GREENBRICKS
DATA

Strategic AI Vision Statement
England/Scotland Border

The Vision

UK's Strategic Hyperscale Opportunity

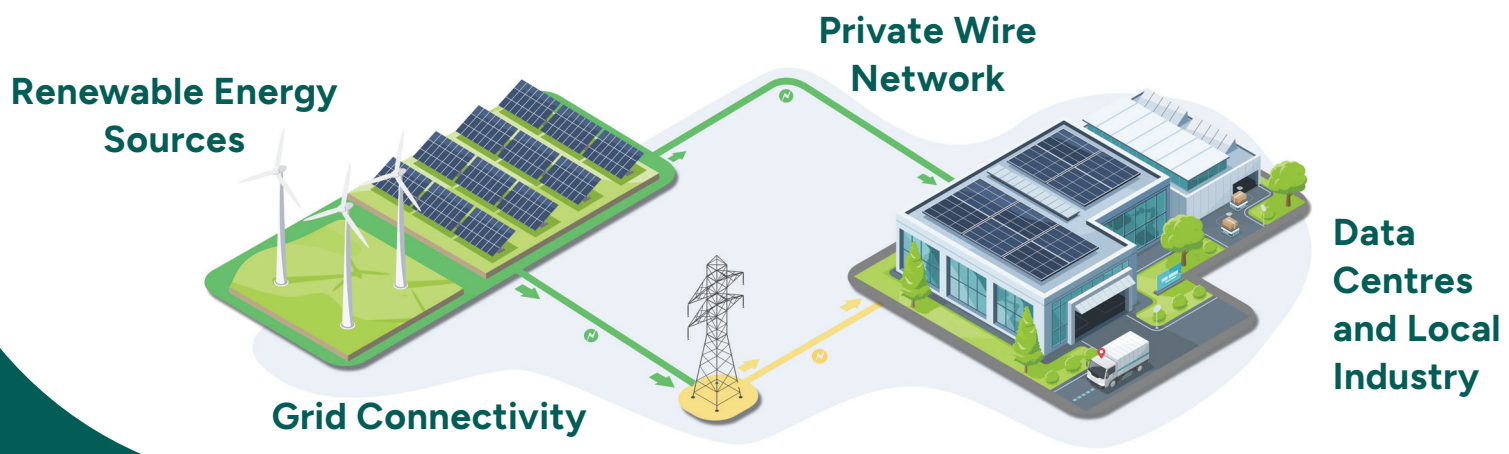
The UK is entering a defining decade for Artificial Intelligence (AI), advanced computing and digital infrastructure. Independent analysis shows that European data centre demand could more than triple by 2030, which will require significant investment and will also create an intense pressure on power systems and accelerating competition for locations with a reliable, low carbon supply[1].

To compete with the global rush for key data centre locations the UK must deliver development-ready areas with access to secure, low-cost, low-carbon power, strong grid and fibre connectivity, and enough land to accommodate large-scale computer campuses. This imperative is recognised in UK policy and industry analysis, which highlights the need for streamlined grid connections, planning reforms, and infrastructure prioritisation to enable AI and data centre growth[2].

Greenbricks believes, that within Dumfries and Galloway, there is an opportunity to take a strategic approach to an AI Growth Zone with data centre development leveraging large scale new and existing green energy generation along with alleviating a constrained transmission grid.

Dumfries and Galloway has been identified as one of the best zones in the UK due to:

- **High deployment of renewable energy supply** with an even greater pipeline[3]
- Huge opportunity of **Behind the Meter (BTM) private wire network connections**
- Competitive advantage from **low cost green energy**
- **Great development opportunities** along the M6 A74 (M) corridor
- **Existing fibre connectivity**[4]
- The B6 grid network constraint, currently costing **£2bn per year**[5], could be reduced through increased consumption at this specific location



Strategic AI data investment at England/Scotland border affords:

