

CF Millhaven Battery Energy Storage System

LOYALIST TOWNSHIP – PROJECT CONCEPT PLAN

DOUG DEEKS

Project Location



FIGURE 1: CF MILLHAVEN 250MW BESS LOCATION
ADDRESS: MILLHAVEN RD ODESSA ON K0H2H0

Project Detail: PIN- 451290215

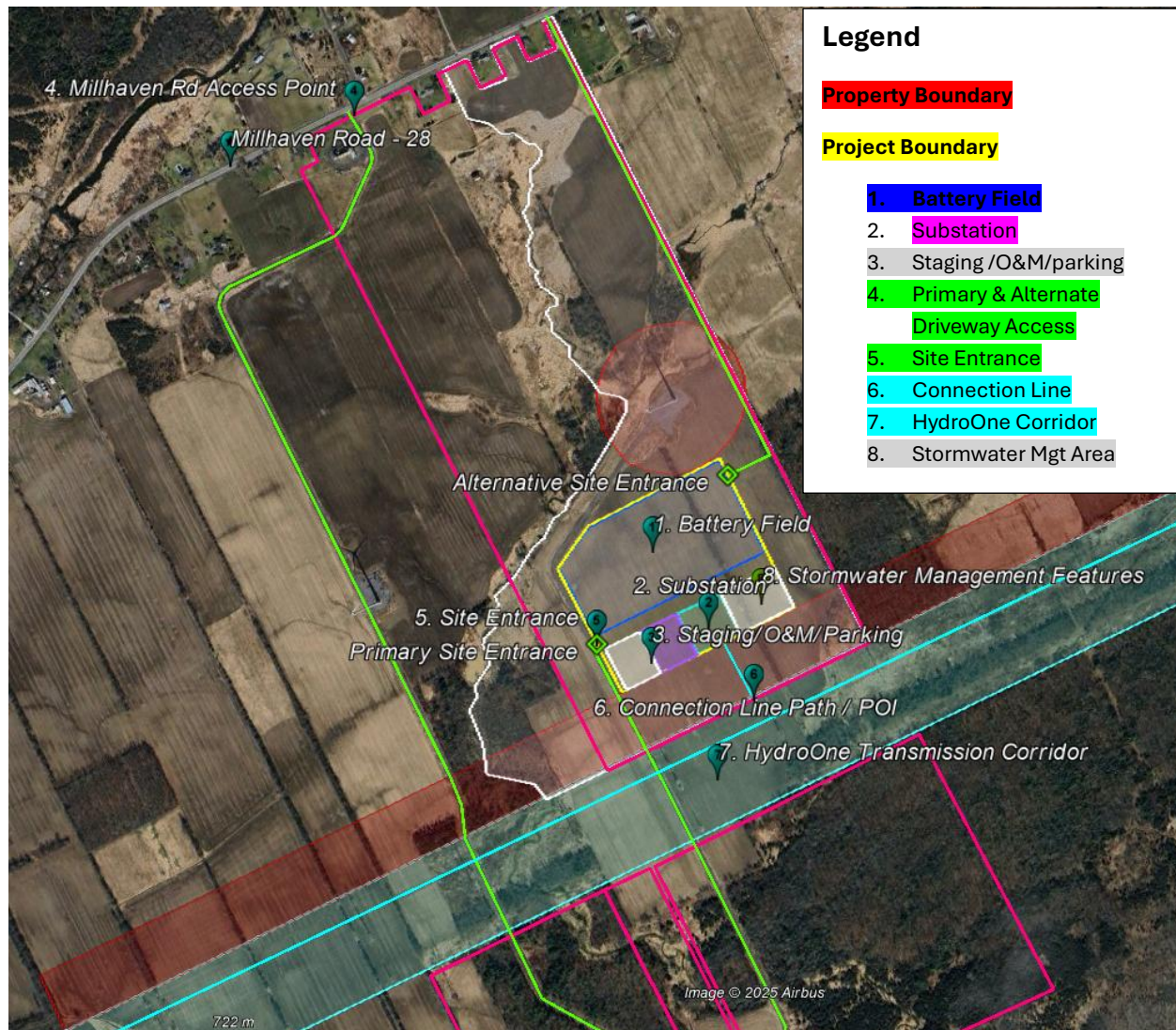


FIGURE 2: CARBONFREE CONCEPT PLAN – 250MW CF MILLHAVEN BESS

PROPERTY: 451290215

Project Concept Plan and Overview

- Project purpose: To provide long-duration grid capacity, reliability services, and energy shifting to support the IESO LT2c procurement.
- Typical operation: Charge during low-demand hours (overnight-weekend / low-price) and discharge during peak demand or when instructed by IESO/market operator.
- Expected construction duration: ~12–18 months (site prep, civil, installation, commissioning - 2027).

Site plan Figure 2

Map key:

1. Battery Field (rows of containers housing battery units)
2. BESS Substation & step-up transformer(s)
3. Staging / laydown/parking/Operations building
4. Municipal Road entrance
5. Site entrance / interior access road
6. Route to POI / tap line to transmission corridor
7. HydroOne Transmission Line Corridor

Key Project Components

1. Battery Field — Modular containerized battery units. Arranged in rows with internal access roads and separation distances for safety and maintenance. Containers house battery racks, inverters/PCS and HVAC/controls.
2. Transformer Station (TS) — Step-up transformer(s) convert site MV to transmission voltage required at the Point of Interconnection (POI). The TS is in a fenced, secured yard with oil containment and spill prevention.
3. Switchyard & Interconnection — High-voltage equipment, relays and protection, and the tap line connection to the nearby transmission corridor or substation. This is coordinated with the utility and built to strict safety standards.
4. Control / Operations Building — Offices, control room (SCADA/EMS), maintenance workshop, and parking. This is a small building with limited staff

5. Fire Protection — Fire water tank and hydrant network; separation corridors and access lanes sized for emergency vehicles. Project includes emergency response planning and coordination with local fire services.

6. Stormwater Management — Basins, swales and erosion control to manage runoff and protect local waterways. Designed to meet municipal stormwater and environmental requirements.

7. Access & Security — Controlled entry gate, perimeter fencing, security cameras and lighting designed to minimize offsite light spill.

8. Tap Line / Route to POI — The route of the short connection line to the transmission corridor or substation is shown; where possible, the route uses existing utility corridors to reduce new disturbance.

Area allocation (approx.)

- Battery field (containers + access lanes): ~15 acres
- Transformer station & switchyard: ~1 acres
- Control building & parking: ~0.5 acre
- Stormwater / environmental buffers: ~2 acres
- Landscaping, setbacks & security: ~2 acres
- Total (illustrative): ~20 acres

Safety & community protections

- The site uses engineered fire separation, monitoring systems, and onsite suppression water supply. Battery systems include thermal monitoring and automatic shutdown protocols.
- The project will develop an Emergency Response Plan with the local fire department and first responders. Training and site familiarization will be provided for emergency personnel.
- The project is setback >1km from nearest residential and commercial neighbours and from the nearest municipal road. Noise from inverters and transformers will be controlled via equipment selection, acoustic enclosures and landscaping buffers; expected operational noise is typically below municipal limits at property lines.
- Visual impact minimized with landscaping, low-height equipment placement and dark-sky-compliant lighting.