



ELEMENT 2

The Road to Net Zero

Hydrogen Fuelling Infrastructure For Trucks

Brendan Bilton
Chief Technology Officer

Building the first commercially-scaled hydrogen refuelling station network in the UK


DECARBONISATION - SUSTAINABLE LOW CARBON TRANSPORT - NET ZERO

Element 2 in brief



- Building a national network of hydrogen fuelling stations (HRS) in the UK and Ireland
- Led by a **team of experts** with knowledge, and passion in clean energy
- A site developer, distributor, operator, and retailer; not a technology owner or hydrogen producer
- Element 2 are already the **largest supplier** of hydrogen to engine and vehicle test centres in the UK
- Identifying and securing **over 125** strategic hydrogen refuelling sites across the UK and Ireland before 2030


Management Team



Co-Founder & Chief Executive Officer
Tim Harper

Tim began his career in scientific instruments before joining the European Space Agency (ESA) as an engineer responsible for detecting and identifying failure mechanisms in semiconductors and materials used in space.


[READ MORE](#)



Co-Founder & Chief Technology Officer
Brendan M. Bilton

Brendan is a qualified Metallurgist and Materials Scientist who has spent over 20 years in the renewable energy, fuel cell, and hydrogen sectors.


[READ MORE](#)



Chief Operating Officer
James Harris

James has more than 15 years' experience as a strategist and programme director for high-profile clean energy, infrastructure and industrial projects in the UK, EU27 and Asia Pacific.


[READ MORE](#)



Chief Development Officer
Dr Andrew Hagan

Andrew has spent more than 20 years working in the hydrogen, climate, and energy industries. His experience includes roles at Air Liquide, where he was a consultant on H₂/CO gases, and Shell.

[READ MORE](#)



Chair
Dirk Van Daele

Dirk van Daele has been Chair of the Element 2 Supervisory Board since its inception in December 2020, on the back of his FCA regulated expertise and previous board experience.

[READ MORE](#)



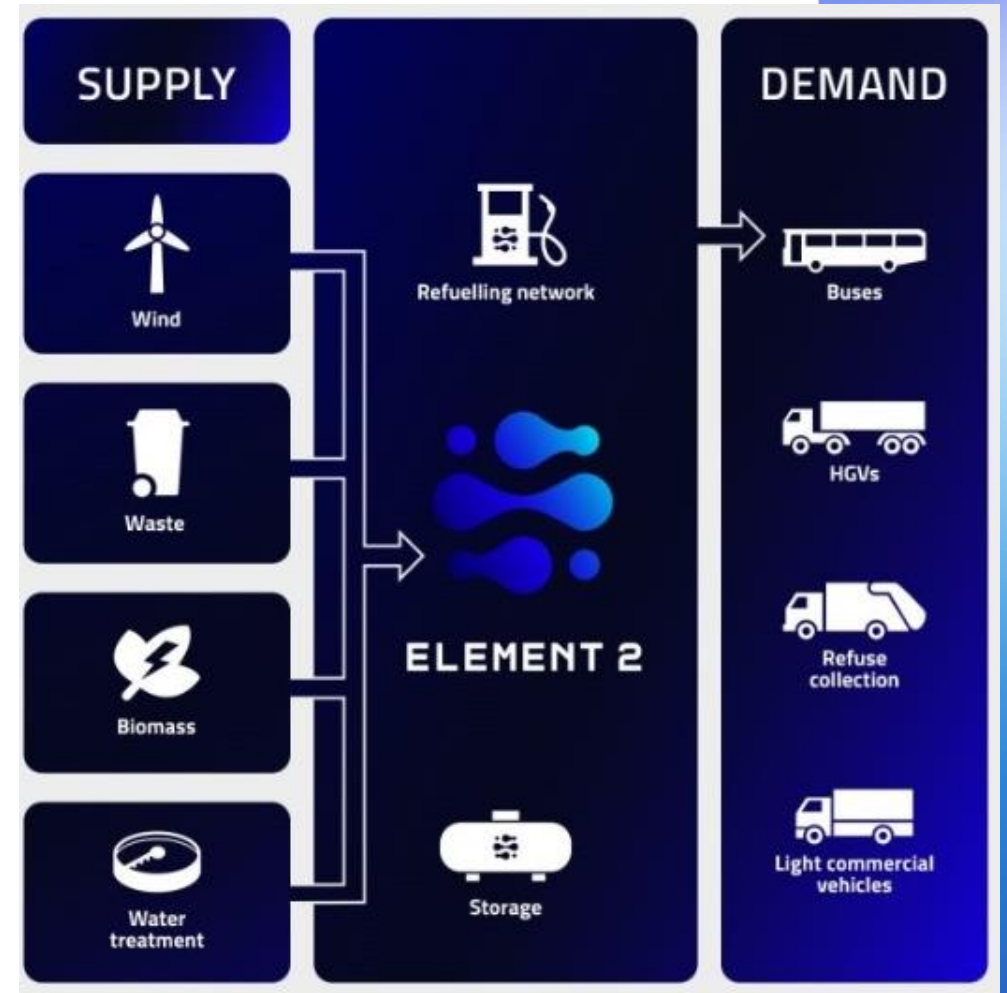
Why Hydrogen?

