Redshaw 400kV Substation

Transport Statement

May 2025

Land & Planning

Contents

Tables

Figures

Executive summary

This Transport Statement ('**TS**') documents an assessment of the potential transport-related impacts associated with Scottish Power Transmission plc ('**SPT**') (hereafter referred to as the '**Applicant**') proposal to construct a new 400kV/132kV substation situated near Redshaw in South Lanarkshire, which is hereafter referred to as the '**Proposed Development'**.

The Proposed Development includes the installation of a new 400kV Gas Insulated Switchgear ('**GIS'**) substation building and a new 132kV GIS substation building, along with a small distribution substation and 15 associated transformers. Additionally, a new permanent access track and purpose built access (utilising an existing field access) adjoining the substation compound and the temporary contractor's compound to the B7078 will be constructed to facilitate both construction and operational traffic.

Due to the M74 motorway's residual capacity and strategic nature, construction traffic associated with the Proposed Development will not result in a significant intensification of the motorway. As such, the M74 has been scoped out of this assessment.

Based on a review of the Proposed Development against existing conditions, and an assessment of construction traffic against baseline (2026) traffic flows, it is concluded that:

- Once completed, activity at the site will be limited to occasional monitoring and maintenance activities. The operation of the Proposed Development is therefore considered to have a negligible impact on the operation of the local and strategic transport network and no adverse impacts are anticipated.
- Construction of the Proposed Development is scheduled to take 38 months; commencing in November 2025 and concluding in October 2031. Construction activities will generate additional vehicle movements on the local and strategic road network through the movements of personnel, equipment, and construction vehicles to and from the Proposed Development. Construction activities are likely to generate a total of 180 additional vehicle movements on a typical day; 20 of which will be undertaken by Heavy Goods Vehicles ('**HGV')**.
- All traffic movements generated by the Proposed Development will utilise the B7078 and will access the substation compound via a new 5.5m wide permanent access track and purpose built access (upgrading an existing field access) adjoining the B7078.
- The number of additional vehicle movements generated during the construction phase is expected to be low enough to avoid any detrimental impacts on existing road traffic given the residual capacity. It is also anticipated to have a negligible impact on the operation of public transport in the area and on users of nearby active travel infrastructure.
- The construction of the Proposed Development will also require the movement of approximately 20 abnormal loads. The appointed contractor will identify specific traffic management requirements and localised arrangements for these deliveries, which will be formalised following standard protocols and approvals processes. Due to the low frequency of these movements, any impact on the public road network will be minimal.

This report concludes that impact on the operation of the local and strategic transport network due to the Proposed Development will be negligible. Any impacts will be time-limited and will cease upon the completion of construction works. As such, in general no material interventions or specific mitigations have been proposed.

However, in line with industry-recognised good practice, a bespoke Construction Traffic Management Plan ('**CTMP**') has been developed for subsequent adoption and development by

the appointed contractor(s). The CTMP outlines details of proposed traffic management measures and associated interventions proposed to be implemented during the associated construction phase, with the aim of minimising local disruption and enhancing safety for all road users. The outline CTMP has been submitted as a separate standalone document in support of the application for planning permission.

The preparation of the project Construction Environmental Management Plan ('**CEMP**') and CTMP will take into consideration the general matters and deliverables relating to other developments. This includes a requirement within the CTMP for the Applicant's appointed contractor to liaise with the appropriate developer organisation of any notably sized development(s) which appear likely to overlap with the Proposed Development; the aim of which is to coordinate and schedule construction-related traffic in such a way to reduce and minimise the effects of combined construction-related activity.

1 Introduction

1.1 Overview

The Applicant has submitted a planning application to South Lanarkshire Council ('**SLC**') for consent under Section 32 of the Town and Country Planning (Scotland) Act 1997, to construct a new 400kV/132kV substation near Redshaw in South Lanarkshire hence.

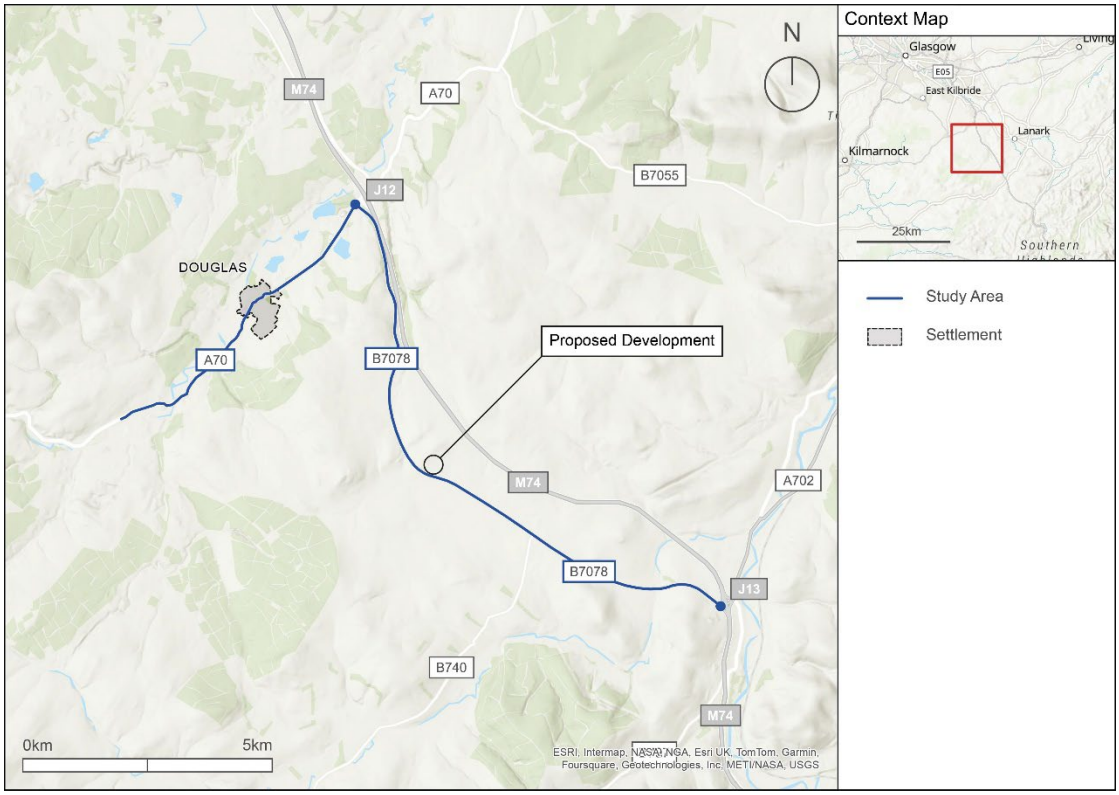
Mott MacDonald has prepared this TS in support of the planning application for the substation and associated works.

The study area is defined as:

- The B7078 between the A70/B7078 priority junction and the M74 / A702 / B7078 (Abington Interchange) roundabout junction (integral to M74 Junction 13)**.**
- The A70 between Douglas and M74 Junction 12

The study area is shown in **Figure 1.1.**

Figure 1.1: Study Area



Source: Mott MacDonald, LUC

The Proposed Development includes a new 400kV GIS substation building, a new 132kV GIS substation building, a new small distribution substation, and 15 new associated transformers. The works will also necessitate the construction of a new permanent access track from the local public road (the B7078) which will be used to accommodate construction and operational traffic movements.

Full details of the Proposed Development can be found in the EIA Report (Chapter 3) which accompanies the application for planning permission.

The Proposed Development is required to support the anticipated growth in renewable energy projects and potential future connections in the area, with an expected 2GW of renewable energy to be integrated into the transmission network. These improvements will enhance the resilience of local grid infrastructure and are anticipated to ensure a more reliable, fit-for-purpose, and economical transmission network for the south of Scotland.

Due to the M74 motorway's residual capacity and strategic nature, construction traffic associated with the Proposed Development is unlikely to result in a significant intensification of the motorway. As such, the M74 has been scoped out of this assessment.

1.2 Objectives

This TS has been prepared to identify the main transport issues relating to the Proposed Development, in addition to providing an assessment of potential impacts to the operation of local and strategic transport network.

1.3 Report Content

This report has been prepared in accordance with the Transport Scotland's Transport Assessment Guidance[1] in and is structured as follows:

- **Section 2** summarises the key policies relevant to the TS
- **Section 3** summarises the existing traffic and transport conditions local to the site
- **Section 4** describes the Proposed Development in further detail
- **Section 5** summarises the assessment of the potential impacts to the local and strategic transport network (including mitigation proposals)
- **Section 6** sets out a summary of the study findings and conclusions

[1] Transport Scotland (2012) 'Transport Assessment Guidance',. Available [online] at: https://transport.gov.scot [accessed 06/05/2025]

2 Policy Review

2.1 Overview

Relevant national, regional, and local policy documents have been reviewed and considered as an integral part of developing this TS.

2.1.1 National Policy

2.1.1.1 National Transport Strategy 2

The National Transport Strategy 2[2] ('**NTS2**') sets out the vision for Scotland's transport system from 2020 for the next 20 years. This Strategy was developed based on the original National Transport Strategy in 2006. The document envisages Scotland to have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, business and visitors. This vision is reinforced by four priorities and associated outcomes. The four outcomes[3] are:

- Reducing inequalities
- Climate action
- Delivering inclusive economic growth
- Improving health and wellbeing

These outcomes cover all modes of transport, with the overarching aim of the document to promote success through increasing wellbeing, sustainability and inclusive economic growth.

NTS2 and its outcomes have been taken into consideration when developing this TS. This includes the analysis of existing transport accessibility by mode (in **Section 3**).

2.1.1.2 National Planning Framework 4

The National Planning Framework[4] is now in its fourth revision ('**NPF4**'), and sets out the long-term spatial planning strategy for Scotland, which includes three delivery outcomes for Scotland:

- "**Sustainable places**[5], where we reduce emissions, restore and better connect biodiversity"
- "**Liveable places**[6], where we can all live better, healthier lives"
- "**Productive places**[7], where we have a greener, fairer and more inclusive wellbeing economy"

[2] Transport Scotland (2020) 'National Transport Strategy 2'. Available [online] at: https://www.transport.gov.scot [accessed 06/05/2025]

[3] Transport Scotland (2020) 'National Transport Strategy 2', page 5. Available [online] at: https://www.transport.gov.scot [accessed 06/05/2025]

[4] The Scottish Government (2024) 'National Planning Frame 4'. Available [online] at: https://www.gov.scot [accessed 06/05/2025]

[5] The Scottish Government (2024) 'National Planning Frame 4', pages 36 - 58. Available [online] at: https://www.gov.scot [accessed 06/05/2025]

[6] The Scottish Government (2024) 'National Planning Frame 4', pages 59 - 78. Available [online] at: https://www.gov.scot [accessed 06/05/2025]

[7] The Scottish Government (2024) 'National Planning Frame 4', pages 79 - 93. Available [online] at: https://www.gov.scot [accessed 06/05/2025]

Since the Planning etc. (Scotland) Act 2006[8], NPF4 is a statutory document and therefore a material consideration within any planning application.

2.1.2 Regional Policy

2.1.2.1 A Call to Action: The Regional Transport Strategy for the west of Scotland (2023-2038)

Strathclyde Partnership for Transport's ('**SPT**') Regional Transport Strategy[9] ('**RTS'**) sets out the long-term direction for transport for the west of Scotland.

The RTS includes polices under the following themes:

- Accessing and using transport[10];
- Reducing the need to travel and managing demand[11];
- Enabling active travel[12];
- Enhancing the quality and integration of public transport[13];
- Improving road safety[14];
- Decarbonising vehicles and improving air quality[15];
- Moving goods more sustainably[16];
- Increasing resilience and adapting to climate change[17];
- Protecting and enhancing the built and natural environment[18]; and
- Connecting places[19].

The RTS and its themes and relevant policies have been taken into consideration when developing this TS.

[8] UK Government (2006) 'Planning etc. (Scotland) Act 2006'. Available [online] at: https://www.legislation.gov.uk [accessed 06/05/2025]

[9] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy'. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[10] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 30 - 31. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[11] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 32 - 33. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[12] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 34 - 35. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[13] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 36 - 38. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[14] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', page 39. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[15] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 40 - 41. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[16] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', page 42. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[17] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 43 - 44. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025

[18] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', page 45. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

[19] Strathclyde Partnership for Transport (2023) 'Regional Transport Strategy', pages 46 - 49. Available [online] at: https://www.spt.co.uk [accessed 06/05/2025]

2.1.3 Local Policy

2.1.3.1 South Lanarkshire Council's Local Development Plan 2

SLC's Local Development Plan 2[20] ('**LDP2**') was adopted in 2021. It sets out a vision for South Lanarkshire and aims to promote South Lanarkshire as a place on which to invest, live, visit and work.

LDP2 identifies four objectives[21] which seek to:

- Encourage sustainable economic growth;
- Meet the community needs;
- Enhance and safeguard the environment; and
- Maximise the use of and seek opportunities to enhance existing infrastructure.

LDP2 and its objectives have been taken into consideration when developing this TS.

2.1.3.2 South Lanarkshire's Sustainable Development and Climate Change Strategy (2022-2027)

SLC's Sustainable Development and Climate Change Strategy[22] ('**SDCCS**') covers the period from year 2022 to 2027. Its aim is to build a sustainable, climate resilient and net-zero South Lanarkshire together, in a fair and inclusive way.

The strategy includes four key themes[23]:

- People;
- Places and Communities;
- The Natural Environment; and
- A Green Economy.

These themes inform a number of priorities including:

- Influence change through improving the understanding of Sustainable Development and the Climate Emergency across South Lanarkshire;
- Improve affordable, sustainable and accessible transport options; and
- Progress a transition to net-zero, energy efficient and climate resilience homes, buildings and infrastructure, and minimise the unsustainable use of natural resources and regenerate where appropriate.

The SDCCS themes and actions have been taken into consideration when developing this TS.

2.1.3.3 South Lanarkshire Local Transport Strategy

SLC's Local Transport Strategy[24] (LTS) was adopted in 2013 and presented a 10-year vision for transport in South Lanarkshire.

---

[20] South Lanarkshire Council (2021) 'Local Development Plan 2'. Available [online] at: https://www.southlanarkshire.gov.uk [accessed 06/05/2025]

[21] South Lanarkshire Council (2021) 'Local Development Plan 2', page 9. Available [online] at: https://www.southlanarkshire.gov.uk [accessed 06/05/2025]

[22] South Lanarkshire Council (2022) 'Sustainable Development and Climate Change Strategy'. Available [online] at: https://www.southlanarkshire.gov.uk [accessed 06/05/2025]

[23] South Lanarkshire Council (2022) 'Sustainable Development and Climate Change Strategy – Theme and vision'. Available [online] at: https://www.southlanarkshire.gov.uk [accessed 06/05/2025]

[24] South Lanarkshire Council (2013) 'Local Transport Strategy'. Available [online] at: https://www.southlanarkshire.gov.uk [accessed 06/05/2025]

The LTS:

- Outlines the strategy for SLC's roads and transportation plans;
- Looks to how the roads and transportation system will develop in the short and long term;
- Is about making sure that transport supports regeneration and sustainable development;
- Sets out improvements in the quality and safety of roads and transportation; and
- Aims to improve health by encouraging walking and cycling.

SLC are in the process of developing the 2024-2034 LTS which is yet to be published.

The current LTS objectives have been taken into account when developing this TS.

3 Existing Conditions

3.1 Site Location & Context

3.1.1 Proposed Development Site Location

A high-level Transport Access Review and site visit was undertaken in on Tuesday 25 September 2023. The Transport Access Review is included in **Appendix A**.

The Proposed Development site is located on agricultural land adjacent to the B7078 west of the M74 between Junction 12 (Uddington) and Junction 13 (Abington) as indicated in **Figure 1.1.**

There are no major settlements in proximity to the Proposed Development, however, the B7078 does facilitate access to the nearby Andershaw and Kennoxhead windfarms, a disused hotel and truck stop, Duneaton Quarry, and several isolated farmsteads.

The closest population centre is the village of Douglas, located approximately 3.5 km to the northwest with a population of just under 1,500.

3.1.2 Site Access

A new vehicular access to the Proposed Development Site, utilising an existing field access will be constructed as part of the Proposed Development. A new 5.5m wide permanent access track will connect to the B7078 (serving as the primary access for the works). Further information regarding the site access is detailed in **Section 4.2**.

3.2 Road Network

3.2.1 Existing Road Network

Roads in the study area (shown in **Figure 1.1**) are detailed in this Section. As described in **Section 1.1** the M74 has been scoped out of the assessment.

3.2.1.1 B7078

The B7078 is a local single carriageway road administered by SLC, situated in an approximate north-south direction parallel to the nearby M74 and can be accessed from the north via the A70 (Ayr Road), from the south via Junction 13 of the M74 at Abington, and from the west via the B740.

3.2.1.2 A70 (Ayr Road)

The A70 (Ayr Road) forms a priority junction with the B7078 to the north of the Proposed Development. It links to the M74 motorway at Junction 12.

3.2.1.3 Speed Limits

The B7078 and A70 (Ayr Road) are single carriageway roads typically subject to a 60mph (national) speed limit.

3.2.2 Baseline Traffic Conditions

Publicly available traffic counts (sourced from both Department for Transport ('**DfT**') datasets and recent planning applications for nearby developments) have been referenced to determine a set of baseline traffic flows for those sections of local roads anticipated to be used by traffic generated by the Proposed Development. These local transport routes are the:

- B7078; and
- A70 (Ayr Road).

National Road Traffic Forecast 97 ('**NRTF97**')[25] growth factors have been applied to the available counts to produce a set of baseline traffic flows for 2026, the peak year for construction vehicle movements. A central growth forecast is considered a reasonable and robust assumption and is likely to be reflective of the overall 'slowing' of road traffic growth since the Covid-19 pandemic. The resulting baseline traffic flows are provided in **Table 3.1**.

