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Steeple Renewables Project

Appendix 13.1 - Transport Assessment

Environmental Statement - Volume 2

April 2025

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Transport Assessment

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Contents.

1.	Introduction	4
2.	Site Context	5
3.	Policy Context	13
4.	Development Proposals	16
5.	Site Access Arrangements	19
6.	Vehicle Trip Generation	32
7.	Committed Development Traffic	38
8.	Traffic Impact Assessment	41
9.	Summary and Conclusion	48
Α	ppendices.	
Ар	pendix A – Site Location Plan	50
Ар	pendix B – Personal Injury Collision (PIC) Data	51
Ар	pendix C – Proposed Construction Traffic Routeing Diagram	52
Ар	pendix D – Compound and Haul Routes Location PlanPlan	53
Ар	pendix E – Site Access Geometry and Visibility Drawings	54
Ар	pendix F – Swept Path Analysis Drawings	55
Ар	pendix G – Traffic Flow Diagrams	56



1. Introduction

- 1.1. This Transport Assessment (TA) has been prepared by Pegasus Group on behalf of Steeple Solar Farm Ltd. (the Applicant), in order to support a forthcoming Development Consent Order (DCO) application for the Steeple Renewables Project, on land at Sturton-le-Steeple, Nottinghamshire.
- 1.2. The proposals are for the construction, operation (including maintenance) and decommissioning of a 'nationally significant infrastructure project' (NSIP) solar photovoltaic (PV) farm with 450MW solar energy generation and the capacity to produce 150MW energy storage, with associated infrastructure and equipment.
- 1.3. The Proposed Development comprises two parcels of land in the vicinity of the villages and hamlets of Sturton-le-Steeple, North Leverton with Habblesthorpe, North Wheatley, and Fenton. It is approximately five kilometres to the southwest of Gainsborough and nine kilometres to the northeast of Retford. The Site Location Plan is provided in **Appendix A Site Location Plan**.
- 1.4. The site is located within the administrative authorities of Bassetlaw District Council (BDC) who act as the Local Planning Authority (LPA). The Proposed Development is located within the local highway authority (LHA) boundary of Nottinghamshire County Council (NCC). The proposed construction traffic routing (defined later in this report) also passes through the Doncaster Council (DC) LHA boundary, and the strategic road network (SRN) which is owned and operated by National Highways (NH).
- 1.5. Scoping discussions with the local and strategic highway authorities have indicated that the following transport documents should be included to support the DCO submission:
 - Outline Construction Traffic Management Plan (OCTMP) (Appendix 13.2)
 [EN010163/APP/6.3.13]
 - Transport Assessment (Appendix 13.1) [ENO10163/APP/6.3.13]

Report Structure

- 1.6. The structure of the remainder of this TA is set out below:
 - Section 2 A description of the existing transport conditions and site context.
 - Section 3 A Policy Framework for the Transport Assessment.
 - Section 4 A description of the development proposals.
 - Section 5 Detail of the proposed site accesses in the construction and operational phases.
 - **Section 6** Outline of approach to forecasting trips and transport impacts on the surrounding highway network.
 - Section 7 An assessment of the committed development relevant to this site.
 - Section 8 Outline of approach to assessing forecast traffic impact at specific junctions on the local and strategic road network.
 - **Section 9** Summary and Conclusion.



2. Site Context

Site Location and Description

- 2.1. The development site comprises two parcels of land in the vicinity of the villages and hamlets of Sturton-le-Steeple, North Leverton with Habblesthorpe, North Wheatley, and Fenton. It is approximately five kilometres to the southwest of Gainsborough and nine kilometres to the northeast of Retford. The site largely comprises existing agricultural fields. The site location is illustrated in the site plan provided at **Appendix A Site Location Plan.**
- 2.2. The Proposed Development comprises the following:
 - i. The first land parcel (the 'western parcel') is located on the western side of Sturton-le-Steeple. It is northwest of North Leverton with Habblesthorpe, and south east of North Wheatley and comprises largely existing agricultural land and associated buildings.
 - ii. The second land parcel (the 'eastern parcel') is located on the eastern side of Sturton-le-Steeple. It includes the area surrounding Fenton and comprises largely existing agricultural land and associated buildings.
- 2.3. The access strategy of the proposed development incorporates the limitations of the local highway network (e.g. where there are height, width and weight restrictions, and locations of PROWs). In light of the restrictions surrounding the highway network of the site, the proposed construction traffic routing set out below has been proposed.
- 2.4. The delivery trips during construction phase will arrive/depart the site using the route A1(M) J34 Blyth Interchange, A614, A631, A620 (detailed further below) and travel south into the site accesses for the western and eastern parcel. Within each parcel there will be a Primary Compound (two Primary Compounds in total). In addition to the Primary Compounds, there will be one Secondary Construction Compound located within the Eastern Parcel and two further Secondary Construction Compounds are located within the Western Parcel.
- 2.5. The construction timescales are anticipated to be over a 24 month period between 2027 and 2029. The construction site is likely to be operational six days a week (Monday to Saturday).

Existing Highway Network

2.6. The proposed construction routing for the project has been designed to utilise the most appropriate and strategic routes to minimise potential impacts on the strategic and local road network. The following section provides an overview of the roads forming the proposed construction traffic route.

Strategic Road Network

A1(M)

2.7. Construction traffic will access the site via the A1(M) Blyth Interchange, which forms part of the Strategic Road Network (SRN). The A1(M) provides a high-capacity route for vehicular traffic, facilitating efficient connections to regional and national destinations.



2.8. Within the vicinity of the Blyth interchange, the A1(M) forms a dual carriageway motorway lying in a northwest to southeast alignment. The motorway consists of two lanes per carriageway, with each lane measuring circa 3.65m in width. The carriageways are separated by a central reservation approximately four metres wide. Slip roads provide access to the Blyth Interchange roundabout which in turn provides access onto Bawtry Road (A614) routing north towards Bawtry.

Local Road Network

Bawtry Road (A614) / Great North Road (A638)

- 2.9. Bawtry Road (A614) in conjunction with a short section of Great North Road (A638) provide a route between the A1(M) Junction 34 Blyth Interchange and Bawtry and lies in a northeast to southwest alignment.
- 2.10. The Bawtry Road (A614) and Great North Road (A638) are single-carriageway roads with Bawtry Road measuring circa 7.3m in width and Great North Road measuring circa eight metres. Bawtry Road is subject to variable speed restrictions ranging from 30–40 mph within one kilometre of Blyth interchange and subject to 60mph speed restriction for the rest of the route. Both roads form part of the form part of the Major Road Network (MRN).

A631

2.11. The A631 provides a connection between the A620 at Beckingham, with the A368 at Bawtry via a signalised junction, around 13.3 kilometres to the west. It is a predominantly single carriageway route, with two short extents (total 1.7 kilometres) of dual carriageway. In the vicinity of Bawtry, it serves several dwellings and commercial units. It is predominantly subject to a 50mph speed limit, which reduces to 30mph through built-up areas such as Everton. Footways of varying width are provided in brief extents in the vicinity of the built-up areas.

A620 (Gainsborough Road / Saundby Road)

- 2.12. The A620 provides a connection between the A631 in the north (in the vicinity of Beckingham), with Sturton Road / Gainsborough Road to the south in the vicinity of the hamlet of Bole. It is a single carriageway route which is predominantly unlit, and is subject to a 40mph speed limit from the A631 junction to the approach to the roundabout junction with Sturton Road, where it increases to 50mph. The carriageway measures around six metres in width.
- 2.13. The A620 serves a small number of residential dwellings and small-scale business / industrial estates. A footway is generally provided on the eastern side of the carriageway, with extents of this also providing for shared cycle use.

Sturton Road / Gainsborough Road

2.14. Sturton Road / Gainsborough Road provides a connection between the A620 in the north, with Station Road / Wheatley Road in the south via a priority junction arrangement. It is a single carriageway road measuring around 6.5 metres in width, and is subject to a 50mph speed limit for the majority of its extent, reducing to a 30mph speed limit on the approach to Sturton le Steeple, around 220 metres to the north of the junction with Station Road / Wheatley Road. The route is unlit, and footways are generally not provided. It serves the



primary access and egress for the West Burton power station to the north of Sturton le Steeple.

2.15. Sturton Road / Gainsborough Road already accommodates HGV movements associated with the West Burton power station. The carriageway is subject to a restriction for vehicles weighing 18 tonnes or less except for access, commencing around 275 metres to the north of the junction with Station Road / Wheatley Road.

Station Road / Wheatley Road

2.16. Station Road / Wheatley Road is a single carriageway route which is lit and subject to a 30mph speed limit within the built-up extent of Sturton le Steeple, increasing to around 40mph around 185 metres to the west of the junction with Sturton Road / Gainsborough Road. The carriageway measures around six metres in width and a footway measuring around 1.5 metres wide is provided on the north side of the carriageway. Station Road / Wheatley Road serves a small number of residential dwellings and is subject to the 18 tonne weight restriction (except for access) which commenced on Sturton Road / Gainsborough Road.

Environmental Weight Restriction Order

- 2.17. There is an existing environmental weight restriction order in place in Sturton-le-Steeple restricting heavy goods vehicles to a maximum of 18-tonnes.
- 2.18. However, in an email on 21st February 2025, the Traffic Regulation Order records team at Nottinghamshire County Council confirmed that the Environmental Weight Restriction Order (EWR) for the Sturton-le-Steeple area has exceptions for:
 - A. For Delivery to sites within the Zone and
 - B. For Construction Works within the Zone.
- 2.19. The purpose of the weight restriction is primarily to restrict large vehicles unnecessarily cutting through villages on inappropriate routes, as opposed to being as a result of any structures or similar.

Highway Safety

- 2.20. Personal Injury Collision (PIC) data has been obtained from via East Midlands on behalf of NCC, for the most recent five-year period (1/8/2019 to 31/7/2024). The study area comprises the local highway network between the A631 and the site access locations. This study area has been included in the scope of the assessment as it comprises the main route to the site for deliveries and construction workforce trips.
- 2.21. The full accident data report and plot is provided at **Appendix B Personal Injury Collision** (PIC) Data.
- 2.22. The PIC data indicates that during the most recently available five-year period there have been no incidents classified as 'fatal' within the study area. There have been three incidents categorised as 'Serious', and 14 classified as 'Slight' collisions. A summary of these incidents per year is provided in Table 2.1.



Table 2.1 - Summary of PIC records (Source: Via East Midlands, December 2024)

	Slight	Serious	Fatal	Total
2019 (Aug-Dec)	1	0	0	1
2020	0	0	0	0
2021	6	0	0	6
2022	2	2	0	4
2023	4	0	0	4
2024 (Jan-July)	1	1	0	2
Total (5-years)	14	3	0	17

- 2.23. Relating to incidents involving vulnerable road users, one incident in 2023 involved a motorcycle and was classified as slight in severity, and two incidents in 2019 and 2024 involved pedal cycles, with one classified as serious in 2024 and the other as slight in 2019. One incident included a horse rider which was classified as serious in 2022.
- 2.24. A review of the incidents categorised as 'serious' is provided in Table 2.2.

Table 2.2 – Summary of 'Serious' PICs in the most recently available 5 years

Date / Ref	Location	Vehicles Involved	Summary
May 2022 ref: 2B058822	Thornhill Lane crossroads	Van / goods vehicle (under 3.5 tonnes) and a ridden horse	A van was travelling southbound, and a ridden horse was travelling and northbound. No collision between the vehicles was reported, however resulted in a serious incident.
April 2022 ref: 2B078722	Gainsborough Road (A620), 443 metres south of Marsh Lane	Car and a van / goods vehicle (under 3.5 tonnes).	The driver of the car, heading northbound, driving in the wrong lane into the path of the oncoming southeast bound van / goods vehicle. The driver of the car was identified to be driving under the influence (i.e., under "Breath Test" the report states: "Positive").
May 2024 ref: 2B071024	A631 / Station Road / Bar Road, A620 roundabout	Car and a pedal cycle	A car entering the roundabout from the northern arm (Station Road), heading southbound, and a pedal cycle travelling over the roundabout from the northwestern arm (A631) to the south eastern arm (A631). The car failed to give way and collided with the nearside of the pedal cycle.

2.25. A high-level review of the wider network (based on the Crashmap database), including the A631 to the west of the Gainsborough Road, the A638 and the A614 junction to the A1(M) indicates that the PICs recorded on this section are consistent with what is generally anticipated with the level of traffic already using the network and the data indicates that there are no obvious clusters or blackspots which would require further detailed analysis.



- 2.26. In summary, the Via East Midlands PIC record indicates a total of 17 incidents over a five-year period, which does not suggest an underlying highway safety issue within this local area. It is therefore concluded that there is no existing safety concern on the local highway network within the vicinity of the site.
- 2.27. In conclusion taking both data sources to analyse the construction traffic routing from the A1(M) to the site accesses, it can be concluded that there is not considered to be an existing highway safety issue both reviewing the data at a high level for the wider network, and reviewing the accident data in detail for the section of the local highway network closer to the site.

Pre-Application Correspondence

2.28. The responses to the pre-application scoping submissions are summarised in Table 2.3.



Table 2.3 – Summary of Pre-Application Scoping Correspondence

Consultee	Summary of Comment	Applicant Response
	The Inspectorate is content to scope out detailed assessments where the relevant thresholds have not been exceeded, subject to the ES confirming the numbers and types of vehicles for all phases (with reference to thresholds within guidance), as well as proposed access/transport routes to justify this position.	It is considered at this stage that the operational phase of the proposed development can be scoped out of the ES with regards to transport matters, given the low number of vehicles anticipated to require access to the Proposed Development site.
		The EIA is supported by a OCTMP and TA. It will be supported by a Decommissioning Traffic Management Plan.
Secretary of State	The Scoping Report states that it is anticipated that the development impact, comparing to the existing flows on the Strategic Road Network (SRN) will be negligible, and therefore it is anticipated that these links will be scoped out of any	It is considered that the operational and decommissioning phases pf the Proposed Development in terms of transport impact can be scoped out of the ES, in relation to the impact on
Scoping Opinion dated 3 rd June 2024	further assessment.	the SRN. The need to assess the construction traffic impact on Junction 34 of the A1(M), which forms part of the proposed vehicle routing, has been considered with National Highways.
	Given the presence of PRoWs within the Site, the ES should confirm whether the Proposed Development would result in any PRoW or other recreational routes being diverted or stopped up, on either a temporary or permanent basis.	Several PRoWs are within or abut the site and therefore a PRoW Management Plan is provided to assess the impact on PRoWs and to provide a management strategy for the Proposed Development. It's important to note that there are no proposals currently to alter/divert or stop-up any PRoW during the operational phase. During construction, it may be necessary to provide temporary mitigation on some PRoW, primarily for the purpose of



Consultee	Summary of Comment	Applicant Response
		safety for the public while construction is underway.
National Highways consultee responses from the PEIR Response via letter dated 24 th February 2025	National Highways' main concerns are related to the impact on the Strategic Road Network (SRN), specifically the A1(M) Junction 34. National Highways requires further information on construction traffic flow and the transport assessment.	Information on forecast construction traffic flows at A1 (M) Junction 34 is provided in Section 8 of this report.
Nottinghamshire County Council as LHA	NCC advised a proposal of this magnitude will have significant impact on the existing transportation network, mainly	Discussions with the LHA have been held, and an EIA Transport and Access chapter has been prepared.
Response to Highways Scoping Request via email	during the project's construction phase.	A Transport Assessment, OCTMP, a PRoW Management Plan and a
dated 15 th May 2024	Includes the request for a Transport Assessment, OCTMP, Safety Audits, PRoW Management Plan, and Outline Construction Traffic Management Plan to assess the additional traffic demands and any required mitigation to the highway network, prepared in accordance with current Planning Practice Policy, Nottinghamshire County Council's Design Guide and other industry accepted guidance on TAs.	Construction Worker Travel Plan have been prepared in this context. It is proposed that Road Safety Audits (RSA) of the primary/main site access will be completed following submission of the DCO and compiled in a Technical Note. The safety of the proposed secondary site accesses will also be considered as appropriate.
Nottinghamshire County Council PROW Team Meeting, with PROW (legal) officer	Advised that the landowner rights of access should be confirmed.	Land owner rights have been confirmed and access to the land through the use of the PRoW network, e.g. using the Restricted Byways, has been confirmed as acceptable.
4 th May 2024	Indicated that the use of A1/A4\	Troffic flow diagrams bases
National Highways	Indicated that the use of A1(M) Junction 34 would be acceptable in	Traffic flow diagrams have been provided in this
Meeting with the	principle during the construction	Transport Assessment that
Spatial Planning	period. However, assessment would	provide a forecast of the
(Midlands) team	be required.	peak / "worst-case" traffic forecast during
9 th December 2024		construction, including at A1(M) Junction 34.
2027		ΑΙ(ΙΥΙ) JULICUIT J4.



Consultee	Summary of Comment	Applicant Response
City of Doncaster Council Highways Meeting with the Highways development Control Officers, and Highways Operation Officers 16th December 2024	Requested a review and assessment of the A361 / A368 signalised junction at Bawtry.	An assessment of the junction has been included within the Transport Assessment.
Scoping note submitted to the LHA to agree the scope of transport work required to support the DCO submission in February 2025.	NCC agreed the construction traffic routing and the scope of the OCTMP and TS/TA. Further information was provided on contacts for PRoWs, AlLs and Streetworks licenses.	Noted and has been provided within the OCTMP, meeting with PRoW officers undertaken, and other NCC teams contacted.
Nottinghamshire County Council PROW Team Meeting, with PROW (operations) officer 13th March 2025	A PRoW Management Strategy is required for each PRoW in the vicinity of the site. A Conditions Survey is required before and after construction.	A Management Strategy and a Conditions Survey for the PRoW will be provided in the OCTMP.
Nottinghamshire County Council as LHA 27 th March 2025	Pegasus Group presented the proposed methodology for the OCTMP and TA to NCC on 27.03.2025.	



3. Policy Context

- 3.1. The Proposed Development has been considered in the context of the following documents as appropriate:
 - i. Overarching National Policy Statement (NPS) for Energy (EN-1 Section 15.4 'Traffic and Transport') 2024.
 - ii. National Policy Statement for Renewable Energy Infrastructure (EN-3 Section 2.10 'Solar Photovoltaic Generation') 2024.
 - iii. National Planning Policy Framework (NPPF) 2024.
 - iv. National Planning Practice Guidance (NPPG) 2014.
 - v. Design Manual for Roads and Bridges (DMRB).
 - vi. Nottinghamshire's Local Transport Plan 2011-2026.
 - vii. Bassetlaw Local Plan 2020-2038.
 - viii. Nottinghamshire County Council Highways Design Guide.

National Policy Statements

- 3.2. National Policy Statement (NPS) EN-1 ('Overarching National Policy Statement for Energy') sets out guidance relating to traffic and transport at Section 5.14. Paragraph 5.14.5 states that the Applicant's ES should include a transport appraisal, in this case a Transport Assessment (TA), using the Department for Transport's (DfT) 'Transport Analysis Guidance'. Paragraph 5.14.6 confirms that Applicants should consult with National Highways and Highway Authorities as appropriate.
- 3.3. National Policy Statement EN-3 ('National Policy Statement for Renewable Energy Infrastructure'²) sets out guidance relating to access and the potential impacts and mitigations for construction traffic relating to new solar farms at Chapter 2.10 suggests that applicants should assess the potential routes for deliveries and the suitability of these routes, and the mitigation measures that may be required to be implemented by the Highway Authority or the Secretary of State.

National Planning Policy

National Planning Policy Framework (2024)

3.4. In transport terms, the thrust of the National Planning Policy Framework (NPPF) is a presumption in favour of sustainable development and to make the fullest use of public transport walking and cycling whilst noting that opportunities will vary between urban and rural areas; to ensure safe and suitable access can be achieved for all, and that

¹ EN-1 Overarching National Policy Statement for Energy

² National Policy Statement for renewable energy infrastructure (EN-3)



development should only be refused on transport grounds where the residual cumulative impacts are severe.

Planning Practice Guidance (2019)

- 3.5. Planning Practice Guidance (PPG) (2019) provides advice on when Transport Assessments and Transport Statements are required and what they should contain. The PPG confirms that these types of documents can positively contribute to:
 - i. Encouraging sustainable travel.
 - ii. Lessening traffic generation and its detrimental impacts.
 - iii. Reducing carbon emissions and climate impacts.
 - iv. Creating accessible, connected, inclusive communities.
 - v. Improving health outcomes and quality of life.
 - vi. Improving road safety; and
 - vii. Reducing the need for new development to increase existing road capacity or provide for new roads.

Nottinghamshire's Local Transport Plan (LTP3) 2011-2026

- 3.6. The LTP3 comprises the local transport strategy which details how transport improvements will be delivered in the county, and an implementation plan to set out the measures and investment to deliver the strategy, including encouraging a transfer to lower carbon vehicles.
- 3.7. The goals of the LTP3 include minimising the impacts of transport and maximise opportunities to improve the environment and help tackle carbon emissions, and encourages the uptake of 'smarter choices' measures (such as travel plans, promotion and marketing of sustainable travel, and the better use of technology) to help influence travel behaviour.
- 3.8. The LTP3 indicates that the highway network should be resilient to the changing climate, with the County Council supporting the development of a low carbon transport system (with reference to solar power included), through:
 - i. Supporting the change to new vehicle technologies and lower carbon fuels.
 - ii. Promoting lower carbon transport choices.
 - iii. Encouraging a transfer to lower carbon vehicles.

Bassetlaw Local Plan 2020-2038

3.9. The Local Plan indicates that large scale ground mounted proposals for solar farms are capable of contributing substantially to total solar power generation nationally, and it recognises that such schemes are now more prominent in the district.



- 3.10. The Local Plan includes policies promoting renewable and low-carbon energy and technologies, and alternative energy sources to fossil fuels.
- 3.11. The Local Plan supports the efficient and safe operation of the local and strategic highway network.

Nottinghamshire County Council Highways Design Guide

- 3.12. The Nottinghamshire County Council Highways Design Guide provides comprehensive standards and principles for planning, designing, and delivering infrastructure associated with developments, including utility-scale energy projects such as solar farms. The guide establishes a framework for ensuring that new developments contribute to a safe, sustainable, and efficient highway network across the county.
- 3.13. The Guidance on Transport Assessment document (which is appended to the Nottinghamshire County Council Highways Design guide) outlines the requirements for all developments anticipated to generate significant movements to prepare a transport assessment to assess the likely impacts of the proposed development.
- 3.14. In the context of this Transport Assessment, the principles of the Nottinghamshire Highways Design Guide have informed the site access strategy, construction routeing and mitigation measures. An OCTMP [ENO10163/APP/6.3.13] will be prepared to further detail measures in accordance with these guidelines, ensuring that the solar farm development's impact on the local highway network is appropriately mitigated.



4. Development Proposals

Construction Traffic Routing Strategy

Delivery Routing

- 4.1. It is proposed that construction vehicle routing will comprise the following:
 - i. A1(M) Blyth Interchange forms part of the Strategic Road Network (SRN).
 - ii. Vehicles will route eastwards along the A614 and A638 towards Bawtry.
 - iii. Traffic will turn right at the A638/A631 signalised junction in West Bawtry onto the A631 Bawtry Road, heading east towards Beckingham.
 - iv. At the Beckingham Roundabout (Station Road/A631/Bar Road/A620) traffic will head south along the A620 Bar Road.
 - v. Traffic will head southbound onto Gainsborough Road, Saundby Road and Sturton Road.
 - vi. Delivery traffic will then divide based on which land parcel and Primary Compound they are assigned to deliver to, as outlined below.

Eastern Parcel

4.2. For traffic routing to the Eastern Parcel, the Quarry access on construction route to the north of Sturton-le-Steeple will be used to access the Primary Compound in the Eastern Parcel (referred to as Primary Compound A). This requires a left turn from Gainsborough Road, located approximately 330m north of the Gainsborough Road / Station Road junction.

Western Parcel

- 4.3. For traffic routing to the Western Parcel, the Station Road access will be used to access the Primary Compound in the Western Parcel (referred to as Primary Compound B). This requires a right turn at the Gainsborough Road / Station Road junction to head westbound on Station Road, followed by a left turn off Station Road located approximately 200m into the Western Parcel access.
- 4.4. Vehicles leaving the site will use the same route but in reverse.
- 4.5. The proposed construction routing is illustrated below in Plate 4.1, with a full plan provided in **Appendix C**.



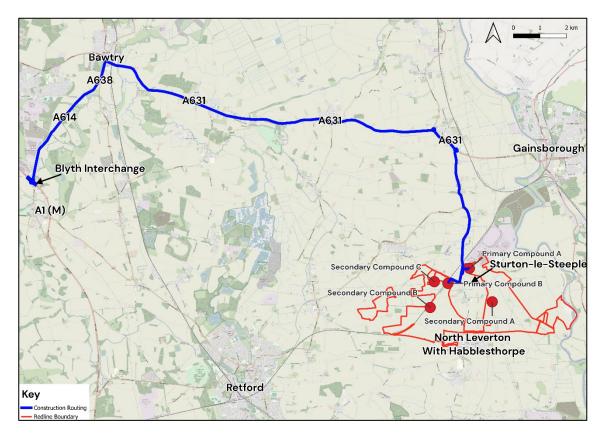


Plate 4.1 - Construction routing from Strategic Road Network (A1) to the site

Source: Open Street Maps

- 4.6. During pre-application scoping discussions with Nottinghamshire County Council, Doncaster Council and National Highways, this construction traffic route was agreed as suitable in principle for deliveries.
- 4.7. NCC Highways and the Traffic Regulation Order (TRO) team have also confirmed that the proposed construction routing would be appropriate with reference to the New Roads and Street Works Act (NRSWA) which indicates that the routeing is suitable for access for construction purposes.
- 4.8. Delivery drivers will be informed of the route prior to arriving at and / or departing from the site, with strict timing restrictions on LGV and HGV movements being enforced.
- 4.9. If issues arise due to increased traffic volumes or community concerns, the LPA and LHA may request the applicant to review and implement alternative permitted routes.

