Holm Hill Substation

Environmental Appraisal

Chapter 2: Proposed Development

November 25

Land & Planning

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2 THE PROPOSED DEVELOPMENT

2.1 Site Context

2.1.1 The Holm Hill Substation (hereby referred to as the 'Proposed Development') would comprise a substation platform featuring earth switches, disconnectors, a Capacitive Voltage Transformer (CVT), associated plant, and ancillary systems, along with a Sealing End Compound, located approximately 85 metres (m) to the southeast of the proposed substation platform. The Proposed Development will also include two temporary contractor compounds, stone access roads, four car parking spaces, Sustainable Drainage System (SuDS), and landscape planting.

2.1.2 The Proposed Development is situated in Dumfries and Galloway, at National Grid Reference NX 54607 95825, approximately 3.5 kilometres (km) to the north-west of Carsphairn, north-east of the A713, within a rural landscape characterised by open moorland and rough grazing. Areas of plantation forestry are located to the north-west of the Site. Access to the Proposed Development will be via the A713, which connects Ayr to Castle Douglas and serves as the primary route through the Glenkens, promoted as the Galloway Tourist Route.

2.1.3 The Proposed Development location was chosen for its direct access to the A713, its immediate proximity to the electricity transmission line it will connect to, its setting within predominantly open moorland and rough grazing land with some surrounding forestry, and the confirmed absence of protected species based on ecological surveys.

2.1.4 Positioned on the south-western slope of Holm Hill, the Site descends toward the A713, with elevations ranging from approximately 242 m to 220 m Above Ordnance Datum (AOD). The Proposed Development is situated immediately adjacent to the existing DE Route electricity transmission network and will connect to the existing tower in the southeast corner of the Proposed Development's Red Line Boundary (RLB) - via underground cabling, terminating at the Sealing End Compound. The proposed cable connection is being undertaken under the Applicant's Permitted Development rights[1]. While it falls within the scope of these rights, the construction of the underground cable has not been explicitly assessed in **Chapters 3–6**, within this Environmental Appraisal (EA). The underground cable would be installed within the designated construction footprint of the Proposed Development. Consequently, any potential impacts from the cable connection have already been accounted for due to its planned location.

2.2 The Proposed Development

2.2.1 The Proposed Development covers an area of approximately 7.53 hectares (ha) and includes both the permanent operational infrastructure and the temporary works and facilities necessary for its construction.

Permanent Operational Infrastructure

2.2.2 The Proposed Developments' permanent operational infrastructure includes:

- a 132 Kilovolt (kV) substation platform (including a control building, earth switch, disconnectors, CVT, and four car parking spaces);
- Sealing End Compound;
- emergency back-up generator;
- ancillary works (lighting, Closed-Circuit Television (CCTV), security fencing);
- a proposed access route and bellmouth junction to the A713 (**Figure 2.1: Proposed Development**);
- an area for landscape planting (**Figure 6.1: Landscape Planting Plan**);

[1] The Town and Country Planning (General Permitted Development) (Scotland) Order 1992. Available at The Town and Country Planning (General Permitted Development) (Scotland) Order 1992.

- SuDS, including two ponds, two culverts and a soakaway; and
- stone access roads.

2.2.3 The substation platform (**Figure 2.1: Proposed Development**) associated with the Proposed Development is approximately 67 m x 56 m. This platform will accommodate a control building with a maximum height of 3.8 m, a generator, and four designated car parking spaces. To ensure Site security, the perimeter of the platform will be enclosed with palisade fencing, with a maximum height of 3.0m.

2.2.4 The Proposed Development will also include a Sealing End Compound, which serves as a critical interface to connect the DE route electricity transmission network to the proposed substation platform via underground cabling (UGC). This compound will be accompanied by associated High Voltage (HV) and Low Voltage (LV) equipment, busbars, and an Overhead Line (OHL) gantry structure reaching approximately 9.5 m in height. In addition, the Proposed Development will incorporate related cabling and protection systems.

2.2.5 The Proposed Development will incorporate two SuDS ponds, one soakaway, and two culverts intersecting the existing watercourse, which runs through the Proposed Development RLB. The main objective of incorporating SuDS into the design of the Proposed Development is to mitigate any potential increase in downstream flood risk. Two culverts are required as part of the construction of the Proposed Development - one permanent and one temporary. Both will be embedded below the existing watercourse bed and sized appropriately to ensure hydraulic continuity while minimising ecological disruption.