Table 3.1: 2026 Baseline Traffic Conditions (Daily (24 hour) Average Two-Way Flows)

Count Location	Source	Cars + LGVs	HGVs + PSVs	Total
A70 (Ayr Road) [between M74 on-slip/off-slip at J12]	DfT	3,278	580	3,858
A70 (Ayr Road) [west of Douglas]	DfT	2,118	317	2,435
A70 (Ayr Road) between the B7078 junction and Junction 12 of the M74	M74 West Renewable Energy Park Environmental Impact Assessment Report (EIAR), Ramboll	3,615	1,115	4,730
B7078 (by Andershaw Wind Farm)	M74 West Renewable Energy Park EIAR, Rambollut	602	304	906

Source: DfT[26], Ramboll[27]

DfT traffic data includes hourly traffic flows. A factor to convert daily traffic flow to peak hour traffic flow has been derived using manual count data collected as part of DfT Road Traffic Counts for non-DfT count locations.

The DfT traffic data has identified 16:00 –17:00 as the network peak hour, with the resulting 2026 baseline peak hour traffic flows provided in **Table 3.2**.

Table 3.2: 2026 Baseline Traffic Conditions (Peak Hour Two-Way Flows)

Count Location	Cars + LGVs	HGVs + PSVs	Total
A70 (Ayr Road) [between M74 on-slip/off-slip at Junction 12]	293	54	347

[25] Department of the Environment, Transport and the Regions (1997). National Road Traffic Forecasts (Great Britain).

[26] Department for Transport 'Road Traffic Statistics' Manual Count Point Locations (10827 and 40825). Available [online] at https://roadtraffic.dft.gov.uk/ [accessed 02/05/2025]

[27] Renewco Power & Ramboll (2024) 'M74 West Renewable Energy Park, Environmental Impact Assessment Report, Chapter 9 Traffic and Transport'. Available [online] https://publicaccess.southlanarkshire.gov.uk/ (Planning Reference: P/24/1236) [accessed 02/05/2025]

A70 (Ayr Road) [west of Douglas]	229	23	252
A70 (Ayr Road) between the B7078 junction and Junction 12 of the M74	338	104	442
B7078 (by Andershaw Wind Farm)	57	29	86

Source: DfT[28], Ramboll[29]

3.3 Public Transport

There is limited public transport provision in the vicinity of the site, with some infrequent bus services operating on the A70 (Ayr Road) to the north. These services primarily operate between the village of Glespin (to the west) and Lanark (to the northwest), routing via the A70 (Ayr Road) including the section beneath the M74 to the north of the site.

A summary of those services operating in proximity of the site has been included in **Table 3.3**.

Table 3.3: Local Bus Services near the Proposed Development Site

Service	Route	Route Section	Frequency	Operator
8A	**Glespin** – **Lanark** [via Douglas, Uddington, Rigside, Douglas Water, Cairnhouse, Lesmahagow, Kirkmuirhill, Auchenheath, Kirkfieldbank]	A70 (Ayr Road)	1x service/day [Sunday only]	Stuart's Coaches
9	**Glespin** – **Lanark** [via Douglas, Uddington, Rigside, Douglas Water, Kirkfieldbank]	A70 (Ayr Road)	2x services/day [weekdays] 4x services/day [Weekends]	Stuart's Coaches
39	**Glespin** – **Lanark** [via Douglas, Uddington, Rigside, Hyndford Bridge]	A70 (Ayr Road)	1x service/day [Saturday only]	Stuart's Coaches
259	**Lanark** – **Glespin** [via Kirkfieldbank – Rigside – Uddington – Douglas]	A70 (Ayr Road)	7x services/day [weekdays + Saturday only]	Whitelaw Coaches

Source: Stuart's Coaches[30], Whitelaw Coaches[31]

[28] Department for Transport 'Road Traffic Statistics' Manual Count Point Locations (10827 and 40825). Available [online] at https://roadtraffic.dft.gov.uk/ [accessed 02/05/2025]

[29] Renewco Power & Ramboll (2024) 'M74 West Renewable Energy Park, Environmental Impact Assessment Report, Chapter 9 Traffic and Transport'. Available [online] https://publicaccess.southlanarkshire.gov.uk/ (Planning Reference: P/24/1236) [accessed 02/05/2025]

[30] Stuart's Coaches Timetable Information. Available [online]at: https://stuartscoaches.co.uk [accessed 06/05/2025]

[31] Whitelaw Coaches Timetable Information. Available [online] at: https://bustimes.org [accessed 06/05/2025]

3.4 Active Travel

National Cycle Network Route 74 (NCN 74)[32] is located along the length of the B7078 in the study area. The majority NCN 74 in the locality of the site is a fully segregated shared use footway/cycleway of good quality and condition. There is a section, of on-road cycle lane for approximately 2.2km along the B7078 approaching the priority junction with the A70 (Ayr Road), where the route then continues onwards as a segregated path.

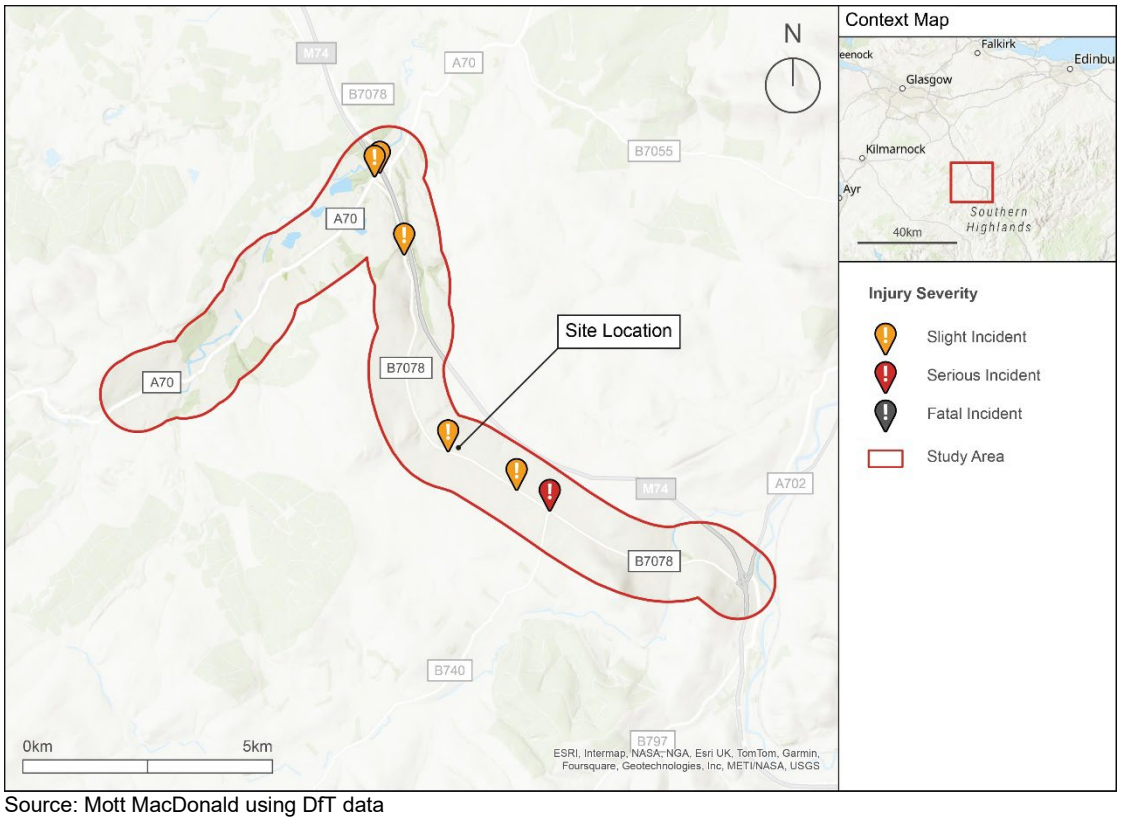
This section of NCN 74 also forms part of SLC's Core Path network[33].

3.5 Road Safety

Recorded Personal Injury Collision ('**PIC**') data was obtained from publicly available DfT datasets which included recorded road traffic incidents on the public road network in study area.

In line with standard practice, data from the most recently available three years (June 2021 – June 2024 inclusive) has been assessed. An incident plot has been produced and included in **Figure 3.1** with an accompanying summary provided in **Table 3.4**.

Figure 3.1: Road Traffic Personal Injury Collision Plot



Source: Mott MacDonald using DfT data

[32] Sustrans National Cycle Netowrk Available [online] https://www.sustrans.org.uk/national-cycle-network/ [accessed 06/05/2025]

[33] South Lanarkshire Council Core paths plan maps Available [online] at: https://www.southlanarkshire.gov.uk/downloads/download/676/core_paths_plan_maps (Maps 38 and 44) [accessed 06/05/2025]

Table 3.4: Road Traffic Personal Injury Collision Summary by Severity

Year	Slight	Serious	Fatal	Total
2021	0	0	0	0
2022	3	1	0	4
2023	2	0	0	2
2024	0	0	0	0
Total	**5**	**1**	**0**	**6**

Source: DfT[34]

A total of six PICs were recorded on the local road network adjacent to the site, one of which was classified with a serious severity outcome. The distribution of incidents does not suggest the presence of any 'crash clusters' near the Proposed Development.

It is therefore concluded that the road network adjacent to the site does not have a poor safety record.

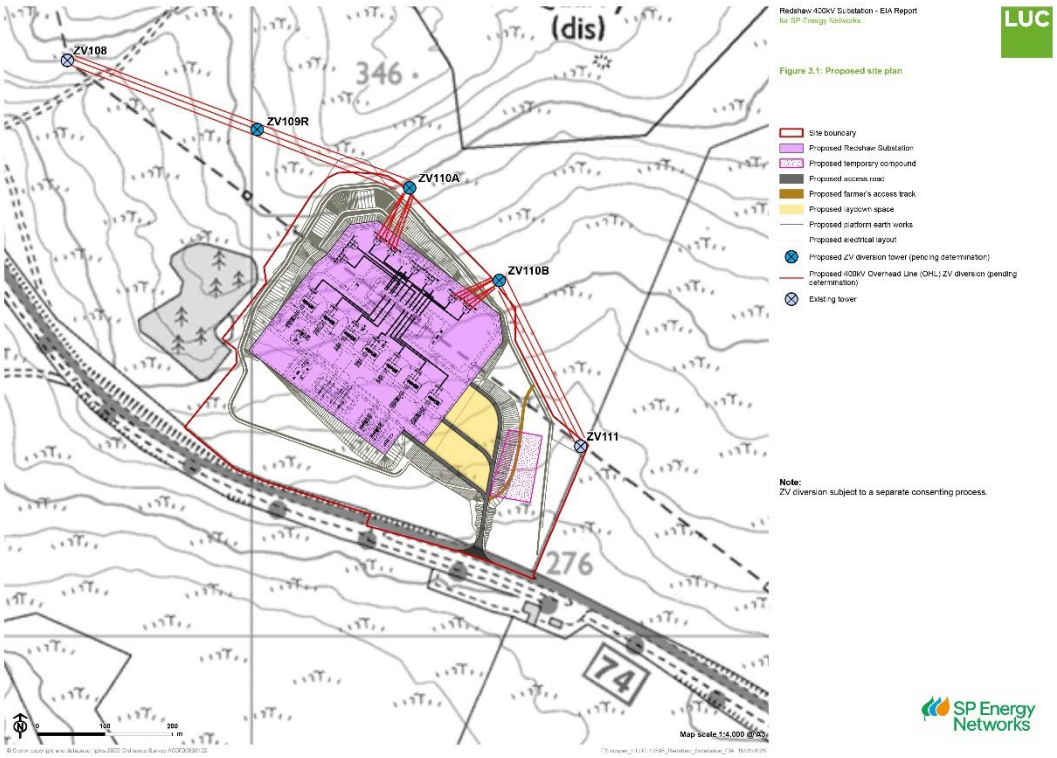
[34] Department for Transport Road Safety Data. Available [online] at : https://data.gov.uk [accessed 06/05/2025]

4 Proposed Development

4.1 Overview

The Proposed Development will cover an approximate area of 20.7ha. The configuration of the Proposed Development is shown in **Figure 4.1**.

Figure 4.1: Proposed Development Configuration



Source: SPEN, LUC

4.2 Site Access

Site access (construction and operational) will be taken from a new vehicular access, utilising an existing field access.

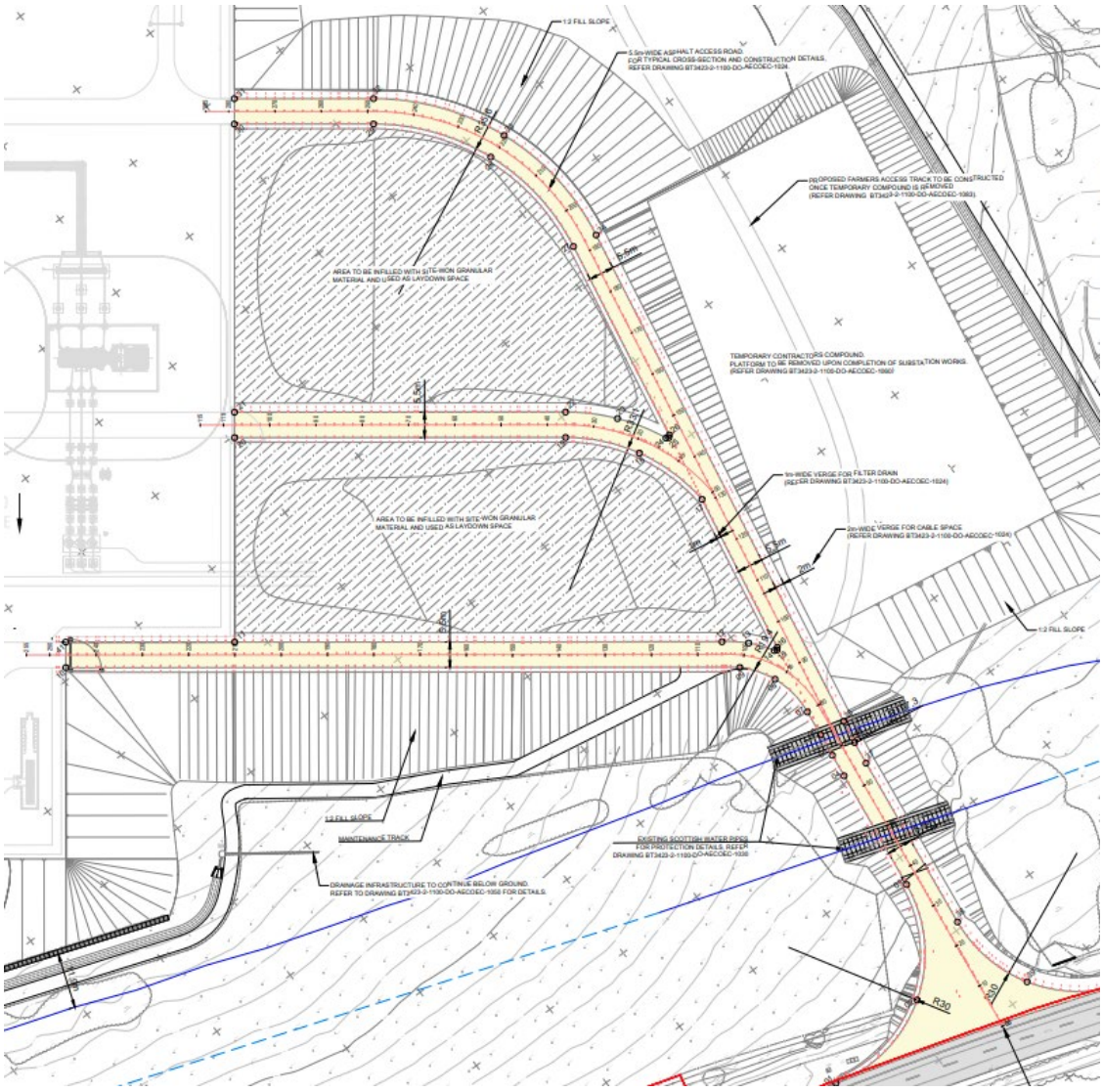
A new permanent access track, 5.5m in width, will be constructed to provide access to the substation and will connect to the B7078 immediately to the southeast. The proposed access will take the form of an at-grade priority junction designed to facilitate access to and from the site, with illustrative drawings provided in **Figure 4.2** (the full drawing and other associated drawings can be found in **Appendix B**).

The track is expected to be constructed with stone, but a bituminous finish may be required in some locations, including the interface with the public road and this will be confirmed during the detailed design phase.

A new field access would also link to the access track which is expected to be used infrequently.

A Stage 1 Road Safety Audit been undertaken for the site access and is included (with associated correspondence) in **Appendix C**. It is expected that a Stage 2 Road Safety Audit would be undertaken for the detailed design of the site access.

Figure 4.2: Proposed Development Access Road Layout



Source: SPEN

4.3 Construction of Proposed Development

4.3.1 Key Activities

The Proposed Development will require the following construction activities to be undertaken:

- Earthworks for the 400kV/132kV substations and access road;
- Civil works for the 400kV/132kV substations and access road;
- Installation of the power transformers; and
- Cable civil and ducting works.

- During the construction phase, it is anticipated that the following types of machinery will be utilised: HGVs, excavators, cranes, breakers, tractor trailers, and ride-on rollers.

4.3.2 Abnormal Loads

Police Scotland manages the movement of abnormal loads throughout Scotland[35]. The Chief Officer of Police Scotland must be notified in advanced of any abnormal load movements throughout Scotland.

Under The Road Vehicles (Construction and Use) Regulations 1986[36] and The Road Vehicles (Authorisation of Special Types) (General) Order 2003 ("**the STGO**") [37] abnormal indivisible loads are characterised by one or more of the following:

- A width of more than 2.9m, including lateral projection[38];
- A weight of more than 44,000 kilograms[39];
- An axle load of more than 10,000kg for a single non-driving axle or 11,500kg for a single driving axle[40]; and
- An 18.65m rigid length or 25.9m overall length (including forwards and rearwards projections) [41].

Abnormal load routes are described in the CTMP.

4.3.3 Construction Programme

Construction of the Proposed Development is proposed to be undertaken between November 2025 and October 2031, with associated earthworks and civil works for the substations to be completed by 2026.