Construction Workforce Traffic Routing

- 4.10. The distribution of the workforce traffic accessing the site during the 24 month construction period will comprise a combination of local workforce and temporary non-local workforce.
- 4.11. Non-local workforce will likely to be staying in local accommodation (e.g. hotels, hostels etc), whereby the location of these will be determined by the appointed Contractor. Locally based workforce will likely to be arriving from key residential areas in the local area.



- 4.12. The vehicle traffic distribution of the workforce is based on Census data for the location of usual residence and place of work by method of travel to work in ward Bassettlaw 002 (Middle Super Output Area (MSOA) level). Generally, the data indicates that around 44% of the workforce are anticipated to travel locally from within Bassetlaw, 17% from Lindsey, 11% from Lincoln/Lincolnshire, and 6% from Doncaster. The remaining 22% would be travelling from other areas within the region and nationally.
- 4.13. The workforce is anticipated to access the site through mini-bus, van and car sharing at the beginning of the working day and depart the site at the end of the working day, minimising personal vehicle use where possible. Furthermore, where possible, the start and finish times of shift patterns will be staggered and will be outside of peak network hours.
- 4.14. It is proposed that all construction workforce routing to the site will also come from the north of the site so that the vehicle impact is minimised on the local highway network and surrounding villages. The use of the construction vehicle routing will be secured via requirement of the DCO to comply with this OCTMP [ENO10163/APP/6.3.13]. This will ensure that vehicles associated with construction will be routing on A-roads as far as possible and minimising the impact on the local roads and villages in the local area.
- 4.15. Key origin destinations for local and non-local workforce (based on the census data, as a proxy) include Bassetlaw (including Retford), Lindsay (Gainsborough), Lincoln and Lincolnshire, Doncaster. Routing for these likely key destinations are set out below.

Bassetlaw (including Retford)

4.16. Vehicle trips from Bassetlaw, including Retford, will route via Retford Road, A620 and Gainsborough Road, A620 to reach the Gainsborough Road / Saundby Road / Sturton Road Roundabout, whereby Sturton Road will be followed south to approach the Primary Site Compounds.

Lindsey (Gainsborough) and Lincoln/Lincolnshire

4.17. The vehicle trips from Lindsey and Lincoln/Lincolnshire are anticipated to route towards the site via the Beckingham Roundabout (Roundabout junction with Station Road forming the northern arm, the A631 forming the eastern and western arms and Bar Road, A620 forming the southern arm), approaching from the east of the roundabout and heading south along the A620, Sturton Road and Gainsborough Road to reach the Primary Site Compounds.

Doncaster

4.18. The vehicle trips from Doncaster are anticipated to route towards the site via the Beckingham Roundabout but instead approaching from the west of the roundabout to head south along the A620, Sturton Road and Gainsborough Road to arrive at the Primary Site Compounds.

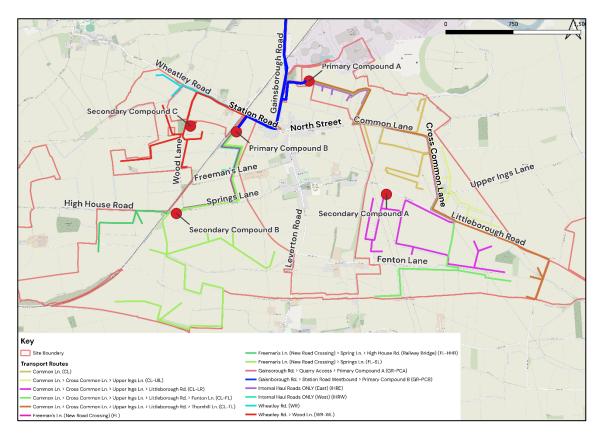


5. Site Access Arrangements

Overview

5.1. This section provides a detailed summary of the site access strategy for the site. The site accesses are informed by the proposed compound locations and haul routes, which are detailed in full in the OCTMP [ENO10163/APP/6.3.13]. The below diagram Plate 5.1 provides an illustration of the site compound locations and haul routes for ease of reference. It is also provided in Appendix D – Compound and Haul Routes Location Plan.

Plate 5.1 - Proposed Compound Locations and Haul Routes



Source: Open Street Maps

5.2. The remainder of this section details the proposed site accesses.

Construction Access Points

- 5.3. This section provides details of the site access strategy. The proposed compound locations and haul routes inform the site access locations.
- 5.4. There are twenty site accesses proposed in total. **Plate 5.1** below provides an overview of the site access locations.



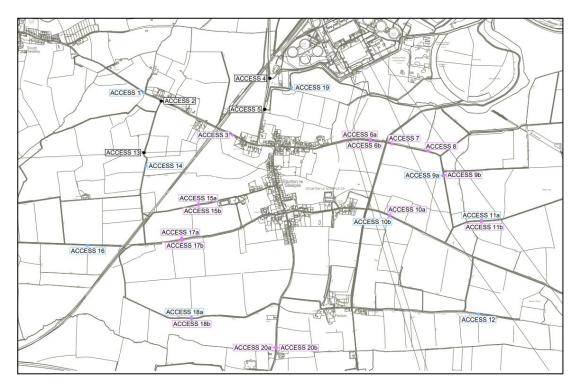


Plate 5.1 – Extract of Site Access Locations Drawing

Source: RES Site Access Locations (Drawing Reference: 04954-RES-ACC-DR-PE-004 09.05.2025 REV1)

- 5.5. All site access points and/or crossovers—whether connecting to the adopted public highway or Public Rights of Way (including footpaths, bridleways, and byways, both restricted and unrestricted)—have been designed in accordance with Nottinghamshire Design Guide, appropriately reflecting the low traffic volumes associated with the construction phase and operational phase, low vehicle speeds (site speed limit of 10mph), and the temporary nature of construction activity (forecast as approximately 24 months).
- 5.6. The construction access points are proposed for the eastern and western land parcels. The access strategy is based on the vehicles accessing the following destinations within the overall site:
 - i. Primary Construction Compounds (x2)
 - ii. Secondary Construction Compounds (x3)
 - iii. Individual fields
- 5.7. During pre-application discussions, NCC advised that the submission of general arrangement drawings for the site access points, should be annotated with the following:
 - visibility splays
 - widths
 - dimensions



vegetation clearance

5.8. Site access drawings, including visibility splays (Drawing Ref: 04954-RES-ACC-DR-PE-004 REV1), are provided in **Appendix E.** The accompanying Swept Path Analysis (SPA) drawings (Drawing Ref: 04954-RES-ACC-DR-PE-005 REV2) are provided in **Appendix F.** Each access is described below in turn.

Access 1

- 5.9. Access 1 is modification of an existing gated farm access located on Wheatley Road.
- 5.10. Visibility splays of 2.4 x 120 metres can be achieved in both directions to the nearside kerb, commensurate with a design speed of 40mph in line with the NCC Design Guide visibility requirements.
- 5.11. Vegetation trimming or removal will be required where the vegetation is sited at the proposed access or where it obstructs the required visibility splays. The anticipated areas for vegetation trimming/removal have been clearly indicated on the access drawing.
- 5.12. The proposed junction radii are eight metres on the western side of the junction and 14m on the eastern side, with a carriageway width of 5.8m provided. The radii and junction widths have been informed by SPA tracking, which demonstrates that a 16.5m articulated vehicle can safely ingress and egress, to/ from the Access 1 junction."

Access 2

- 5.13. Access 2 is an existing three-arm priority junction located on Wheatley Road / Wood Lane.
- 5.14. This access is already an approved access for the Wood Lane Solar Scheme (Planning Reference: 20/00117/FUL) which was granted planning permission in August 2020.
- 5.15. Visibility splays of 2.4 x 120 metres can be achieved in both directions to the nearside kerb, commensurate with design speeds of 40mph in line with the NCC Design Guide visibility requirements.
- 5.16. For Site Access 2, the visibility splay partially contains within the western visibility envelope an existing tree trunk. This represents an intermittent, partial obstruction within the visibility splay, which is not considered to warrant the removal of the existing tree. In line with the previously approved Transport Statement and accompanying drawings for the adjacent Wood Lane Solar Farm development (Planning Reference: 20/00117/FUL), a similar visibility splay provision is proposed here. The Wood Lane Solar Farm drawings indicated 2.0m x 120m visibility splays. A similar arrangement was previously deemed acceptable as part of the access assessment for the Wood Lane Solar Farm
- 5.17. Where the visibility splay intersects with the existing hedgerow, this will be realigned/trimmed/removed as necessary to ensure that the visibility splay is not impacted whilst also seeking to preserve existing vegetation wherever possible.
- 5.18. Given that the existing site access has previously been utilised for the Wood Lane Solar Farm development, it is proposed to retain the current junction geometry. Swept Path Analysis (SPA) demonstrates that this arrangement is suitable for the safe ingress and



egress of 16.5m articulated HGVs, which are anticipated to be the most onerous vehicles to use the access as part of the Steeple Solar Farm scheme.

Access 3 / Primary Compound B

- 5.19. Access 3 is a proposed three-arm priority junction located on Station Road.
- 5.20. The access to Primary Compound B is via Access 3 and is located off Station Road to the west of Sturton le Steeple village. The existing field access is located approximately 320 metres to the west of the Gainsborough Road / Station Road junction.
- 5.21. Visibility splays of 2.4 x 70m to the east and 2.4m x 120m to the west can be achieved to the nearside kerb, commensurate with design speeds of 30mph and 40mph respectively in line with the NCC Design Guide/DMRB visibility requirements.
- 5.22. The proposed junction radii are 14m on the western side of the junction and 10m on the eastern side, with a proposed junction width of 6.9m. SPA has informed the design of the junction and illustrates that a 16.5m vehicle can safely ingress and ingress from the proposed field access.
- 5.23. There will be a requirement for vegetation trimming/removal where this obstructs the visibility splay for the access and where this is required it has been clearly illustrated on the access drawing.

Access 4

- 5.24. Access 4 is an existing three-arm priority junction located on Gainsborough Road and providing access to Rose Street (power station access).
- 5.25. Visibility splays of 2.4 x 215 metres can be achieved in both directions to the nearside kerb, commensurate with a design speed of 60mph in line with the NCC Design Guide visibility requirements.
- 5.26. Given the existing nature of the access for vehicles associated with the West Burton Power Station, it is not proposed to make any changes to the existing arrangement of the access, especially given that this route does not form a main access to a compound or one of the proposed haul routes which are anticipated to be used for HGV deliveries / trips.

Access 5 / Primary Compound A

- 5.27. Access 5 is an existing three arm priority junction located on Gainsborough Road which forms access to the Sturton le Steeple Quarry and was previously consented as part of an NCC planning application (planning app ref: 1/16/00354/CDM).
- 5.28. The access to Primary Compound A is via Access 5 located off Gainsborough Road just south of the West Burton Power station site and utilises the existing quarry access road. It is located approximately 340 metres to the north of the Gainsborough Road / Station Road junction.
- 5.29. Visibility splays of 2.4 x 215 metres can be achieved in both directions to the nearside kerb, commensurate with a design speed of 60mph in line with the NCC Design Guide visibility requirements.



5.30. Given the existing and approved nature of the site access for HGV usage associated with the Steeple le Sturton Quarry, it is not proposed to make any changes to the existing arrangement of the Access, with SPA illustrating that this access will be suitable to accommodate the ingress and egress movements of 16.5m Articulated Vehicles, a Mobile Crane and a 120MVA Grid Transformer vehicle, subject to some mitigation works on the central island, which is further discussed within the OCTMP. The Mobile Crane and Grid Transformer vehicle may require some minor overrunning of the central island, and the client is committed to ensuring this is returned to a good condition once construction is completed.

Access 6

- 5.31. Access 6 is a new access to create a four-arm crossroad junction with Common Lane. Where the site accesses take the form of crossovers, these are formed by the corresponding 6 a & b access drawings, which together represent the complete crossover layout and design. Site Access 6 will also give access to construction vehicles utilising other site accesses along Common Lane, such as Access 7 and 8. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.32. The proposed junction radii for Site Access 6A are 12m on both the eastern and western side, with a width of 7.5m. The proposed junction radii for Site Access 6B are eight metres on both the eastern and western sides of the junction with a width of 4.5m. The junction arrangement has been informed by SPA tracking for a 16.5m HGV, with the drawings provided at **Appendix F** illustrating an HGV being able to ingress and egress to/ from Site Access 6.
- 5.33. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 7

- 5.34. Access 7 is a new access to create a three-arm priority access on Common Lane.
- 5.35. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.36. The proposed junction radii have been informed by SPA tracking for a 16.5m HGV and is proposed to include a 14m radii on the western side of the junction, a 10m radii on the eastern side of the junction and a junction width of 6.5m. The SPA illustrates that using this geometry, the 16.5m HGV is able to ingress and egress from the access in a safe and controlled manner, with no anticipated wheel overrunning.
- 5.37. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 8

5.38. Access 8 is a new access to create a three-arm priority access on Common Lane.



- 5.39. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.40. The proposed junction radii are 13m on the western side of the junction and 10m on the eastern side of the junction, with a junction width of four metres. This geometry has been informed by SPA tracking which illustrates a 16.5m HGV being able to ingress from west as well as egress to the west, towards Primary Compound A.
- 5.41. Where the visibility splay intersects with the existing hedgerow, this will be realigned/trimmed/removed as necessary to ensure that the visibility splay is not impacted whilst also seeking to preserve existing vegetation wherever possible.

Access 9

- 5.42. Access 9 is a combination of a new access (9a) and modification to an existing farm access (9b) to create a four-arm crossroads on Cross Common Lane. Where the site accesses take the form of crossovers, these are formed by the corresponding a & b access drawings, which together represent the complete crossover layout and design
- 5.43. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.44. The proposed junction radii for both Site Access 9A and Site Access 9B are 10m on both the northern and southern sides of each junction, with a junction width of four metres provided for both accesses. The junction crossover arrangements have been informed by SPA tracking for a 16.5m HGV, with the drawings demonstrating that an HGV can safely ingress from the north into both field accesses and similarly egress back to the north.
- 5.45. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 10

- 5.46. Access 10 is a combination of a new access (10a) and modification to an existing farm access (10b) to create a four-arm crossroads on Littleborough Road with construction traffic only being required to crossover at this point, therefore there will be no vehicles turning in/out at these junctions.
- 5.47. Secondary Compound A is located off an internal Haul Route which is accessed from Littleborough Road.
- 5.48. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.49. The proposed junction radii for Site Access 10a is six metres on the western side of the junction and eight metres on the eastern side of the junction, with a junction width of four metres.



- 5.50. The proposed junction radii for Site Access 10b is 12m on the western side of the junction and eight metres on the eastern side of the junction, with a junction width of four metres.
- 5.51. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 11

- 5.52. Access 11 is a proposed four-arm crossroad junction on Upper Ings Lane. Where the site accesses take the form of crossovers, these are formed by the corresponding a & b access drawings, which together represent the complete crossover layout and design. Access 11a is a modification of an existing field boundary gap and 11b is a new access point.
- 5.53. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.54. The proposed junction radii is eight metres on both sides of the junction for both Site Access 11a and Site Access 11b. For Access 11a it has been proposed to provide a 4.5m junction width, and for Access 11b, a four metre junction width is proposed. It is considered that this will be suitable for the crossover manoeuvre proposed, with no HGV movements anticipated to turn onto Upper Ings Lane.
- 5.55. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 12

- 5.56. Access 12 is a proposed three-arm priority junction on Fenton Lane. This is an existing field entry that will require some modification.
- 5.57. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.58. The proposed junction radii is 12.5m on the western side of the junction and 12m on the eastern side of the junction, with a junction width of 6.6m. This arrangement has been informed by SPA tracking to allow for a 16.5m HGV to ingress from the west of Access 12 and similarly egress to the west, in a suitable manner and without any wheel overrunning.

Access 13 / Secondary Compound C

- 5.59. Access 13, located on the western parcel of the wider site and south of access 2, is a three-arm priority junction with Wood Lane which forms a field access.
- 5.60. Visibility splays of 2.4 x37 metres can be achieved to the nearside kerb, commensurate with a design speed of 25mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.61. The proposed junction radii are 13m on the northern side of the junction and 11m on the southern side of the junction, with a proposed junction width of four metres This geometry



has been informed by SPA tracking for a 16.5m HGV to ingress from the north of Access 13 and similarly egress to the north, in a suitable manner and without any wheel overrunning.

Access 14

- 5.62. Access 14 is located south of access 13 and forms a new three-arm priority field access junction with Wood Lane. Access 13 will also provide access to Secondary Compound C, which is located within the western parcel and is connected via the internal haul route extending east from this junction.
- 5.63. Visibility splays of 2.4 x 37 metres can be achieved to the nearside kerb, commensurate with a design speed of 25mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.64. The proposed junction radii are eight metres on the southern side of the junction and 15m on the northern side of the junction, with a proposed junction width of four metres. This geometry has been informed by SPA tracking for a 16.5m HGV to ingress from the north of Access 14 and similarly egress to the north, in a suitable manner and without any wheel overrunning.
- 5.65. Where the visibility splay intersects with the existing hedgerow, this will be trimmed/removed as necessary to ensure that the visibility splay is not impacted whilst also seeking to preserve existing vegetation wherever possible.

Access 15

- 5.66. Access 15 is a new field access, located in the eastern parcel and forms a proposed fourarm crossroads junction with Freeman's Lane. Where the site accesses take the form of crossovers, these are formed by the corresponding a & b access drawings, which together represent the complete crossover layout and design
- 5.67. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.68. The proposed junction radii is eight metres on both sides of the junction for both Site Access 15a and Site Access 15b. For both Access 15a and 15b it has been proposed to provide a four-metre junction width. It is considered that this will be suitable for the crossover manoeuvre proposed, with no HGVs anticipated to be required to turn onto Freeman's Lane.
- 5.69. Where the visibility splay intersects with the existing hedgerow, this will be trimmed/removed as necessary to ensure that the visibility splay is not impacted whilst also seeking to preserve existing vegetation wherever possible.

Access 16

5.70. Access 16 is an existing, modified field access, providing a three-arm priority junction and located on High House Road.



- 5.71. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.72. The proposed junction radii is six metres on the western side of the junction and 14m on the eastern side of the junction, with a proposed junction width of four metres. This geometry has been informed by SPA tracking for a 16.5m HGV to ingress from the east and similarly egress to the east, in a suitable manner and without any wheel overrunning.
- 5.73. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 17 / Secondary Compound B

- 5.74. Access 17 is a four-arm crossroads junction, formed of new junctions providing access to fields adjacent to Springs Lane. Where the site accesses take the form of crossovers, these are formed by the corresponding a & b access drawings, which together represent the complete crossover layout and design
- 5.75. Access 17 will also serve as the point of entry to Secondary Compound B, which is located to the south of the junction and accessed via an internal haul route connected to this point. All construction traffic associated with this area will be routed through the compound before being distributed to the relevant fields within the Western Parcel.
- 5.76. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.77. The proposed junction radii for Site Access 17a are 15m on the western side of the junction and 6m on the eastern side of the junction with a junction width of 4.2m. The proposed junction radii for Site Access 17B are eight metres on both sides of the junction, with a proposed junction width of 4 metres."
- 5.78. The geometry of the field access (access 17) has been informed by SPA tracking for a 16.5m HGV, which demonstrates that vehicles can safely egress from the northern field via Access 17A and turn onto Springs Lane to travel southwest, without any wheel overrunning. Similarly, the SPA shows that an HGV approaching from the west is able to ingress into the field in a safe and controlled manner.
- 5.79. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.

Access 18

- 5.80. Access 18 is a four-arm crossroads junction with Dog Holes Lane, located in the eastern parcel and providing a field access crossover. Where the site accesses take the form of crossovers, these are formed by the corresponding a & b access drawings, which together represent the complete crossover layout and design. Access 18a utilises an existing gap into the field, whilst 18b is a new access point.
- 5.81. Access points 18a and 18b have been designed as a crossover. To retain two existing trees along the frontage a reduced visibility splay has been proposed in line with lower vehicle



speeds; for example, a 30 mph results in a visibility distance of 50 metres to the east of Access 18. All other visibility splays can achieve a 2.4 x 70m visibility splay to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.

- 5.82. The reduced visibility standards for Access 18a (east) are considered acceptable on the basis of the low traffic volumes that utilise the unnamed track and that it is reasonable to assume any existing traffic will be travelling via lower speeds. Further mitigation to encourage lower traffic speeds can be implemented in the OCTMP if necessary.
- 5.83. The proposed junction radii for both Site Access 18A and 18B are eight metres on both the eastern and western sides of each junction, with a proposed junction width of four metres for both accesses.

Access 19 / Primary Compound A

- 5.84. Access 19 is a three-arm priority junction with an unnamed track, providing access from Gainsborough Road to Primary Compound A, via Access 5.
- 5.85. Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerb, commensurate with a design speed of 30mph in line with the NCC Design Guide/DMRB visibility requirements.
- 5.86. The proposed junction radii is 22m on the southern side of the carriageway and 10m on the northern side of the carriageway, with a junction width of 6.5m. Whilst this access 19 has been designed with consideration of the relevant vehicle movements required to utlise it, no SPA are provided as it is located on essentially an internal bend on a track/access road, that is not a PROW and will have no other users and therefore no conflicts with others.

Access 20

- 5.87. Access 20 is a temporary site entrance from Leverton Road which will be operational under traffic management for the purpose of installing cabling which routes across the highway. The purpose of this access is solely to facilitate the cable route where it crosses over the highway. There may be some minimal vehicle movements across this junction, but no vehicles will be turning into or out of the site at this location. Where the site accesses take the form of crossovers, these are formed by the corresponding a & b access drawings, which together represent the complete crossover layout and design Visibility splays of 2.4 x 70 metres can be achieved to the nearside kerbs north of both Access 20a and 20b, commensurate with a design speed of 30mph in line with NCC Design Guidance / DMRB visibility requirements.
- 5.88. Furthermore, to the south, visibility splays of 2.4 x 47 metres can be achieved to the nearside kerbs for both Access 20a and 20b, in line with NCC Design Guidance requirements for a 30mph Road.
- 5.89. Whilst it is recognised that this access is located adjacent to the speed limit change to a posted National Speed Limit of 60mph, and the visibility splays are provided for a 30mph speed limit, there will be minimal vehicle movements and traffic management will be in place as necessary to facilitate these.



- 5.90. The proposed junction width of the crossover is four metres for both Access 20a and 20b. Where the access proposals or visibility splay intersects with the existing hedgerow, this will be removed as necessary, and this has been annotated on the site access drawing.
- 5.91. As above, all Site access drawings including visibility splays (Drawing Ref: O4954-RES-ACC-DR-PE-O04 REV1) are provided in **Appendix E**, with accompanying Swept Path Analysis (SPA) drawings (Drawing Ref: O4954-RES-ACC-DR-PE-O05 REV2) provided in **Appendix F**.

Dedicated Haul Routes

- 5.92. To transport the delivery goods throughout the site, dedicated haul routes are proposed. This section outlines the designated haul routes to be used for construction traffic during the project.
- 5.93. The haul routes have been planned to minimise disruption to the local community and ensure safe and efficient transport of materials and equipment. The haul routes primarily utilise internal routes within the site boundary, with specific access points to connect to public highway when necessary. The haul routes require vehicles to share/cross the PRoW and appropriate mitigation will be implemented during construction to ensure the safety of the public. The principle of using haul routes to minimise disruption during the construction phase on the local highway network was welcomed by NCC.
- 5.94. Information provided by the Applicant confirms that a total of 15 haul routes will be required to move materials, components, plant / equipment and construction workers to and throughout the site to enable the construction of the solar scheme.
- 5.95. These haul routes are identified in **Table 5.1** below and are shown in context to the scheme at **Plate 5.1**. A unique identifier has been assigned to each haul route for brevity, using the origin and destination points.



Table 5.1 - Internal Haul Routes Summary

Haul Route Name	Haul Route Reference	Land Parcel (Western / Eastern)
Gainsborough Road - Station Road Westbound - Primary Compound B	GR-PCB	Western Parcel
Internal Haul Road (West)	IHRW	Western Parcel
Wheatley Road	WR	Western Parcel
Wheatley Road - Wood Lane	WR-WL	Western Parcel
Freeman's Lane (New Road Crossing)	FL	Western Parcel
Freeman's Lane (New Road Crossing) - Springs Lane - High House Road (Railway Bridge)	FL-HHR	Western Parcel
Freeman's Lane - Springs Lane	FL-SL	Western Parcel
Station Road Eastbound > Cross Street - Leverton Road	SRE-LR	Western Parcel
Gainsborough Road - Quarry Access > Primary Compound A	GR-PCA	Eastern Parcel
Internal Haul Road (East)	IHRE	Eastern Parcel
Common Lane	CL	Eastern Parcel
Common Lane - Cross Common Lane - Upper Ings Lane	CL-UIL	Eastern Parcel
Common Lane - Cross Common Lane - Upper Ings Lane - Littleborough Road	CL-LR	Eastern Parcel
Common Lane - Cross Common Lane - Upper Ings Lane - Littleborough Road - Fenton Lane	CL-FL	Eastern Parcel
Common Lane - Cross Common Lane - Upper Ings Lane - Littleborough Road - Thornhill Lane	CL-TL	Eastern Parcel

Operational Access Points

5.96. Access to the Eastern and Western Land parcels through the construction accesses will be retained for use during the Operational Phase of the development (lifetime duration of 40 years).

Emergency Access Points

- 5.97. Emergency access points are provided throughout the layout at the following locations:
 - Emergency secondary access to the BESS compound off Common Lane for fire tender vehicles.
- 5.98. Fire tender access to the solar site isn't considered, as DC coupling isn't proposed.
- 5.99. During the operational phase, the site entrances apart from Leverton Road have been designed to accommodate HGVs and will remain throughout the operation period, so they could be used as emergency access points.

Decommissioning Access Points

5.100. The Decommissioning phase of the proposed development will consider the potential use of the Construction accesses listed above. This will be considered further in the Decommissioning Traffic Management Plan, prior to decommissioning.



5.101. Traffic during the decommissioning phase is currently proposed to egress the site using the inverse of the construction route(s) set out above, but will be agreed in advance of the decommissioning phase following the 40-year lifetime of the proposed solar farm, BESS and associated infrastructure.

