# Proposal content document

# CSBP Ammonia Expansion Project

**Table 1: General proposal content description**

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|---|---|
| Proposal title | Ammonia Expansion Project |
| Proponent name | CSBP Limited |
| Short description | The Proposal is for the construction and operation of a new ammonia plant within the CSBP Kwinana Industrial Complex in the Kwinana Industrial Area (KIA), approximately 40 km south of the Perth Central Business District (CBD) (Figure 1.1).<br><br>The Proposal will use natural gas sourced from the Dampier to Bunbury Natural Gas Pipeline (DBNGP), integrated with hydrogen production from a 10 megawatt (MW) electrolyser manufacture ammonia, which will then be used by CSBP for the manufacture of other chemical products or sold externally to customers.<br><br>The Proposal will be a self-sustained facility with a production capacity of approximately 300,000 tonnes per annum (tpa) and will be integrated with a number of existing CSBP facilities located in the KIA (Figure 2.2). |

Table 2: Proposal content elements

| Proposal element | Location/description | Maximum extent, capacity, or range |
|---|---|---|
| **Physical elements** | | |
| Overall extent of the Proposal | Figure 2.1 | Development Envelope of 27.52 ha, including less than 1 ha of clearing, within the 138 ha CSBP Kwinana Industrial Complex. |
| Ammonia plant | | 300,000 tonnes per annum nominal capacity |
| Utilities | | Including:<br>• 10MW electrolyser for hydrogen production<br>• Natural gas fuelled steam boiler;<br>• Water treatment plant for boiler water supply to ammonia plant;<br>• Electrolyser for green hydrogen production;<br>• Cooling water tower;<br>• Flare; and<br>• Other utilities. |
| Infrastructure and logistics buildings | | Including:<br>• Existing control room modification;<br>• Office and maintenance workshop relocation; and<br>• Ammonium nitrate storage dome shelter relocation. |
| **Construction elements** | | |
| Laydown area, carpark, and roads | Figure 2.1 | Approximately 7 ha of temporary facilities to support construction of the Proposal. |

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|---|---|---|
| ***Operational elements*** | | |
| Gas supply (natural gas) | N/A | Nominal 27 TJ per day via gas pipeline. |
| Power supply | | Internal generation of up to 11 MW from process waste heat. Connection to the South West Interconnected System (SWIS) for supply of up to 5.6 MW electricity and purchase of equivalent renewable energy certificates (REC) for the electrolyser. |
| Water supply | | Approximately 1,610 ML per annum. |
| Liquid effluent | | Liquid effluent will be collected and processed through existing nutrient stripping wetlands, or new water treatment plant, at CSBP Kwinana prior to being pumped offsite to the Sepia Depression Ocean Outlet Landline (SDOOL), Cockburn sounds diffuser or emergency beach outflow. Conditions on effluent concentrations will be in line with existing licence conditions, with load limits to increase in line with volume increases. |
| Solid waste | | Solid waste including water treatment residue and spent catalyst/resins directed to appropriate disposal site. Construction waste streams to be recycled by waste management contractors where available. Residual wastes to local landfill in accordance with landfill classification. |
| Energy efficiency | | Approximately 32 to 36 GJ per tonne ammonia. |
| Finished product transport | | Transport of liquid ammonia by pipeline to existing storage tanks and distribution header. |
| Emissions to air | | $NO_X$ emissions to air: Approximately 150,000 kg per annum |
| Noise | | < 30 dB(A) cumulative at nearest noise sensitive premises.<br>< 70 dB(A) at Proposal boundary. |
| **Greenhouse gas emissions** | | |
| ***Construction*** | | |
| Scope 1 | | Estimated 19,505 tonnes $CO_2$-e. |
| Scope 2 | | Any occurring will displace Scope 1 emissions described above. |
| Scope 3 | | Not determined. |
| ***Operation*** | | |
| Scope 1 | | Estimated maximum 539,003 tonnes $CO_2$-e per annum. |
| Scope 2 | | Estimated 33,735 t$CO_2$-e per annum avoided via purchase of RECs |
| Scope 3 | | Estimated 42,961 tonnes $CO_2$-e per annum. |
| **Rehabilitation** | | |
| Not applicable | | |
| **Commissioning** | | |
| Commissioning of the Proposal will be subject to operational limits above. | | |
| **Decommissioning** | | |
| Removal of all above surface infrastructure. Buried services will be decommissioned and left in-situ or removed. | | |
| **Elements which affect extent of effects on environment** | | |
| Proposal time | Expected Project life | 35 years |
| | Project Development | Approximately 3 years |
| | Operation phase | Approximately 30 years |
| | Decommissioning | Approximately 2 years |