On weekdays, construction activities will be undertaken between 07:00-19:00 during summer months (April – September) and between 08:00-17:00 (or as daylight allows) during winter months (October – November[42]). Working hours on Saturdays will be limited to between 09:00-12:00, and no working is proposed on Sundays or national public holidays.

4.4 Operation of Proposed Development

Once operational, activities associated with the Proposed Development will be minimal and related to occasional monitoring and maintenance.

[35] Police Scotland 'Moving an abnormal load'. Available [online] at: https://www.scotland.police.uk [accessed 06/05/2025]

[36] The UK Government 'The Road Vehicles (Construction and Use) Regulations 1986'. Available [online] at: https://www.legislation.gov.uk [accessed 06/05/2025]

[37] The UK Government 'The Road Vehicles (Authorisation of Special Types) (General) Order 2003'. Avilable [online] at https://www.legislation.gov.uk [accessed 06/05/2025]

[38] The UK Government 'The Road Vehicles (Construction and Use) Regulations 1986', regulation 82. Available [online] at: https://www.legislation.gov.uk [accessed 06/05/2025]

[39] The UK Government 'The Road Vehicles (Construction and Use) Regulations 1986', regulation 75. Available [online] at: https://www.legislation.gov.uk [accessed 06/05/2025]

[40] The UK Government 'The Road Vehicles (Construction and Use) Regulations 1986', regulation 30. Available [online] at: https://www.legislation.gov.uk [accessed 06/05/2025]

[41] The UK Government 'The Road Vehicles (Construction and Use) Regulations 1986', regulation 7. Available [online] at: https://www.legislation.gov.uk [accessed 06/05/2025]

[42] Winter months will extend through to March if there are construction delays.

5 Impact Assessment

5.1 Overview

Given the low levels of operational trips anticipated (see **Section 4.4**), the potential impact on the operation of local transport and strategic network, once construction has been completed, will be negligible. As such, it has not been deemed necessary to undertake an assessment for the Proposed Development's operational phase; this approach was agreed through scoping.

The construction of the Proposed Development will, however, generate vehicle trips through the movement of personnel, equipment and materials to and from the site for a duration of approximately 38 months. The impact assessment set out in the following sections therefore only considers the construction phase of the Proposed Development.

5.2 Trip Generation

5.2.1 Construction Personnel

The Applicant anticipates that on a typical day during construction, the Proposed Development will require up to 50 personnel on site. A vehicle occupancy rate of 1.25 is assumed equating to 40 vehicles travelling to and from the site on a daily basis, generating 80 two-way car movements per day.

5.2.2 Construction Traffic

Standard HGVs and Large Goods Vehicles ('**LGV**') will be used to transport construction materials, components and plant to the Proposed Development. The Applicant has advised that a peak of 20 HGV trips per day will be required during construction, generating 40 two-way HGV movements. In addition to personnel traffic, a peak of 30 LGV trips per day will be required during construction, generating a 60 two-way LGV movements.

5.2.3 Abnormal Loads

There will be a requirement for the movement of approximately 20 abnormal loads (associated with the movement of transformer and control building components) during the construction phase.

At the time of writing, details regarding the transportation of any abnormal loads to site are still to be confirmed and will likely only be confirmed once a contractor is in place.

5.2.4 Total Vehicles

In total, the Proposed Development is expected to generate an additional 180 daily vehicle movements on the local transport network during the peak construction period, comprising:

- 80 two-way car movements.
- 60 two-way LGV movements.
- 40 two-way HGV movements.

5.3 Impact Assessment of the Local Transport Network

5.3.1 Road Network

Construction traffic will approach the site on the B7078 either from the north or south, via the A70 (Ayr Road) or the M74 at Junction 13, respectively.

The impact of construction traffic during the local network's peak hour (16:00 – 17:00) has been assessed with the following assumptions:

- All construction personnel departures will occur during this period
- LGV and HGV movements (both inbound and outbound) will be distributed evenly over a weekday (a winter month of duration nine hours has been assumed for the assessment)

This results in a total of 49 additional vehicle movements (including five HGV movements) over the course of the peak hour. These additional movements have been assessed against each of the 2026 baseline peak hour traffic flows for the adjacent road network displayed in **Table 3.1**.

The results of this assessment are indicated in **Table 5.1**.

Table 5.1: 2026 Road Network Impact (Peak Hour)

Road	Theoretical Capacity (1 hour, 2-way)[43]	2026 Baseline [No. HGVs]	2026 Baseline + Construction Trips [No. HGVs]	% Change [% Change HGVs Only]
A70 (Ayr Road) [between M74 on-slip/off-slip at Junction 12]	2,400	347 [54]	396 [59]	14% [9%]
A70 (Ayr Road) [west of Douglas]	2,400	252 [23]	301 [28]	19% [22%]
A70 (Ayr Road) between the B7078 junction and Junction 12 of the M74	2,400	442 [104]	491 [109]	11% [5%]
B7078 (by Andershaw Wind Farm)	2,400	86 [29]	135 [34]	57% [17%]

Source: DfT[44], Ramboll[45], SPEN

The addition of trips generated by the construction of the Proposed Development would constitute an increase in traffic of between 11% and 57% on stretches of the adjacent road network, with HGV traffic increasing by between 5% and 22%.

In instances where baseline traffic flows are low, as is the case with much of the adjacent road network, large percentage increases may not be fully representative of actual changes in levels of traffic, and it is possible to show relatively large increases yet for the road to operate well below capacity.

[43] DMRB, Volume 15, Part 5 "The NESA Manual"

[44] Department for Transport 'Road Traffic Statistics' Manual Count Point Locations (10827 and 40825). Available [online] at https://roadtraffic.dft.gov.uk/ [accessed 02/05/2025]

[45] Renewco Power & Ramboll (2024) 'M74 West Renewable Energy Park, Environmental Impact Assessment Report, Chapter 9 Traffic and Transport'. Available [online] https://publicaccess.southlanarkshire.gov.uk/ (Planning Reference: P/24/1236) [accessed 02/05/2025]

For example, the B7078 will see an increase from 86 vehicle movements increasing to 135 vehicle movements. The increase in construction traffic would see one vehicle movement on average every 42 seconds increasing to one vehicle movement on average every 27 seconds. Such levels of traffic are well within the capacity of the road network, including the operation of both the A70 (Ayr Road)/B7078 priority intersection and the M74/A702/B7078 roundabout (Abington Interchange).

A daily traffic increase of 180 vehicle movements on the B7078 and the A70 (within in the study area), which would be less than a 20% increase and less than a 10% increase respectively, would suggest a negligible increase in collision likelihood based on an average of one collision per year on both road sections.

5.3.2 Active Travel Network

While this TS acknowledges that NCN 74 traverses the study area and crucially shares a short on-road segment of the B7078 north of the site, the increase in vehicular trips is low enough that the potential impacts on vulnerable road users should be considered negligible.

Due to the rural setting of the site, the Proposed Development is not expected to generate any walking or cycling trips during construction. Accordingly, the design proposals do not provide pedestrian or cycle access for use by personnel to access the site either during the construction or operational phases of the Proposed Development.

5.3.3 Public Transport Operations

Public bus services operate on an infrequent basis on the A70 (Ayr Road) to the north of the site, therefore it is unlikely to be used by personnel travelling to and from the site. As such, the Proposed Development is not expected to generate any additional public transport trips and no provision has been included within the Proposed Development proposals to enhance public transportation access.

Although some construction traffic generated by the Proposed Development is expected to use this route to travel to and from the site, the anticipated increase in vehicle trips is low enough that the level of impact on bus operations should be considered negligible.

5.4 Committed Development

A review of relevant planning applications has been undertaken to identify any nearby committed developments which – together with the Proposed Development – may result in impacts to the local transport network above that which may be expected from the Proposed Development alone. In line with standard industry practice, committed developments – defined in this case as those with extant planning consent (with the potential to generate traffic on the adjacent public road network) – are listed in **Table 5.2**.

Table 5.2: Review of Committed Developments

Development	Reference	Authority	Assessment Details
Douglas West Extension (Wind Farm) [46]	ECU00001836	Scottish Government Energy Consents Unit	No overlapping of construction routes.
Hagshaw Hill Repowering (Wind Farm) [47]	ECU00000737	Scottish Government Energy Consents Unit	No overlapping of construction routes.
Priestgill (Wind Farm) [48]	P/19/1803 P/22/1646	SLC	No traffic information available.
Broken Cross surface mine[49]	CL/12/0116	SLC	No traffic information available.
Broken Cross (Wind Farm) [50]	P/19/1636	SLC	No overlapping of construction routes
Birkhill (Wind Farm)[51]	P/19/0363	SLC	No traffic information available.
Coalburn Energy Storage Facility[52]	ECU00003458	Scottish Government Energy Consents Unit	No overlapping of construction routes.
Coalburn II Energy Storage Facility[53]	ECU00004698	Scottish Government Energy Consents Unit	No overlapping of construction routes.
Duneaton Quarry[54]	P/21/0106	SLC	No information on construction traffic movement available.
Priestgill Overhead Line[55]	ECU00004475	Scottish Government Energy Consents Unit	No overlapping of construction routes.
MET Mast Centre	N/A	SLC	No information available.

Source: Varies by Development

The preparation of the project CEMP and CTMP will take into consideration the general matters and deliverables relating to other developments. This includes a requirement within the CTMP for the Applicant's appointed contractor to liaise with the appropriate developer organisation of any notably sized development(s) which appear likely to overlap with the Proposed Development; the aim of which is to coordinate and schedule construction-related traffic in such a way to reduce and minimise the effects of combined construction-related activity.

[46] Energy Consents Unit 'Douglas West Wind Farm Extension'. Available [online] at: https://www.energyconsents.scot (reference: ECU00001836): [accessed 06/05/2025]

[47] Energy Consents Unit 'Hagshaw Hill Wind Farm Repowering'. Available [online] at: https://www.energyconsents.scot (reference: ECU00000737) [accessed 06/05/2025]

[48] South Lanarkshire Council. Available [online] at: https://publicaccess.southlanarkshire.gov.uk (reference: P/19/1803 and P/22/1646) [accessed 06/05/2025]

[49] South Lanarkshire Council. Available [online] at: https://publicaccess.southlanarkshire.gov.uk (reference: CL/12/0116) [accessed 06/05/2025]

[50] South Lanarkshire Council. Available [online] at: https://publicaccess.southlanarkshire.gov.uk (reference: P/19/1636) [accessed 06/05/2025]

[51] South Lanarkshire Council. Available [online] at: https://publicaccess.southlanarkshire.gov.uk (reference: P/19/1363) [accessed 06/05/2025]

[52] Energy Consents Unit 'Coalburn Energy Storage Project'. Available [online] at: https://www.energyconsents.scot (reference: ECU00003458) [accessed 06/05/2025]

[53] Energy Consents Unit 'Coalburn 2 Energy Storage Project'. Available [online] at: https://www.energyconsents.scot (reference: ECU00004698) [accessed 06/05/2025]

[54] South Lanarkshire Council. Available [online] at: https://publicaccess.southlanarkshire.gov.uk (reference: P/21/0106) [accessed 06/05/2025]

[55] Energy Consents Unit 'Priestgill Connection – Section 37 application'. Available [online] at: https://www.energyconsents.scot (reference: ECU00004475) [accessed 06/05/2025]

5.5 Mitigation

Based on the assessment described above, the Proposed Development will generate a negligible increase in road traffic for the duration of the construction phase. Any impacts will be time-limited, ceasing upon completion of construction works, and are not anticipated to be disruptive to the local transport network.

In general, no material interventions are deemed necessary to mitigate any impacts arising directly from the construction of the Proposed Development. However, the development will require the movement of abnormal loads. The appointed contractor(s) will identify specific traffic management requirements and localised arrangements for these deliveries, which will be formalised following standard protocols and approvals processes. Due to the low frequency of these movements, any impact on the public road network will be minimal.

In line with industry-recognised good practice, a CTMP has been developed for inclusion within the Proposed Development's application for consent. The document, which will be adopted by the Applicant's appointed contractor(s), outlines the details of proposed traffic management measures and associated interventions to be implemented during the construction of the Proposed Development. This will include, but will not be limited to:

- Clear instructions on appropriate routing to and from the site;
- Signage strategies confirming that all signs are clearly displayed on approach to the site; and
- Details of wheel washes at the site to minimise the impact of dust and debris.

The aim of the CTMP is to minimise local disruption while enhancing safety for all road users. It will remain a dynamic document and is intended to be developed as appropriate prior to commencement (and potentially during) construction activities.

6 Conclusion

6.1 Summary of Findings

Planning permission is being sought to construct a new 400kV/132kV substation near Redshaw in South Lanarkshire.

The Proposed Development will include the installation of a new 400kV GIS substation building and a new 132kV GIS substation building, along with a small distribution substation and associated transformers. Additionally, a new permanent access track and purpose built access (utilising an existing field access) adjoining the B7078 to the substation compound will be constructed, for both construction and operational traffic movements.

This TS has assessed the traffic and transportation impact associated with the Proposed Development and has identified that:

- Once completed, activity at the site will be limited to occasional monitoring and maintenance activities. The operation of the Proposed Development is therefore considered to have a negligible impact on the local transport network and no adverse impacts are anticipated.
- Construction of the Proposed Development is expected to take 38 months; commencing in November 2025 and concluding in October 2031. Construction activities will generate additional vehicle movements on the local road network through the movements of personnel, equipment and construction vehicles to and from the site. Based on the requirements provided by the Applicant, construction activities are likely to generate a total of 180 additional vehicle movements on a typical day; 20 of which will be undertaken by HGVs.
- All additional vehicle movements will route to and from the Proposed Development via the B7078 and will access the substation compound via a new 5.5m wide permanent access track.
- The number of additional vehicle movements generated during the construction phase is expected to be low enough to avoid any detrimental impacts on existing road traffic. It is also anticipated to have a negligible impact on the operation of public transport in the area and on users of nearby active travel infrastructure.
- The construction of the Proposed Development will also require the movement of approximately 20 abnormal loads. The appointed contractor will identify specific traffic management requirements and localised arrangements for these deliveries, which will be formalised following standard protocols and approvals processes. Due to the low frequency of these movements, any impact on the public road network will be minimal.

This report concludes that impact on the operation of the local and strategic transport network due to the Proposed Development will be negligible. Any impacts will be time-limited and will cease upon the completion of construction works. As such, in general no material interventions or specific mitigations have been proposed.

However, in line with industry-recognised good practice, a bespoke outline CTMP has been developed for adoption by the appointed contractor(s). The CTMP outlines details of proposed traffic management measures and associated interventions to be implemented during the construction phase, with the aim of minimising local disruption and enhancing safety for all road users.

The preparation of the project CEMP and CTMP will take into consideration the general matters and deliverables relating to other developments. This includes a requirement within the CTMP for the Applicant’s appointed contractor to liaise with the appropriate developer organisation of

any notably sized development(s) which appear likely to overlap with the Proposed Development; the aim of which is to coordinate and schedule construction-related traffic in such a way to reduce and minimise the effects of combined construction-related activity.

Appendices

A. Transport Access Review

MOTT MACDONALD

Redshaw 400kV Substation

Transport Access Review

Project:	Redshaw 400kV Substation		
Our reference:	100329055/RED/TN-01/B		
Prepared by:	E. Fatahiany	**Date:**	23 May 2025
Approved by:	J. Dooley	**Checked by:**	M. Matheson
Subject:	Transport Route Review		

Revision	Date	Originator	Checker	Approver	Description
A	09/10/2023	E Fatahiany	M Matheson	J Dooley	Issue (1)
B	23/05/2025	E Fatahiany	M Matheson	J Dooley	Issue (2)

1 Introduction

1. The transport access routes assessed are based upon professional judgement of public roads which could logically accommodate construction generated traffic with reference to the proposed site location.

2. The road sections assessed are public roads administrated by Transport Scotland (for trunk routes) and South Lanarkshire Council (for local roads).

3. A drive-through survey of the Study Area was conducted, by experienced Mott MacDonald Traffic Engineers, on Tuesday 25th September 2023. The findings of the access review is documented in **Table 1.1**. Geographical context is provided on plan included as **Appendix A**. The B7078 and the A70 were surveyed from both approaches.

4. All hyperlinks with **Table 1.1** are to Google Mapping locations.

5. It was observed that there were an several two-way road signs evident in the vicinity of the B7078 and its junction with the A702/M74 roundabout, this is likely due to the several accesses which join this route.