Road Safety Audits

- 5.102. As discussed during pre-application scoping discussions, NCC require that a Road Safety Audit be undertaken at the following locations (and indicated on the access plans provided in **Appendix E**):
 - 1) Access 1 Wheatley Road
 - 2) Access 3 Station Road
 - 3) Accesses 6a and 6b Common Lane (crossroads)
 - 4) Access 7 Common Lane
 - 5) Access 8 Common Lane
 - 6) Accesses 10a and 10b Littleborough Road
- 5.103. A Stage 1/2 road safety audit (RSA1/2) will be carried out at the proposed primary accesses prior to works being carried out in the public highway. The Detailed Design of such works will also be submitted to the LHA Streetworks team for approval. A Designers Response will be also provided further to the audit to inform the final design of the access points.



6. Vehicle Trip Generation

- 6.1. Forecast vehicle movements associated with the Steeple Renewables Solar Project have been provided by the Applicant. The summary worksheet setting out the vehicle movements associated with the construction programme is available in **Appendix G Traffic Flow Diagrams.**
- 6.2. The worksheets provided by the Applicant provide an estimate of the 24-month profile of forecast construction traffic for the development, with construction traffic forecasts provided for each month. This has been used to forecasts the peak and off-peak vehicle trips and is set out below.
- 6.3. The construction period is anticipated to comprise the following:
 - i. 24 months construction programme (2027 2029)
 - ii. Six day working week (Monday to Saturday)
 - iii. 10 hour working day (e.g. 8am to 6pm) weekdays
 - iv. On Saturdays, the working day will finish at approximately 1:30pm

Construction Phase

- 6.4. The construction phase includes the preparation of the site, site access junction modifications, haul route construction, erection of security fencing, assembly and erection of the PV strings, installation of the inverters, transformers and energy storage units, extension of the substation and grid connection. Site clearance following construction will also take place during this stage.
- 6.5. Utilising the information contained in the worksheets provided by the Applicant, the number and type of vehicles anticipated to access the site during the construction phase are summarised below along with the vehicle trips associated with the construction phase associated with deliveries and workforce trips. Further information on the type of vehicles and type of deliveries associated with the development is provided in the OCTMP [ENO10163/APP/6.3.13].

<u>Deliveries</u>

- 6.6. HGVs will bring equipment and materials onto the site and this will be strictly managed to ensure that vehicle movements are controlled and kept to a minimum.
- 6.7. Deliveries associated with the construction phase will arrive to / depart from the site outside of network peak hours where possible. Vehicles will operate on a 'Call Ahead' management system and if needed vehicles will be advised to wait at the existing HGV waiting area at the Blyth Services located off A1(M) Junction 24, until after the peak hour traffic has eased and will then progress to use the local road network to access the site.
- 6.8. An average of 21 deliveries will access the site daily during typical periods of construction. This is based on an average of 537 deliveries trips per month, which based on a 4.3 week month and a 6-day working week which leads to 21 deliveries (42 two-way delivery trips)



per day. This would therefore be an average of two deliveries (four two-way trips) per hour based on a 10 hour construction working day. During some months this will be less, and in some months this will be more.

- 6.9. The deliveries can be categorised into the types of loads including 'Partitionable Loads' and 'Non-Partitionable Loads'.
- 6.10. Partitionable Loads will arrive at Primary Compounds A and B by HGV and then the HGV will exit the site after unloading. The load is then transported through the site (to Secondary Compounds and individual fields) as a 'Split Load' on smaller vehicles. Partitionable loads are always split onto two smaller vehicles (e.g. onto tractor and trailer).
- 6.11. Non-Partitionable Loads will access the site into Primary Compounds A and B and will access the site through the designated internal haul routes to its destination. Non-partitionable loads will consist of loads that cannot be separated such as concrete for example.

Abnormal Indivisible Loads (AIL)

6.12. A small number of abnormal indivisible loads over the 24-month construction period (approximately between five and 10 vehicles in total) will be required to transfer heavier equipment such as transformers. These will be classed as 'heavy' loads and will be transported on 16.5m articulated vehicles. Further information is provided in **Chapter 9** of the **OCTMP [ENO10163/APP/6.3.13]** in the section titled "Abnormal Indivisible Loads Plan".

Construction Workers

- 6.13. The workforce is expected to travel to the site using mini-buses, vans, and cars at the beginning of the working day and depart the site at the end of the working day. Where possible, the start and finish times of shift patterns will be staggered and will be outside of peak network hours.
- 6.14. The workforce will comprise both local and non-local workers. At this stage, the location from which the local and non-local workers will travel is unknown, as it will depend on the appointed contractor. Therefore, based on the information available, assumptions have been used in this TA and separately in the OCTMP [ENO10163/APP/6.3.13] to provide a suitable forecast for the trip analysis.
- 6.15. Non-local workforce will stay at local accommodation (hotels, hostels, etc) and will be transported to the site by minibuses to minimise the impact on the local highway network. Local workforce which comprises local residents will travel from the local residential areas.
- 6.16. It should be noted that all workforce movements will follow the restricted construction traffic routing, avoiding Sturton-le-Steeple, North Leverton, and Fenton villages. Workers will join the designated routes based on their place of origin and only approach the site from the north only. The restricted routing will be enforced by a DCO requirement.
- 6.17. An average of 68 workers, including both local and non-local staff, will be on site daily during typical construction periods (an average of 1,750 worker trips per month, which based on a 4.3 week month and a 6 day working weeks results in 68 worker trips). During some months, this will be less, while in other months, it will be more.



- 6.18. The Primary Construction Compounds, A and B, will be provided within the Eastern parcel and the Western land parcels. The Compounds will include car parking for contractors, ensuring that all parking associated with the construction is contained on-site and that parking on local roads is avoided.
- 6.19. The use of minibuses will be secured via a requirement of the DCO to comply with this TA. This will minimise the number of single-occupancy vehicle trips by construction workers.

Peak vehicle movements

- 6.20. The application has provided an estimate of the 24-month profile of forecast construction traffic for the development. According to this forecast, during the 24-month construction period there are two peak periods, one for construction delivery traffic and one for construction workforce traffic, indicated below:
 - i. Delivery Peak Month 7 a total of 4,332 vehicle trips (approximately 1,970 delivery vehicle trips and 2,363 construction worker trips over the monthly period); and
 - ii. Construction Worker Peak Month 22 a total of 4,511 vehicle trips (approximately 48 delivery vehicle trips and 4,463 construction worker trips over the monthly period).
- 6.21. The summaries of the delivery and workforce trips are provided in Tables 6.1 and 6.2 below, respectively.

Table 6.1 – Summary of Forecast Delivery Trips

Delivery Trips Summary	Month 7 – Peak Delivery Month	Month 22 – Peak Construction Worker Month	Average Month During Construction
Monthly Delivery Trips	1,970	48	537
Weekly Delivery Trips (based on an average of 4.3 week month)	458	11	125
Average Daily Delivery Trips (based on a 6 day working week)	76	2	21
Average Hourly Delivery Trips based on a 10 hour working day	8	<1	2

Source: Construction Traffic Assessment_20250303, 7. Programme & Profiles



Table 6.2 - Summary of Forecast Construction Workforce Trips

Workforce Trips Summary	Month 7 – Peak Delivery Month	Month 22 – Peak Construction Worker Month	Average Month During Construction
Monthly Workforce Trips	2,363	4,463	1,750
Weekly Workforce Trips (based on an average of 4.3 week month)	549	1,038	407
Average Daily Workforce Trips (based on a 6 day working week)	92	173	68
Average Hourly Workforce Trips based on a 10 hour working day	9	17	7

Source: Construction Traffic Assessment_20250303, 7. Programme & Profiles

- 6.22. As shown in Table 6.1 and Table 6.2 above, the anticipated development trips for an average weekday based on the anticipated 4.3 weeks per month, and a 6-day working week with a 10 hour working day.
- 6.23. For month 7, the delivery peak month, this would result in there being 76 average daily one-way delivery trips and 92 average daily one-way workforce trips. This would result in 153 two-way average daily delivery trips and 183 two-way average daily workforce trips.
- 6.24. For month 22, the workforce peak month, it is anticipated there will be two average daily one-way delivery trips and 173 average daily one-way workforce trips. This would equate to four two-way average daily delivery trips and 346 two-way average daily workforce trips.
- 6.25. It should be noted that workforce trips are anticipated to be tidal in nature, arriving in the morning and departing in the evening, this will be scheduled, where possible, to not overlap with the network peak hours.

Operational Phase

6.26. The trip generation has been derived based on the Applicant's experience of other similar sites, and the anticipated need for materials, equipment and maintenance during the operational phase and the amount of workforce required to monitor and work on the site intermittently during the 40-year lifetime of the Proposed Development. These are outlined in Table 6.3.



Table 6.3 – Operational trip generation summary

Type of Trip	Number of persons / daily trips	Days on site	Frequency of visit	Additional information	Type of Vehicle
Preventative (active) Maintenance including for example Technicians, Monitoring/Control Room Staff, Engineers, Safety/Compliance Personnel, Administrative staff	7 persons (14 daily two- way trips).	Generally, Monday to Friday. Some operatives may require access on a 24 hour basis.	Regular	Office hours, arrival and departures outside of peak hours where possible.	Car, LGVs (7.5 tonne panel vans) and 4x4 type vehicles.
Corrective (reactive) Maintenance: Replacement of large components (e.g. Inverters)	As required	Once every 5 to 15 years. Day/times, as required.	Ad-hoc	Deliveries. Cannot be predicted accurately as unable to predict if/when a repair or a replacement is needed.	Small number of HGVs.
Emergency Trips	As required	Unable to forecast.	Ad-hoc	Cannot be predicted accurately as unable to predict if/when an emergency will arise.	Emergency vehicles e.g. Fire appliance.



- 6.27. In summary, during operation, it's expected that there will typically be seven workers onsite. These workers are expected to have a "Monday-Friday" standard working pattern. Therefore, there will be approximately seven trips per day by engineers for maintenance typically by 7.5t van or 4x4 vehicles. Should large replacement parts be required, this may require an ad-hoc HGV delivery.
- 6.28. The daily traffic associated with the Operational Phase of the Proposed Development is considered to be low. The likely trips are significantly lower than the Construction Phase of the development on all links for total traffic and HGV. In comparison to the baseline 2024 trips the impact will be negligible for all links during the Operational Phase and can therefore be ruled out of the assessment.
- 6.29. Whilst the contractor's compound will have been removed, on-site parking and space will be provided within the site layout to allow a vehicle to turn around, ensuring that reversing does not occur onto the adjacent highway.

Proposed Mitigation

6.30. An OCTMP [EN010163/APP/6.3.13] has been submitted alongside this Transport Assessment. This details a package of mitigation measures that will be implemented to minimise the effects of construction on the local highway network if deemed necessary. For the details of this proposed mitigation, please refer to the OCTMP [EN010163/APP/6.3.13] document, which includes details for Abnormal Indivisible Loads (AIL) deliveries, a Construction Worker Travel Plan (CWTP), Cable Routing Construction Management Plan (CMP), PRoW Management Plan, and other site-specific mitigation measures.

Summary

6.31. The level of traffic during the construction phase and operational phase are not considered to be material and it is considered that this will not have a detrimental impact on the safety or operation of the local or strategic highway network. Minibuses and the restricted routing strategy will help to minimise the impact of the vehiclular traffic on the strategic and local highway networks.



7. Committed Development Traffic

- 7.1. During pre-application scoping discussions, nine committed and allocated development sites were identified for consideration within the TA in terms of committed development traffic which during operation or construction would coincide with the development's construction period between 2027 and 2029.
- 7.2. Other sites in the area were reviewed however have been scoped out due to construction programmes did not overlap time periods with the Proposed Development construction and/or did not impact on the proposed construction traffic route.
- 7.3. It is important to note that, when considering committed development traffic, we have used a series of robust assumptions which taken together can be considered as a "worst-case scenario". For example, where daily traffic flows have been obtained from the Outline Construction Traffic Management Plan for the site, or similar, the figure used is often the forecast peak of construction traffic for the committed development site. Essentially, the committed development flows represent a scenario where the peak construction periods for all sites were to occur simultaneously. In reality, this will not occur and the peak construction periods for the sites will occur at different times and potentially not overlap with this site at all.
- 7.4. The relevant Committed Development sites are identified and summarised in Table 7.1.
- 7.5. The traffic flow diagrams associated with the daily flows for each of the identified committed development sites are provided in **Appendix G.**



Table 7.1 – Committed Development Summary

7.6.

Development	App. Ref. (if applicable)	Location	Proposal	Distance to Site	Status	Potential for Transport Impact
National Grid Electricity Transmission (North Humber to High Marnham) (NSIP)	ENO2OO34 (NSIP)	Yorkshire to Nottinghamshir e	Various works to reinforce the transmission network including new substation, overhead line, reconfiguration works of existing overhead lines, underground cable sections, removal/reconfiguration/diversion of utility assets	Overhead lines anticipate d to traverse western portion of site.	Consultation Stage. Construction proposed to start in 2028.	Yes - the scheme's construction phase could overlap with proposed construction programme and impact on the proposed construction traffic route.
West Burton Solar Project (NSIP)	EN010132 (NSIP)	Land parcels at Marton, Ingleby, and Broxholme	NSIP development comprising four electricity generating stations, each with anticipated capacity in excess of 50MW, comprising of ground mounted solar arrays, with associated development comprising energy storage, grid connection infrastructure and other infrastructure integral to the construction, operation, and maintenance of the NSIPs	8 kilometres to the east	Consented. Construction has commenced and is anticipated to end in Q4 2026.	Yes – the redline boundary of the site conflicts with the Proposed Development and the cable route works overlap with proposed construction traffic route.
Land to the East of Bumble Bee Farm, Gainsborough Road, Saundby	22/00358/FU L (Bassetlaw District Council)	Land west of Saundby and 700 metres southwest of Beckingham	Installation of a solar farm and battery energy storage facility with associated infrastructure to supply up to 49.9MW to the National Grid	2.5 kilometres to the north	Consented. Construction has not yet commenced.	Yes – the scheme's construction phase could overlap with proposed construction programme and impact on the proposed construction traffic route.



Development	App. Ref. (if applicable)	Location	Proposal	Distance to Site	Status	Potential for Transport Impact
Land north west and south of Field Farm, Wood Lane	20/00117/FUL (Bassetlaw District Council)	Land parcels west of Sturton le Steeple	Construction of a 49.9MW solar photovoltaic farm of ground mounted solar photovoltaic panels on agricultural land to the south of Wood Lane, to include associated infrastructure such as housing for inverters, a substation compound, point of connection mast, fencing, security cameras, cabling, access tracks and temporary compound	Adjacent to the west	Consented. Understood that construction has not yet commenced.	Yes – the scheme's construction phase could overlap with proposed construction programme and impact on the proposed construction traffic route.
Land east of Gainsborough Road, Bole	22/01713/FUL (Bassetlaw District Council)	Land at West Burton power station	Construction and operation of a battery energy storage system with an electrical output capacity of up to 500MW and associated development including power inverter systems, electrical banking station, electrical cabling including below ground cabling to 400KV switchyard, welfare facilities, internal access roads, site security infrastructure, lighting, boundary treatments, and landscaping	Adjacent to the north	Consented. Understood that construction of the scheme is projected to be complete by the end of 2026.	Yes – the scheme's construction phase could overlap with proposed construction programme and impact on the proposed construction traffic route.
Land at Sturton le Steeple, Gainsborough Road	V/4386 (Nottinghams hire County Council)	Land to the southeast of West Burton power station	Development of a sand and gravel quarry including the construction of a new access road and erection of processing plant, ancillary buildings and a wharf facility with restoration to agriculture, woodland and water areas for amenity and nature reservation after-uses.	Adjacent to the north-east	Consented.	Yes – the scheme's construction phase could overlap with proposed construction programme and impact on the proposed construction traffic route.



8. Traffic Impact Assessment

Overview

8.1. This section provides a discussion on the impact of the site on the surrounding highway network. This is based on a trip generation exercise, utilising data supplied by the Applicant, which has been carried out to forecast the number of vehicular trips anticipated to arise as a result of the Scheme during the construction period.

Vehicle Trip Generation Summary

- 8.2. The forecast vehicle trip generation for construction is detailed in **Section 6** of this report.
- 8.3. During the 24-month construction period there are two peak periods, one for construction delivery traffic and one for construction workforce traffic.
- 8.4. As detailed in **Section 6**, For month 7, the delivery peak month, the forecast daily two-way average trips are 153 delivery trips and 183 daily workforce trips. This results in a forecast daily two-way average of 336 trips.
- 8.5. For month 22, the workforce peak month, the forecast daily two-way average trips are four daily delivery trips and 346 daily workforce trips. This results in a forecast daily two-way average of 350 trips.

Scope of Traffic Impact Assessment

- 8.6. Throughout the pre-submission stage of the DCO, the Applicant team has been liaising with the local and strategic highway authorities in the preparation of the TA. The timescales for the planning application were accelerated, resulting in the need to submit any further Traffic Impact Assessments necessary in a follow-up Technical Addendum.
- 8.7. Based on pre-application discussions, for this Transport Assessment, we have provided a discussion of the forecast construction traffic impact on three junctions of interest on the local/strategic road network. These are as follows:
 - 1) A1(M) Blythe Interchange (National Highways);
 - 2) Bawtry Signal Junction; and
 - 3) The Saundby Road / A620 Gainsborough Road / Sturnton Road Roundabout.

Trip Distribution and Assignment

8.8. The construction traffic will follow a fixed route to the site from the A1(M) Blyth Interchange, which forms part of the Strategic Road Network (SRN), then continue to route along the A614 and A638 towards Bawtry. Traffic will then turn onto the A631 Bawtry Road, heading east towards Beckingham. At the Beckingham Roundabout (Roundabout junction with Station Road forming the northern arm, the A631 forming the eastern and western arms and Bar Road, A620 forming the southern arm) traffic will head south along the A620 Bar Road, to head towards Sturton le Steeple via Gainsborough Road, Saundby Road and Sturton Road. Therefore, the construction traffic distribution and assignment is fixed in accordance



with the route set out in Plate 4.1 and provided in full in **Appendix C – Proposed Construction Traffic Routeing Diagram**.

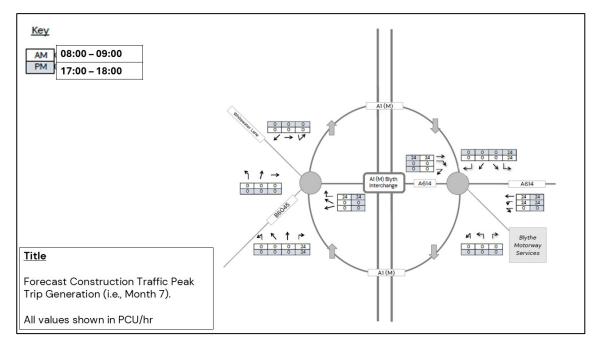
- 8.9. As detailed in Section 4 of this report, in terms of the workforce trips, these will comprise a combination of local workforce and temporary relocated workforce staying in local accommodation (hotels, hostels etc.). The workforce is anticipated to access the site utilising mini-buses, vans, and cars at the beginning of the working day and depart the site at the end of the working day. Where possible, the start and finish times of shift patterns will be staggered and will be outside of peak network hours.
- 8.10. The vehicle traffic distribution of the workforce is based on Census data for the location of usual residence and place of work by method of travel to work in ward Bassetlaw 002 (MSOA level). Broadly, the data indicates that around 44% of the workforce are anticipated to travel locally from within Bassetlaw, 17% from Lindsey, 11% from Lincoln/Lincolnshire, and 6% from Doncaster. The remaining 21% would be travelling from other areas within the region and nationally.
- 8.11. In addition to assigning workforce traffic based on the Census data, it is proposed that the Applicant will enforce a construction worker routing plan with restricted construction worker routing in place so that all vehicles will approach the site from the north of the site and will not therefore access the site through Sturton-le-Steeple, North Leverton with Habblesthorpe or Fenton villages. The proposed construction worker traffic route will be based on the principal route of the construction traffic management routing as identified in Plate 4.1. The workforce traffic will then join the route at appropriate locations, for example, workers from Doncaster would join the route at the A638/A631 junction, and workers from Gainsborough and Lincoln, for example, would join the route at the A631/A620 junction.
- 8.12. At the A1(M) strategic road network, at this stage the traffic has been distributed based on a 50% split between northbound and southbound direction.
- 8.13. Traffic flow diagrams illustrating the proposed trip distribution and assignment are provided in **Appendix G.**

Forecast Traffic Impact on A1(M) Blythe Interchange

- 8.14. For National Highways consideration, traffic flow diagrams provided in **Appendix G** illustrate the forecast traffic impact on the strategic road network in PCUs. An extract is also provided below for ease of reference.
- 8.15. In order to inform discussions with National Highways, a robust, "worst-case scenario" in terms of traffic impact at AI(M) has been provided. A robust assumption has been made regarding delivery and workforce trips that they will coincide with the traditional peak hours, whereas, in reality, as detailed in the OCTMP [EN010163/APP/6.3.13], deliveries can be scheduled to occur outside of a network peak hour.
- 8.16. Passenger Car Units (PCU) have been used. In transport planning, PCU is a metric used to compare the impact of different types of vehicles on traffic flow, with one PCU representing the effect of a single passenger car. All values in the figures in this section are expressed in PCU per hour.



Plate 8.1 – Forecast Construction Delivery Traffic Peak Trip Generation at A1(M) Blyth Interchange



Source: Traffic Flow Diagram Appendix G

- 8.17. Assuming the forecast daily trips of 336 during Month 7 were spread evenly across a 10-hour working day, the resultant impact in any given hour would be approximately 34 vehicles (i.e., 336/10). In PCU, this is equivalent to 49 trips as shown in the diagram above.
- 8.18. In summary, during Month 7 of the construction program, the forecasted traffic impact at A1(M) Blyth Interchange in a robust, worst-case scenario is equivalent to 49 PCUs per hour.
- 8.19. For Month 22, i.e., the "workforce peak", because the forecast traffic predominantly is comprised of workers travelling to and from the site, rather than deliveries, the impact on the highway network will differ compared to Month 7. The forecast daily two-way average for Month 22 is 350 trips. As detailed in the OCTMP [EN010163/APP/6.3.13], these trips can be scheduled to occur entirely outside of the network's peak hours. However, to inform discussions with National Highways, in a hypothetical robust "worst-case" scenario where the forecasted trips occurred within an hour period, the resultant impact on the A1(M) Blyth Interchange is illustrated in Plate 8.2.



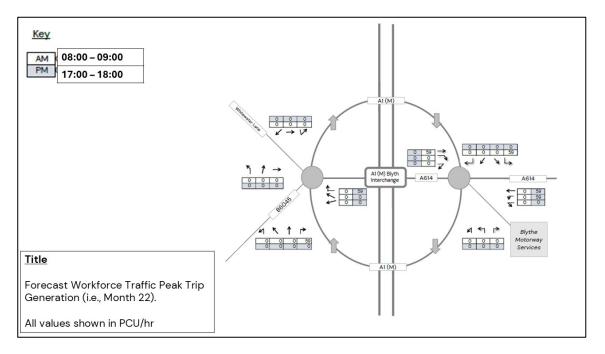


Plate 8.2 - Forecast Workforce Traffic Peak Trip Generation at A1(M) Blyth Interchange

Source: Traffic Flow Diagram Appendix G

- 8.20. In summary, during Month 22 of the construction program, the forecast traffic impact at A1(M) Blyth Interchange in a robust, worst-case scenario is equivalent to 118 PCUs per hour.
- 8.21. This robust, "worst-case" scenario figure is provided to inform discussions with National Highways. However, in reality, by scheduling deliveries and worker arrival/departure times so that these occur outside of peak hours, reserve capacity in the highway network can be utilised and any adverse/severe impacts from congestion can be mitigated.
- 8.22. The traffic impacts are temporary and can be sufficiently mitigated by the measures contained in the OCTMP [ENO10163/APP/6.3.13] and Construction Worker Travel Plan (CWTP), therefore, junction capacity assessment is not considered to be required as the forecast temporary impacts can be appropriately mitigated.



Forecast Traffic Impact at Bawtry Signal Junction

- 8.23. Traffic flow diagrams provided in **Appendix G** illustrate the forecast traffic impact on the local road network in PCUs. A robust assumption has been made regarding delivery trips that they will coincide with peak hours, whereas, in reality, as detailed in the **OCTMP** [EN010163/APP/6.3.13], deliveries and workforce trips can be scheduled to occur outside of a network peak hour.
- 8.24. In summary, during Month 7 of the construction program, the forecasted traffic impact at Bawtry Signal Junction is equivalent to 49 PCUs per hour.
- 8.25. During Month 22 of the construction program, the forecast traffic impact at Bawtry Signal Junction in a robust, worst-case scenario is equivalent to 129 PCUs per hour.

Plate 8.3 - Forecast Workforce Traffic Peak Trip Generation at Bawtry Signal Junction

Source: Traffic Flow Diagram Appendix G

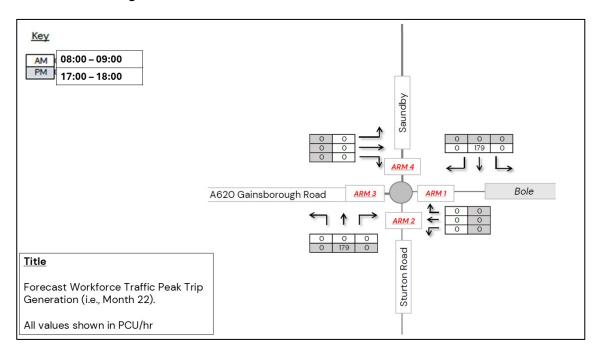
8.26. It's essential to note that the construction traffic impacts are temporary in nature. Additionally, by scheduling deliveries and worker arrival/departure times so that these occur outside of peak hours, reserve capacity in the highway network can be utilised and any adverse/severe impacts from congestion can be mitigated. Therefore, junction capacity assessment is not recommended as the forecast temporary impacts can be sufficiently mitigated.