2.2.6 Access to the Proposed Development will be provided via the existing A713, which forms part of the Galloway Tourist Route. As part of the construction of the Proposed Development, a permanent access road and bellmouth junction will be created off the A713 to facilitate Site entry.

2.2.7 Additional ancillary infrastructure included within the Proposed Development comprises security fencing, CCTV systems, and lighting. Lighting columns will not exceed 6 m in height and will not remain illuminated permanently. Instead, they may be activated during maintenance activities or when required to ensure safe working conditions. Lighting can be controlled remotely or manually from within the compound's control building.

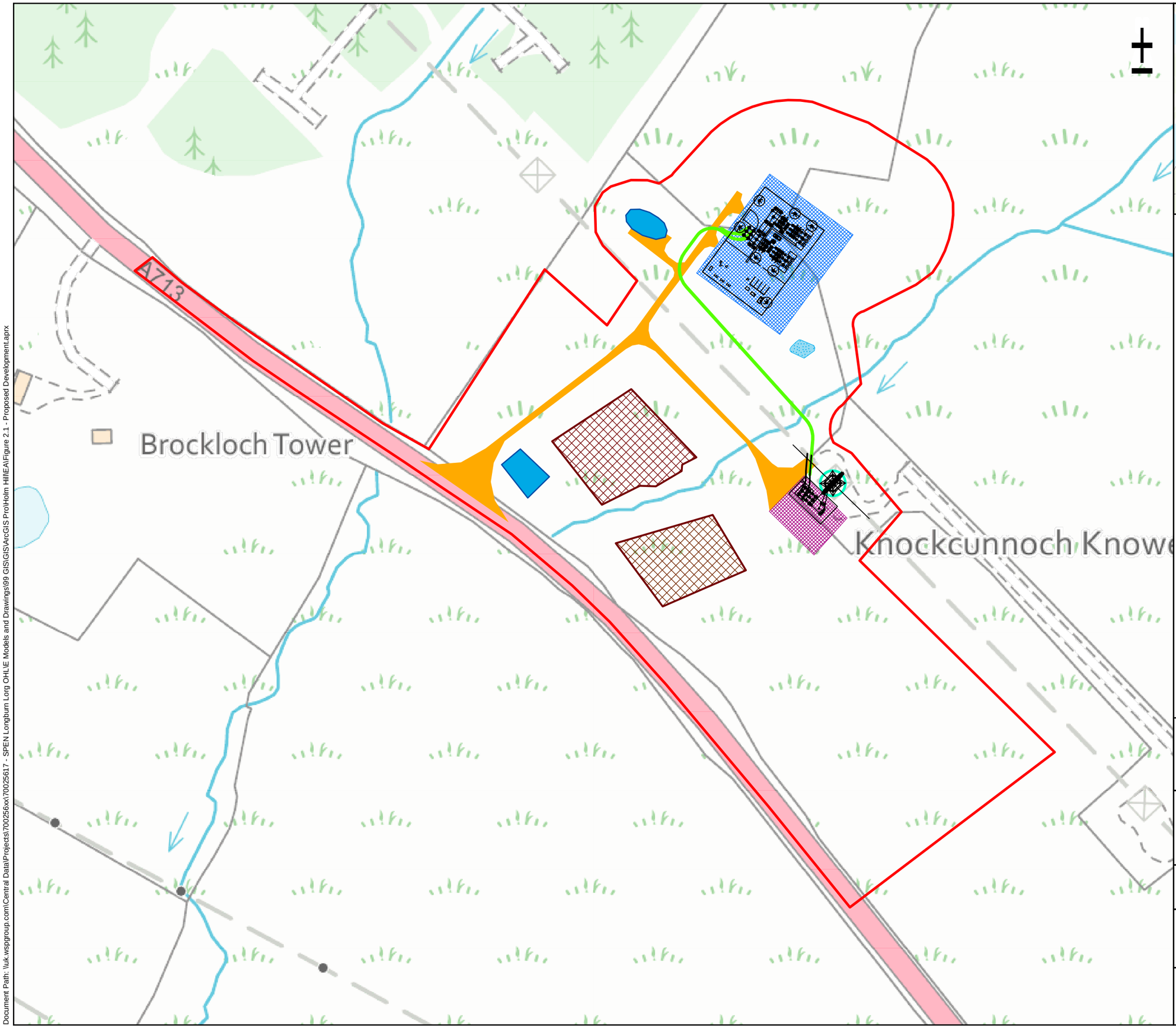
2.2.8 Landscaping measures have been integrated into the design of the Proposed Development, particularly in the area of land between the A713 and the proposed substation platform. These measures aim to visually screen the development from key viewpoints, especially those frequented by local residents and tourists engaged in walking and cycling along the Galloway Tourist Route that bounds the RLB to the south. The approach focuses on blending the proposed substation into the surrounding landscape through the strategic planting of native trees, which will help mitigate visual impact of the Proposed Development for local receptors (i.e local residents) and receptors along the A713. A detailed planting plan has been prepared, outlining the native species to be introduced following the completion of construction of the Proposed Development and is available within **Figure 6.1: Landscape Planting Plan**.