- In 2035 – **no more diesel engine trucks** (<29 T GVW) can be sold in the UK
- For a full zero emission vehicle solution, a mixture of battery electric, fuel cell electric and hydrogen combustion will be the powertrains of choice
- Hydrogen can be used in a fuel cell for an electric vehicle platform or in a combustion engine
- Battery Electric trucks and buses are proven technologies, but have limitations in terms of range, up-time availability and load carrying capacity
- To provide the extra range and load carrying capacity, to match the full spectrum of diesel truck usage, hydrogen is the only zero emission solution for long haulage HGVs



Our role in the hydrogen value chain

- We play a **pivotal** role
- We are building a **UK-wide** infrastructure for public and professional access to hydrogen, working with site owners, fleet operators, local authorities and fuel card operators
- We target **local green** / low carbon hydrogen
- We build mobile and permanent hydrogen refuelling infrastructure at **our cost**
- We will deploy infrastructure to meet growing demand
- We refuel **any** hydrogen powered vehicles



Vehicles in the UK – we've refuelled them all



ELECTRA **TEVVA**

XPOLogistics

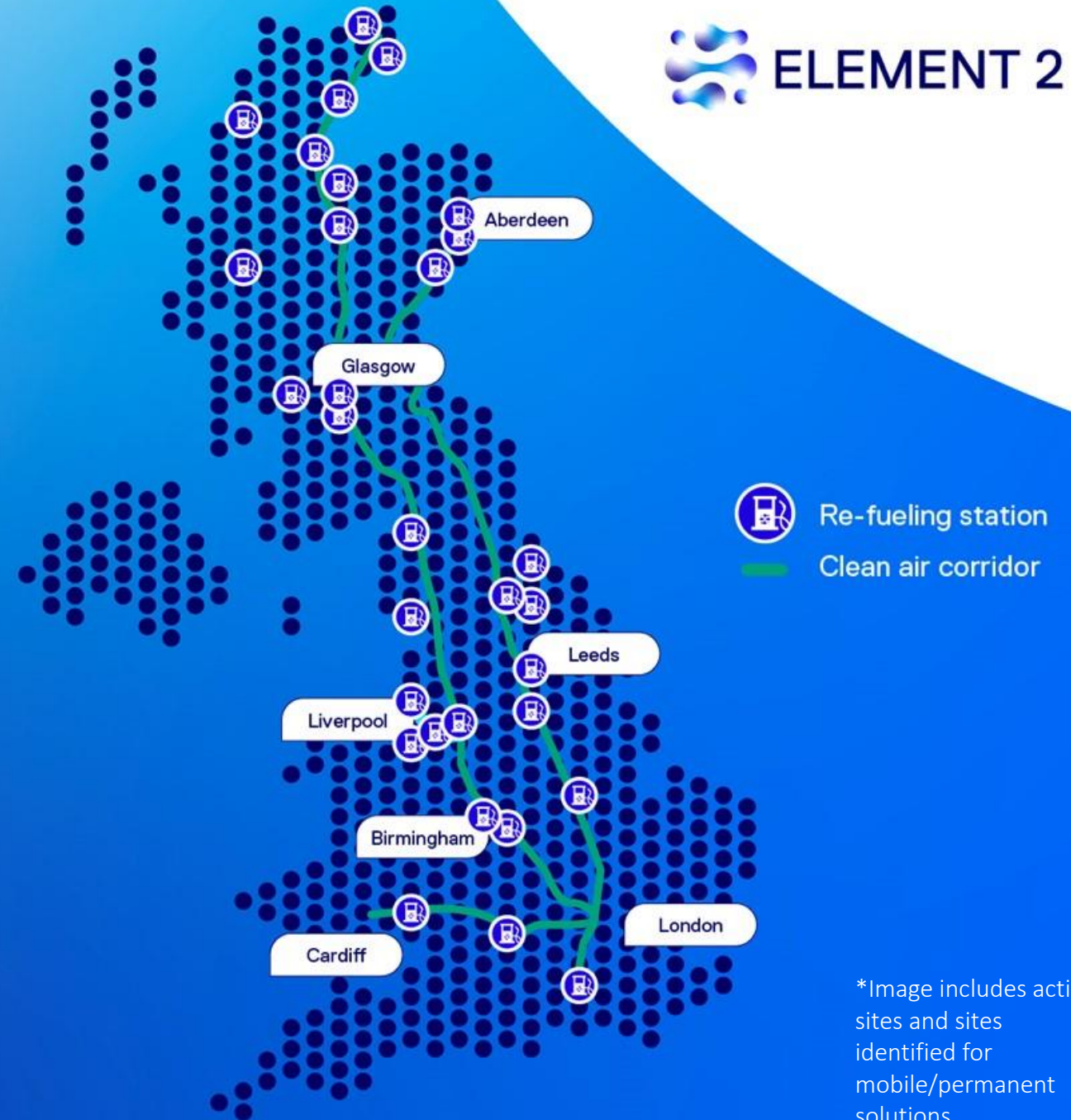
EXELBY
SERVICES

Stagecoach **Toyota** Caetano Portugal, S.A.

FAUN
ZOELLER

National Network of Refuelling Stations

- Mobile refuelling stations up and running in multiple locations
- First 2 planning applications approved with Exelby Services on the A1M and M6 for Permanent stations
- 2 Greenfield site applications submitted
- Discussions in hand with major truck stop operators
- All stations have both 350 & 700 bar capabilities





Element 2 Hydrogen Refuelling Station Solution

- 1 to 2.5 tonnes a day of retail capacity
- 2 to 6 hydrogen dispensers for side-by-side fuelling
- 50+ HGV fills per day
- 300+ LCV/Passenger fills
- 24/7 operation – automated, inherently safe interface
- UKFuels and KeyFuels integration as standard (+IFSF)
- 98%+ Uptime – Backup compression and dispensing.
- Biodiversity Net Gain scheme
- Using local gabion stone, aggregates and wildflowers
- Glulam canopy construction, with self-cleaning PTFE roof
- Rainwater collection canopies and semi-permeable materials
- Safe access routes to kiosks and driver rest areas

#MakeDieselHistory

By working together, we can make UK
road transport a global decarbonisation
success story

Thank you



ELEMENT 2