Forecast Traffic Impact at Saundby Road/Gainsborough Road/ Sturton Road Roundabout

- 8.27. Traffic flow diagrams provided in **Appendix G** illustrate the forecast traffic impact on the local road network in PCUs. A robust assumption has been made regarding delivery trips that they will coincide with peak hours, whereas, in reality, as detailed in the **OCTMP** [ENO10163/APP/6.3.13], deliveries and workforce trips can be scheduled to occur outside of a network peak hour.
- 8.28. In summary, during Month 7 of the construction program, the forecasted traffic impact at Saundby Road/Gainsborough Road/ Sturton Road Roundabout is equivalent to 49 PCUs per hour.
- 8.29. During Month 22 of the construction program, the forecast traffic impact at Saundby Road/Gainsborough Road/ Sturton Road Roundabout in a robust, worst-case scenario is equivalent to 179 PCUs per hour.

Plate 8.4 – Forecast Workforce Traffic Peak Trip Generation at Saundby Road/Gainsborough Road/ Sturton Road Roundabout



Source: Traffic Flow Diagram Appendix G

8.30. It's essential to note that the construction traffic impacts are temporary in nature. Additionally, by scheduling deliveries and worker arrival/departure times so that these occur outside of peak hours, reserve capacity in the highway network can be utilised and any adverse/severe impacts from congestion can be mitigated. Therefore, junction capacity assessment is not recommended as the forecast temporary impacts can be sufficiently mitigated.



Traffic Impact Assessment Summary

- 8.31. The construction traffic impacts are temporary in nature, and the Outline Construction Traffic Management Plan and Workforce Travel Plan documents outline a range of measures that can be enforced to mitigate the forecasted traffic impact on junctions.
- 8.32. This includes scheduling deliveries and worker arrival/departure times so that these occur outside of peak hours, thereby utilising reserve capacity in the highway network. As previously mentioned, it also includes measures to route traffic via pre-agreed routes avoiding sensitive areas such as village centres wherever possible and consolidating workforce trips into mini-buses or similar.
- 8.33. In summary, therefore, whilst it is acknowledged that there will be a temporary traffic impact on the local and strategic highway network during construction: this can be sufficiently mitigated by the measures contained in the OCTMP [ENO10163/APP/6.3.13] and Travel Plan and therefore it is considered that no further junction capacity assessment is required.



9. Summary and Conclusion

9.1. This Transport Assessment (TA) has been prepared by Pegasus Group on behalf of Steeple Solar Farm Ltd. to support a forthcoming Development Consent Order (DCO) application for the Steeple Renewables Project, located on land at Sturton-le-Steeple, Nottinghamshire.

Site Context

- 9.2. The proposals are for the construction, operation (including maintenance) and decommissioning of a 'nationally significant infrastructure project' (NSIP) solar photovoltaic (PV) farm with 450MW solar energy generation and the capacity to produce 150MW energy storage, with associated infrastructure and equipment.
- 9.3. The Proposed Development comprises two parcels of land in the vicinity of the villages and hamlets of Sturton-le-Steeple, North Leverton with Habblesthorpe, North Wheatley, and Fenton. It is approximately five kilometres to the southwest of Gainsborough and nine kilometres to the northeast of Retford.
- 9.4. This TA should be read alongside the **OCTMP [EN010163/APP/6.3.13]** prepared to support the submission of the DCO.

Compliance with Policy

9.5. A policy framework has been provided for the site in this document. The site complies with local and national policy, and, of particular note, the traffic impacts of construction will be appropriately mitigated.

Highway Safety Assessment

9.6. A highway safety assessment of the site has been completed through an analysis of PIC data, and the conclusion is that there is no existing safety concern on the local highway network within the vicinity of the site.

Proposed Site Access Strategy

9.7. A detailed site access strategy for the site has been provided which includes utilising primary and secondary construction compound accesses. Additionally, to transport the delivery good throughout the site, dedicated haul routes have been proposed. These have been carefully planned to minimise disruption to the local community and ensure safe and efficient transport of materials and equipment. The haul routes primarily utilise internal routes within the site boundary, with specific access points to connect to the public highway when necessary.

Forecast Vehicle Trip Generation

9.8. Vehicle movements associated with the Steeple Renewables Solar Project have been forecast based on a detailed methodology created by the Applicant. A detailed analysis of the forecast traffic movements has been provided in this document, with further details contained within the appendices.



Proposed Mitigation

9.9. In terms of mitigation, a **OCTMP [ENO10163/APP/6.3.13]** has been submitted alongside this TA. This details a comprehensive package of mitigation measures that will be implemented to minimise the effects of construction on the local and strategic highway network as appropriate.

Consideration of Committed Development

9.10. An appropriate consideration of committed development within the area has been provided in this TA. It should be noted that a overly-robust, worst-case scenario has been used to inform the assessment and in reality the peak construction period of the multiple sites will not occur simultaneously.

Traffic Impact Assessment

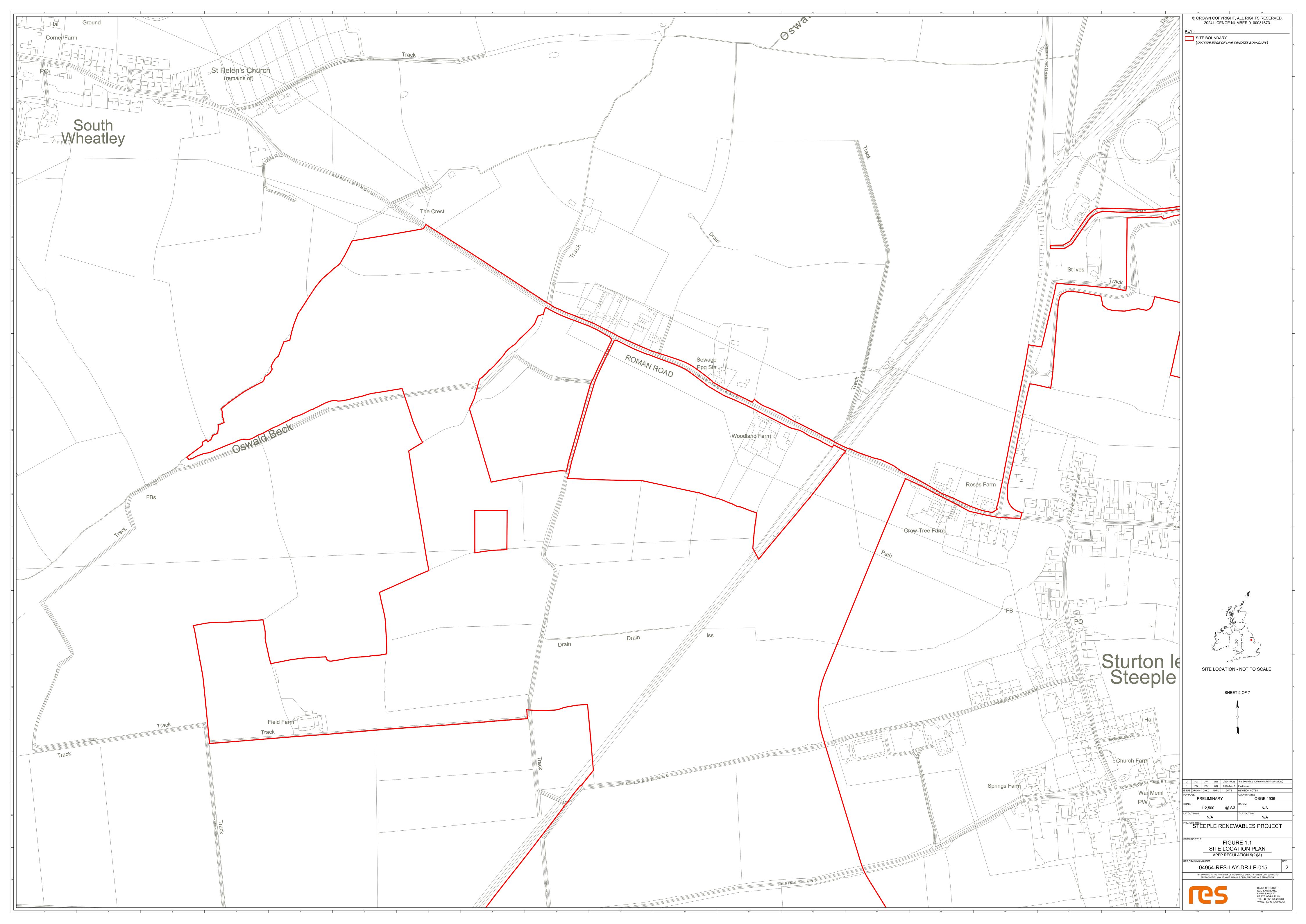
9.11. Whilst it is acknowledged that there will be a temporary traffic impact on the local and strategic highway network during construction: this can be sufficiently mitigated by the measures contained in the **OCTMP [ENOI0163/APP/6.3.13]** and Travel Plan and therefore it is considered that no further assessment is required.

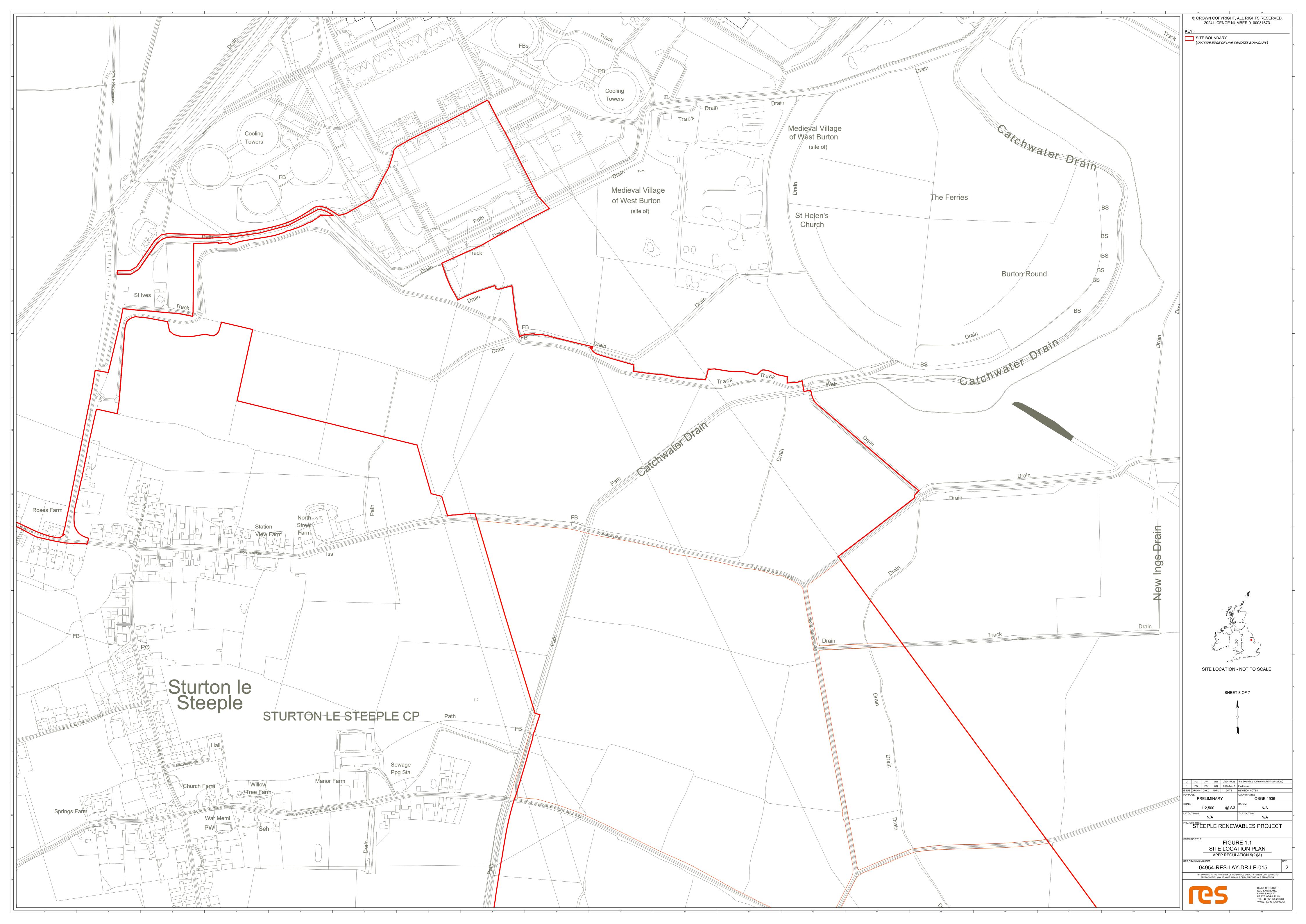
Conclusion

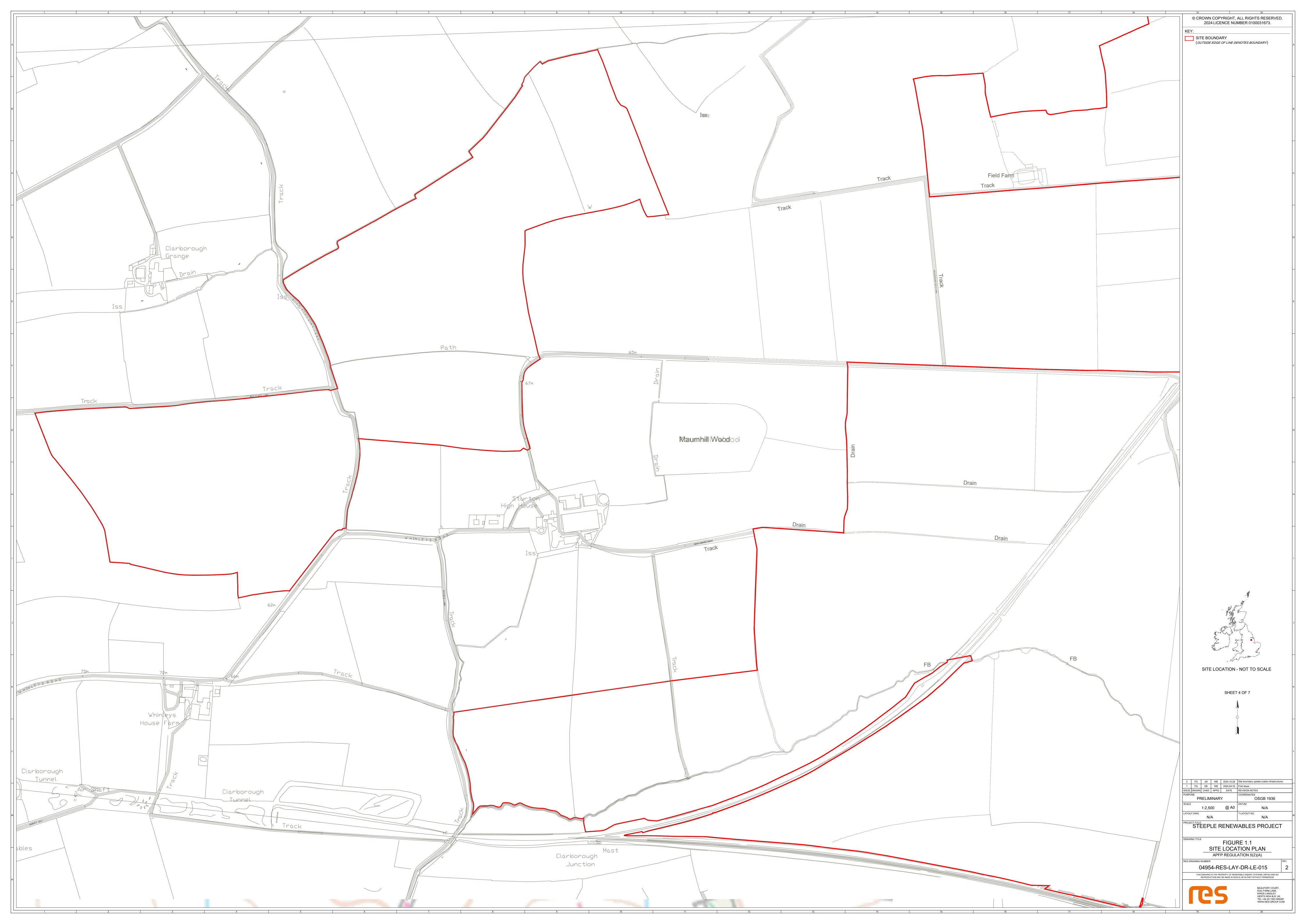
- 9.12. It is concluded that safe and appropriate access arrangements are provided for the construction and operational phases of development, and that the trips associated with the development are considered not to have a significant impact on the strategic and local highway network, which will be ensured through the application of the OCTMP [ENO10163/APP/6.3.13] which includes appropriate mitigation specific for the scheme.
- 9.13. It is therefore concluded that there is no reason that the proposed development should not be consented through the DCO submission process.

