GeoPura®

Sustainable Power Now

**SECTORS:** EV Charging



# Westmorland Case Study

## Cairn Lodge Services, Lanarkshire

Cairn Lodge Services, part of the Westmorland Family, on the M74 in Lanarkshire, proudly announced the launch of its cutting-edge electric vehicle (EV) charging facility powered by hydrogen. This marked the first-of-its-kind deployment of a hydrogen-powered generator connected to EV chargers at a UK service station, aimed at accelerating the rollout of EV charging infrastructure.

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|---|---|
| **Location** | Cairn Lodge Services, Lanarkshire |
| **Dates** | October 2023 - November 2025 |
| **Equipment** | HPU 1 + 6 x EV charging points |

### KEY METRICS

| | |
|---|---|
| **$CO_2$ saved** | 692.57 tonnes |
| **NOx saved** | 6,771.38 kg |
| **PM saved** | 260.44kg |

### APPLICATIONS

Grid Augmentation

EV Charging

Off-Grid Power

## Challenges

- Insufficient grid capacity.
- Sustainable alternative to diesel generators needed.
- Power supply and infrastructure required for EV Charging.

## Solutions

- GeoPura HPU utilised to provide zero emission power for charging infrastructure
- Experienced teams on site to ensure reliable power supply
- EV charging provided long term as a sustainable solution

ZERO EMISSION FUEL

GREEN POWER GENERATION

# About the project



Cairn Lodge Services, a family-run motorway services business renowned for its commitment to quality service and sustainability, took a proactive step to bridge the energy grid gap by using hydrogen power. Westmorland partnered with GeoPura to connect its HPU, fuelled by green hydrogen, to Westmorland EV chargers provided by SWARCO Smart Charging.

The GeoPura HPU supplemented the current grid supply and provided suitable electricity for EV charging at the service station. GeoPura's HPU technology utilised green hydrogen - a clean and renewable energy source - to generate electricity onsite. This technology was used independently of the grid or to support the local grid in managing peak charging demands.

From December 2023, EV drivers visiting Cairn Lodge Services had access to six ultra-rapid Westmorland EV chargers from SWARCO Smart Charging, powered by green hydrogen, until a suitable electrical grid connection was established.

This innovative solution offered seamless scalability for off-grid EV charging in various applications, even in areas where grid upgrades were delayed or not feasible. By incorporating GeoPura HPUs, Cairn Lodge Services overcame electrical grid capacity restraints and avoided delays in opening its EV charging facilities. This allowed it to meet the demands of the holiday season and the expected surge in EV charging

## What our client says

"Cairn Lodge Services is excited to offer the first hydrogen powered EV chargers on the UK motorway network. The rapid growth of the EV market has underscored the pressing need for accessible and reliable charging facilities.

As EV adoption soars, the pressure on the electrical grid has become increasingly evident, leaving businesses like Westmorland to look for creative, sustainable alternatives until there is sufficient grid capacity. We want to be at the forefront of this sustainable and eco-friendly EV charging revolution, providing a convenient, green charging to our customers.

To the customer, the charging experience is no different to a grid connected charger, and by utilising this new technology we can provide much needed EV charging facilities sooner, meeting the growing demand without having a negative impact on the environment."

**Nabil Subuh, CEO**
Westmorland Family

## Find out more

Learn more about our HPU here.