Reducing consumer bills - avoiding £2bn B6 constraints

Hyperscalers access to a localised cost of electricity

£3bn annual energy saving from 6GW data demand

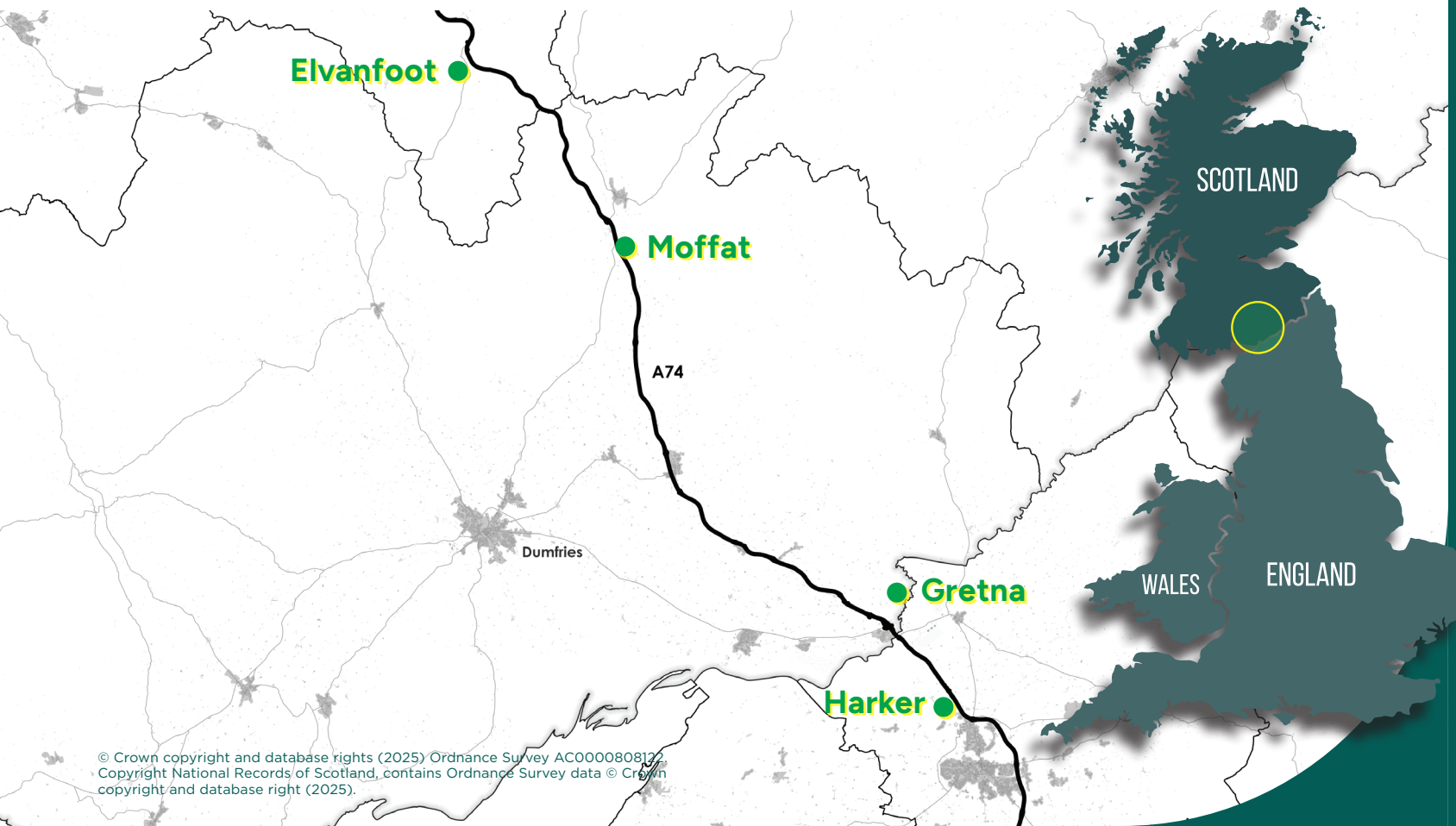
Location

The motorway corridor from Carlisle to Elvanfoot has been identified as a strategic hyperscale data zone by Greenbricks. This corridor hosts **4 major 400kV transmission substations**, Harker, Gretna, Moffat and Elvanfoot.

The South of Scotland are looking to become a green economy leader, and this area has a competitive advantage as the natural capital due to significant renewable energy capacity[6] making it attractive to potential international business and trade companies.

There is an estimated 10GW of operational, consented or in planning wind, solar and BESS along this corridor[7]. These projects could connect to data centres via a self-built private network to fast track connectivity and deliver low cost green energy direct from source **without transmission costs**. It is estimated that the renewable energy sources could provide **6GW** of power for data centres along this corridor.