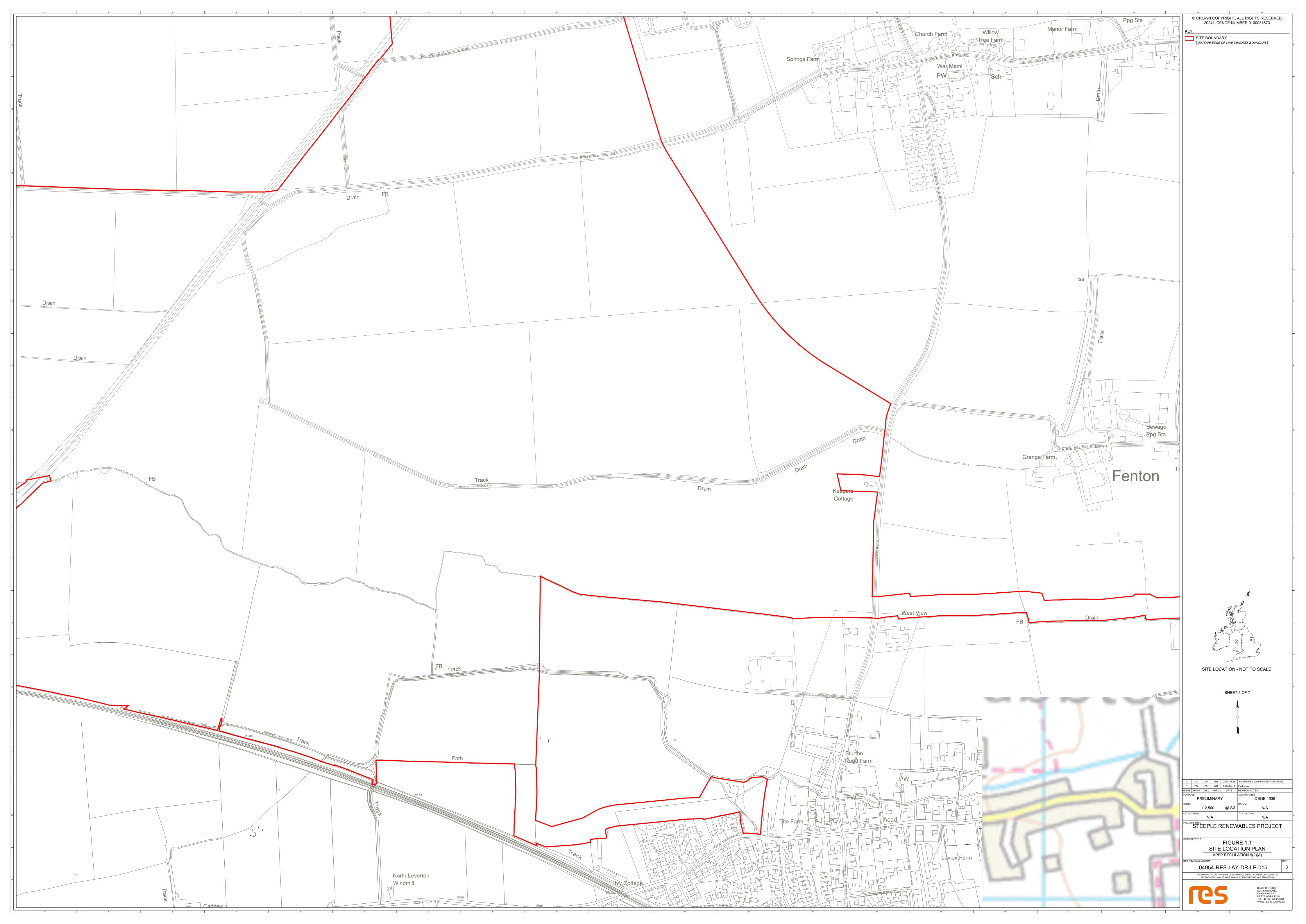


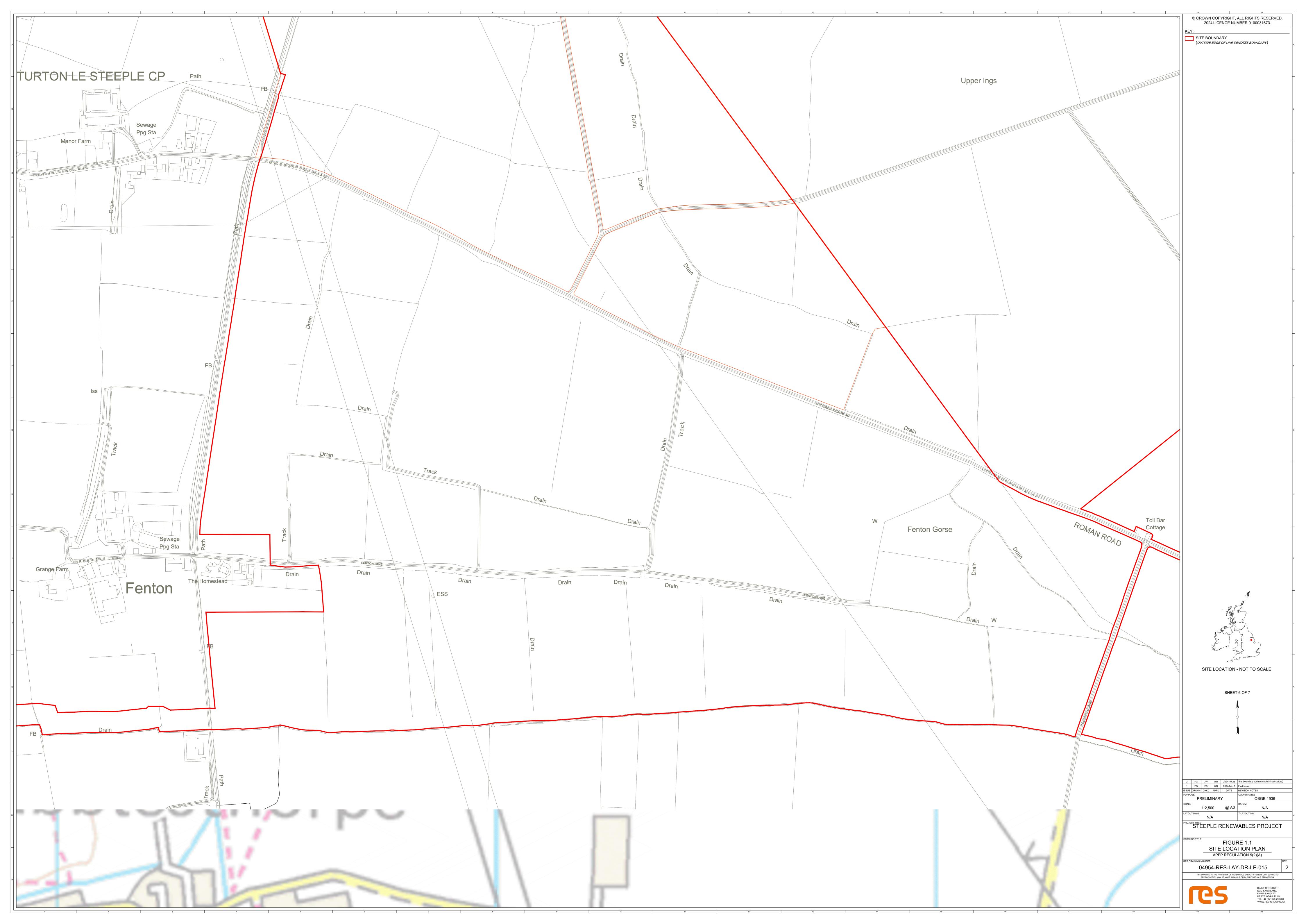
Appendix A – Site Location Plan

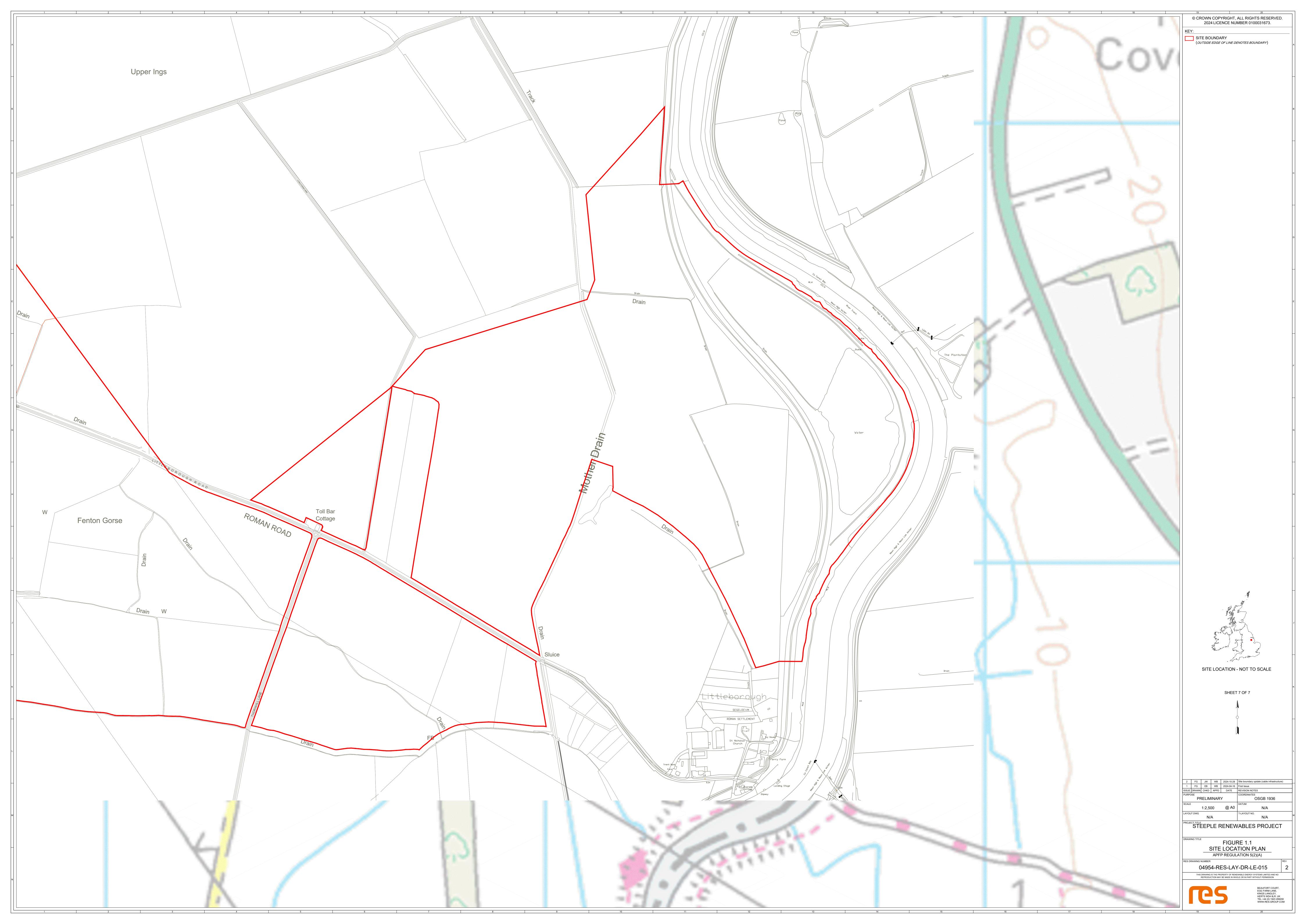






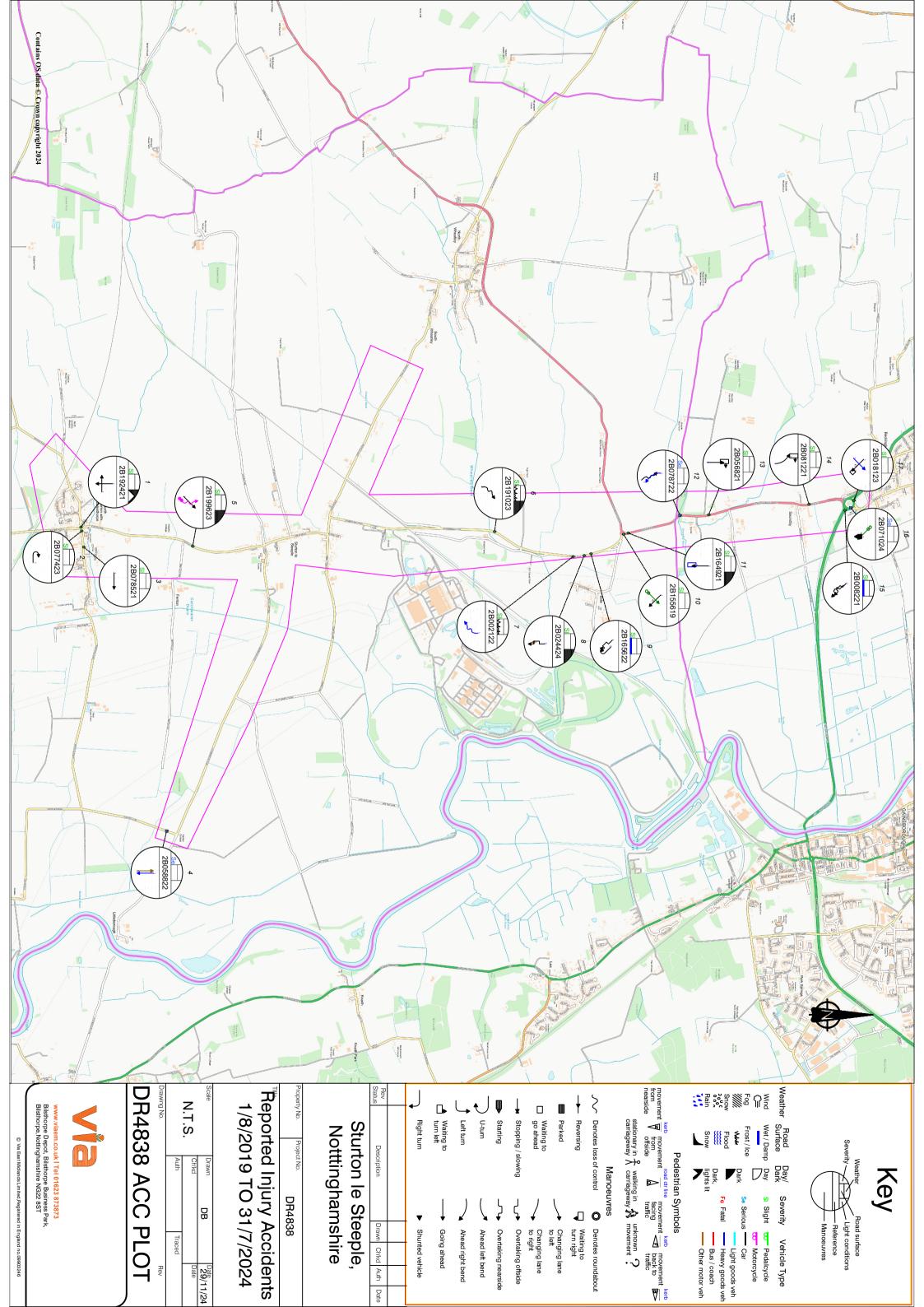








Appendix B – Personal Injury Collision (PIC) Data





Total number of reports = 17

Total number of pages (including this page) = 19

ROAD TRAFFIC INJURY ACCIDENT RECORDS - DISCLAIMER

These details are a record of the personal injury accidents reported to the Police. Every endeavour is made to ensure the accuracy and completeness of these records, which have been transcribed from the original Police Reports. The data is then entered and held on computer.

Occasions may arise when information from the Police, relevant to a particular accident, may not be available for several months and will therefore not be included.

Date: 29-November-2024 Page 1 of 19

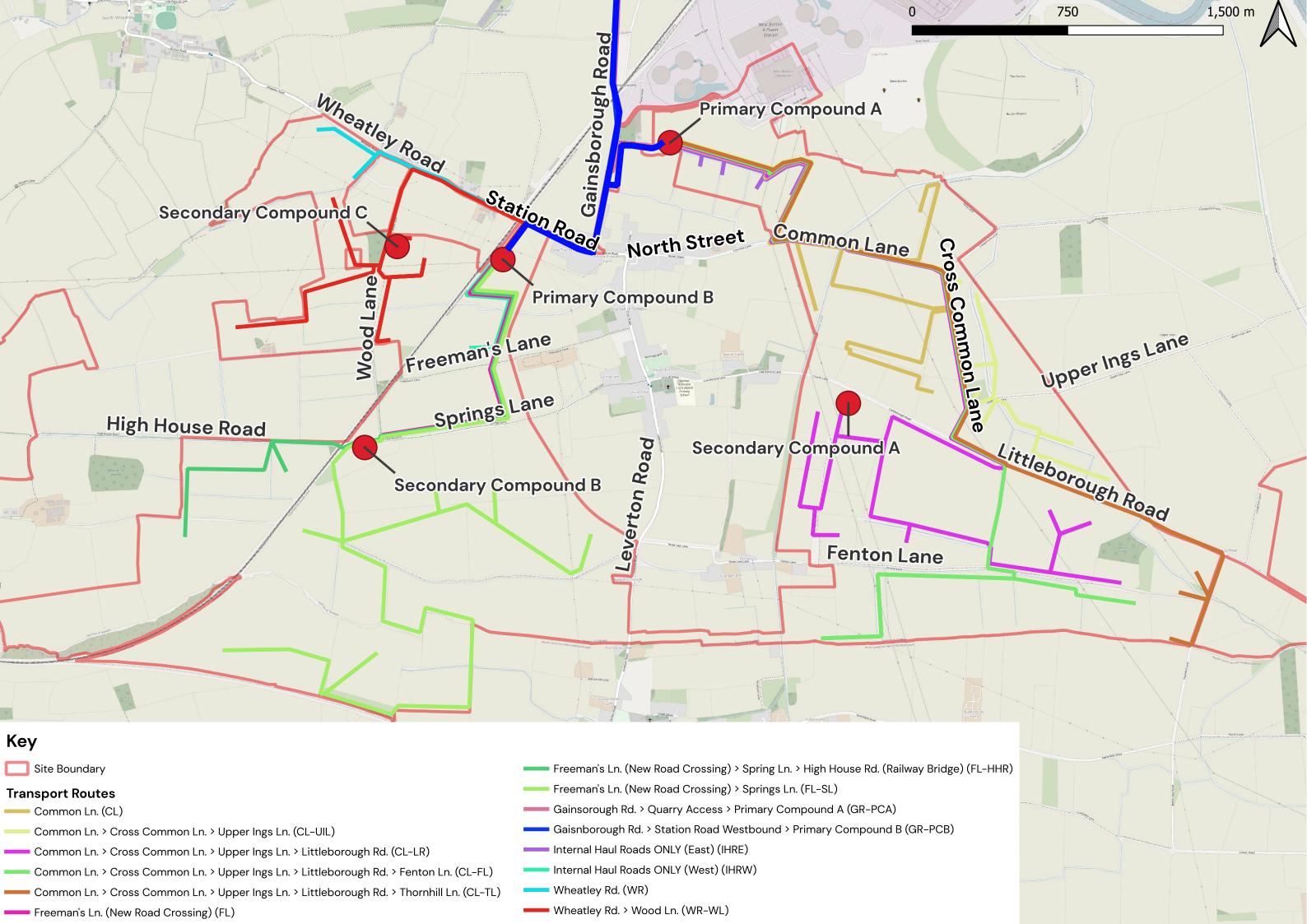




Appendix C – Proposed Construction Traffic Routeing Diagram



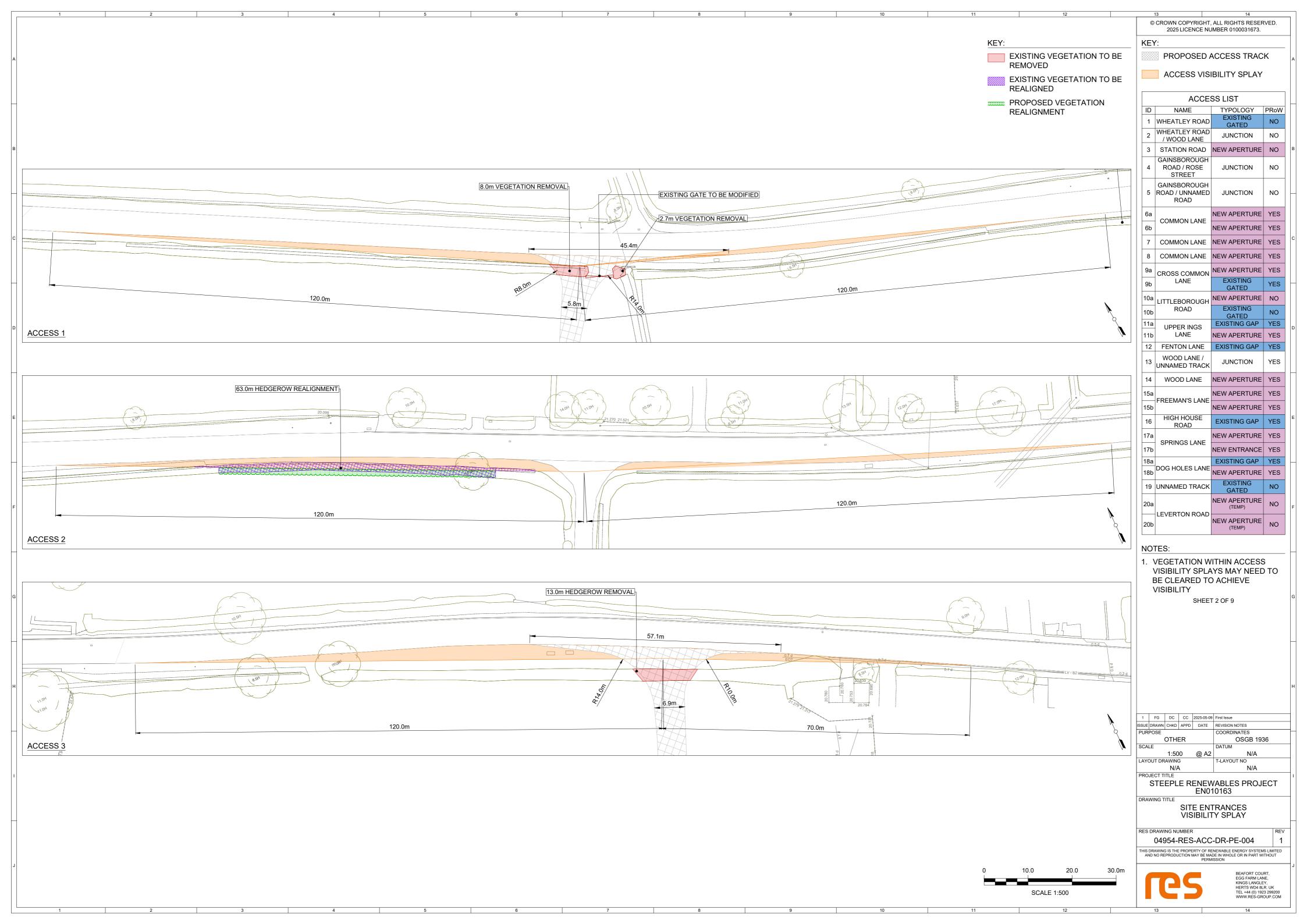
Appendix D – Compound and Haul Routes Location Plan

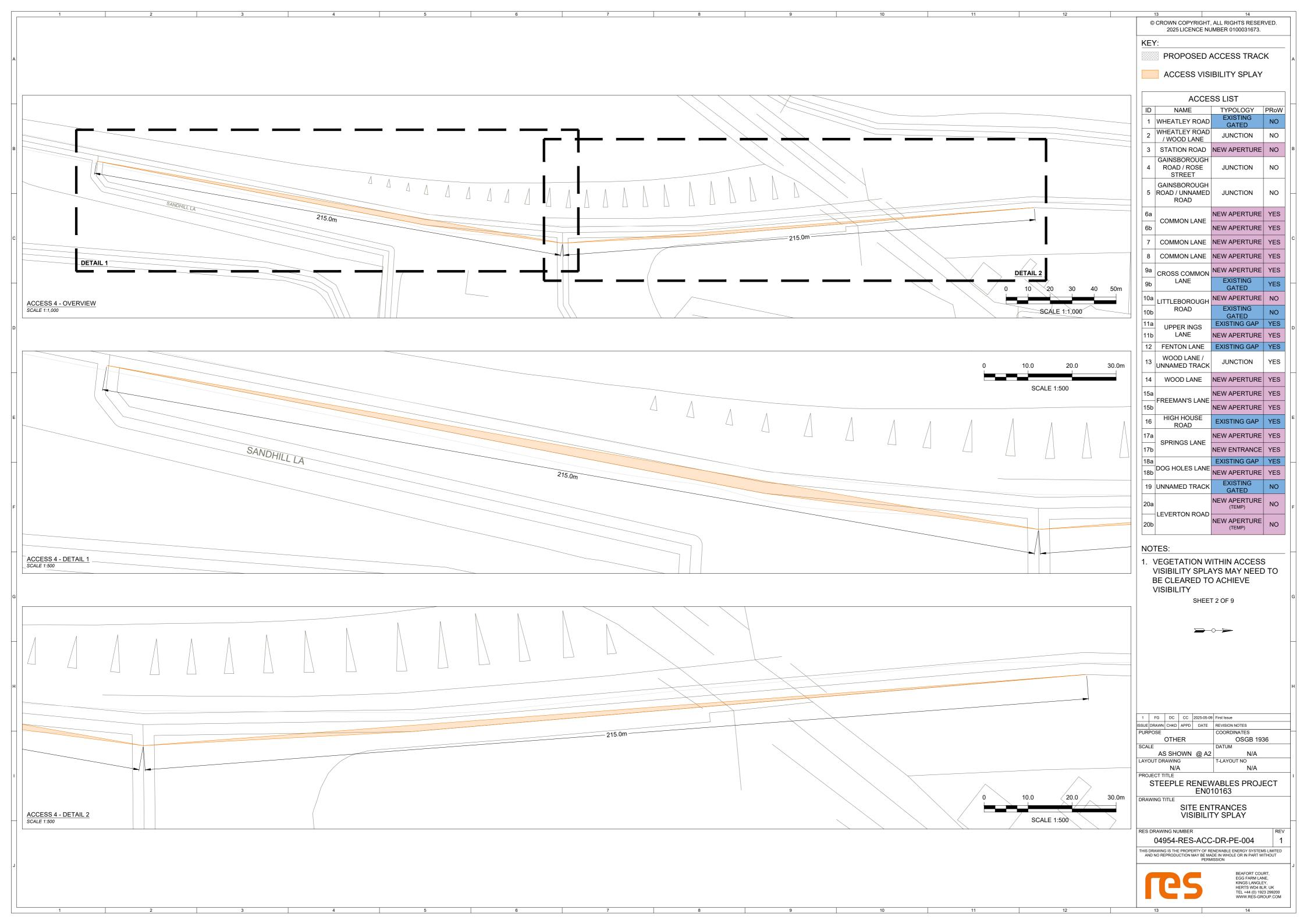


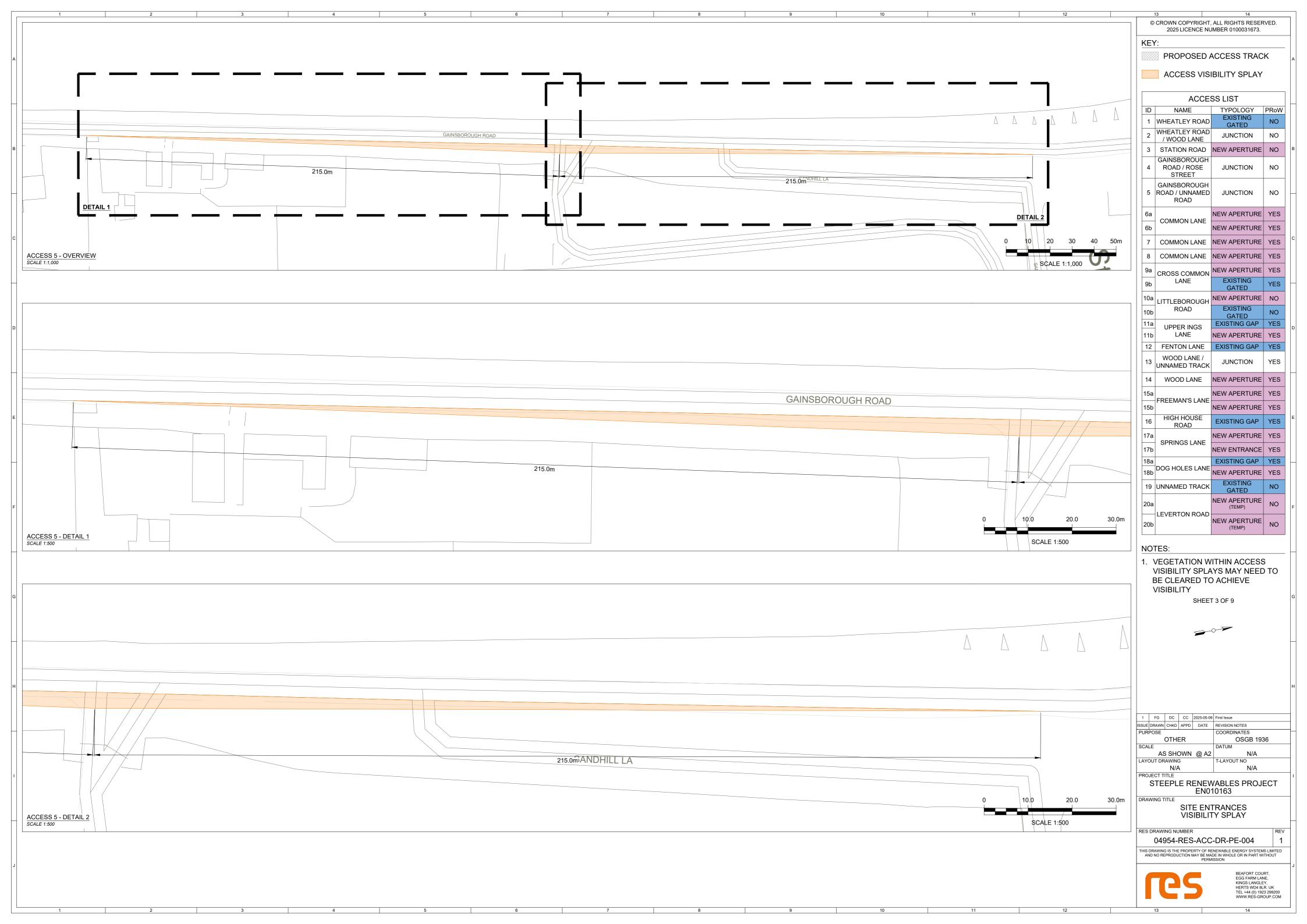


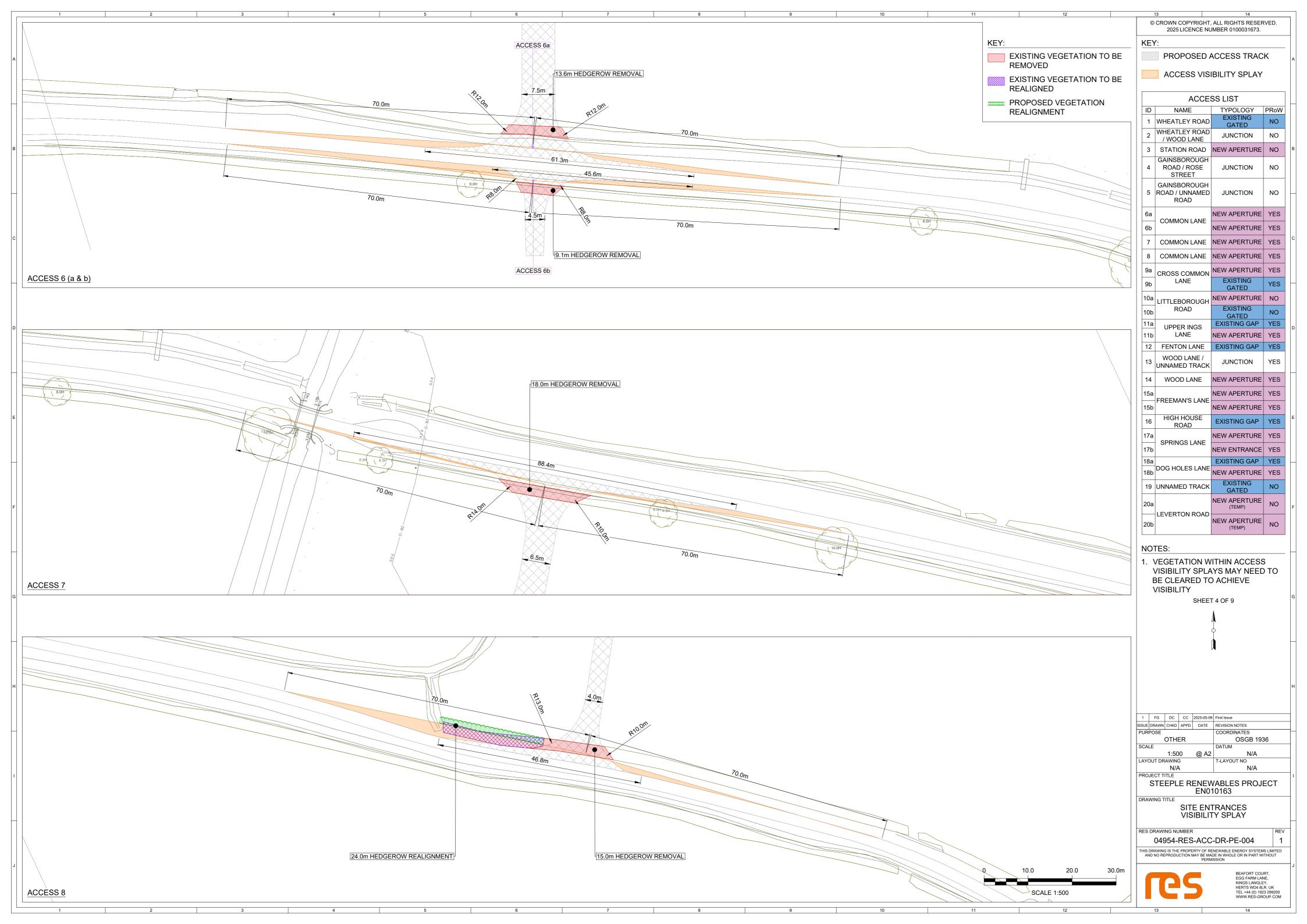
Appendix E – Site Access Geometry and Visibility Drawings