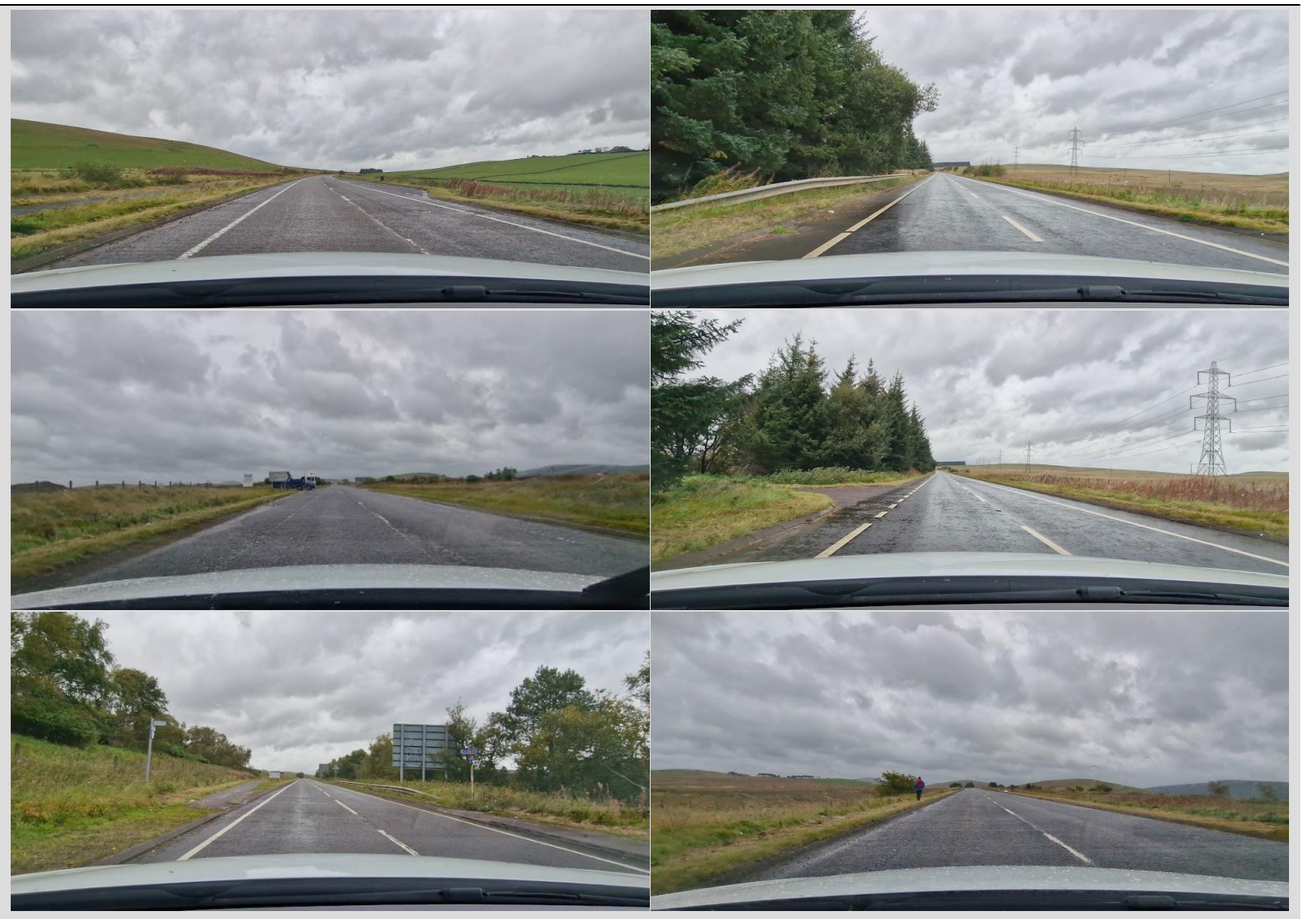
Table 1.1: Transport Access Review

Lat/Long Location	Name	Category	Comments	Images
55.59291, -3.83051	B7078 / Poniel Interchange (East)	Roundabout with two lanes with underpass due west.	Speed limit is NSL. Equestrian warning sign on slip road on approach to Poniel Interchange roundabout. Observed overrun area for wind farm vehicles across the roundabout. Segregated shared space path part of National Cycle Route 74 (NCR-74) which crosses M74 Junction 11 Slip-off and circulates roundabout, originating from the west and continues southbound along B7078.	
55.592191, -3.830156	B7078 towards Ayr Road	Single and dual carriageway.	Stone bridge with no weight capacity signs. Single and dual carriageway segregated by verge. Merging lanes for 200yards observed upon exit of Poniel Interchange southbound. Split islands observed for traffic to cross carriageway for access to various locations. Banned right-hand turn to access service area and must utilise roundabout to the south to access, noting traffic will join from the east service station. Two way shared path (inc. NCR-74) continues along this road southbound only after Poniel Roundabout. This shared path then crosses the carriageway on approach of Milbank Interchange roundabout and continues west bound along Ayr Road. It is noted a narrow footpath is also continued southbound. After service stations single carriageway widens to dual carriageway southbound. Wide single carriageway with hatching on both left and right hand sides or road narrowing and disjointed road restraint systems observed.	   
55.57719, -3.81095	B7078 / Milbank Interchange (East) / A70 (Ayr Road)	Two-lane roundabout	Speed limit is NSL, roundabout is two lanes and is wide. This roundabout interests with the A70 (Ayr Road) and acts as a connection with the M74. Two-way shared path (inc. NCR-74) is along the south-western side and continues along Ayr Road.	
55.576608, -3.811746	A70 / Ayr Road on approach to Milbank Interchange (west)	Singe Carriageway	Two way shared path (inc. NCR-74) continues along this road along the eastbound section of road only after towards Milbank Interchange (West) roundabout. The A70 goes through an underpass of the M74 with no height restrictions observed.	

Lat/Long Location	Name	Category	Comments	Images
			The road centreline turns into a double solid white line on approach to Milbank Interchange (West).	  
55.574658, -3.815026	Milbank Interchange (west)	Two-lane roundabout	Serves the A70 (north-west to south-east) and the run-off from the M74. Two-way shared path. Two way shared path (national cycle route 74) continues along this road due west on the eastbound section of road. This splits into two at the roundabout but re-joins on exit.	 
55.576608, -3.811746	A70 / Ayr Road on approach to B7078	Singe Carriageway	No change per previous comment to the road composure itself, other than evident road restraint system at the southern edge opposite the junction and screed surfacing on approach indicating potential past instances of speeding. The shared path splits, where the NCR-74joints the B7078 and is not segregated. The sharedpath continues along Ayr Road on the eastbound lane. Street lighting improvement works observed, vegetation hinders visibility space either turning west onto the A70 or travelling on the A70 past the B7078.	

Lat/Long Location	Name	Category	Comments	Images
55.573846, -3.816511	Section of B7078 between Ayr Road and ISSB	Single carriageway	Single carriageway observing NSL speed limit, clear sections of hard strip on both sides of the single carriageway which starts off being flanked by dense forestry. Approach road to Ayr Road from B7078 has scrim surfacing Several HGVs observed utilising hard strips. The flanked forestry eventually ends to become clear land on either side. It was observed signage past forestry areas have been clipped by vehicles indicating areas of wind vortex. The B7078 serves as access to residential, agricultural and quarrying areas. It connects to the A76 the B740, serving areas such as Crawford John and Corsebank. Gated accesses are observed which may lead to an underpass for the M74 for local residents. Informal parking areas / passing areas observed. The NCR-74 starts as an un-segregated cycle path along the B7078, where there is an un-segregated crossing point which for the NCR-74 within the first 2.25km which crosses the B7078. There-after it is a segregated cycleway until the Abington Interchange, where it has a mixture of crossings adjacent to the B7078. Works access and new roundabout ahead signs observed (in which some are covered in vegetation), with either prominent or minor access roads on either side with occasional road restraint systems. There are two junctions with advanced lorry turning signs and cycling crossing signs at Andershaw Wind farm and Kennoxhead Windfarm Substation. These are supplemented with advanced warning cyclists crossing sign as well, in which the cycling crossing is unsegregated but has red scrim.	

Lat/Long Location	Name	Category	Comments	Images
55.524939, -3.787320	Section of B7078 adjacent to ISSB	Single Carriageway	No changes per previous comments on road purpose/composure in general, speed limit is still NSL. To access the proposed site the terrain profile begins with a slight drop in elevation in a ditch for an abrupt and immediate rise in elevation by a few metres at the start of the adjacent Red Moss Hotel layby. Further east, around the midpoint of Red Moss hotel, near the land boundary / masonry wall the terrain plateaus becoming more feasible for access. There is a gated fence line observed here which seems most feasible for access. The change in height from ditch to land then rises again shortly after the masonry wall. Observed Red Moss Hotel which is vicinity of the ISSB to the south, which has a vide lane to facility HGVs parking adjacent to the B7078 and is separated by verge line, which is approximately 200m in length. It should be noted that it is assumed this site is one-way. The segregated NCR-74 is to the immediate west of Red Moss Hotel and further away from the B7078.	   

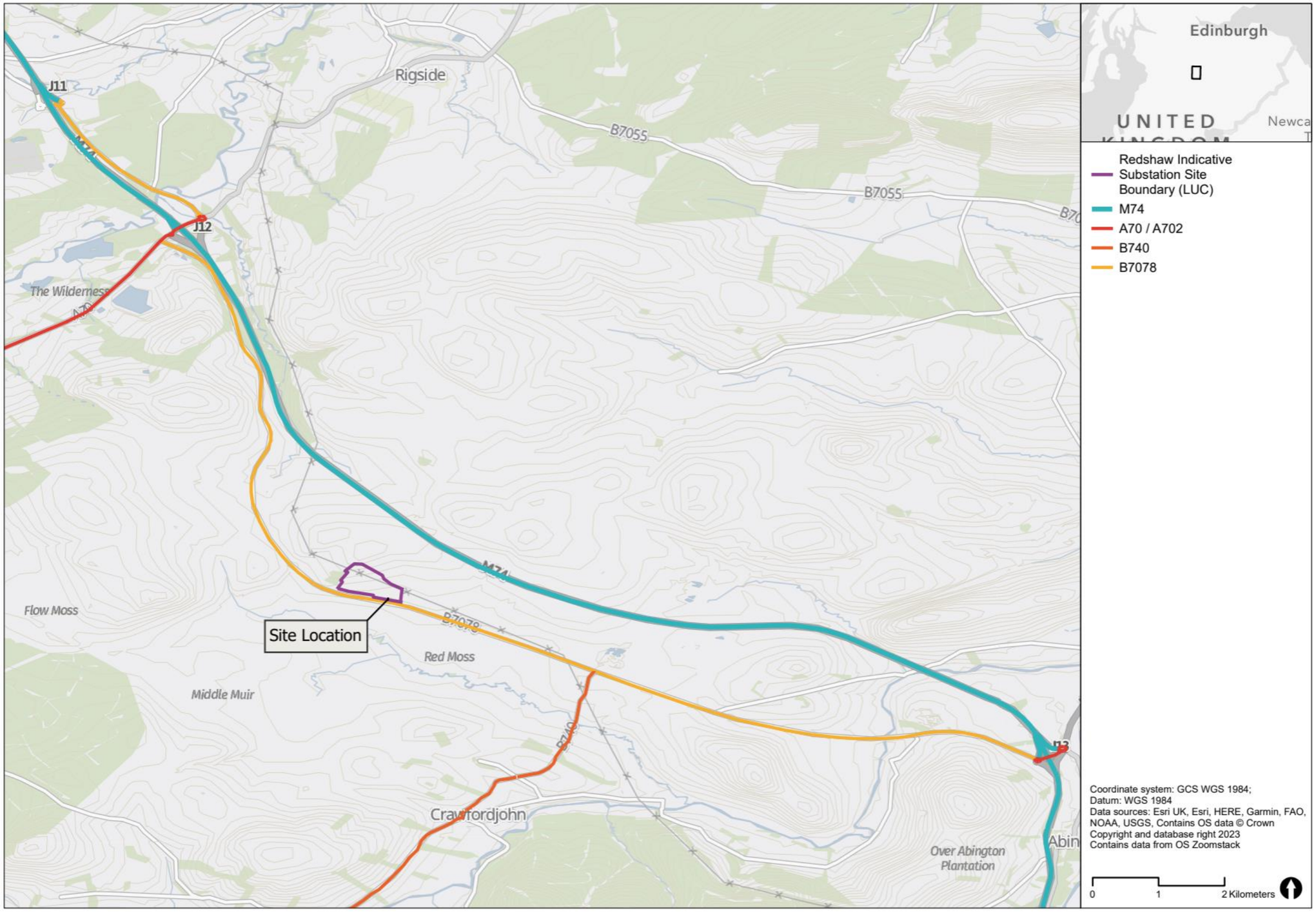
Lat/Long Location	Name	Category	Comments	Images
55.50316, -3.69751	Section of B7078 between ISSB and Abington Interchange	Single Carriageway	No changes per previous comments on road purpose/composure in general, speed limit is still NSL. Recent signs of re-surfacing along this section of road. Segregated NCR-74 past Red Moss HGV Hotel southbound continues to maintain wider verge separation with the B7078. There are several at-grade junctions which serve as accesses located in the treeline which is due south-east of the Red Moss HGV Hotel. They do not have advanced warning signs which may hinder visibility of any vehicles exiting. Disjointed road restraint systems observed along this route area. Another access is also observed which leads to an underpass at the M74, which is located mid-way between both Duneaton Quarry sites respectively. No advanced warning junction sign observed for this obscure junction, just before junction to cottage which is signed. At the first Duneaton Quarry site, it is noted there was not an advanced junction warning left sign, yet a HGV was observed egressing from this junction. It is observed that the segregated NCR-74 route has a lower segregation gap further south-east, than at the Red Moss Hotel, where is a large parking layby adjacent to it. Further road restraints observed at locations with steeper drops into ditches at either verge towards Abington Interchange. Craighead Road intersects the B7078 from the south past Duneaton Water, opposite the second Duneaton Quarry junction. The NCR-74 has a segregated crossing at this point along Craighead Road. Past this area prominent embankments on either side are observed flanking the B7078. Thereafter NCR-74 crosses the B7078 at 100m from the approach to Abington Interchange Roundabout (West). It was observed that a pedestrian was utilising the northern edge of the carriageway as a walking route, but this is not a known walking route and should be noted by site operatives.	
55.50316, -3.69751	Abbington Interchange (West) / A702 Roundabout	2-lane roundabout	NCR-7 continues towards the A702 from this route. it has an un-segregated crossing at the slipstream from the roundabout on the M74 Northbound and there is an un-segregated pedestrian crossing at slip-road from the M74 onto the Abbington Interchange. The NCR-7 is a mix of level road marking or segregated path with shared space in this area.	

Lat/Long Location	Name	Category	Comments	Images
55.50316, -3.69751	Abbington Interchange (East) / A702 Roundabout	2-lane roundabout	NCR-7 continues from the B7078 on both side across the M74 overpass connecting both Abington Interchange roundabouts West and East. The NCR-7 is a mix of level road marking or segregated path with shared space in this area. National Cycleway 74 continues South-east along the A702 upon exiting Abington Interchange East on a mixture of shared-space or on-road markings. Multiple advanced cyclists crossing road signs observed. Roundabout serves as an access to Abington due south or to areas such as Wandel or Coulter due North-East, with Abbington Services due North.	 
55.573788, -3.816423	A70 / Ayr Road	Single Carriageway	The A70 spans west-east, between the A76 and the M74, connecting Cumnock to Mulkirk, Glespin, Douglas and Uddington respectively. This route serves engineering industries, agricultural, residential, school and health facilities. The speed limit is mostly NSL but reduces to 30mph and 20mph respectively when in areas of dense residential areas or adjacent to Douglas Primary School, which evidently has priority traffic calming chicanes. Road works were observed on approach to Douglas at stone bridges with no observes weight strictions. There is a mixture of double white lines predominately due west of double primary school, towards and past Glespin, where it was observed in some sections the road width would narrow especially near embankments. Friction surfaces would be observed in some instances, especially at narrow bends. Cycle users and bus-stop facilities were observed along this route as well, most notably within Douglas and Muirkirk. It is noted that a potential Scottish Ambulance Service facility was spotted in vicinity of Land This route was observed to contain a higher than normal quantity of HGVs, with advanced warning signs for agricultural vehicles as well. Several accesses were observed in-use by Forestry Scotland.	     

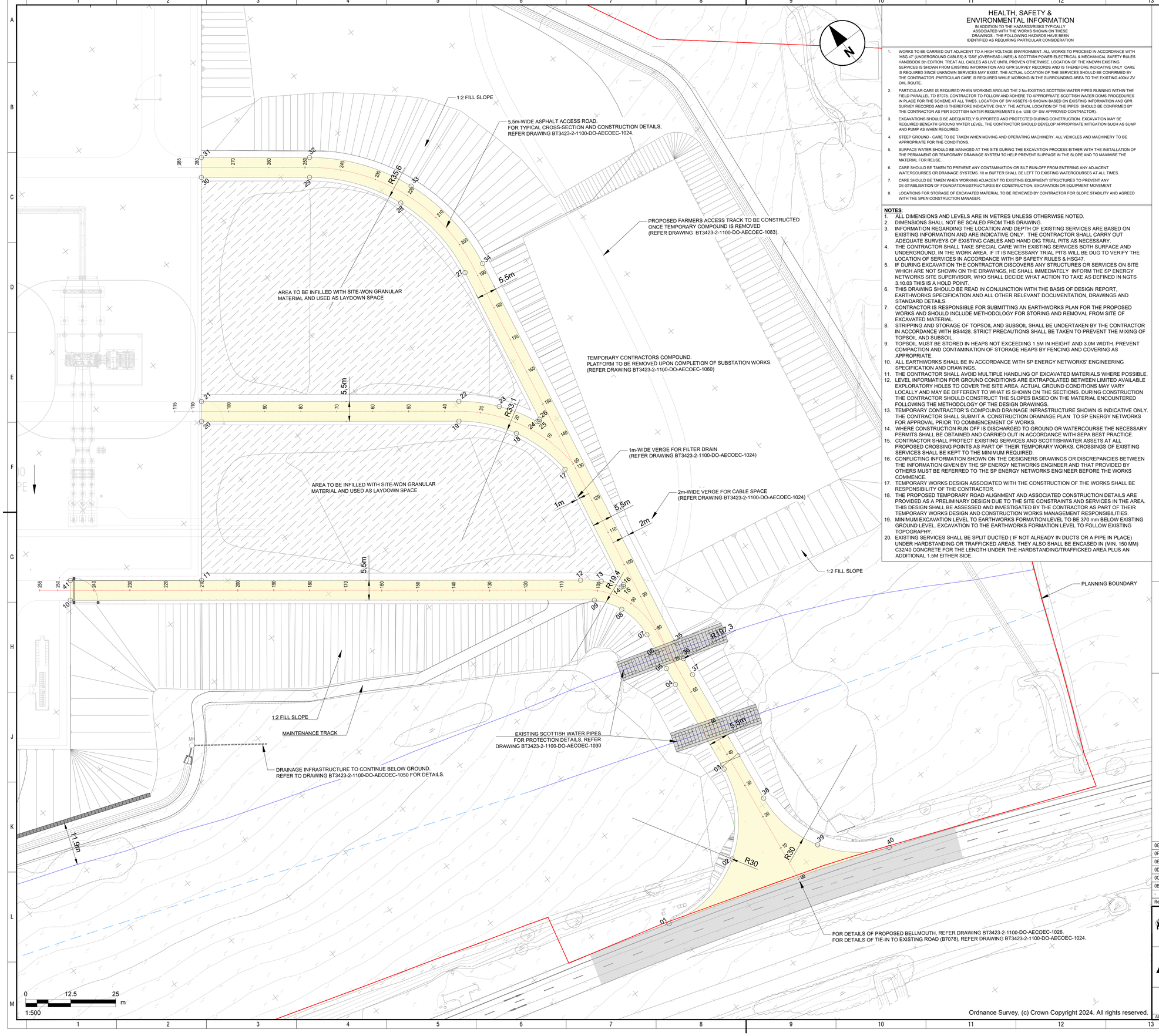
Lat/Long Location	Name	Category	Comments	Images
				 