Temporary Construction

2.2.9 The temporary construction elements and activities associated with the Proposed Development are outlined below:

- **Contractor's Compounds** – Located between the proposed bellmouth A713 junction and the substation platform, on the eastern side of the Proposed Development access road.
- **Drainage Infrastructure** – Installation of drainage systems for the temporary contractor's compound, including a temporary connection to the attenuation basin. This connection will be removed upon completion of Site works and decommissioning of contractor areas.
- **Groundworks** – Includes temporary drainage measures and earthworks required to establish a level platform at the Site.
- **Remedial Works** – Restoration of the surrounding area and any disturbed ground to its original condition.

2.2.10 Construction of the Proposed Development is expected to take approximately 12 to 18 months following the granting of consent. However, the detailed programming of works will be determined by the Principal Contractor in coordination with The Applicant.



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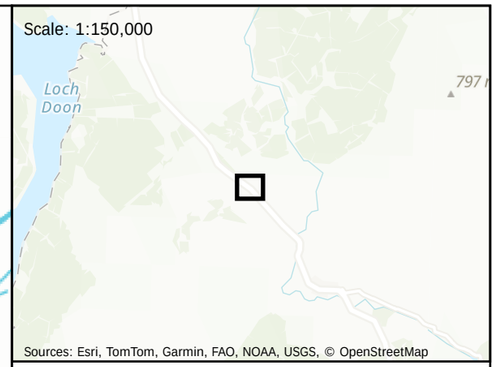

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap

Key

- Holm Hill Red Line Boundary
- Proposed Underground Cable
- Existing Tower
- 132 kV Proposed Substation Platform
- Access Road
- Sealing End Compound
- Temporary Contractor Compound
- SuDS Pond
- Proposed Soakaway

