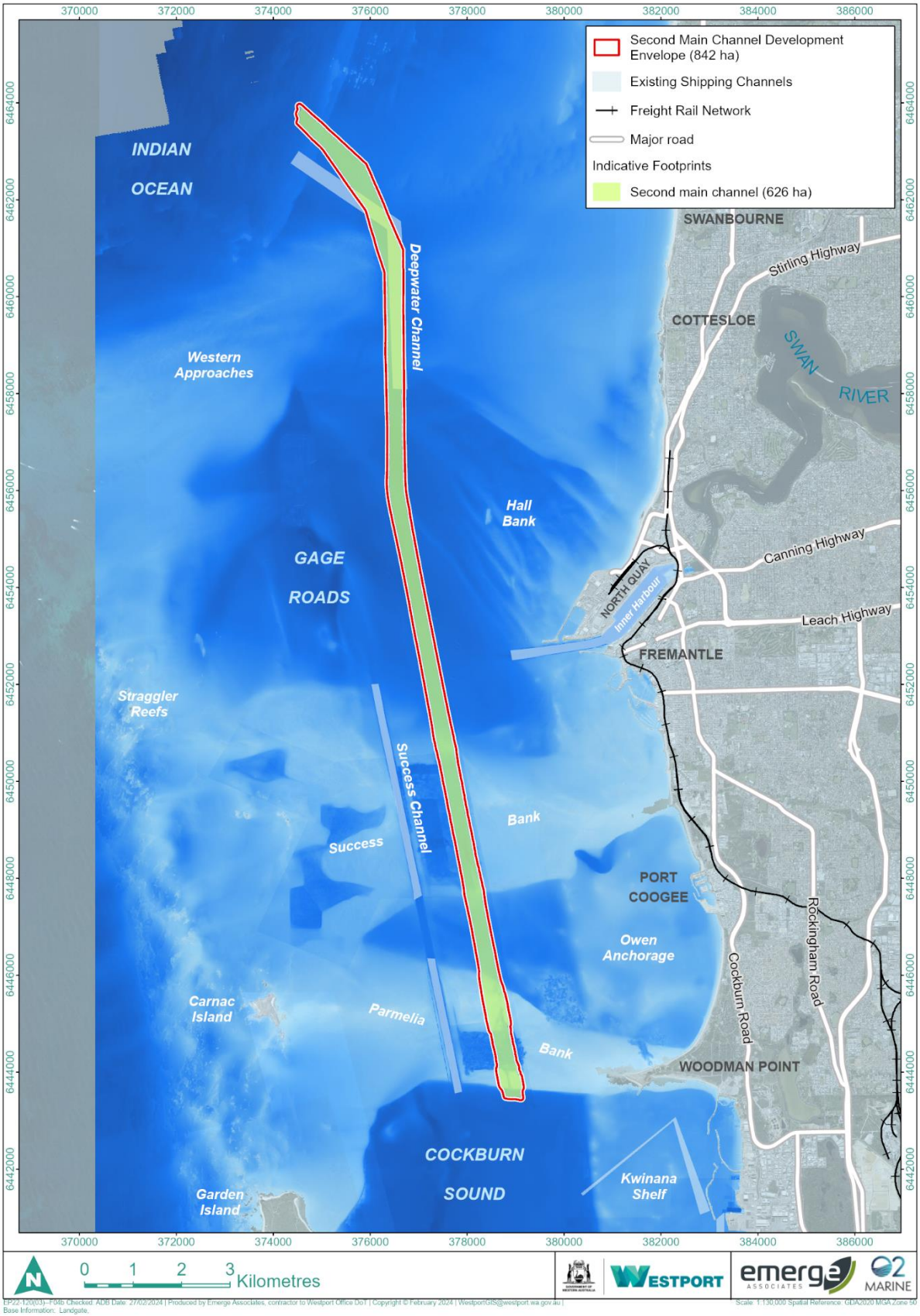

Figure 3: Second Main Channel Development Envelope