Appendices

A. Transportation Routes in vicinity of Redshaw 400kV Substation Site



B. Substation Access Road Layout Drawings



HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS TYPICALLY ASSOCIATED WITH THE WORKS SHOWN ON THESE DRAWINGS - THE FOLLOWING HAZARDS HAVE BEEN IDENTIFIED AS REQUIRING PARTICULAR CONSIDERATION

1. WORKS TO BE CARRIED OUT ADJACENT TO A HIGH VOLTAGE ENVIRONMENT. ALL WORKS TO PROCEED IN ACCORDANCE WITH 'HSG 47' (UNDERGROUND CABLES) & 'GS6' (OVERHEAD LINES) & SCOTTISH POWER ELECTRICAL & MECHANICAL SAFETY RULES HANDBOOK 5th EDITION. TREAT ALL CABLES AS LIVE UNTIL PROVEN OTHERWISE. LOCATION OF THE KNOWN EXISTING SERVICES IS SHOWN FROM EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY. CARE IS REQUIRED SINCE UNKNOWN SERVICES MAY EXIST. THE ACTUAL LOCATION OF THE SERVICES SHOULD BE CONFIRMED BY THE CONTRACTOR .PARTICULAR CARE IS REQUIRED WHILE WORKING IN THE SURROUNDING AREA TO THE EXISTING 400kV ZV OHL ROUTE.
2. PARTICULAR CARE IS REQUIRED WHEN WORKING AROUND THE 2 No EXISTING SCOTTISH WATER PIPES RUNNING WITHIN THE FIELD PARALLEL TO B7078. CONTRACTOR TO FOLLOW AND ADHERE TO APPROPRIATE SCOTTISH WATER DOMS PROCEDURES IN PLACE FOR THE SCHEME AT ALL TIMES. LOCATION OF SW ASSETS IS SHOWN BASED ON EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY. THE ACTUAL LOCATION OF THE PIPES SHOULD BE CONFIRMED BY THE CONTRACTOR AS PER SCOTTISH WATER REQUIREMENTS (i.e. USE OF SW APPROVED CONTRACTOR).
3. EXCAVATIONS SHOULD BE ADEQUATELY SUPPORTED AND PROTECTED DURING CONSTRUCTION. EXCAVATION MAY BE REQUIRED BENEATH GROUND WATER LEVEL. THE CONTRACTOR SHOULD DEVELOP APPROPRIATE MITIGATION SUCH AS SUMP AND PUMP AS WHEN REQUIRED.
4. STEEP GROUND - CARE TO BE TAKEN WHEN MOVING AND OPERATING MACHINERY. ALL VEHICLES AND MACHINERY TO BE APPROPRIATE FOR THE CONDITIONS.
5. SURFACE WATER SHOULD BE MANAGED AT THE SITE DURING THE EXCAVATION PROCESS EITHER WITH THE INSTALLATION OF THE PERMANENT OR TEMPORARY DRAINAGE SYSTEM TO HELP PREVENT SLIPPAGE IN THE SLOPE AND TO MAXIMISE THE MATERIAL FOR REUSE.
6. CARE SHOULD BE TAKEN TO PREVENT ANY CONTAMINATION OR SILT RUN-OFF FROM ENTERING ANY ADJACENT WATERCOURSES OR DRAINAGE SYSTEMS. 10 m BUFFER SHALL BE LEFT TO EXISTING WATERCOURSES AT ALL TIMES.
7. CARE SHOULD BE TAKEN WHEN WORKING ADJACENT TO EXISTING EQUIPMENT/ STRUCTURES TO PREVENT ANY DE-STABILISATION OF FOUNDATIONS/STRUCTURES BY CONSTRUCTION, EXCAVATION OR EQUIPMENT MOVEMENT
8. LOCATIONS FOR STORAGE OF EXCAVATED MATERIAL TO BE REVIEWED BY CONTRACTOR FOR SLOPE STABILITY AND AGREED WITH THE SPEN CONSTRUCTION MANAGER.

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METRES UNLESS OTHERWISE NOTED.
2. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING.
3. INFORMATION REGARDING THE LOCATION AND DEPTH OF EXISTING SERVICES ARE BASED ON EXISTING INFORMATION AND ARE INDICATIVE ONLY. THE CONTRACTOR SHALL CARRY OUT ADEQUATE SURVEYS OF EXISTING CABLES AND HAND DIG TRIAL PITS AS NECESSARY.
4. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH EXISTING SERVICES BOTH SURFACE AND UNDERGROUND, IN THE WORK AREA. IF IT IS NECESSARY TRIAL PITS WILL BE DUG TO VERIFY THE LOCATION OF SERVICES IN ACCORDANCE WITH SP SAFETY RULES & HSG47.
5. IF DURING EXCAVATION THE CONTRACTOR DISCOVERS ANY STRUCTURES OR SERVICES ON SITE WHICH ARE NOT SHOWN ON THE DRAWINGS, HE SHALL IMMEDIATELY INFORM THE SP ENERGY NETWORKS SITE SUPERVISOR, WHO SHALL DECIDE WHAT ACTION TO TAKE AS DEFINED IN NGTS 3.10.03 THIS IS A HOLD POINT.
6. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE BASIS OF DESIGN REPORT, EARTHWORKS SPECIFICATION AND ALL OTHER RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
7. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AN EARTHWORKS PLAN FOR THE PROPOSED WORKS AND SHOULD INCLUDE METHODOLOGY FOR STORING AND REMOVAL FROM SITE OF EXCAVATED MATERIAL.
8. STRIPPING AND STORAGE OF TOPSOIL AND SUBSOIL SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH BS4428. STRICT PRECAUTIONS SHALL BE TAKEN TO PREVENT THE MIXING OF TOPSOIL AND SUBSOIL.
9. TOPSOIL MUST BE STORED IN HEAPS NOT EXCEEDING 1.5M IN HEIGHT AND 3.0M WIDTH. PREVENT COMPACTION AND CONTAMINATION OF STORAGE HEAPS BY FENCING AND COVERING AS APPROPRIATE.
10. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SP ENERGY NETWORKS' ENGINEERING SPECIFICATION AND DRAWINGS.
11. THE CONTRACTOR SHALL AVOID MULTIPLE HANDLING OF EXCAVATED MATERIALS WHERE POSSIBLE.
12. LEVEL INFORMATION FOR GROUND CONDITIONS ARE EXTRAPOLATED BETWEEN LIMITED AVAILABLE EXPLORATORY HOLES TO COVER THE SITE AREA. ACTUAL GROUND CONDITIONS MAY VARY LOCALLY AND MAY BE DIFFERENT TO WHAT IS SHOWN ON THE SECTIONS. DURING CONSTRUCTION THE CONTRACTOR SHOULD CONSTRUCT THE SLOPES BASED ON THE MATERIAL ENCOUNTERED FOLLOWING THE METHODOLOGY OF THE DESIGN DRAWINGS.
13. TEMPORARY CONTRACTOR`S COMPOUND DRAINAGE INFRASTRUCTURE SHOWN IS INDICATIVE ONLY. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION DRAINAGE PLAN TO SP ENERGY NETWORKS FOR APPROVAL PRIOR TO COMMENCEMENT OF WORKS.
14. WHERE CONSTRUCTION RUN OFF IS DISCHARGED TO GROUND OR WATERCOURSE THE NECESSARY PERMITS SHALL BE OBTAINED AND CARRIED OUT IN ACCORDANCE WITH SEPA BEST PRACTICE.
15. CONTRACTOR SHALL PROTECT EXISTING SERVICES AND SCOTTISHWATER ASSETS AT ALL PROPOSED CROSSING POINTS AS PART OF THEIR TEMPORARY WORKS. CROSSINGS OF EXISTING SERVICES SHALL BE KEPT TO THE MINIMUM REQUIRED.
16. CONFLICTING INFORMATION SHOWN ON THE DESIGNERS DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE SP ENERGY NETWORKS ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE SP ENERGY NETWORKS ENGINEER BEFORE THE WORKS COMMENCE.
17. TEMPORARY WORKS DESIGN ASSOCIATED WITH THE CONSTRUCTION OF THE WORKS SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
18. THE PROPOSED TEMPORARY ROAD ALIGNMENT AND ASSOCIATED CONSTRUCTION DETAILS ARE PROVIDED AS A PRELIMINARY DESIGN DUE TO THE SITE CONSTRAINTS AND SERVICES IN THE AREA. THIS DESIGN SHALL BE ASSESSED AND INVESTIGATED BY THE CONTRACTOR AS PART OF THEIR TEMPORARY WORKS DESIGN AND CONSTRUCTION WORKS MANAGEMENT RESPONSIBILITIES.
19. MINIMUM EXCAVATION LEVEL TO EARTHWORKS FORMATION LEVEL TO BE 370 mm BELOW EXISTING GROUND LEVEL. EXCAVATION TO THE EARTHWORKS FORMATION LEVEL TO FOLLOW EXISTING TOPOGRAPHY.
20. EXISTING SERVICES SHALL BE SPLIT DUCTED (IF NOT ALREADY IN DUCTS OR A PIPE IN PLACE) UNDER HARDSTANDING OR TRAFFICKED AREAS. THEY ALSO SHALL BE ENCASED IN (MIN. 150 MM) C32/40 CONCRETE FOR THE LENGTH UNDER THE HARDSTANDING/TRAFFICKED AREA PLUS AN ADDITIONAL 1.5M EITHER SIDE.

ACCESS ROAD SETTING OUT COORDINATES

POINTS	EASTING	NORTHING	LEVEL	NOTES
01	287299.32	627129.67	278.74m	
02	287324.168	627133.254	278.57m	
03	287337.592	627154.469	282.00m	
04	287341.171	627181.339	285.49m	
05	287341.876	627186.417	286.11m	
06	287342.555	627191.493	286.70m	
07	287343.307	627197.119	287.40m	
08	287342.061	627206.974	288.79m	
09	287337.573	627213.628	289.88m	
10	287222.021	627302.271	301.33m	
11	287254.327	627284.432	301.44m	
12	287337.902	627220.401	290.47m	
13	287342.299	627216.661	289.76m	
14	287345.716	627212.01	289.17m	
15	287346.234	627211.764	289.14m	
16	287346.643	627212.166	289.23m	
17	287353.228	627247.471	293.56m	
18	287348.585	627263.621	295.87m	
19	287337.993	627276.025	297.97m	
20	287281.214	627319.526	301.55m	
21	287284.559	627323.892	301.66m	
22	287341.338	627280.391	298.08m	
23	287349.369	627272.431	296.70m	
24	287355.139	627262.706	295.58m	
25	287355.653	627262.408	295.36m	
26	287356.089	627262.813	295.34m	
27	287364.471	627307.754	300.12m	
28	287362.08	627333.966	301.48m	
29	287346.326	627355.052	301.72m	
30	287322.448	627373.346	301.95m	
31	287325.793	627377.712	301.98m	
32	287349.671	627359.418	301.83m	
33	287367.215	627335.936	301.59m	
34	287369.878	627306.746	300.23m	
35	287348.24	627190.733	286.84m	
36	2387347.37	627185.683	286.22m	
37	287346.621	627180.613	285.60m	
38	287341.386	627141.353	280.32m	
39	287345.43	627121.916	278.23m	
40	287360.719	627109.255	278.08m	
41	287225.366	627306.637	301.49m	

	ROAD VOLUMES	INFILL AREA VOLUMES	TOTAL
SOFT STRIP	4,650m3	535m3	5,185m3
GRANULAR CUT	265m3	0m3	265m3
ROCK CUT	0m3	0m3	0m3
FILL REQUIRED	103,000m3	59,100m3	162,100m3

NOTE:
VOLUMES STATED ARE FOR ACCESS ROAD EARTHWORKS AND INFILL AREAS ONLY.
REFER TO SPECIFIC DRAWINGS FOR PLATFORM AND TEMPORARY COMPOUND EARTHWORKS.

NOTE THAT VOLUMES SHOWN ARE NET, AND NO BULKING FACTOR HAS BEEN APPLIED.

REFER TO INDICATIVE CUT & FILL DEPTHS DRAWING (BT3423-2-1100-DO-AECOEC-1040) AND EARTHWORKS CUT & FILL ANALYSIS DOCUMENT BT3423-2-1100-RN-AECOEC-0003) FOR FURTHER DETAILS.

KEY:

- FILL SLOPE (GENERALLY 1:2 GRADIENT)
- PLANNING BOUNDARY (20.645Ha)
- EXTENT OF PROPOSED ACCESS ROADS
- AREAS TO BE INFILLED WITH SURPLUS GRANULAR MATERIAL AND USED AS LAYDOWN SPACE

REFERENCE DRAWINGS:

FOR BEARING TEST LOCATIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1017.
FOR LONGITUDINAL SECTIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1021.
FOR CROSS-SECTIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1022.
FOR ROAD CONSTRUCTION DETAILS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1024.
FOR JUNCTION BELLMOUTH, REFER DRAWING BT3423-2-1100-DO-AECOEC-1026.
FOR JUNCTION VISIBILITY SPLAYS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1025.

NOTES:

1. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING.
2. CONFLICTING INFORMATION SHOWN ON THE DRAWINGS, OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE SP ENERGY NETWORKS ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE SP ENERGY NETWORKS ENGINEER BEFORE THE WORKS COMMENCE.
3. IF, DURING EXCAVATION, THE CONTRACTOR DISCOVERS AND STRUCTURES OR SERVICES ON SITE WHICH ARE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY INFORM THE SP ENERGY NETWORKS SITE SUPERVISOR, WHO SHALL DECIDE WHAT ACTION TO TAKE, AS DEFINED IN NGTS 3.10.03. THIS IS A HOLD POINT.

Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.
0G	28.02.24	EP	JM	RQ	TENDER DESIGN REISSUE
0F	21.02.24	EP	JM	RQ	TENDER DESIGN REISSUE
0E	19.12.24	EP	JM	RQ	TENDER DESIGN ISSUE
0D	07.11.24	JM	EP	RQ	OUTLINE DESIGN ISSUE
0C	25.10.24	JM	EP	RQ	OUTLINE DESIGN ISSUE
0B	03.10.24	EP	JM	RQ	OUTLINE DESIGN ISSUE
-	18.09.24	EP	JM	RQ	OUTLINE DESIGN ISSUE

SP ENERGY NETWORKS

AECOM

Status Stamp: FOR INFORMATION

Project: REDSHAW 400/132kV SUBSTATION ENABLING WORKS

Location: REDSHAW

Drg. Title: SUBSTATION ACCESS ROAD LAYOUT

Drawn	Rev'd	App'd
EP	JM	RQ

Drg. No.: BT3423-2-1100-DO-AECOEC-1020
SPEN Ref. No. : ####
Sheet: Next:
Rev: 0G
Scale: 1:500
Size: A1

BELLMOUTH SETTING OUT COORDINATES				
POINTS	EASTING	NORTHING	LEVEL	NOTES
01	287299.32	627129.67	278.74m	END OF 30m RADIUS CURVE
02	287324.168	627133.254	278.57m	MID POINT OF 30m RADIUS CURVE
03	287337.592	627154.469	282.36m	END OF 30m RADIUS CURVE
04	287337.771	627155.813	282.56m	ENTRANCE GATE
05	287343.223	627155.086	282.45m	ENTRANCE GATE
06	287341.393	627141.352	280.36m	END OF 30m RADIUS CURVE
07	287345.43	627121.916	278.21m	MID POINT OF 30m RADIUS CURVE
08	287360.719	627109.255	278.08m	END OF 30m RADIUS CURVE
09	287330.188	627119.942	278.41m	CENTERLINE OF ROAD