0 0.03 0.06 0.1 km

wsp

Client: SP Energy Networks

Project: Holm Hill Substation

Title: Figure 2.1 - Proposed Development

Date: 06/11/2025 Scale: 1:2,000 @ A3

Drawn: AS Checked: JE Approved: ML

Drawing Number: 70025617-WSP-HOLM-007

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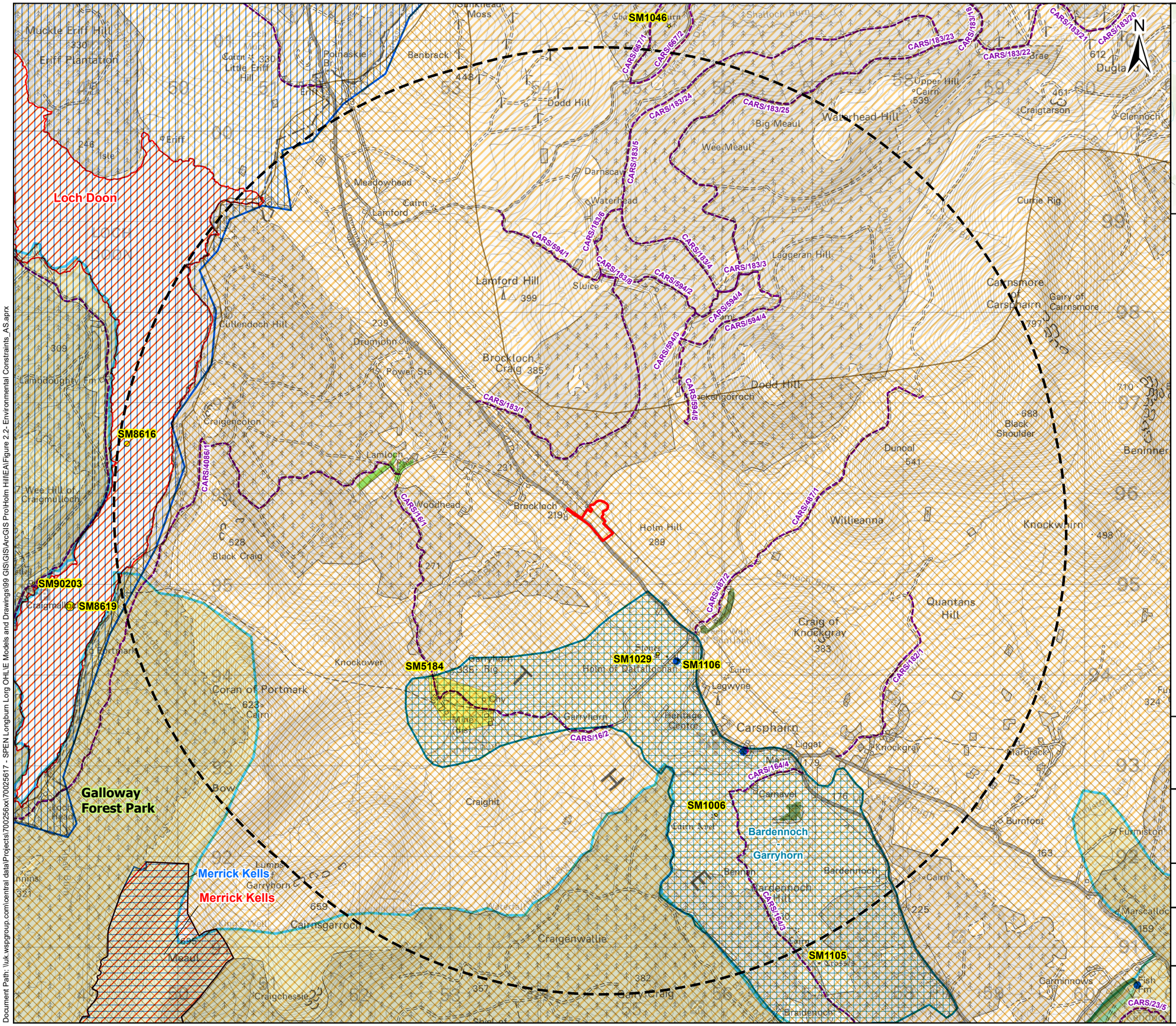

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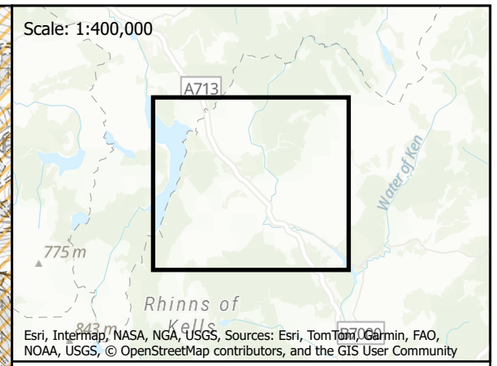

Esri, Intermap, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Key

- Holm Hill Red Line Boundary
- 5km Buffer

Environmental Constraints

- Special Areas of Conservation
- Sites of Special Scientific Interest
- Galloway and Southern Ayshire Biosphere Reserve
- Archaeologically Sensitive Area
- Regional Scenic Area
- Ayrshire Sensitive Landscape Area
- Scheduled Monument
- Important Bird Area
- Core Path

Listed Bulding

- Grade B
- Grade C

Ancient Woodland Inventory

- Ancient (of Semi-Natural Origin)
- Long-Established (of Plantation Origin)
- Other (on Roy Map)

0 1 2 km

wsp

Client: SP Energy Networks

Project: Holm Hill Substation

Title: Figure 2.2 - Environmental Constraints

Date: 11/11/2025 Scale: 1:40,000 @ A3

Drawn: AC Checked: AS Approved: ML

Drawing Number: 70025617-WSP-HOLM-008

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