

Safe ammonia bunkering in Australian ports

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At a glance – 2023-24 Dampier

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172.6Mt 3,741 10 total throughput shipping channels safe vessel visits 174 173 **Throughput** by commodity % 168 167





162

Port of Dampier port boundary





Presentation title | 3

BLB







Bulk Liquids Berth (BLB) with existing fuel and anhydrous ammonia loading arm

Anchorages





- Map extent is the preferred location for ammonia bunkering
- Closest proximity to the Dampier Bulk Liquids Berth
- Outer locality of berths ensures bunker vessel can access ammonia fuelled vessels without navigating around other vessels waiting at anchorage
- Shelter from the coast makes the metocean conditions the most favourable at these anchorages, ensuring maximum operational viability of ammonia bunkering for customers

Ship to ship trial



Pre-trial safety assessment

- Hazard Identification (HAZID)
- Hazard and Operability (HAZOP)
- Review of transfer parameters (including flow rates, transfer conditions, vessel compatibility, operational plan, procedures, safety job analysis and crew competencies)
- Computational Fluid Dynamics (CFD) dispersion analysis (utilising weather and metocean data

Key findings from trial

- Emergency release couplings
- Emergency shutdown devices
- Safety equipment
- Hot-gas and nitrogen purging procedures