

4.3 Port of East London

The Port of East London, located in the Eastern Cape Province, is a multi-purpose river port, unique for being the country's only remaining river port. It plays a crucial role in the regional economy with a significant annual throughput of 1.96 million tons, 53,761 TEU (Twenty-foot Equivalent Units), and 91,546 FBU (Fully Built Units) of motor vehicles. As a multi-faceted hub, the port specializes in automotive exports, imports of vehicle parts, as well as grain and liquid bulk handling.



Figure 13: Port of East London (Source: Satellite Image 2023 Airbus CNES)



Figure 14: Automotive Berth (Source: TNP)



Figure 15: Container Berth (Source: TNP)

Port Characteristics

Characteristic	Details
Location	East Cape Province, South Africa
Latitude	33°1'00' S
Longitude:	27°55'00' E
Port Type	Multi-Purpose River Port
Annual Throughput	1.96 million tons, 53,761 TEU, 91,546 FBU (Motor Vehicles)
Main Activities	Automotive export, vehicle parts import, grain export and import, liquid bulk
Container Handling Capacity	90,000 TEU throughput annually,
Maximum Vessel Length (m)	245m
Maximum Vessel Beam (m):	no limitation
Max Vessel Draft (m)	Bulk/Grain Elevator: 10,4m, Tanker: 10,4m multi-Purpose berth (container & Automotive): 8,5m-10,4m
Quay Length	Approximately 2,400 meters (total for all berths)
Equipment	straddle carrier, haulers and trailers, forklifts
Container Storage Area	1,360 ground slots, 42 reefer plugs
Connectivity	Good road connections to hinterland. Limited rail connection due to operational issues.
Security Standards	ISPS-compliant, with modern security infrastructure
Customs Efficiency	Operates under South African Revenue Service (SARS) guidelines; electronic clearance systems in place
Environmental Practices	Waste management, eco-friendly operations, spill response mechanisms
Competing Ports	PE for automotive sector, Durban for grain handling

Technical Summary

With a container handling capacity of 90,000 TEUs annually, East London is a strategic location for the automotive industry (adjacent Mercedes Benz assembly plant), which constitutes a major part of its activities. The port can accommodate vessels up to 245 meters in length without limitations on beam, although the maximum draft varies between 8.5 meters and 10.4 meters depending on the berth in use. Approximately 2,400 meters of quay length is available, facilitating the berthing of multiple vessels simultaneously.

The equipment at the port includes straddle carriers, haulers and trailers, and forklifts to ensure smooth operations. For container storage, there are 1,360 ground slots and provisions for 42 reefer plugs available.

East London notably does not have ship-to-shore (STS) cranes or mobile harbor cranes. Consequently, vessels calling at this port must be self-sufficient in their cargo operations, relying on their own gear for loading and unloading. This requirement is a significant aspect of the port's operations, as it influences the type of cargo ships that can be serviced and the speed of cargo handling processes.

Competing primarily with Gqeberha in the automotive sector and with Durban for grain handling, East London's strategic economic role is underscored by its largest export grain elevator in the country, which has been adapted for imports too.

Port activities are supported by a variety of marine crafts, including tugs and workboats, and the entrance is regularly dredged to accommodate the ships' draft requirements.

Expansion plans have been set in motion with a new car terminal already making an impact. The terminal currently has a capacity of 50,000 units per year, with potential expansion up to 180,000 vehicles. The presence of a dry dock capable of handling vessels up to 200 meters and a variety of berths further accentuates its multi-purpose nature.

The Port of East London's comprehensive facilities and operational capabilities, combined with its strategic position, make it a vital node in South Africa's maritime infrastructure, supporting the region's trade and industrial activities.

Despite good road connectivity, the port faces some constraints with the rail connections due to operational issues of Transnet Rail.

East London Grain Elevator

The East London Grain Elevator, a vital bulk handling facility for grain in South Africa, has undergone various stages of development and refurbishment since its inception. Located on the coastline, in the Southeast of the Port of East London, it is the largest grain silo in the country. The facility serves as a critical component in the storage and export of maize and other grain products.

The grain elevator was originally constructed in the 1960s. By February 2011, it was announced that Transnet would invest R20 million in refurbishing the elevator, which at its peak handled up to 3.4 million tons of grain annually. The largest single shipment ever loaded was 40,000 metric tons, showcasing the facility's impressive handling capacity. After a decade of dormancy, during which grain handling was moved to Durban, the East London Grain Elevator resumed operations in June 2022, revitalizing its role in the country's grain exportation.

Technical Data

The facility features 83 silos, providing a theoretical total storage capacity of 76,000 metric tons. It is used today up to maximum 90 %, which equals to approximately 66,000 tons of storage capacity. The circular bins, crucial components of the silo's storage capabilities, measure 7.3 meters (24 feet) in diameter and 37.8 meters (124 feet) in height.