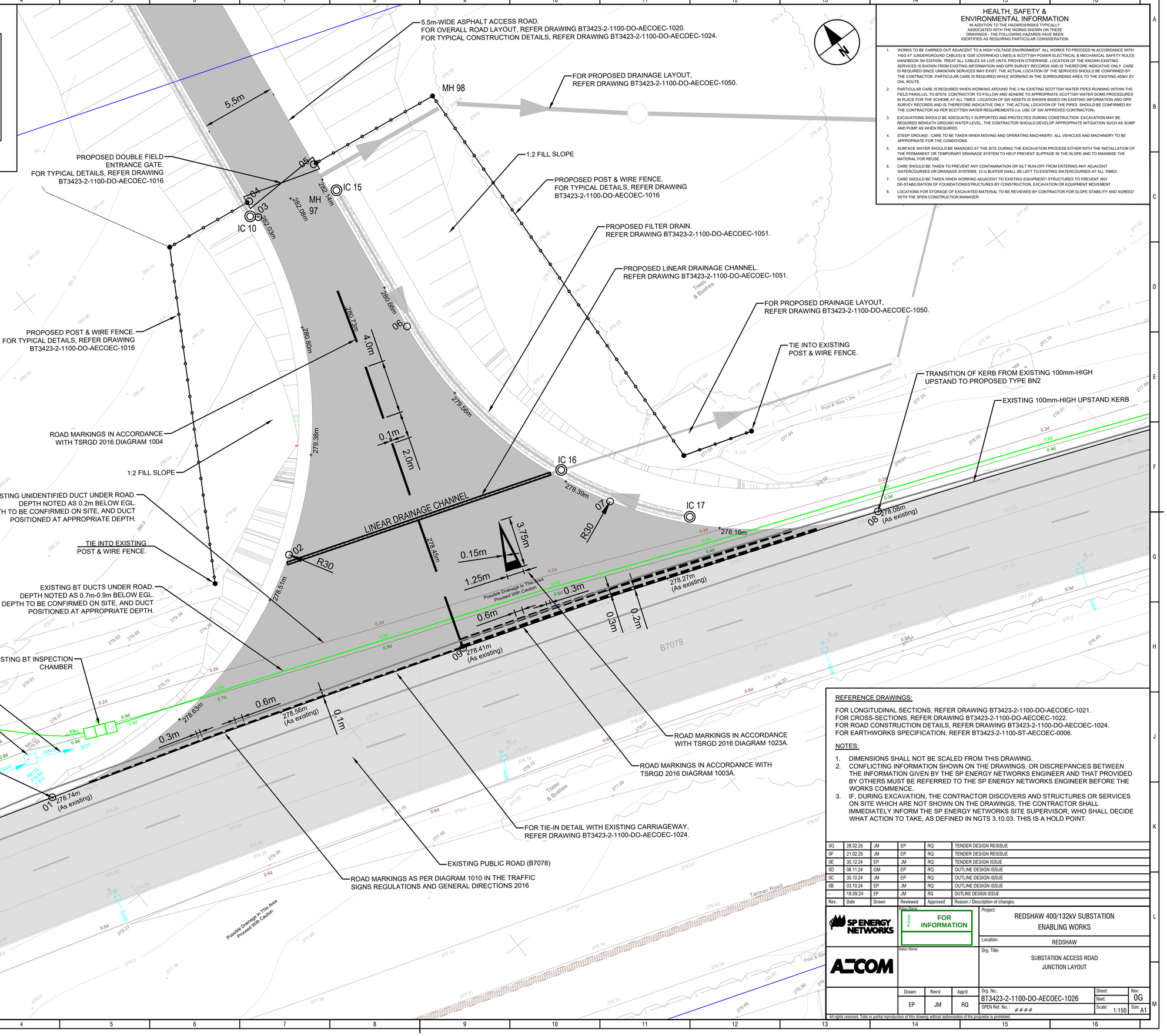
NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METRES UNLESS OTHERWISE NOTED.
2. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING.
3. INFORMATION REGARDING THE LOCATION AND DEPTH OF EXISTING SERVICES ARE BASED ON EXISTING INFORMATION AND ARE INDICATIVE ONLY. THE CONTRACTOR SHALL CARRY OUT ADEQUATE SURVEYS OF EXISTING CABLES AND HAND DIG TRIAL PITS AS NECESSARY.
4. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH EXISTING SERVICES BOTH SURFACE AND UNDERGROUND, IN THE WORK AREA. IF IT IS NECESSARY TRIAL PITS WILL BE DUG TO VERIFY THE LOCATION OF SERVICES IN ACCORDANCE WITH SP SAFETY RULES & HSG47.
5. IF DURING EXCAVATION THE CONTRACTOR DISCOVERS ANY STRUCTURES OR SERVICES ON SITE WHICH ARE NOT SHOWN ON THE DRAWINGS, HE SHALL IMMEDIATELY INFORM THE SP ENERGY NETWORKS SITE SUPERVISOR, WHO SHALL DECIDE WHAT ACTION TO TAKE AS DEFINED IN NGTS 3.10.03. THIS IS A HOLD POINT.
6. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE BASIS OF DESIGN REPORT, EARTHWORKS SPECIFICATION AND ALL OTHER RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
7. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AN EARTHWORKS PLAN FOR THE PROPOSED WORKS AND SHOULD INCLUDE METHODOLOGY FOR STORING AND REMOVAL FROM SITE OF EXCAVATED MATERIAL.
8. STRIPPING AND STORAGE OF TOPSOIL AND SUBSOIL SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH BS4428. STRICT PRECAUTIONS SHALL BE TAKEN TO PREVENT THE MIXING OF TOPSOIL AND SUBSOIL.
9. TOPSOIL MUST BE STORED IN HEAPS NOT EXCEEDING 1.5M IN HEIGHT AND 3.0M WIDTH. PREVENT COMPACTION AND CONTAMINATION OF STORAGE HEAPS BY FENCING AND COVERING AS APPROPRIATE.
10. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SP ENERGY NETWORKS' ENGINEERING SPECIFICATION AND DRAWINGS.
11. THE CONTRACTOR SHALL AVOID MULTIPLE HANDLING OF EXCAVATED MATERIALS WHERE POSSIBLE.
12. LEVEL INFORMATION FOR GROUND CONDITIONS ARE EXTRAPOLATED BETWEEN LIMITED AVAILABLE EXPLORATORY HOLES TO COVER THE SITE AREA. ACTUAL GROUND CONDITIONS MAY VARY LOCALLY AND MAY BE DIFFERENT TO WHAT IS SHOWN ON THE SECTIONS. DURING CONSTRUCTION THE CONTRACTOR SHOULD CONSTRUCT THE SLOPES BASED ON THE MATERIAL ENCOUNTERED FOLLOWING THE METHODOLOGY OF THE DESIGN DRAWINGS.
13. TEMPORARY CONTRACTOR'S COMPOUND DRAINAGE INFRASTRUCTURE SHOWN IS INDICATIVE ONLY. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION DRAINAGE PLAN TO SP ENERGY NETWORKS FOR APPROVAL PRIOR TO COMMENCEMENT OF WORKS.
14. WHERE CONSTRUCTION RUN OFF IS DISCHARGED TO GROUND OR WATERCOURSE THE NECESSARY PERMITS SHALL BE OBTAINED AND CARRIED OUT IN ACCORDANCE WITH SEPA BEST PRACTICE.
15. CONTRACTOR SHALL PROTECT EXISTING SERVICES AND SCOTTISHWATER ASSETS AT ALL PROPOSED CROSSING POINTS AS PART OF THEIR TEMPORARY WORKS. CROSSINGS OF EXISTING SERVICES SHALL BE KEPT TO THE MINIMUM REQUIRED.
16. CONFLICTING INFORMATION SHOWN ON THE DESIGNERS DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE SP ENERGY NETWORKS ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE SP ENERGY NETWORKS ENGINEER BEFORE THE WORKS COMMENCE.
17. TEMPORARY WORKS DESIGN ASSOCIATED WITH THE CONSTRUCTION OF THE WORKS SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
18. THE PROPOSED TEMPORARY ROAD ALIGNMENT AND ASSOCIATED CONSTRUCTION DETAILS ARE PROVIDED AS A PRELIMINARY DESIGN DUE TO THE SITE CONSTRAINTS AND SERVICES IN THE AREA. THIS DESIGN SHALL BE ASSESSED AND INVESTIGATED BY THE CONTRACTOR AS PART OF THEIR TEMPORARY WORKS DESIGN AND CONSTRUCTION WORKS MANAGEMENT RESPONSIBILITIES.
19. MINIMUM EXCAVATION LEVEL TO EARTHWORKS FORMATION LEVEL TO BE 370 mm BELOW EXISTING GROUND LEVEL. EXCAVATION TO THE EARTHWORKS FORMATION LEVEL TO FOLLOW EXISTING TOPOGRAPHY
20. EXISTING SERVICES SHALL BE SPLIT DUCTED (IF NOT ALREADY IN DUCTS OR A PIPE IN PLACE) UNDER HARDSTANDING OR TRAFFICKED AREAS. THEY ALSO SHALL BE ENCASED IN (MIN. 150 MM) C32/40 CONCRETE FOR THE LENGTH UNDER THE HARDSTANDING/TRAFFICKED AREA PLUS AN ADDITIONAL 1.5M EITHER SIDE.

HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS TYPICALLY ASSOCIATED WITH THE WORKS SHOWN ON THESE DRAWINGS - THE FOLLOWING HAZARDS HAVE BEEN IDENTIFIED AS REQUIRING PARTICULAR CONSIDERATION

1. WORKS TO BE CARRIED OUT ADJACENT TO A HIGH VOLTAGE ENVIRONMENT. ALL WORKS TO PROCEED IN ACCORDANCE WITH 'HSG 47' (UNDERGROUND CABLES) & 'GS6' (OVERHEAD LINES) & SCOTTISH POWER ELECTRICAL & MECHANICAL SAFETY RULES HANDBOOK 5th EDITION. TREAT ALL CABLES AS LIVE UNTIL PROVEN OTHERWISE. LOCATION OF THE KNOWN EXISTING SERVICES IS SHOWN FROM EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY CARE IS REQUIRED SINCE UNKNOWN SERVICES MAY EXIST. THE ACTUAL LOCATION OF THE SERVICES SHOULD BE CONFIRMED BY THE CONTRACTOR .PARTICULAR CARE IS REQUIRED WHILE WORKING IN THE SURROUNDING AREA TO THE EXISTING 400kV ZV OHL ROUTE.
2. PARTICULAR CARE IS REQUIRED WHEN WORKING AROUND THE 2 No EXISTING SCOTTISH WATER PIPES RUNNING WITHIN THE FIELD PARALLEL TO B7078. CONTRACTOR TO FOLLOW AND ADHERE TO APPROPRIATE SCOTTISH WATER DOMS PROCEDURES IN PLACE FOR THE SCHEME AT ALL TIMES .LOCATION OF SW ASSETS IS SHOWN BASED ON EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY. THE ACTUAL LOCATION OF THE PIPES SHOULD BE CONFIRMED BY THE CONTRACTOR AS PER SCOTTISH WATER REQUIREMENTS (i.e. USE OF SW APPROVED CONTRACTOR).
3. EXCAVATIONS SHOULD BE ADEQUATELY SUPPORTED AND PROTECTED DURING CONSTRUCTION. EXCAVATION MAY BE REQUIRED BENEATH GROUND WATER LEVEL. THE CONTRACTOR SHOULD DEVELOP APPROPRIATE MITIGATION SUCH AS SUMP AND PUMP AS WHEN REQUIRED.
4. STEEP GROUND - CARE TO BE TAKEN WHEN MOVING AND OPERATING MACHINERY. ALL VEHICLES AND MACHINERY TO BE APPROPRIATE FOR THE CONDITIONS.
5. SURFACE WATER SHOULD BE MANAGED AT THE SITE DURING THE EXCAVATION PROCESS EITHER WITH THE INSTALLATION OF THE PERMANENT OR TEMPORARY DRAINAGE SYSTEM TO HELP PREVENT SLIPPAGE IN THE SLOPE AND TO MAXIMISE THE MATERIAL FOR REUSE.
6. CARE SHOULD BE TAKEN TO PREVENT ANY CONTAMINATION OR SILT RUN-OFF FROM ENTERING ANY ADJACENT WATERCOURSES OR DRAINAGE SYSTEMS. 10 m BUFFER SHALL BE LEFT TO EXISTING WATERCOURSES AT ALL TIMES.
7. CARE SHOULD BE TAKEN WHEN WORKING ADJACENT TO EXISTING EQUIPMENT/ STRUCTURES TO PREVENT ANY DE-STABILISATION OF FOUNDATIONS/STRUCTURES BY CONSTRUCTION, EXCAVATION OR EQUIPMENT MOVEMENT
8. LOCATIONS FOR STORAGE OF EXCAVATED MATERIAL TO BE REVIEWED BY CONTRACTOR FOR SLOPE STABILITY AND AGREED WITH THE SPEN CONSTRUCTION MANAGER.



REFERENCE DRAWINGS:

FOR LONGITUDINAL SECTIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1021.
FOR CROSS-SECTIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1022.
FOR ROAD CONSTRUCTION DETAILS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1024.
FOR EARTHWORKS SPECIFICATION, REFER BT3423-2-1100-ST-AECOEC-0006.

NOTES:

1. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING.
2. CONFLICTING INFORMATION SHOWN ON THE DRAWINGS, OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE SP ENERGY NETWORKS ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE SP ENERGY NETWORKS ENGINEER BEFORE THE WORKS COMMENCE.
3. IF, DURING EXCAVATION, THE CONTRACTOR DISCOVERS AND STRUCTURES OR SERVICES ON SITE WHICH ARE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY INFORM THE SP ENERGY NETWORKS SITE SUPERVISOR, WHO SHALL DECIDE WHAT ACTION TO TAKE, AS DEFINED IN NGTS 3.10.03. THIS IS A HOLD POINT.

Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.
0G	28.02.25	JM	EP	RQ	TENDER DESIGN REISSUE
0F	21.02.25	JM	EP	RQ	TENDER DESIGN REISSUE
0E	30.12.24	EP	JM	RQ	TENDER DESIGN ISSUE
0D	06.11.24	GM	EP	RQ	OUTLINE DESIGN ISSUE
0C	30.10.24	JM	EP	RQ	OUTLINE DESIGN ISSUE
0B	03.10.24	EP	JM	RQ	OUTLINE DESIGN ISSUE
-	18.09.24	EP	JM	RQ	OUTLINE DESIGN ISSUE

SP ENERGY NETWORKS

AECOM

Status Stamp: FOR INFORMATION

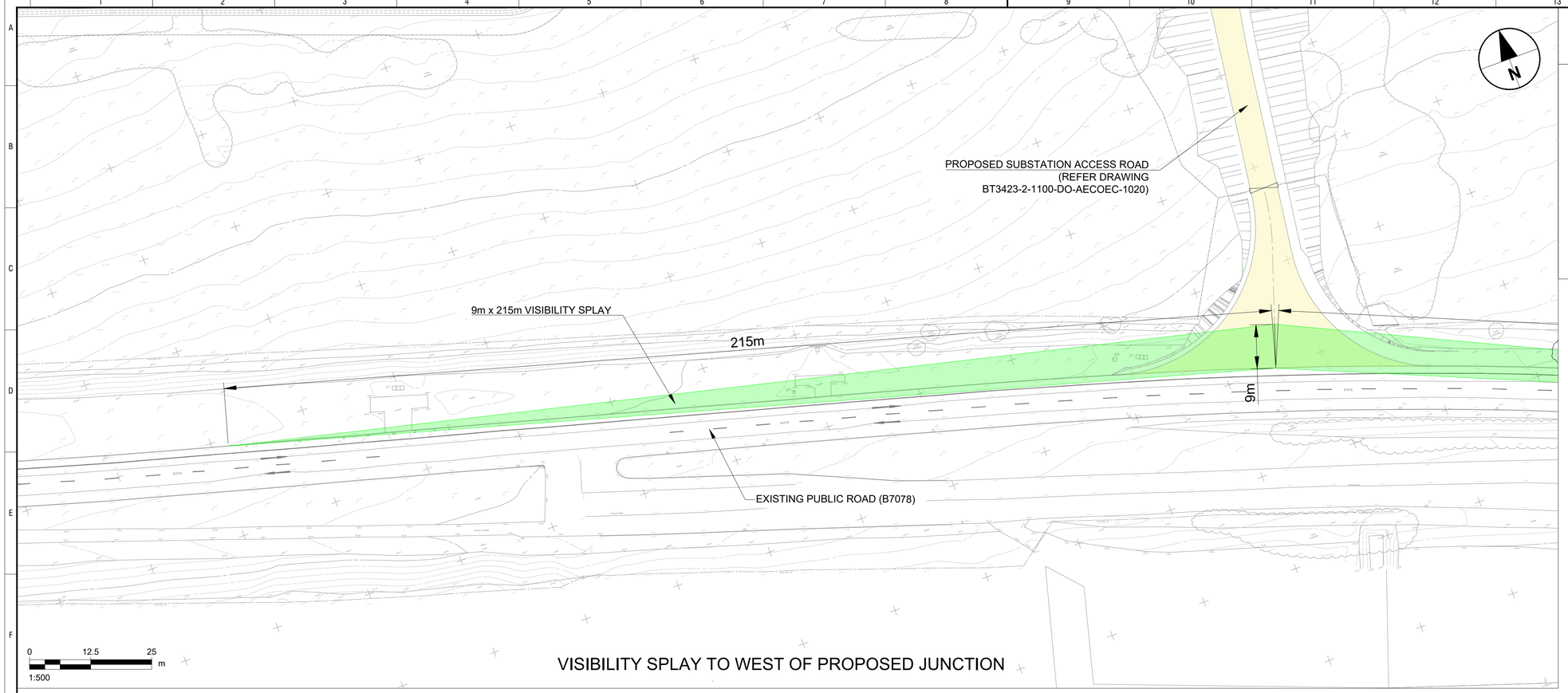
Project: REDSHAW 400/132kV SUBSTATION ENABLING WORKS

Location: REDSHAW

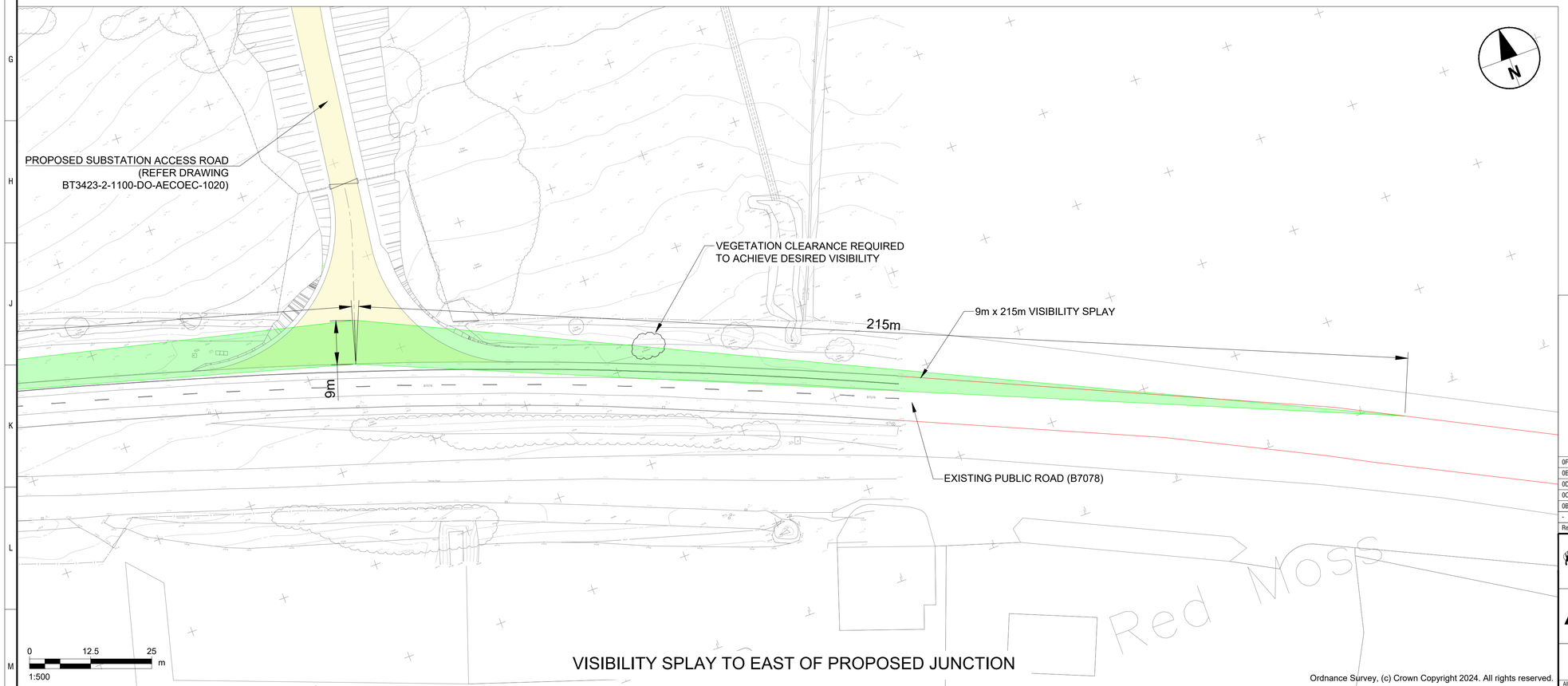
Drg. Title: SUBSTATION ACCESS ROAD JUNCTION LAYOUT