The A74(M) corridor represents a strong location for data centre investment due to its designation within the Dumfries and Galloway Local Development Plan 2 (LDP2) as a strategic area for business and industrial growth[8]. LDP2 safeguards and allocates sites along the A74(M) to maximise the economic potential of the wider motorway corridor. This planning support is reinforced by National Planning Framework 4, which, together with LDP2, forms the statutory development plan for the region[9]. The allocation of sites along the A74(M) also supports regeneration objectives, particularly in response to the closure of the former Chapelcross nuclear power station, making the corridor well suited to large-scale, infrastructure-led developments such as data centres[10].



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Why is the A74(M) corridor a suitable location?

Abundant supply of energy from existing and proposed wind and solar farms

Four 400kV transmission substations and 400kV grid network

Private wire network with underground cables to new private substations

Private Wire Connections

Private wire or Behind the Meter (BTM) connections are dedicated electricity networks linking generators directly to consumers, bypassing the National Grid. They provide a **powerful solution** for data centres confronted by escalating AI-driven workloads and uncertain grid capacity. BTM connections for Industry are commonplace in UK, for example UPM Shotton Paper Mill has a direct private wire from Shotwick Solar Park to its industrial area[11].

Key Benefits[12]:

- **Lower Energy Costs:** Avoids certain transmission and distribution charges
- **Price Certainty:** Long-term PPAs enable fixed or indexed pricing
- **Higher Resilience:** Dedicated infrastructure reduces exposure to grid outages
- **Optimised Power Quality:** Tailored solutions for AI and HPC load
- **Direct Renewable Access:** Clear, auditable zero-carbon power supply

A 500MW Data Centre will benefit from energy savings of approx. £320m annually based on a £100 MW/h discount to a transmission only site.

Ref: Data centres in strategic regions will benefit from electricity discounts of up to £24/MWh in Scotland[13].

AI Data connection at B6 location offers:

Hyperscalers cheap renewable energy from renewable sources

Consumer reduction in grid constraint costs

Help drive market for new solar & wind: £10bn investment

Create a significant number of high-quality, high-paying jobs[14]



Key Economic Figures

6GW worth of data centres built along this corridor could create:

- Over **40,000** construction jobs
- Over **5000** operational jobs created
- Estimated **£60bn** investment

The UK Government estimates that the **UK will need at least 6GW of AI-capable data centre capacity by 2030**[15] and Greenbricks believes that this zone has the potential to fulfil most, if not all of this need.

Developing a large-scale compute corridor in Southern Scotland would drive investment in technology and green electricity generation. Significant public investment in compute infrastructure has been shown to support broader innovation ecosystems, enable faster research outcomes across sectors such as healthcare and energy, and attract private investment and jobs to regional economies by expanding access to advanced computing resources[16].

Scotland already hosts world-leading institutions including the University of Edinburgh, which will house the £750m National Supercomputer, further strengthening alignment between academic research, AI innovation and industrial-scale computer[17].

More data has been generated in the last three years than in all of history creating an unprecedented demand for generation and storage capabilities. Data centre electricity demand is forecast to double by 2030. Strategic development of data centres should leverage current and future energy generation opportunities as much as possible[18].