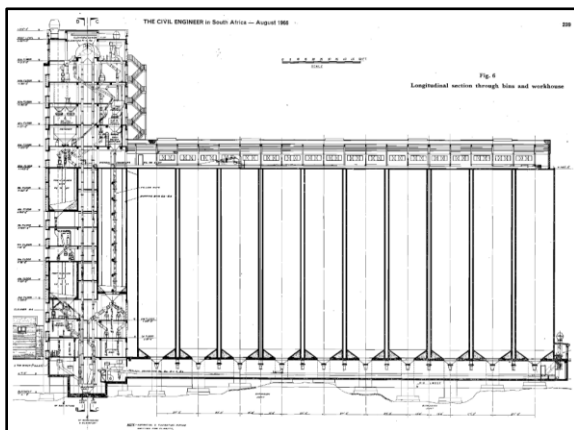


Figure 16: Grain Silos - Side View

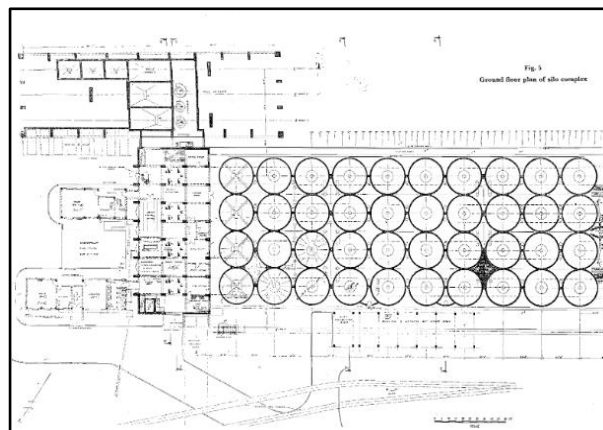


Figure 17: Grain Silos - Top View

For export, the complex originally had a shipping gallery, designed for direct conveying and loading into the ships at the berth. It was a fixed structure with a single inclined section about 170 meters long and a straight horizontal section extending beyond 150 meters, equipped with eleven telescopic spouts for versatile grain loading into the hatches. The spouts can discharge grain at a rate of up to 1,800 tons per hour when four are used simultaneously using the full capacity of the outgoing conveying belt as well.

Today, vessels are loaded using a skip operation with trucking from the silo to the pier, reaching an operational performance averaging 170 tons per hour, which will be described in detail later.

Refurbishments and additional use for import

The grain elevator has received several upgrades and refurbishments over the time. For instance, an import conveyor belt was also constructed in the late 90s to make the silo suitable for import contracts as well.

In 2015, the shipping gallery was demolished because of the deterioration of the structure caused by a lack of maintenance over several years.



Figure 18: Shipping Gallery- before 2015



Figure 19: East London Bulk Berth in 2023

Today's Operations

Export

The vessel loading is managed by skip operation with a loading rate of approximately 5.000mt per day.

- **Filling the Truck at the Silo:** Each truck is loaded with two skips that hold 24 tons of grain. The filling process takes approximately 4 to 5 minutes per skip.
- **Transport from Silo to Ship:** Once filled, the truck transports the skips 1,100 meters to the berth.
- **Unloading the Skip into the Cargo Hold:** At the ship, the skips are lifted from the truck by the ship's gear and unloaded.
- **Returning Empty Truck to Silo:** After unloading, truck travels back 500 meters to the silo to pick up another filled skip, completing the cycle.

On 31st of August, during the Port Assessment, the bulk carrier ST. COLUMBA was engaged in bulk loading operations at the berth. Constructed in 2016, this vessel boasts a deadweight of 37,347 tons and is registered under Bahamas flag. The ST. COLUMBA is equipped with five cargo hatches and four cranes, as usual for handysize bulk carriers. For the loading operations, three cranes were deployed concurrently.



Figure 20: Filling Skips out of the Silos



Figure 21: Loading Operation with Ships Gear

Import

An import belt on the quayside allows for import and export to take place simultaneously. The belt has an intake rate of 250 tons per hour.

The belt, hoppers and grabs belong to the stevedoring company. Additional costs for the service need to be checked.

The total quay length at the berth is 388m, which means that two vessels with a maximum length of 180m each can berth simultaneously. However, due to limited equipment only one for loading, one for unloading.

The grain elevator has been used by the World Food Programme in the past. In 2007, quite a large operation was handled in East London. Over all 320,000 tons of maize were unloaded, temporarily stored in the silos, and then transported by rail up north to Zimbabwe and to DRC.

Challenges

Despite its capabilities, the grain elevator faces multiple challenges that impact its competitiveness. These include quayside depth limitations, which currently accommodate vessels up to a draft of 10.4 meters, although under special arrangements, up to 10.7 meters can be managed. Port equipment and the logistics of supply and receipt of the product are areas that require new investments. The facility needs to contend with the competition from other ports like Durban and Maputo and must innovate to maintain its operational efficiency and relevance.

There is only limited Rail connection, as the Rail link between Kroonstad and East London is without regular operation because of operational issues.