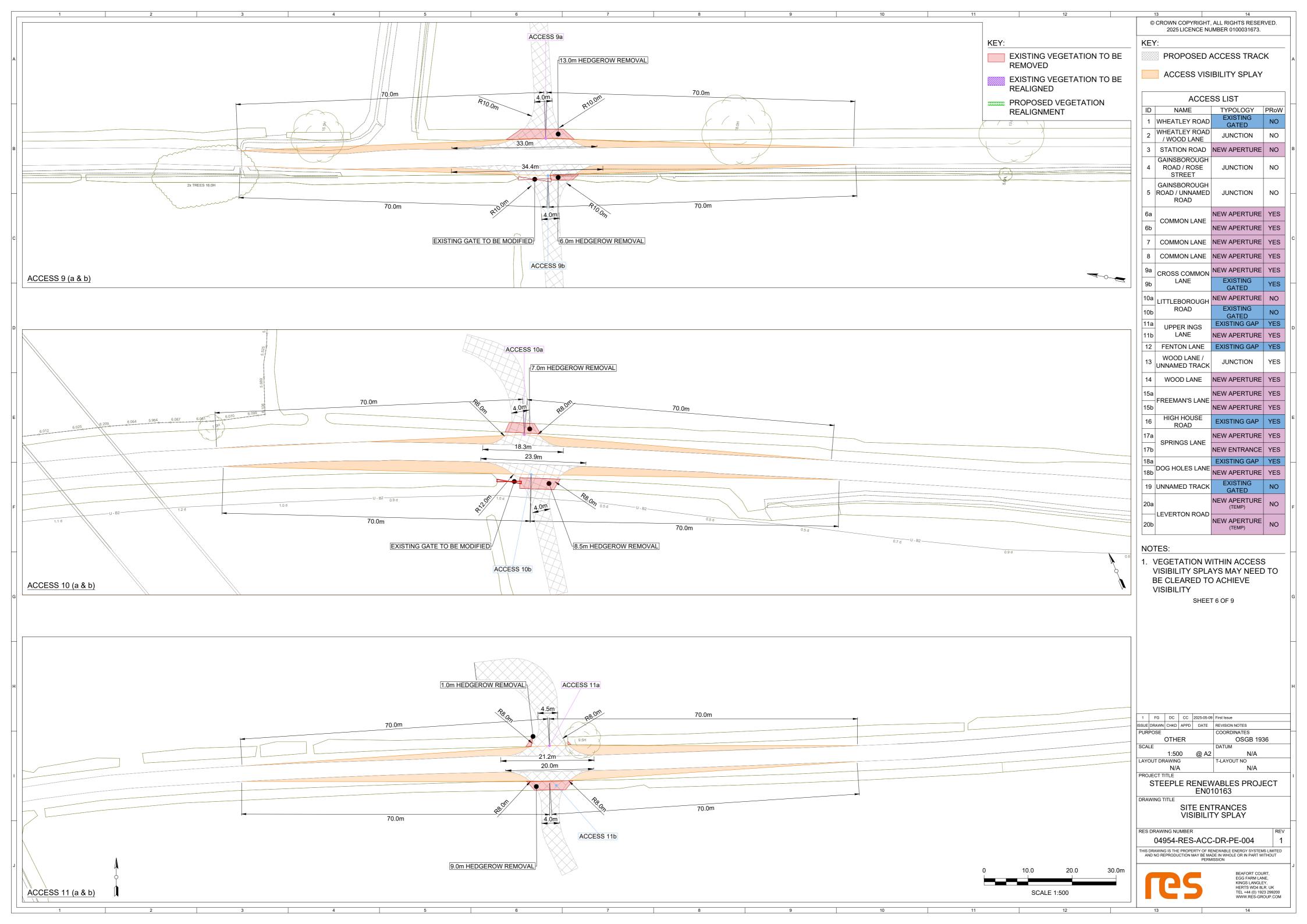


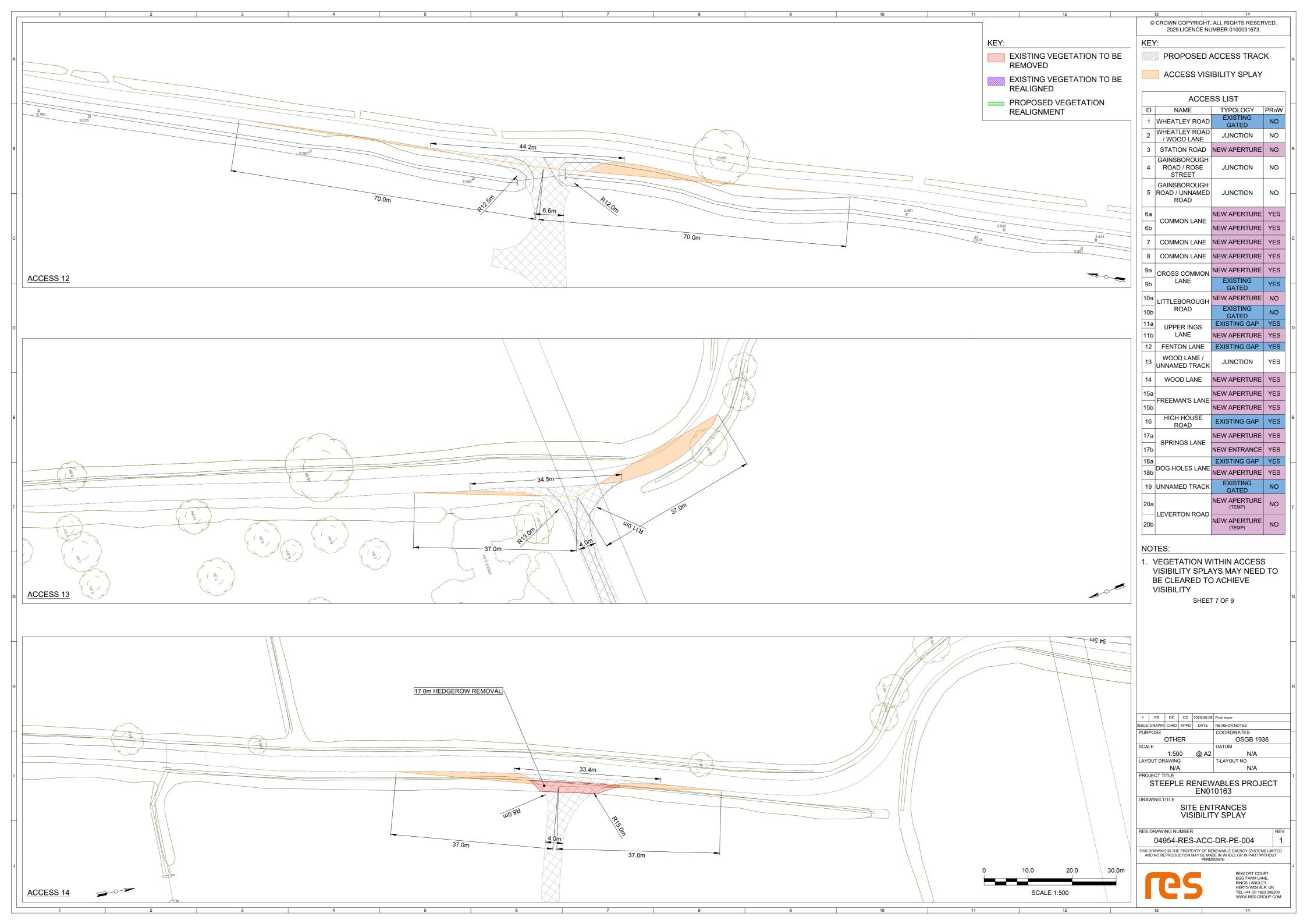


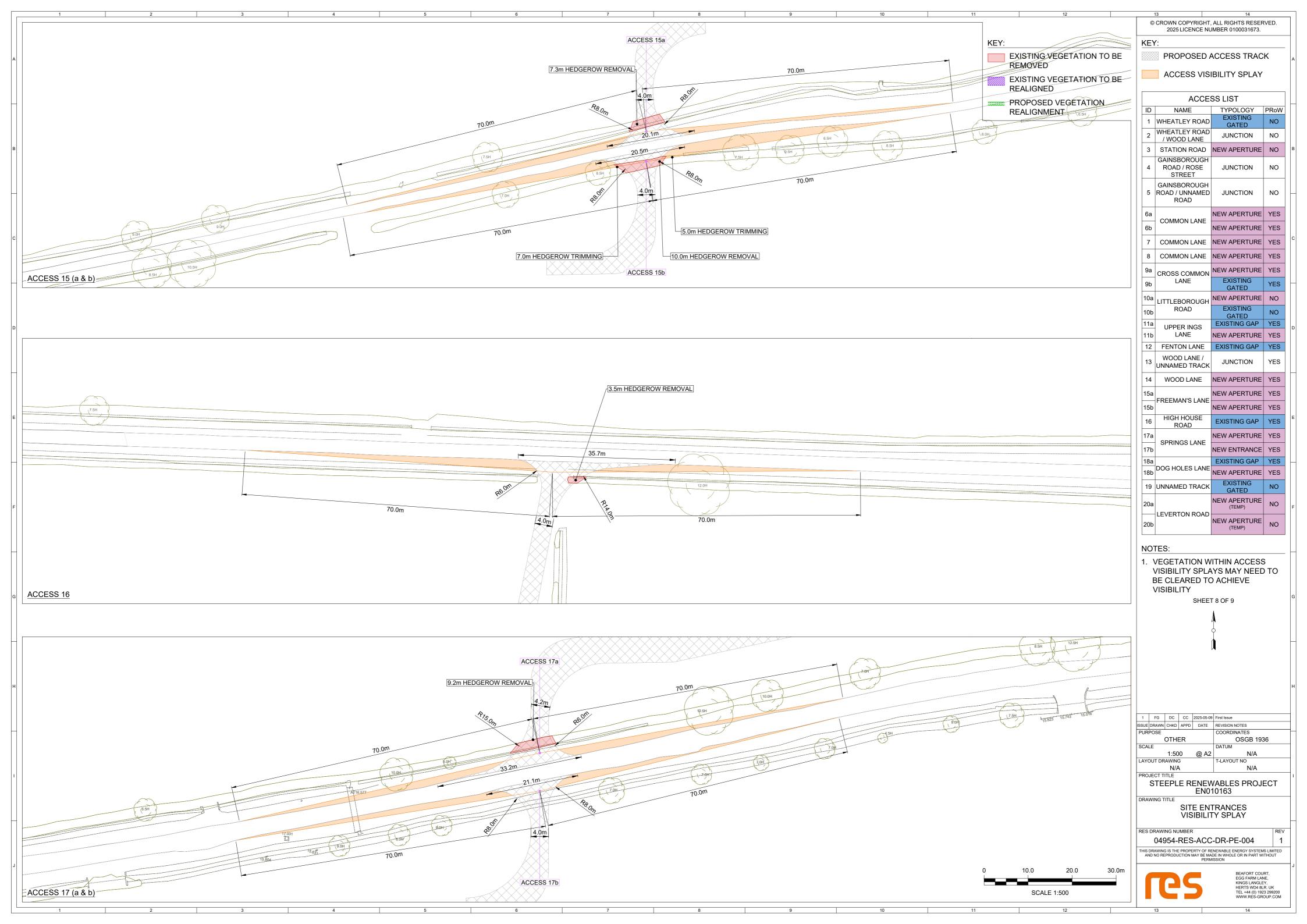


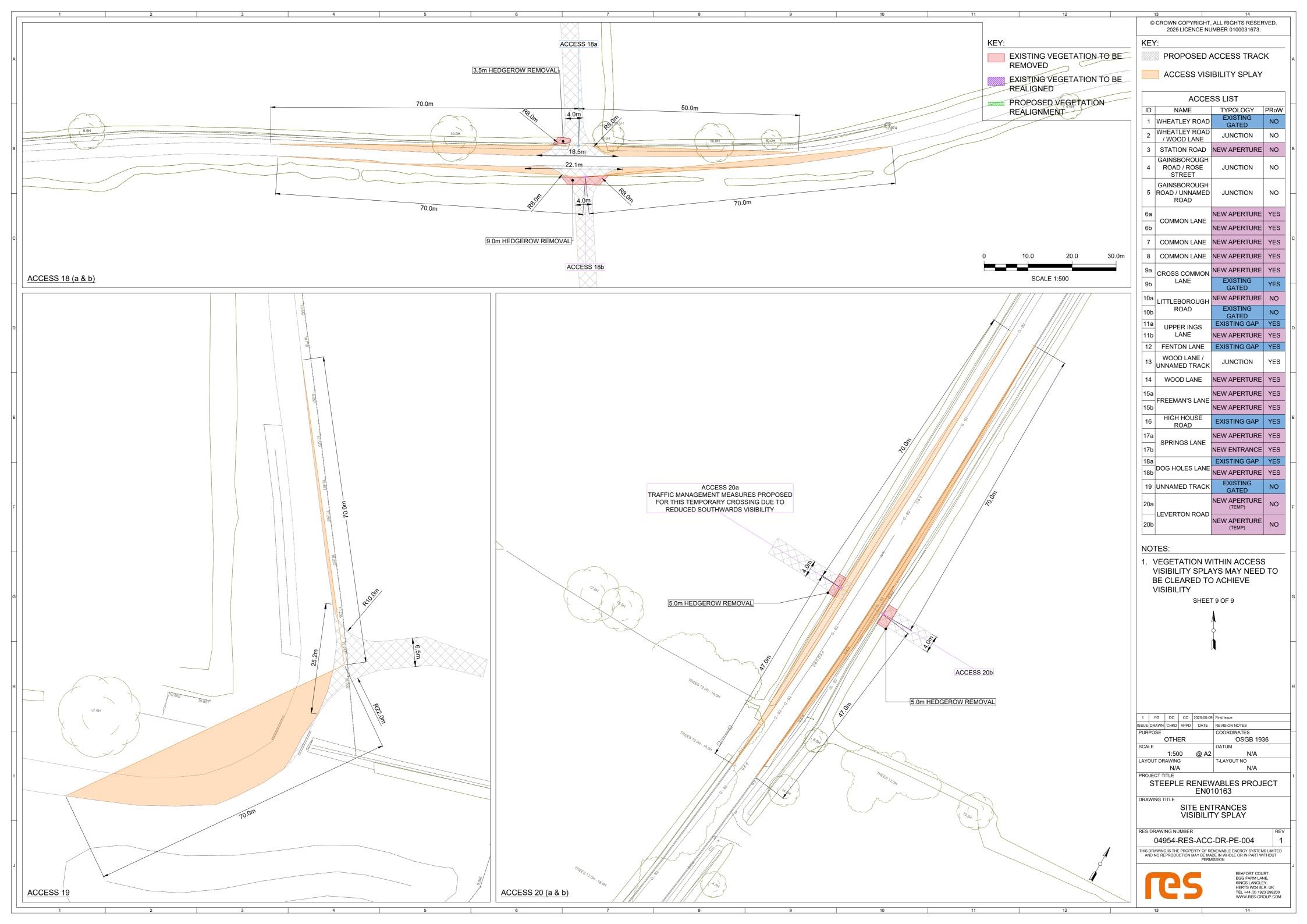






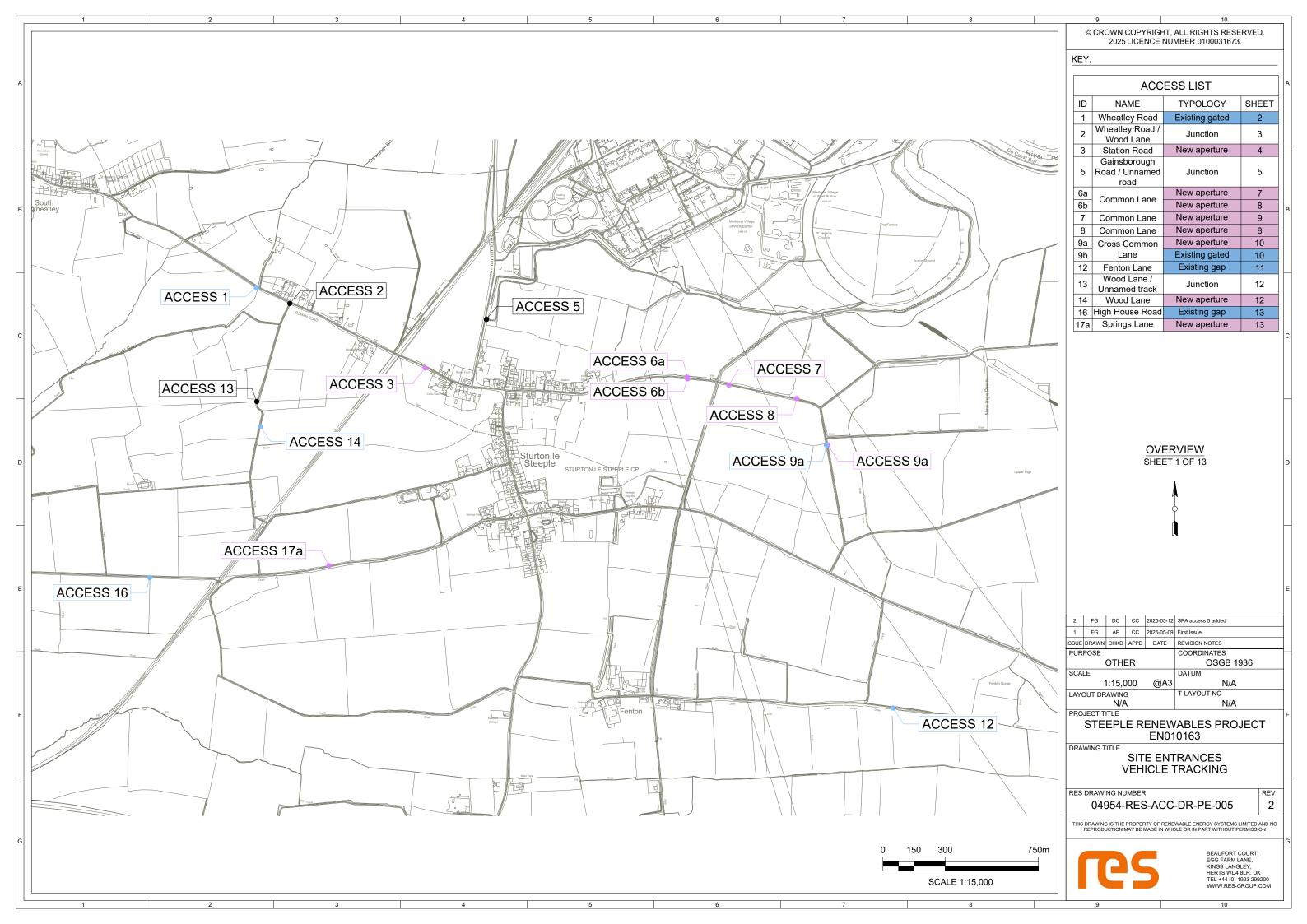


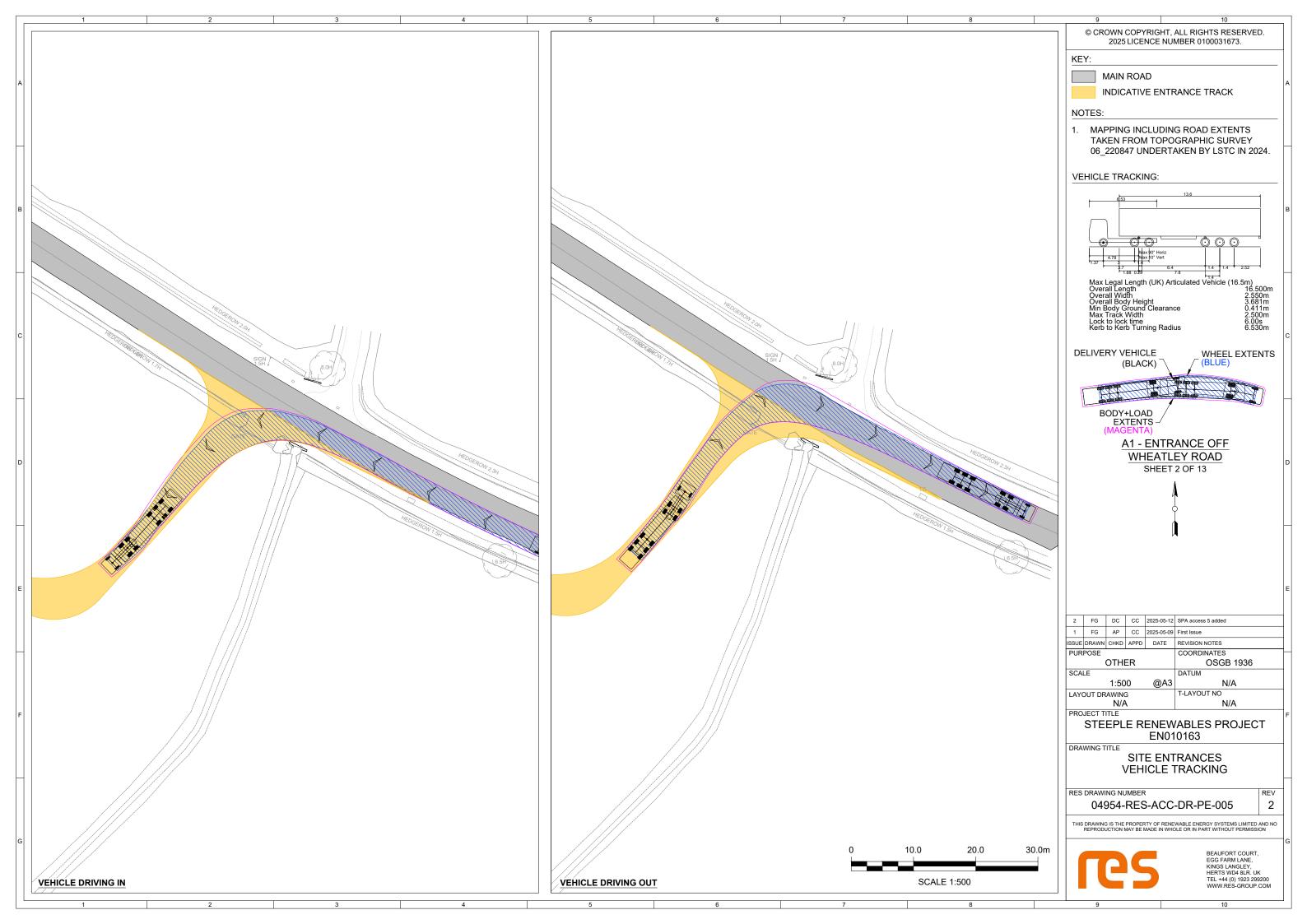


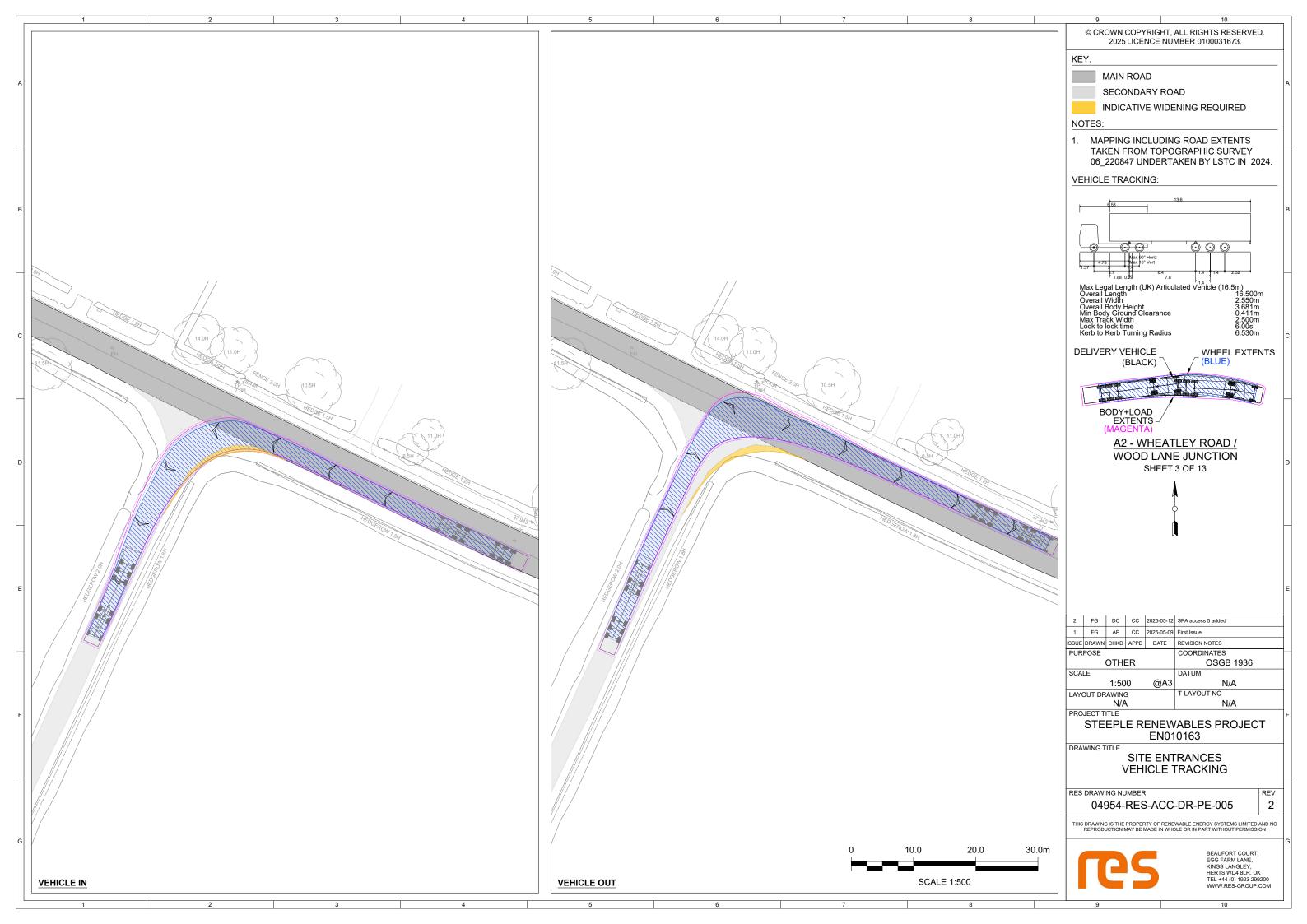


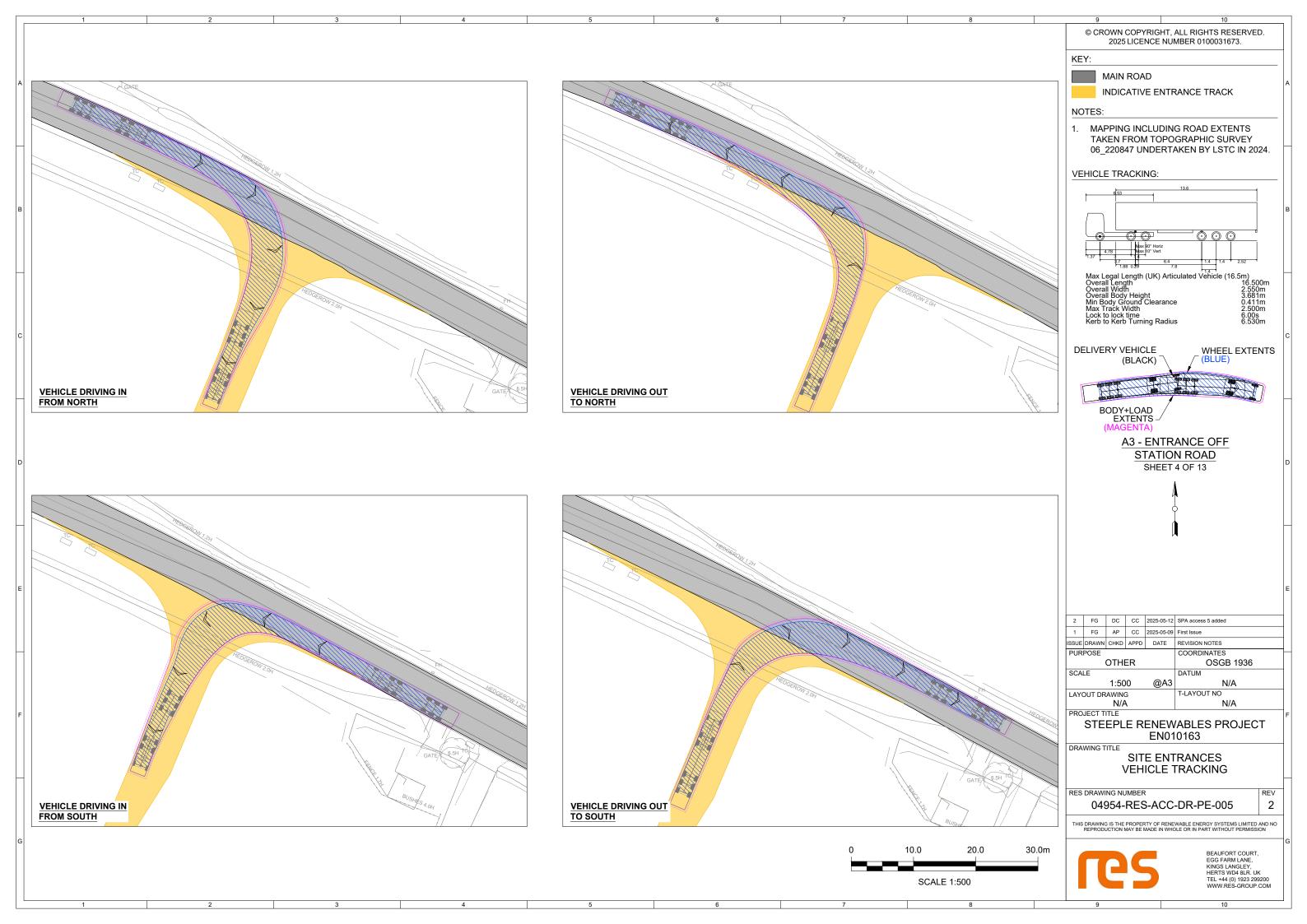


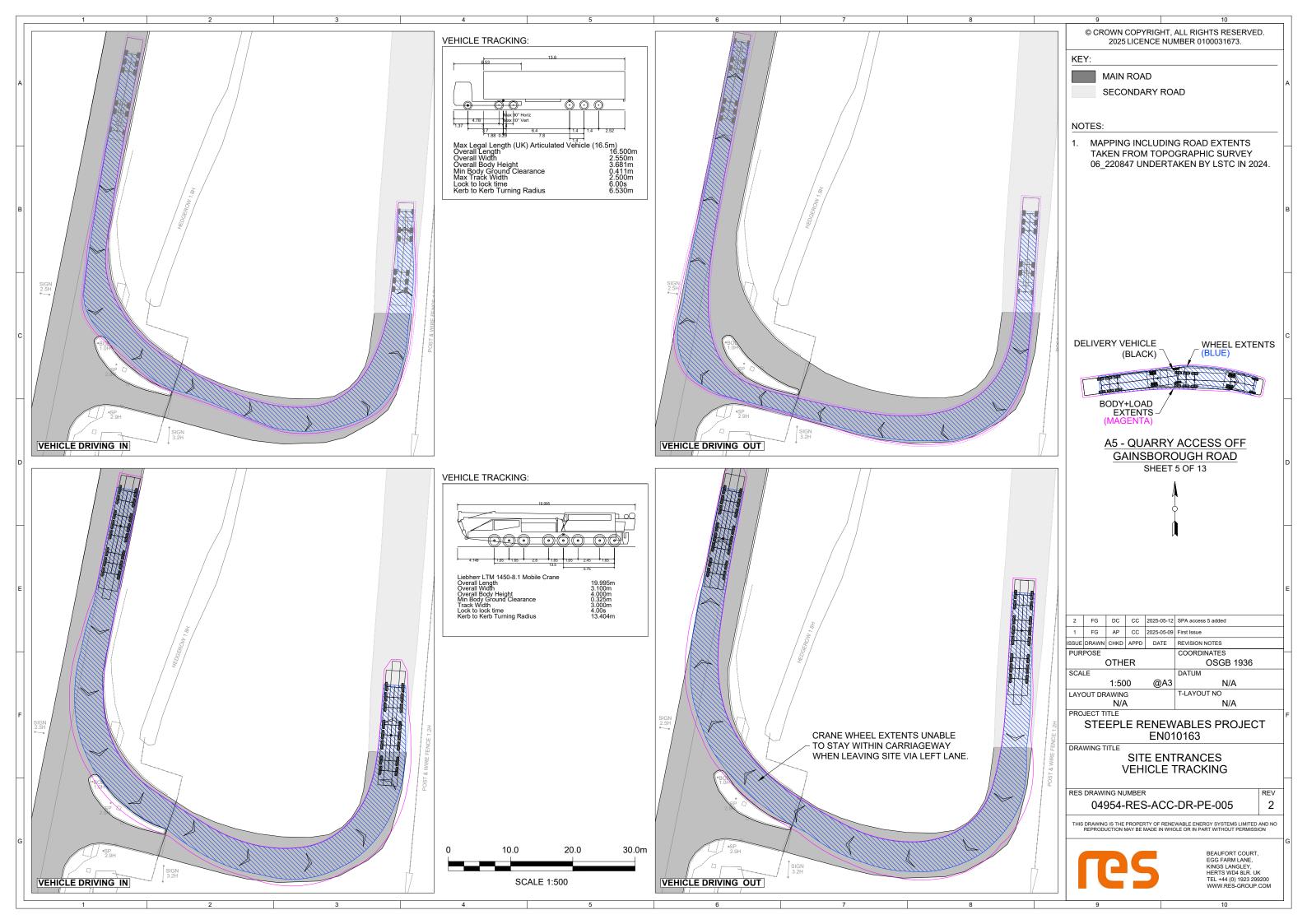
Appendix F – Swept Path Analysis Drawings

