Mayfield Cargo Storage Facility Mod 3 – Lithium-ion Battery Storage (DA-8137-Mod-3)

Prepared for IPC Meeting

DPHI Transport and Water Assessments

29 August 2025

NSW GOVERNMENT

Regional context

Proposed Modification

Applicant:

- Port of Newcastle Operations Pty Ltd

Project:

- To permit the receival, temporary storage and transport of lithium-ion batteries.
- The batteries are classified as dangerous goods and may be stored for periods of up to 12 months with separation distances of 1 m between the units and 6 m between other cargo and boundaries. They are intended for use within renewable energy projects across NSW.
- No physical works or battery charging are proposed, and the site's stormwater system will remain unchanged.

Submissions:

- No public submissions
- City of Newcastle Council provided comments and requested a multi-level risk assessment be undertaken to determine separation distances. The Department's Hazards team reviewed the Preliminary Hazard Analysis (PHA) and confirmed that no additional assessment was required or recommended.
- Advice from TfNSW, NSW DCCEEW and EPA raised no concerns.
- Fire and Rescue NSW were consulted during the assessment.

Reason for referral to IPC:

- The Applicant has made a political donations declaration.

DA Lodgement

- 8 August 2024

Site details

Site:

- 109 Selwyn Street Mayfield North, Newcastle

Original DA and operations:

- The Mayfield Cargo Storage Facility was approved in June 2017 under DA 8137. The consent permits the use of an existing hardstand area as port facilities for the storage of freight, including the loading and unloading of freight, and roll-on and roll-off cargo on the site.
- The open air cargo storage facility (coloured purple in the site plan) occupies an area of 18.6 hectares within the Mayfield Port Lease Area.

Surrounding development:

- Hunter River coal loading facilities and berths of the Newcastle Coal Infrastructure Group to the north.
- Open hardstand area and Mayfield Berth No.4 (M4) to the southeast.
- Intertrade site to the south.
- Stolthaven Mayfield Bulk Fuel terminal to the northwest.
- Residential properties situated 800m to the southwest in Mayfield East.

Hazard and Risk

Battery risks / State of Charge

- The Applicant submitted a Preliminary Hazard Analysis (PHA) which assessed the fire and safety risks of storing batteries on the site. The PHA considered there was minimal risk to people and property and recommended maximum 30% battery State of Charge (SoC) and separation distances for battery storage.
- The Department requested the Applicant to clarify reasoning for the recommendation of 30% maximum SoC and confirm that Fire and Rescue NSW supports any increases in the maximum SoC.
- The Applicant provided an updated PHA and an addendum in July 2025 removing the 30% maximum SoC and advised batteries would be stored in accordance with manufacturer's guidelines. The updated PHA concluded that SoC is relevant when batteries are in operation. In this case the batteries are not operational nor being charged and safety risks are from damage to batteries rather than their SoC.

Separation distances and FRNSW requirements

- The updated PHA and addendum clarified that storage of batteries would be 6m from any potential fire source and 1m between units, consistent with the separation distances recommended by Fire and Rescue NSW's Position Statement on open yard storage of batteries (December 2024).
- The Department's Hazards team reviewed the updated and addendum hazard assessments and is satisfied it has been prepared in accordance with the hazardous development guidelines and supports the recommendations.
- The Department is satisfied that the storage of batteries can safely occur within the existing site, without significant risk to surrounding receivers and developments.

The Department has included these separation distance requirements in recommended conditions.

Lithium-ion battery unit example

Traffic and Transport

- Traffic movements generated by the operation of the proposed modification fall within the total traffic movement permitted by the Mayfield Concept Plan for the port lease area. Total truck movements permitted under Condition 2.3 of the Mayfield Concept Plan are:
  - 462,104 per annum
  - 1,268 movements a day
  - 95 in peak periods
- The proposed modification would result in no more than five truck movements during morning and afternoon peak periods combined as depicted in the Table.
- TfNSW raised no objection to the proposal and stated no significant impact to surrounding road network, and that Council is the road authority for Selwyn Street (local) and Industrial Drive (State). Council raised no concerns with proposed traffic movements.
- The Department is satisfied that the traffic movements generated by the proposal are within the total traffic movements permitted under the Mayfield Concept Plan.

Development	Total Truck Movements per annum	Total Truck Movements per day	Total Truck Movements in peak periods
Stolthaven Mayfield Terminal	39,506	108	20
Mayfield Cargo Storage Facility	74,991	206	12
Total (existing)	114,497	314	32
MCP truck movement limits	462,104	1,268	95
Lithium-ion battery storage (the proposed modification)	1,800	5	5
Total (with proposed modification)	116,297	319	37

Evaluation

- The Department reviewed the modification, Response to Submissions and assessed the merits of the proposed modification, taking into consideration advice from Council and Government agencies.
- The Department considers:
  - the storage of batteries would diversify the range of cargo handled at the port facilities, supporting economic growth in NSW.
  - Would enable temporary storage of batteries in an existing cargo storage facility.
  - the batteries would be stored at appropriate separation distances from other cargo and surrounding developments to minimise fire safety risks.
  - The proposal would enable the NSW State Government policy of achieving Net Zero by 2050 by providing logistical support for temporary storage of imported batteries, for standalone grid-scale battery energy storage system (BESS) projects across NSW.
  - Operational truck movements are within the limits specified in the MCP for the Mayfield port lands.
  - Will provide approximately 18 operational jobs.
- The storage of batteries in accordance with manufacturer's recommendations, and providing appropriate separation distances between battery units, would ensure fire risks are minimised.
- The Department concludes that the impacts of the proposed modification are acceptable and can be appropriately minimised through the implementation of recommended conditions.

Recommended Conditions

- To ensure appropriate separation distances, emergency management and safety the Department recommended compliance with the following:
  - Position statements from Fire and Rescue NSW:
    - Open yard storage of Battery Energy Storage Systems (BESS) dated December 2024
    - Emergency Plan requirements at Sites having Lithium Batteries dated December 2024.
  - A Battery Storage Management Plan which includes:
    - a protocol to manage damaged batteries
    - storage in accordance with manufacturers specifications
    - separation distances
    - inspections of batteries
  - A Battery Fire Emergency Plan prepared in consultation with Fire and Rescue NSW to manage fire safety situations.

- The Battery Storage Management Plan and Battery Fire Emergency Plan are consistent with Fire and Rescue NSW's Position statements on the storage of lithium-ion batteries.

Questions?