Drawn	Rev'd	App'd
EP	JM	RQ

Drg. No.: BT3423-2-1100-DO-AECOEC-1026
SPEN Ref. No. : ####
Sheet: Next:
Rev: 0G
Scale: 1:150
Size: A1



VISIBILITY SPLAY TO WEST OF PROPOSED JUNCTION



VISIBILITY SPLAY TO EAST OF PROPOSED JUNCTION

HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS TYPICALLY ASSOCIATED WITH THE WORKS SHOWN ON THESE DRAWINGS - THE FOLLOWING HAZARDS HAVE BEEN IDENTIFIED AS REQUIRING PARTICULAR CONSIDERATION

1. WORKS TO BE CARRIED OUT ADJACENT TO A HIGH VOLTAGE ENVIRONMENT. ALL WORKS TO PROCEED IN ACCORDANCE WITH 'HSG 47' (UNDERGROUND CABLES) & 'GS6' (OVERHEAD LINES) & SCOTTISH POWER ELECTRICAL & MECHANICAL SAFETY RULES HANDBOOK 5th EDITION. TREAT ALL CABLES AS LIVE UNTIL PROVEN OTHERWISE. LOCATION OF THE KNOWN EXISTING SERVICES IS SHOWN FROM EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY CARE IS REQUIRED SINCE UNKNOWN SERVICES MAY EXIST. THE ACTUAL LOCATION OF THE SERVICES SHOULD BE CONFIRMED BY THE CONTRACTOR. PARTICULAR CARE IS REQUIRED WHILE WORKING IN THE SURROUNDING AREA TO THE EXISTING 400kV ZV OHL ROUTE.
2. PARTICULAR CARE IS REQUIRED WHEN WORKING AROUND THE 2 No EXISTING SCOTTISH WATER PIPES RUNNING WITHIN THE FIELD PARALLEL TO B7078. CONTRACTOR TO FOLLOW AND ADHERE TO APPROPRIATE SCOTTISH WATER DOMS PROCEDURES IN PLACE FOR THE SCHEME AT ALL TIMES. LOCATION OF SW ASSETS IS SHOWN BASED ON EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY. THE ACTUAL LOCATION OF THE PIPES SHOULD BE CONFIRMED BY THE CONTRACTOR AS PER SCOTTISH WATER REQUIREMENTS (i.e. USE OF SW APPROVED CONTRACTOR).
3. EXCAVATIONS SHOULD BE ADEQUATELY SUPPORTED AND PROTECTED DURING CONSTRUCTION. EXCAVATION MAY BE REQUIRED BENEATH GROUND WATER LEVEL. THE CONTRACTOR SHOULD DEVELOP APPROPRIATE MITIGATION SUCH AS SUMP AND PUMP AS WHEN REQUIRED.
4. STEEP GROUND - CARE TO BE TAKEN WHEN MOVING AND OPERATING MACHINERY. ALL VEHICLES AND MACHINERY TO BE APPROPRIATE FOR THE CONDITIONS.
5. SURFACE WATER SHOULD BE MANAGED AT THE SITE DURING THE EXCAVATION PROCESS EITHER WITH THE INSTALLATION OF THE PERMANENT OR TEMPORARY DRAINAGE SYSTEM TO HELP PREVENT SLIPPAGE IN THE SLOPE AND TO MAXIMISE THE MATERIAL FOR REUSE.
6. CARE SHOULD BE TAKEN TO PREVENT ANY CONTAMINATION OR SILT RUN-OFF FROM ENTERING ANY ADJACENT WATERCOURSES OR DRAINAGE SYSTEMS. 10 m BUFFER SHALL BE LEFT TO EXISTING WATERCOURSES AT ALL TIMES.
7. CARE SHOULD BE TAKEN WHEN WORKING ADJACENT TO EXISTING EQUIPMENT/ STRUCTURES TO PREVENT ANY DE-STABILISATION OF FOUNDATIONS/STRUCTURES BY CONSTRUCTION, EXCAVATION OR EQUIPMENT MOVEMENT
8. LOCATIONS FOR STORAGE OF EXCAVATED MATERIAL TO BE REVIEWED BY CONTRACTOR FOR SLOPE STABILITY AND AGREED WITH THE SPEN CONSTRUCTION MANAGER.

REFERENCE DRAWINGS:

FOR OVERALL PLAN OF ACCESS ROAD, REFER DRAWING BT3423-2-1100-DO-AECOEC-1020.
FOR DETAILS OF PROPOSED JUNCTION, REFER DRAWING BT3423-2-1100-DO-AECOEC-1026.

NOTES:

EXTENT OF PROPOSED ACCESS ROAD

9m x 215m VISIBILITY SPLAY

VISIBILITY SPLAY PARAMETERS AS PER DMRB VOLUME 6 PART 6 - GEOMETRIC DESIGN OF MAJOR/MINOR PRIORITY JUNCTIONS

Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.
0F	28.02.25	EP	JM	RQ	TENDER DESIGN REISSUE
0E	21.02.25	EP	JM	RQ	TENDER DESIGN REISSUE
0D	19.12.24	EP	JM	RQ	TENDER DESIGN ISSUE
0C	30.10.24	JM	EP	RQ	OUTLINE DESIGN ISSUE
0B	03.10.24	EP	JM	RQ	OUTLINE DESIGN ISSUE
-	18.09.24	EP	JM	RQ	OUTLINE DESIGN ISSUE

SP ENERGY NETWORKS

AECOM

Status Stamp: FOR INFORMATION

Project: REDSHAW 400/132kV SUBSTATION ENABLING WORKS

Location: REDSHAW

Drg. Title: SUBSTATION ACCESS ROAD JUNCTION VISIBILITY SPLAYS

Drawn	Revd	Appd
EP	JM	RQ

Drg. No.: BT3423-2-1100-DO-AECOEC-1025
SPEN Ref. No. : ####
Sheet: Next:
Rev: 0F
Scale: 1:500
Size: A1

C. Road Safety Audit

Mott MacDonald
10 Temple Back
Bristol BS1 6FL
United Kingdom

T +44 (0)117 906 9500
mottmac.com

LUC / Scottish Power Energy Networks

LUC Redshaw Substation

Road Safety Audit
Stage 1

September 2024

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	05/09/2024	T Blaney	J. Dooley	J Dooley	
					

Document reference: 100329055 | RDSHW | RSA1 | DR | 001 | A |

Contents

1 Introduction

This Stage 1 Road Safety Audit Report covers the preliminary design for the provision of a new priority-controlled (uncontrolled T-junction form) vehicular access to a substation located on the northern side of the B7078 at Redshaw.

The audit was carried out at the request of LUC on behalf of the Scottish Power Energy Networks (Project Sponsor) and South Lanarkshire Council (Overseeing Organisation).

A Road Safety Audit Brief dated 16th July 2024 (*Doc. Ref: 100329055-RDSHW-RSA-S1-001-A*) was prepared on behalf of the Design Team by Malcolm Matheson (Mott MacDonald). The RSA Brief and composition of the Audit Team was formally approved by Mark Kirk (South Lanarkshire Council) on 05/09/2024.

The Road Safety Audit Team, as approved by the Overseeing Organisation, consisted of:

Tim Blaney	BSc (Hons), CMILT, MCIHT, MSoRSA (Certificate of Competency in Road Safety Audit) Audit Team Leader, Mott MacDonald
John Dooley	BA, FCILT, IEng MICE (Certificate of Competency in Road Safety Audit) Audit Team Member, Mott MacDonald

It is confirmed that this Stage 1 Road Safety Audit has been undertaken upon the completion of preliminary design for the scheme.

The Road Safety Audit took place jointly at the Glasgow and Bristol offices of Mott MacDonald between July and September 2024. The Road Safety Audit comprised examination of documentation and drawings listed in **Appendix A**.

The Audit Team visited the site of the proposed works together on Monday 22nd July 2024 at approximately 14:00 hrs. During the site visit the weather conditions were warm, overcast with occasional rain showers, and the road surface was damp.

Traffic flows through on the B7078 local to the proposed development site access location were light and free flowing. No pedestrian or cyclist activity was observed in the vicinity of the scheme.

The terms of reference for this Road Safety Audit are set out in the Transport Scotland departmental standard DMRB GG 119 Road Safety Audit. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

The comments and suggestions for road safety improvements made in this report seek to address matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme. Consequently, the auditors accept no responsibility for the design or construction of this scheme.

All the issues raised in this report require designer action. The comments contained in the report are based on safety related concerns and as such the design engineer will need to consider carefully how to respond to each of the issues. The Audit Response Report should be completed by the Design Team and retained on file for future reference.

An accompanying Key Plan indicating the location of identified safety related issues is provided in **Appendix B**.

1.1 Project Description

Taken from the RSA Brief:

The section of the B7078 which is adjacent to the site extends from a priority junction with A70 Ayr Road to roundabout with M74 Junction 13 (Abington Interchange). It provides access to farm properties, Andershaw Wind Farm, Kennoxhead Windfarm and Duneaton Quarry. The B7078 is a single carriageway road with a segregated cycleway located on the south side of the road.

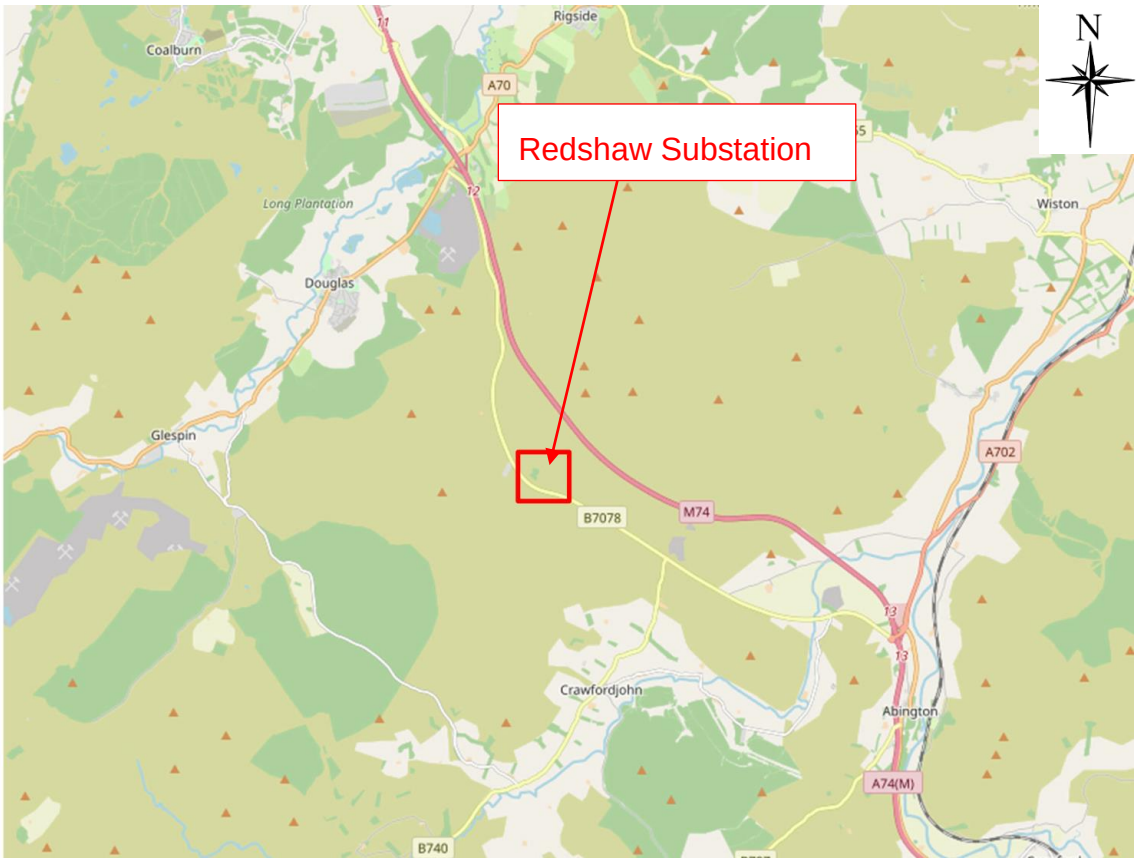
The proposed access is located on the northern side of the carriageway directly adjacent to the Red Moss Truckstop access. A 2.4m x 215m visibility splay is possible (as shown on drawing 100329055-MMD-00-XX-SK-0001). The proposed access will be utilised by HGVs (average of c.10 HGVs/day, peak of c.20 HGVs/day) abnormal loads (likely to be c.20 in total) and general site traffic (cars/LGVs).

The designers subsequently verified that the traffic generation estimates set out above relate to the construction phase of the development and once the site is operational, traffic movements will be low and infrequent. The Audit Team has therefore considered the access arrangements for both during and post-construction.

This audit also considers an alternative location for the access potentially situated approximately 100m south-east of the proposed access.

Figure 1.1 indicates the location of the scheme in a local context.

Figure 1.1: Local context plan



Source: From supplied Road Safety Audit brief based upon Ordnance Survey

1.2 Audit History

The Audit Brief states that no previous Road Safety Audits have been undertaken.

1.3 Departures from Standards

The Audit Brief does not identify any Departures from Standards.

1.4 Collision Data

No collision data was provided within the Audit Brief, however a review of data contained within crashmap.co.uk indicates that in the five-year period of 2019 to 2023, no collisions have occurred in the vicinity of the scheme.

1.5 Report Structure

- **Section 2** reports this Stage 1 Road Safety Audit
- **Section 3** comprises of Audit Team Statements
- **Appendix A** lists the documents and drawings reviewed as part of this audit
- **Appendix B** presents a key plan indicating the location identified road safety related issues

2 Items Raised during this Stage 1 Audit

This section details any road safety related issues identified during this Stage 1 Road Safety Audit associated with the scheme as presented in **Appendix A**.

2.1 Problem 1.01

Location: Proposed access

Summary: Unclear drainage arrangements may result in surface runoff onto B7078 carriageway

The steep ground to the north of the B7078 at the location of the proposed access rises away from the carriageway level. Though long sections have not been provided at this stage of the design, it appears reasonable to assume that the vehicular access will fall towards the B7078 carriageway, and it is unclear what drainage provisions will be. The Audit Team is concerned that surface water and associated debris may runoff onto the B7078 increasing the likelihood of loss of control type collisions, particularly during freezing conditions.

Figure 2.1: Location of proposed access.

Recommendation

It is recommended that appropriate drainage is provided to prevent surface water runoff entering the B7078 carriageway.

2.2 Problem 1.02

Location: Proposed access

Summary: Service cover located within extent of access bellmouth

An existing service cover is present within the extent of the proposed junction bellmouth. Should this remain within in this location, it may present a slip hazard to vehicles turning into the access increasing the likelihood of loss of control collisions. Furthermore, should access to the services be required, operatives may be at greater risk of being struck by passing vehicles even if traffic management is implemented.

Figure 2.2: Service cover within extent of proposed access bellmouth.

Recommendation

It is recommended that the service cover is relocated away from the extent of the access bellmouth.

2.3 Problem 1.03

Location: Proposed access

Summary: Existing signs located within junction visibility splays

Visibility splays for the proposed access are shown as being kept clear of vegetation. However, it was noted that existing traffic signs are present within the visibility splays in both directions. Street furniture within a visibility splay may have a detrimental impact on inter-visibility increasing the likelihood of turning related collisions.

Figure 2.3: View north-west from proposed access location.

Recommendation

It is recommended that any traffic signs situated within the access visibility splays are relocated.

2.4 Problem 1.04

Location: Alternative access location

Summary: Vegetation within likely visibility splays may lead to turning related collisions

An alternative access location is shown in the design drawings will comparatively (with the other access location) require less earthworks during construction. Whilst no visibility splays are shown for the alternative access, it was the Audit Team's opinion that suitable visibility splays can be achieved. However, immediately to the north-west of the alternative access location, a small tree is present that potentially impedes visibility to the north-west. Failure to suitably clear vegetation from visibility splays may result in motorists inappropriately turning out of the access into the path of approaching vehicles increasing the risk of turning related collisions.

Figure 2.4: View north-west from alternative access location.

Recommendation

It is recommended that should the alternative access location be progressed, that vegetation clearance is undertaken to provide unhindered access visibility splays.

3 Audit Team Statement

We certify that this Combined Stage 1/2 Road Safety Audit has been carried out in accordance with Transport Scotland Departmental Standard GG 119.