Opportunity to leverage constraint saving of £2bn

Over 40,000 construction jobs

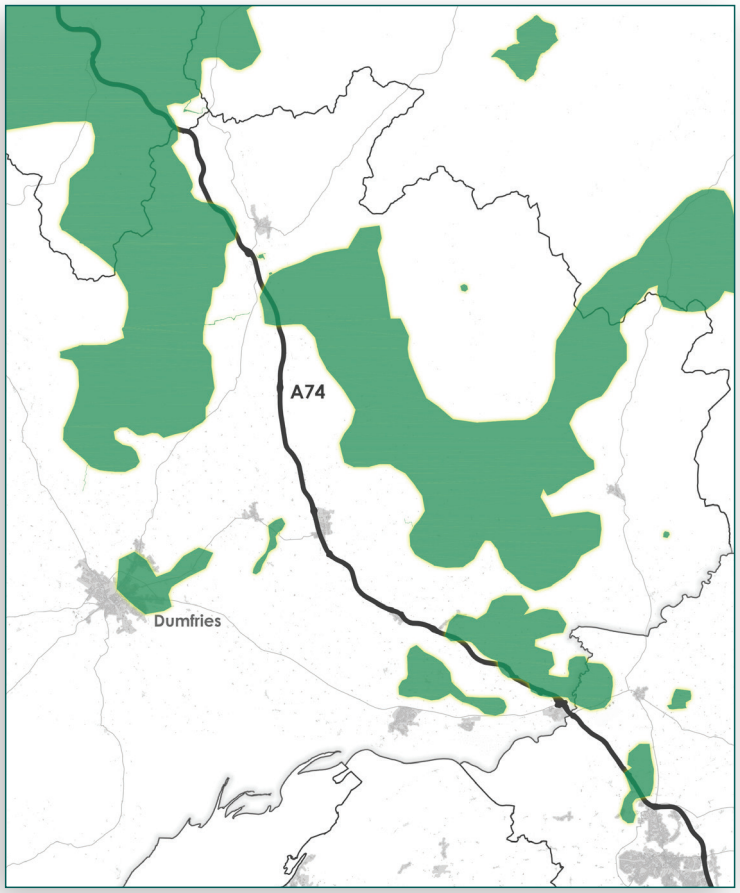
More than 13,000 digital graduates enter Scotland's workforce each year, forming a strong talent base to support new data centre campuses[19]

Estimated £60bn investment

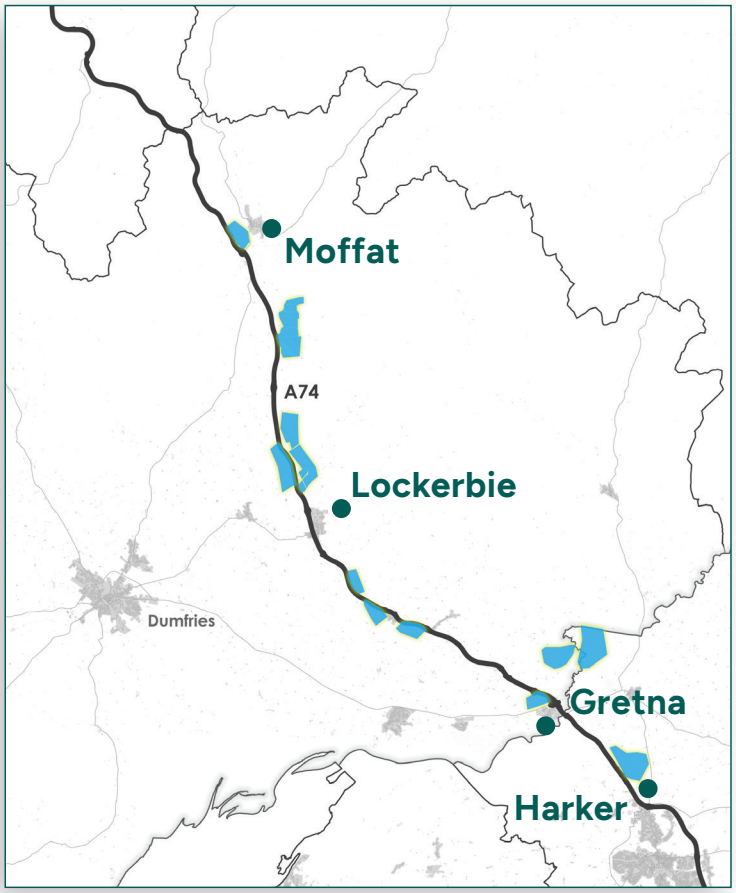
Why southern Scotland?

1. **Strategic location:** Carlisle–Elvanfoot motorway corridor designated as a hyperscale data zone.
2. **Power infrastructure:** Four 400kV substations (Harker, Gretna, Moffat, Elvanfoot) provide strong grid connectivity.
3. **Green energy advantage:** ~10 GW of renewable projects along the corridor could supply up to 6 GW to data centres.
4. **Direct low-cost energy:** Potential for private networks delivering green power straight from source, avoiding transmission costs.
5. **Planning support:** A74(M) corridor sites safeguarded in LDP2 and reinforced by NPF4 for large-scale industrial development.
6. **Economic regeneration:** Site allocations support growth and could attract international investment.

Renewable Energy Sources



Potential Data Centre Zones



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