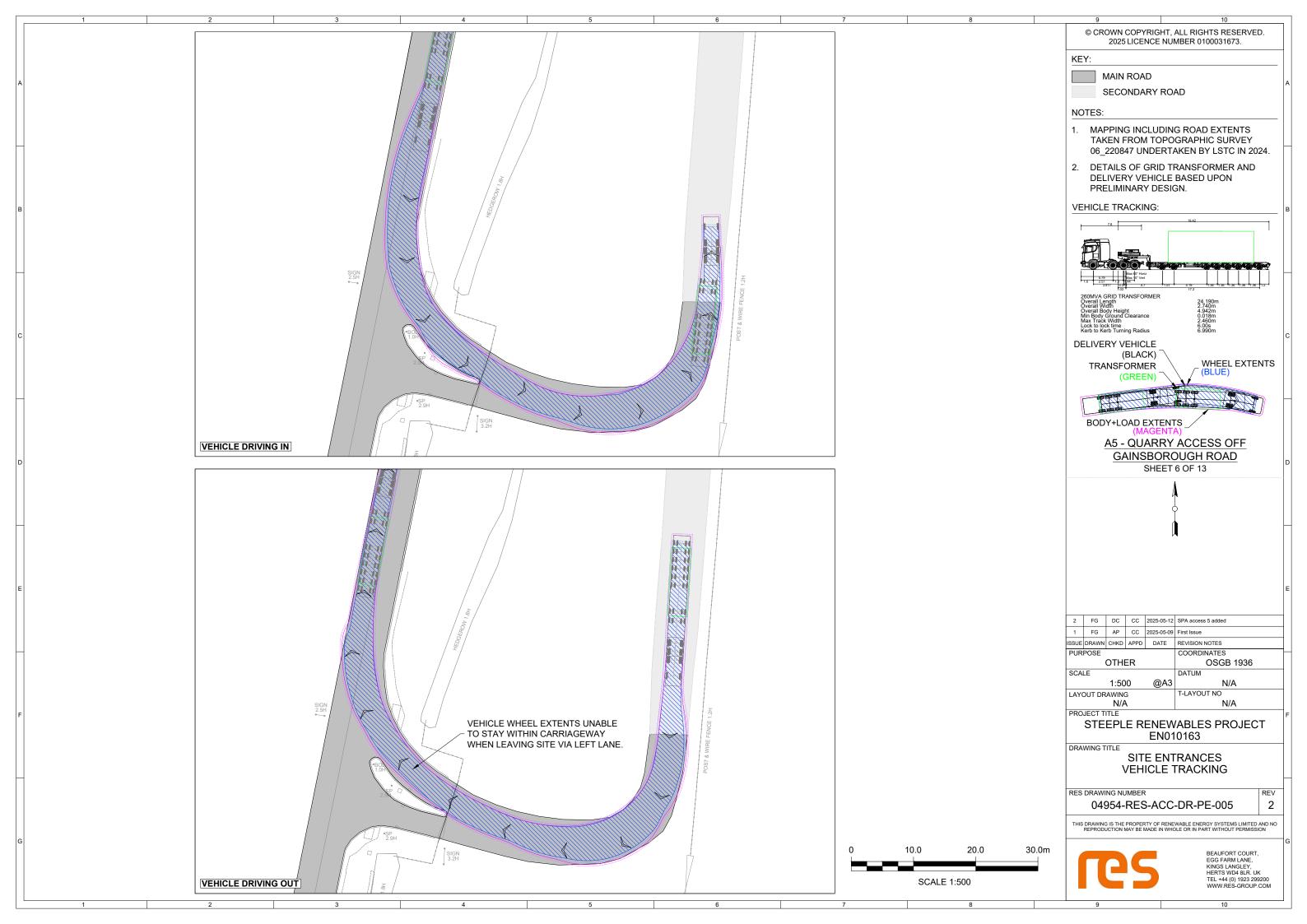


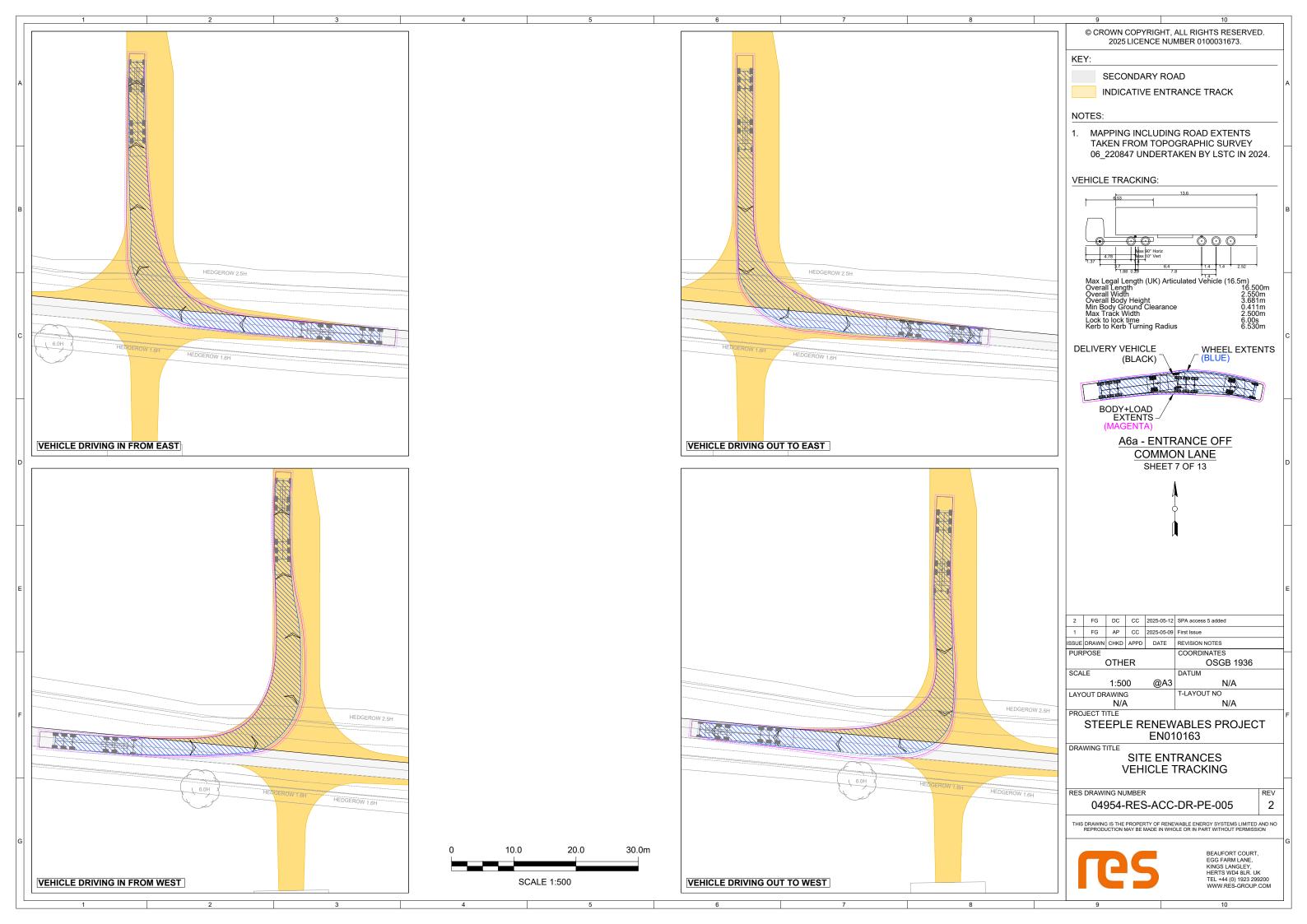


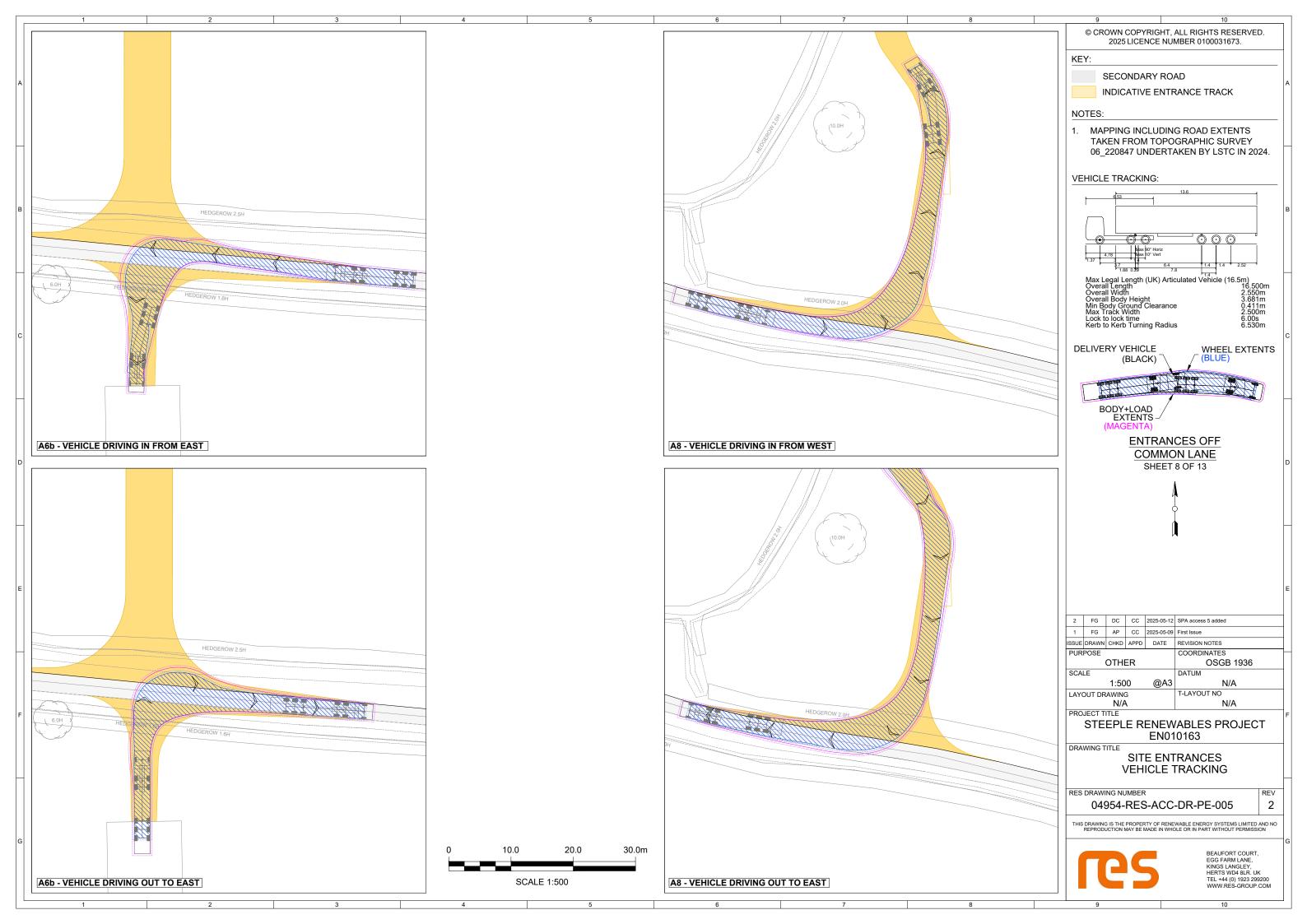


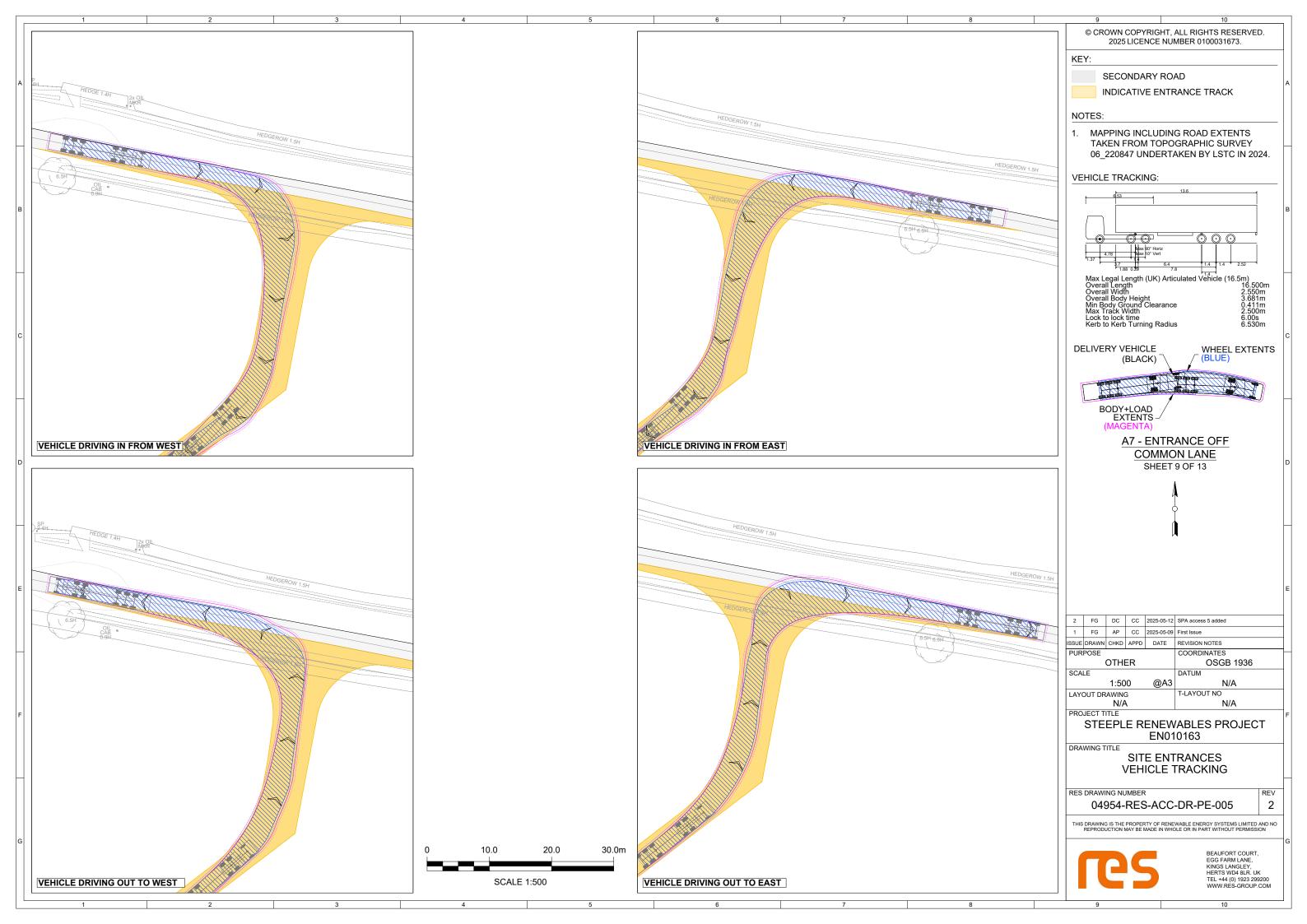


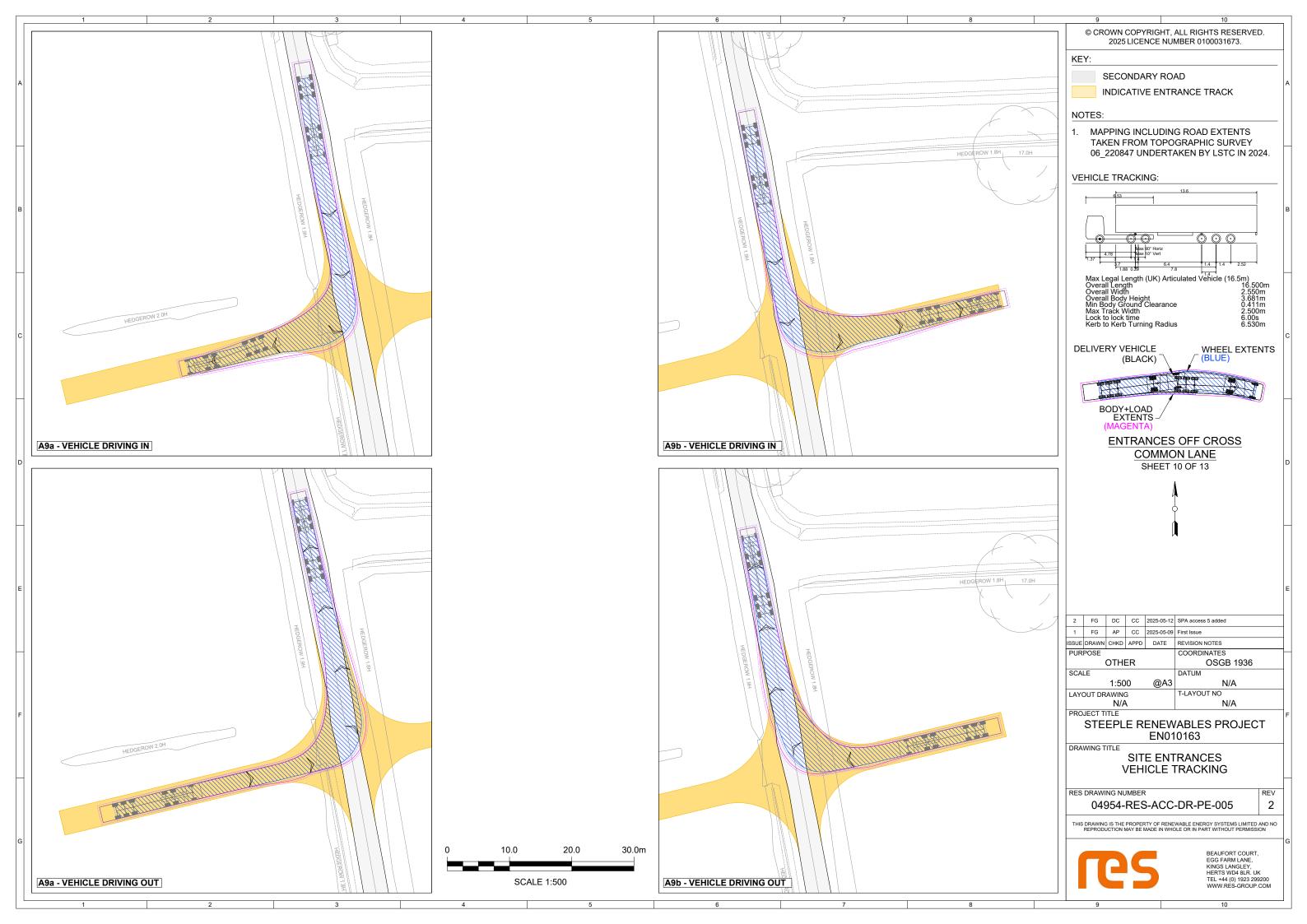


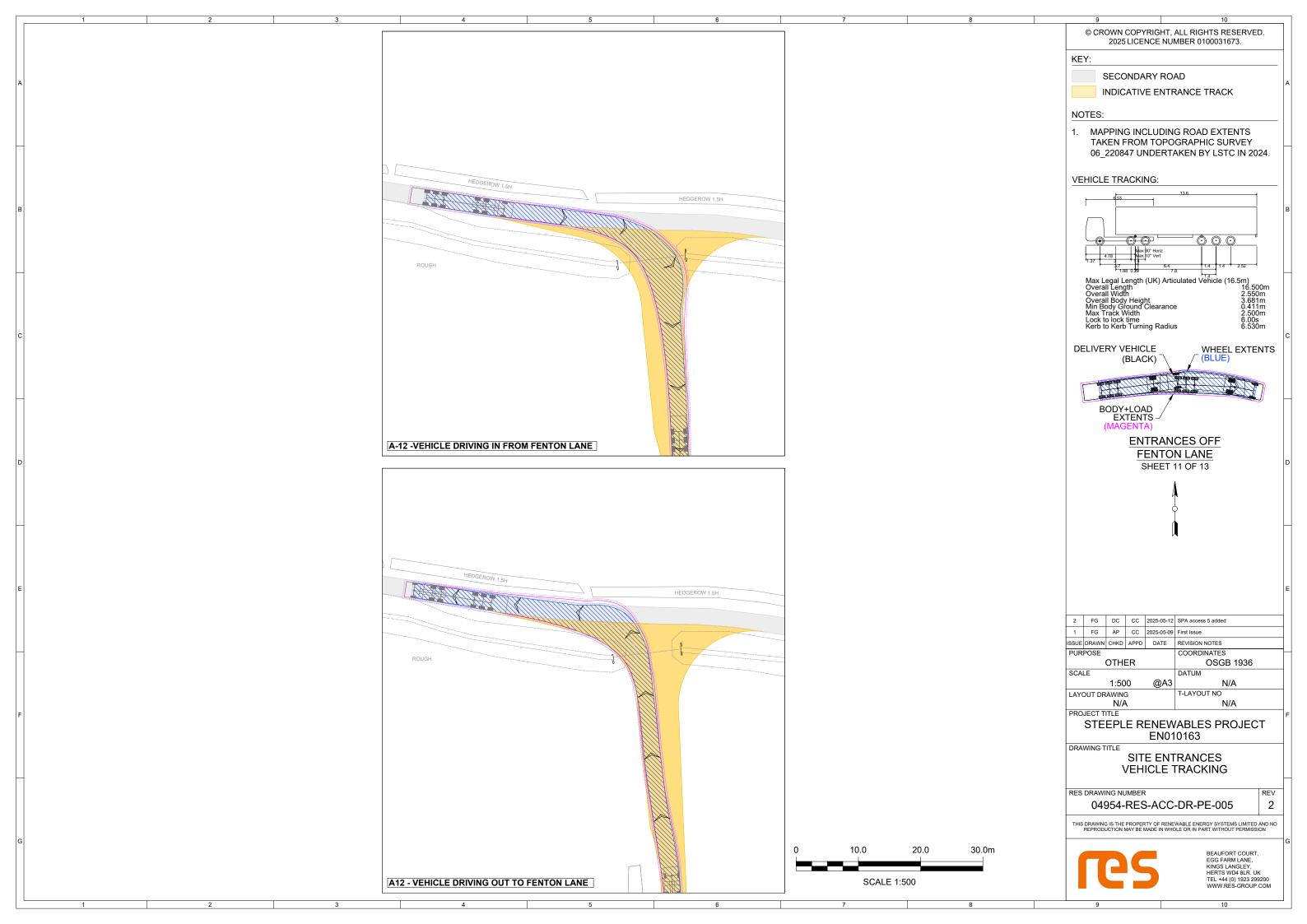