Road Safety Audit Team Leader

John Dooley BA, FCILT, IEng MICE

(RSA Certificate of Competency holder, July 2019)

Signed:

Date: 05th September 2024

Project Principal
Mott MacDonald, Glasgow, UK

Road Safety Audit Team Member

T J Blaney BSc (Hons), CMILT, MCIHT, MSoRSA
(Certificate of Competency in Road Safety Audit, July 2012)

Signed:

Date: 05th September 2024

Principal Road Safety Engineer
Mott MacDonald, Bristol, UK

Appendices

A. List of Drawings & Documents Examined

Table A.1: Drawings

Drawing Number	Rev	Drawing Title
100329055-MMD-00-XX-SK-0001	P1	Proposed access general arrangements and visibility splays

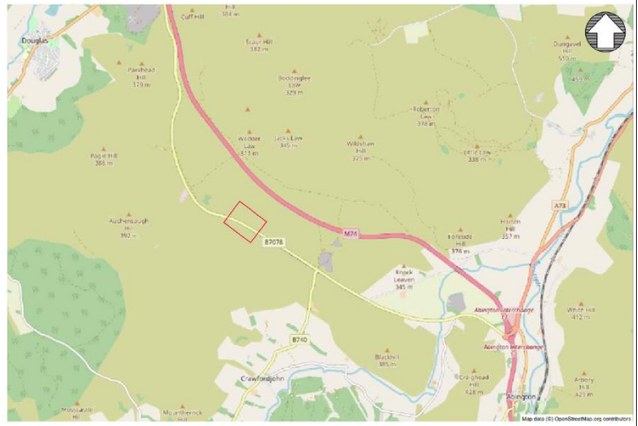
Source: Mott MacDonald

Table A.2: Documents

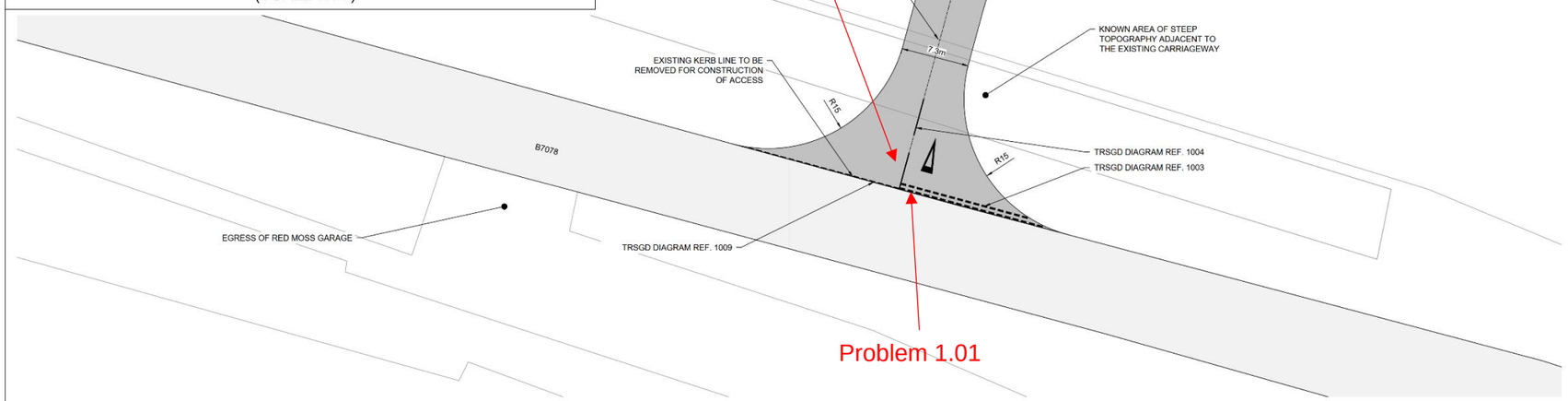
Document Number	Rev	Document Title
100329055-RDSHW-RSA-S1-001	A	Stage 1 Road Safety Audit Brief

Source: Mott MacDonald

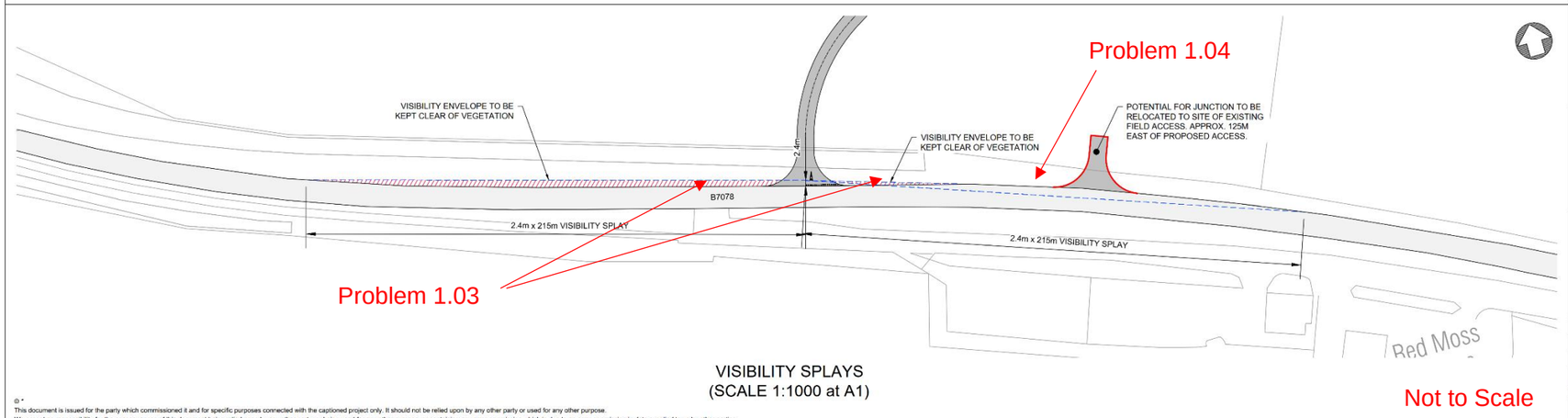
B. Location Plan – Redshaw Substation



LOCATION PLAN
(SCALE NTS)



GENERAL ARRANGEMENT
(SCALE 1:250 at A1)



VISIBILITY SPLAYS
(SCALE 1:1000 at A1)

Not to Scale

Notes

1. Do not scale from this drawing.
2. All dimensions are in metres unless stated otherwise.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. The information on this drawing is based on OS Map data provided by SP Energy Networks
6. Junction visibility splay requirements in accordance with DMRB CD 123 and CD 109.

Key to symbols

- NEW ACCESS ROAD TO PROPOSED SUBSTATION
- EXISTING ROAD
- VISIBILITY SPLAY
- VISIBILITY SPLAY ENVELOPE

Reference drawings

DRAFT

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	18.07.24	RB	DRAFT	MM	DH

MOTT MACDONALD
Floor 1 Greenside
12 Blenheim Place
Edinburgh
EH7 5JH
United Kingdom
T +44 (0)131 221 2300
F +44 (0)131 229 3735
W mottmac.com

Client: SP Energy Networks

Title: REDSHAW PROPOSED 400 / 132 kV SUBSTATION
PROPOSED ACCESS
GENERAL ARRANGEMENT &
VISIBILITY SPLAYS

Designed	R Boyd		Eng check	MM	
Drawn	R Boyd		Coordination	-	
Dwg check	MM		Approved	DH	

Scale at A1	Status	Rev	Security
AS SHOWN	PRE	P1	STD

Drawing Number: 100329055-MMD-00-XX-SK-0001

100329055 | RDSHW | RSA1 | DR | 001 | A | | September 2024

Road Safety Audit Brief

MOTT MACDONALD

This Road Safety Audit (RSA) Brief Template has been produced as a guide to those preparing an RSA Brief.

All RSAs for Motorway and Trunk Road Network schemes must be undertaken in accordance with the **National Highways / Transport Scotland General Principles and Scheme Governance, DMRB GG 119 Road Safety Audit**. This RSA Brief Template is based on the example set out in Appendix C of DMRB GG 119.

Project Summary	
Date:	16th July 2024
Document reference:	100329055-RDSHW-RSA-S1-001-A
Prepared by:	Malcolm Matheson
On behalf of:	Mott MacDonald
Authorisation Sheet	
Project:	LUC Redshaw SS
Report title:	Road Safety Audit Stage 1 – Brief
Prepared by:	
Name:	Malcolm Matheson
Signed:	M Matheson
Organisation:	Mott MacDonald
Date:	16th July 2024
I approve the RSA Brief and instruct the RSA to take place:	
Name:	MARK KIRK.
Signed:	
Organisation:	South Lanarkshire Council
Date:	5TH SEPTEMBER 2024

General Details					
Scheme name and road number:	Name: LUC Redshaw SS Roads: B7078				
Type of scheme:	Access junction (permanent) to facilitate construction and operation of proposed Redshaw Substation.				
Stage of RSA required ☑ (Please indicate one – additional stages will require another RSA brief)	**Stage 1** Completion of Preliminary Design	☑	**Combined Stage 1/2** No Prelim Design - progressed straight to Detailed Design	☐	
	Stage 2 Completion of Detailed Design	☐	**Interim Stage** Also, state stage of interim audit	☐	
	Stage 3 Completion of construction	☐	**Stage 4** Monitoring at 12 or 36 months	☐	
Overseeing Organisation contact details:	Robert Lawson **South Lanarkshire Council** Community and Enterprise Resources South Lanarkshire Council South Vennel Lanark ML11 7JT [redacted]				
Design Organisation contact details:	Malcolm Matheson **Mott MacDonald** 80 George Street Edinburgh EH2 3BU United Kingdom [redacted]				
Police contact details: Required for Stage 3 Road Safety Audit	N/A				

Road Safety Audit Team Membership (CVs available on request)	
RSA Team Leader	John Dooley
RSA Team Member(s)	Tim Blaney
Specialist Advisor (Optional)	N/A
Observer (Optional)	N/A

Terms of Reference

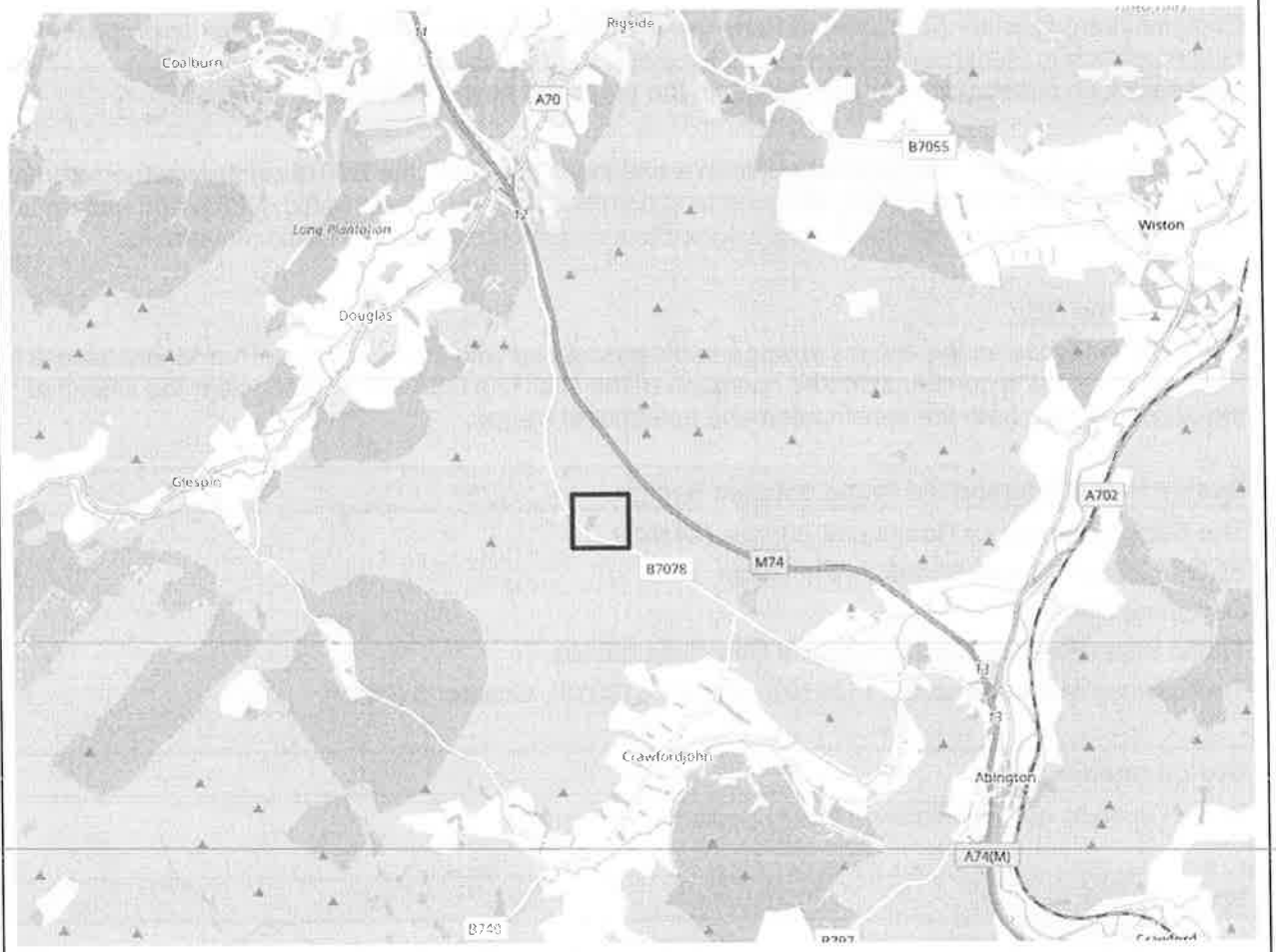
A Stage 1 Road Safety Audit (RSA) in accordance with GG119 is required. The terms of reference for this Audit are GG119, this Audit Brief and all relevant Department for Transport Standards and Advice Notes. The Audit Team are reminded that the Audit only considers road safety matters and is not a technical check that the design conforms to Standard, nor an audit of the existing network.

Scheme Details
General Description
Brief description of project The project is a proposed new substation located in proximity to the existing 400kV Scotland to England interconnector (ZV route) at Redshaw. The overhead line (OHL) route from the proposed Glenmuckloch to Redshaw Reinforcement Project OHL will connect from the proposed Glenmuckloch substation near Kirkconnel, to the proposed new substation at Redshaw. The (permanent) substation access will form a priority junction with the B7078 on the southern corner of the site. The access has been designed to accommodate general site traffic, HGVs and abnormal load deliveries. The access has been designed to accommodate two-way traffic movements. Extents of the RSA The RSA will focus on the access arrangements associated with the substation. Permanent access is required to facilitate construction and operation of the site. The RSA will also consider the impact at the access during both the construction and operational stages.
Design standards applied to the scheme design
The Design Manual for Roads and Bridges (DMRB). SCOT National Roads Development Guide Designing Streets Traffic Signs Regulations and General Directions (2016). Traffic Signs Manual Chapter 3 (2019), Chapter 4 (2018), Chapter 5 (2018).
Design speeds
Design speeds will be relative to locally posted speed limits.
Speed limits
Speed limits are as existing (National Speed Limit).
Existing traffic flows/queues
No survey count data available
Forecast traffic flows
No additional information
Pedestrian, cyclist, and equestrian desire lines
No additional information
Environmental constraints
No additional information

Locality

Description of locality

The site is located south of Douglas, South Lanarkshire as shown in the figure below:



The site is situated in a rural setting adjacent to the B7078 and in close proximity to the M74 motorway which is to the north.

General description

The section of the B7078 which is adjacent to the site extends from a priority junction with A70 Ayr Road to roundabout with M74 Junction 13 (Abington Interchange). It provides access to farm properties, Andershaw Wind Farm, Kennoxhead Windfarm and Duneaton Quarry. The B7078 is a single carriageway road with a segregated cycleway located on the south side of the road.

The proposed access is located on the northern side of the carriageway directly adjacent to the Red Moss Truckstop access. A 2.4m x 215m visibility splay is possible (as shown on drawing 100329055-MMD-00-XX-SK-0001).The proposed access will be utilised by HGVs (average of c.10 HGVs/day, peak of c.20 HGVs/day) abnormal loads (likely to be c.20 in total) and general site traffic (cars/LGVs).

Relevant factors which may affect road safety

The site is directly adjacent to the live carriageway which will be fully operational at the time of the Audit.

Analysis
Collision data analysis
No collision data provided.
Departures from standards
N/A
Previous road safety audit stage reports, road safety audit response reports and evidence of agreed actions
N/A
Strategic decisions
Access location dictated by existing site constraints as well as construction stage requirements to enable safe and efficient movement of traffic to / from the site.

List of included documents and drawings

Documents (e.g., previous RSA reports; design responses; departures; road traffic collision data; walking, cycling and horse-riding assessment and reviews. This could include any relevant operational data such as damage-only collision data or incident logs)

Document Reference	Rev	Document Title (and organisation)	Date
N/A			

Drawings

Drawing Reference	Rev	Drawing Title	Date completed
100329055-MMD-00-XX-SK-0001	P1	REDSHAW PROPOSED 400 / 132 KV SUBSTATION PROPOSED ACCESS GENERAL ARRANGMENT & VISIBILITY SPLAYS	July 2024

NB: All Documents and Drawings provided to the Audit Team should be in PDF. Large packages of drawings (>20 sheets) should also be provided as printed sheets, at A3 size. Please contact the RSA Team if you wish to discuss your requirements.

Checklist ☑ Check that you have provided the following supporting information, where appropriate			
Site location plan	☑	Scale layout plans	☑
Departures and relaxations from standards	☐	Construction/ typical details	☑
Previous RSA reports	☐	Previous RSA response reports and evidence of agreed actions	☐
Collision data and collision data analysis	☐	Road traffic collision plot	☐
Traffic signal staging	☐	Traffic counts	☐
Speed surveys	☐	Pedestrian, cyclist and horse-riding desire lines and volumes	☐
Walking, cycling and horse-riding assessment and reviews	☐	Items outside the scope of the RSA/ strategic decisions	☐
Other factors that may impact on road safety	☐	Design speeds/ speed limits	☑
Design standards used	☑	Adjacent land uses	☐