



Introduction. The 2024 WA Jobs, Education and Training (WAJET) Industry Survey required a 600 word profile on each occupation. Below is 233215 Transport Engineer. The text below is open source and free for use when LDSC is correctly acknowledged. The text is open to correction. The Logistics and Defence Council (LDSC) welcomes input on 08 9388 8781 or <https://www.ldsc.asn.au/contact.html>

Industry Advisory Group. LDSC invites stakeholders to join our Rail Industry Advisory Group 08 9388 8781 or <https://www.ldsc.asn.au/contact.html>

Based on your Rail industry consultations and the feedback provided please provide a 600 word summary for Occupation ANZSCO 233215 Transport Engineer

ANZSCO definition. The ANZSCO Occupation 233215 Transport Engineer plans and develops transport systems to improve infrastructure efficiency and the cost effectiveness of moving people and freight. Registration or licensing may be required. The ANZSCO Skill Level is 1. ANZSCO specialisations include Rooding Engineer (NZ).

Stakeholder feedback. The occupation 233215 Transport Engineer is a specialist branch of Civil Engineering. Transport engineers are responsible for planning, designing and overseeing the construction and maintenance of civil engineering projects relating to transport networks, such as roads, bridges, mass transit stations, railways, airports and harbours. Training is not available in WA. Indeed no Rail engineering specialisation is available in WA. For example the UWA unit Transportation Engineering CIVL5502 covers road: road design, road traffic flow and queuing theory, traffic control and road traffic forecasting.

WA demand. In WA demand for 233215 Transport Engineer has been driven by rail construction: The passenger rail developments of METRONET and Heavy Haul freight rail growth for iron-ore export in the Pilbara. The new WA port Westport will require planning for port - rail – road for container load and unload. Rail stakeholders have an acute demand for all streams of engineers. Rail requires highly specialised Engineers and supporting technicians. Rail Transport Engineers generally specialise as either metropolitan Passenger Rail or Heavy Haul Freight for the resources sector. There is further specialisation of skills for the phases of construction, operation and maintenance. The Transport Engineers who are in charge of civil engineering construction projects like METRONET or Pilbara iron ore remote Heavy haul networks locate internationally to the construction phases of projects. After construction phase the Rail networks move to the operation and maintenance phases.

Acute workforce shortage. The workforce shortage for 233215 Transport Engineer in WA is acute and persistent in the Rail sector. WA has acute workforce shortage across all Engineer and Technician categories for Rail, shipbuilding in the Defence Industries, Maritime, Civil construction and the resources sector. Employment is available in Rail in WA for any engineer or technician in related streams that can demonstrate utility to the sector – for example Electronics Engineers, Industrial, Production or Plant or Transport Engineers. Specifically 233215 Transport Engineer is likely an occupation that needs to be recruited from overseas.

Demand factors are:

- Global demand for WA iron ore
- Global demand for WA wheat
- METRONET construction
- Westport construction
- National Rail Action Plan 2020
- Naval Shipbuilding Plan 2017 including SSN-AUKUS
- WA world leading networks demanding technicians in Autonomous Trains, Electronic Signalling and integrated logistics
- Demand shift from METRONET construction to operations to maintenance

Supply factors are:

- Competition for Engineers and supporting technical workforce
- National Rail Skills Shortage
- Perception / Image of the Rail Industry
- Rail ANZSCO codes need review to current industry occupations
- Regional Housing and Remote Lifestyle

Workforce location. WA Transport Engineers generally locate on construction projects as follows:

- Pilbara: WA the largest exporter in the world of iron ore
- Wheatbelt - Great Southern: WA the largest exporter in Australia for wheat
- Perth Metropolitan Area for METRONET

Demand for Engineers and Technicians. The Naval Shipbuilding Plan, METRONET, the construction of remote railways for Heavy Haul Rail in the Pilbara, and offshore oil & gas exports are creating acute demand for a small graduation of Engineers, supporting technicians and associated STEM and systems expertise. The applicant pool is small. WA needs a coordinated training plan to generate the Engineers and related Technicians required by Rail, shipbuilding in the Defence Industries, Maritime, Civil construction and the Heavy Haul Rail section of the WA resources sector.

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