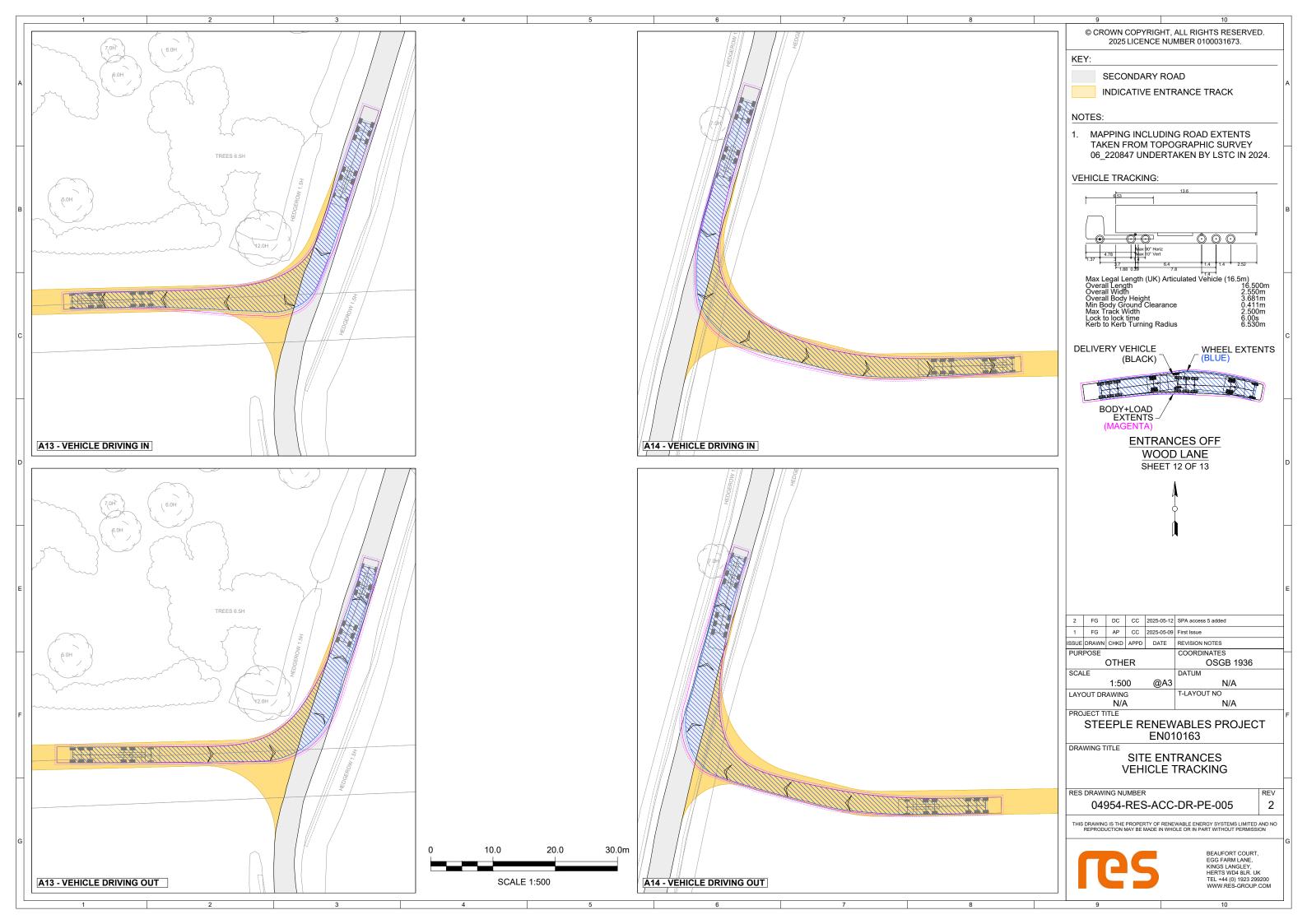


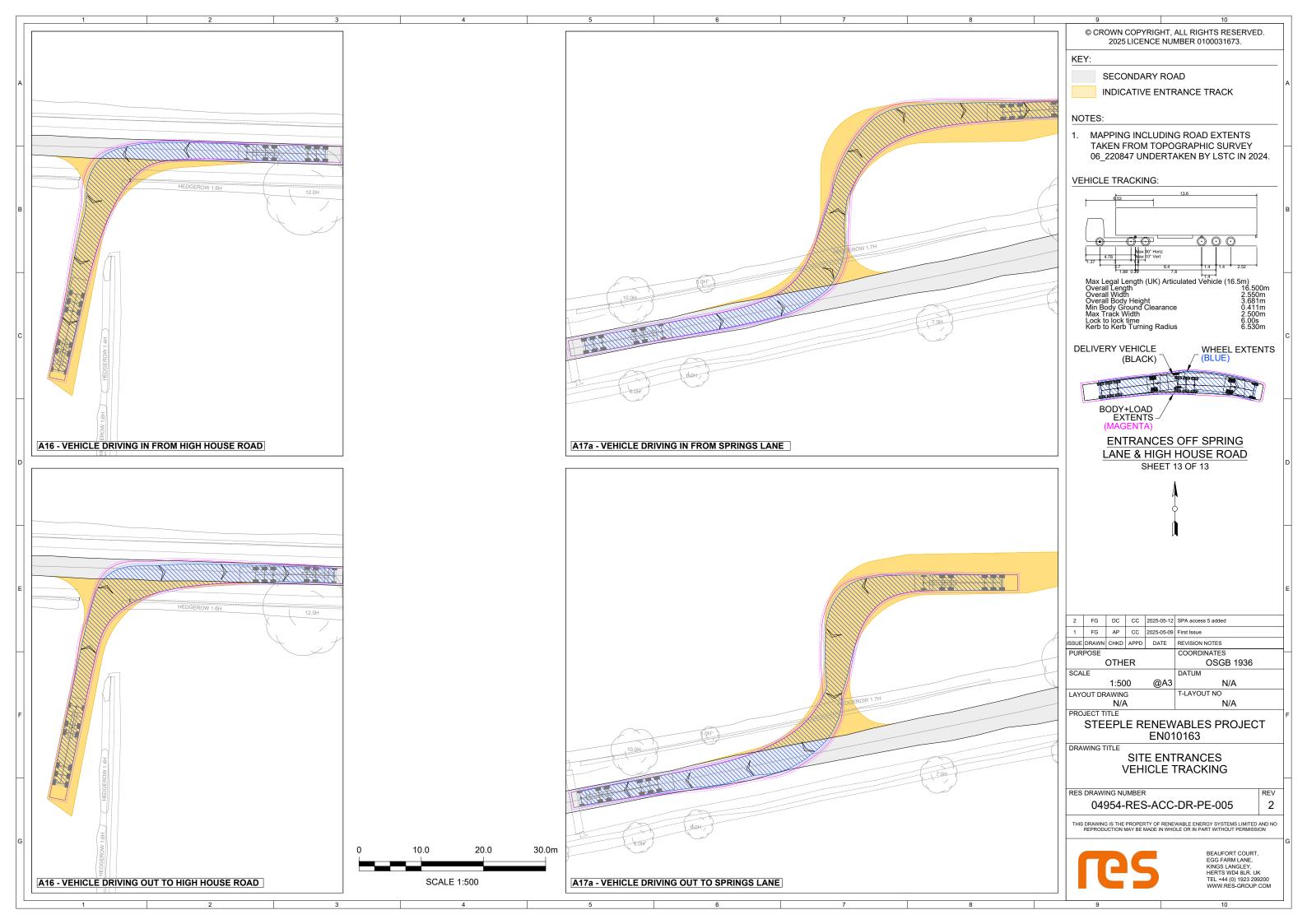






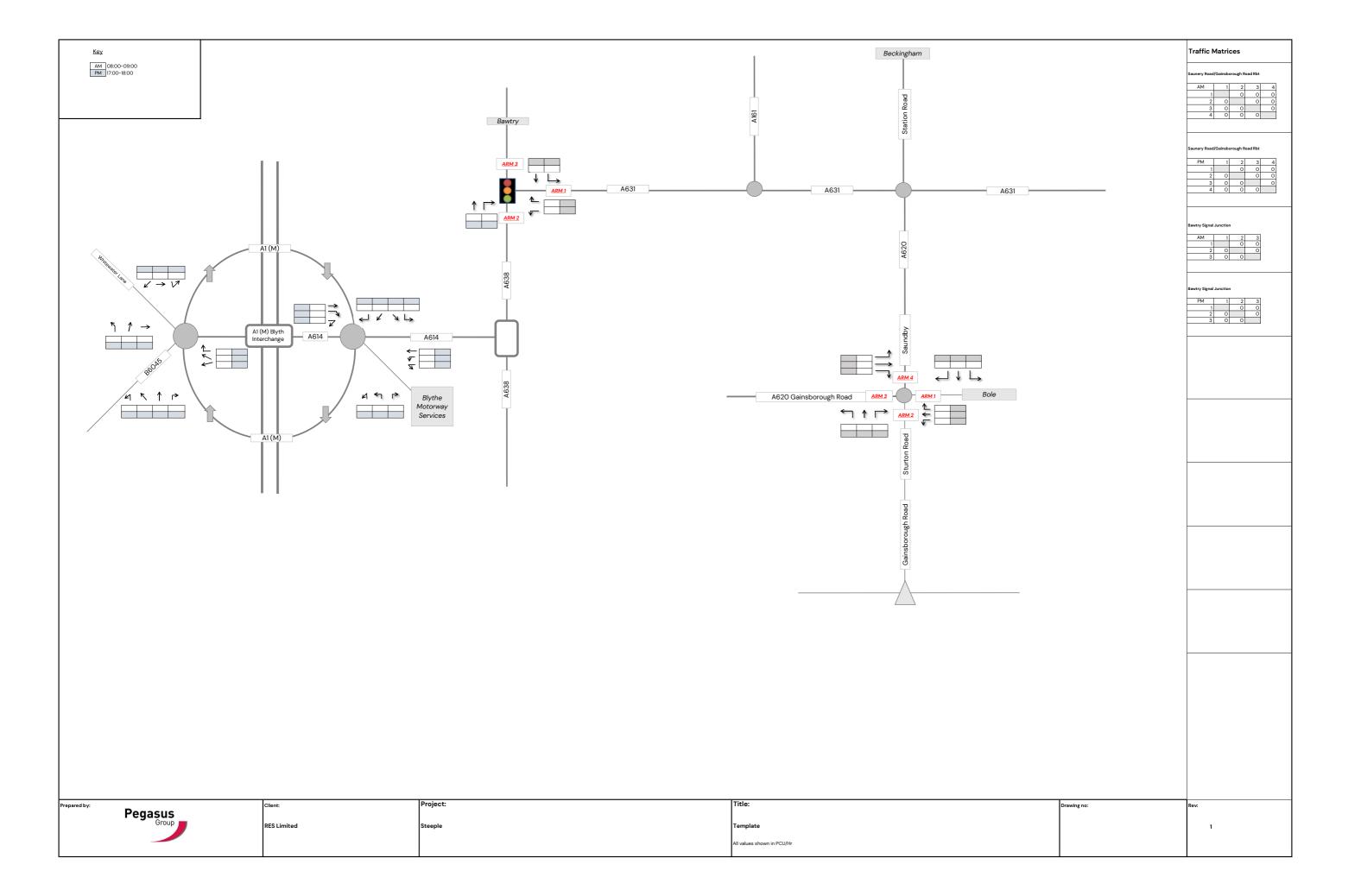


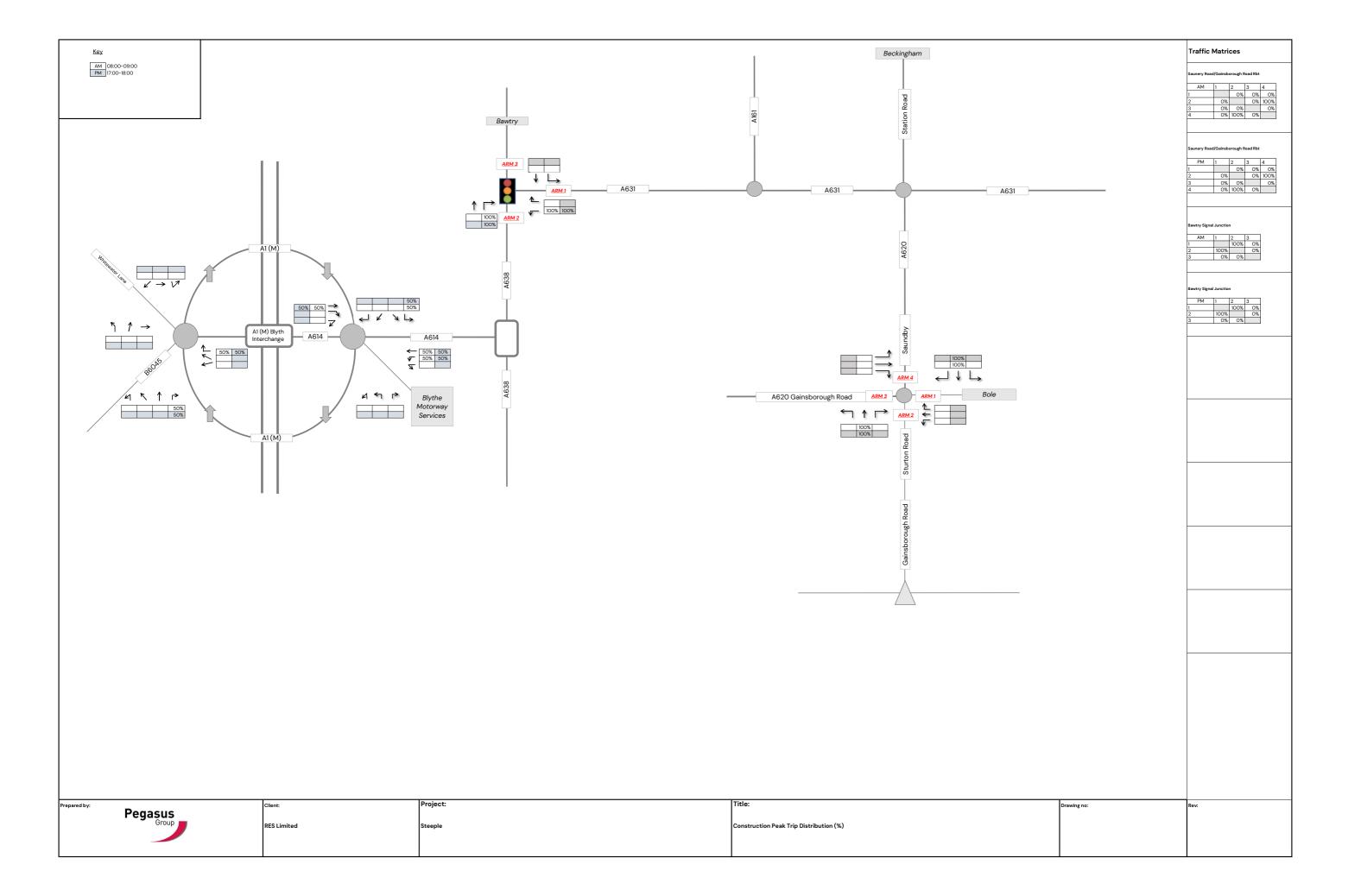


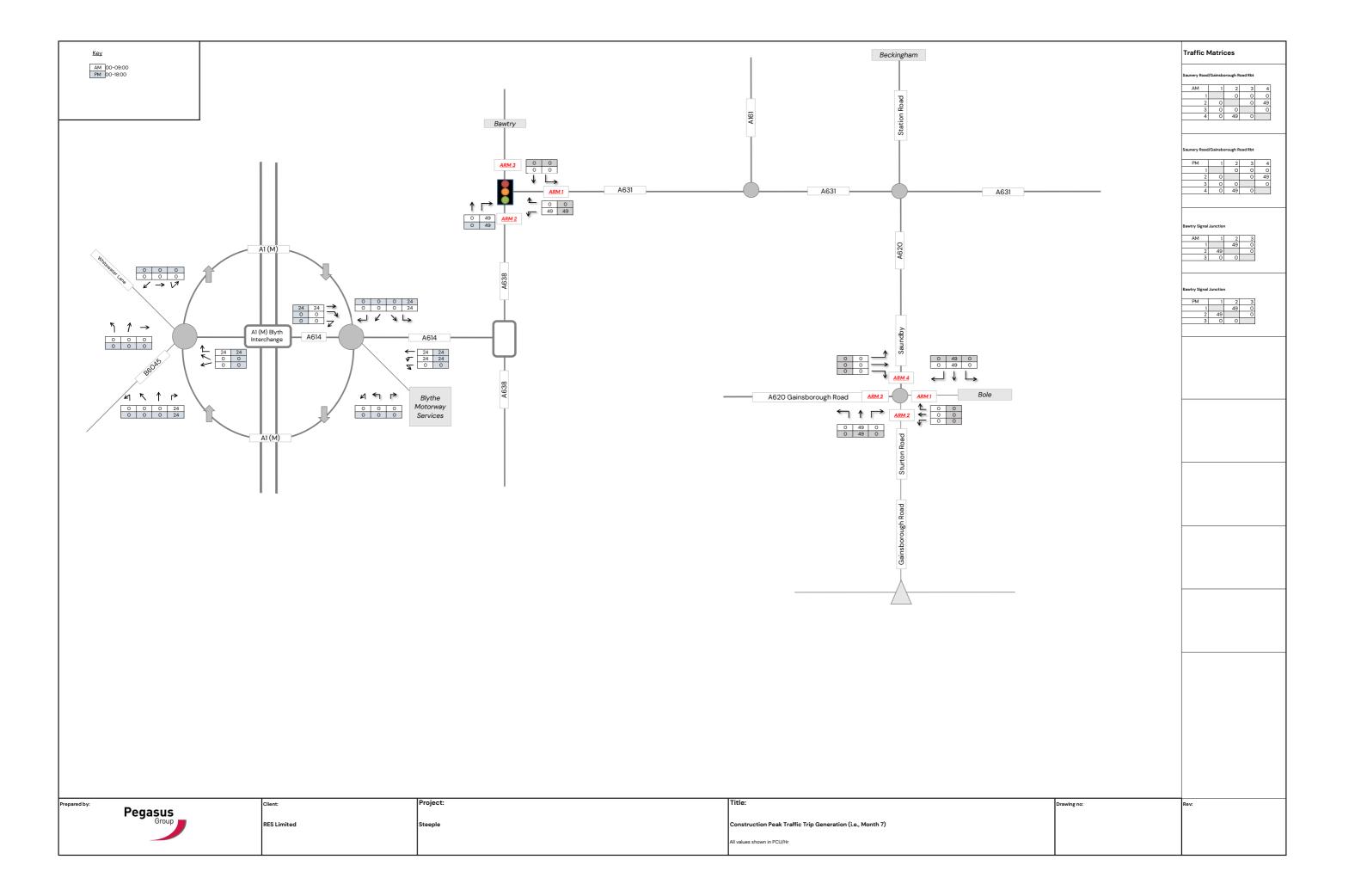


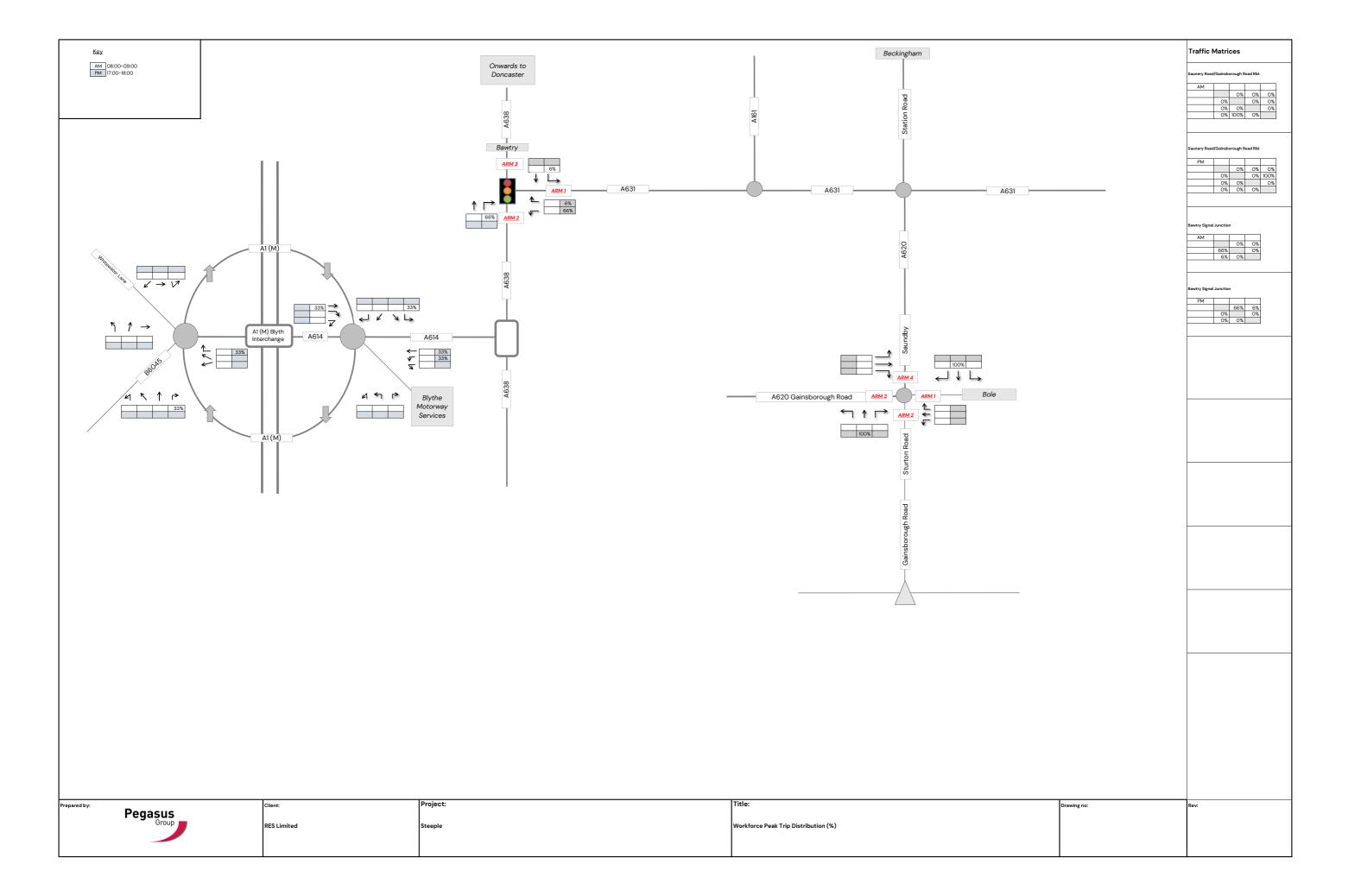


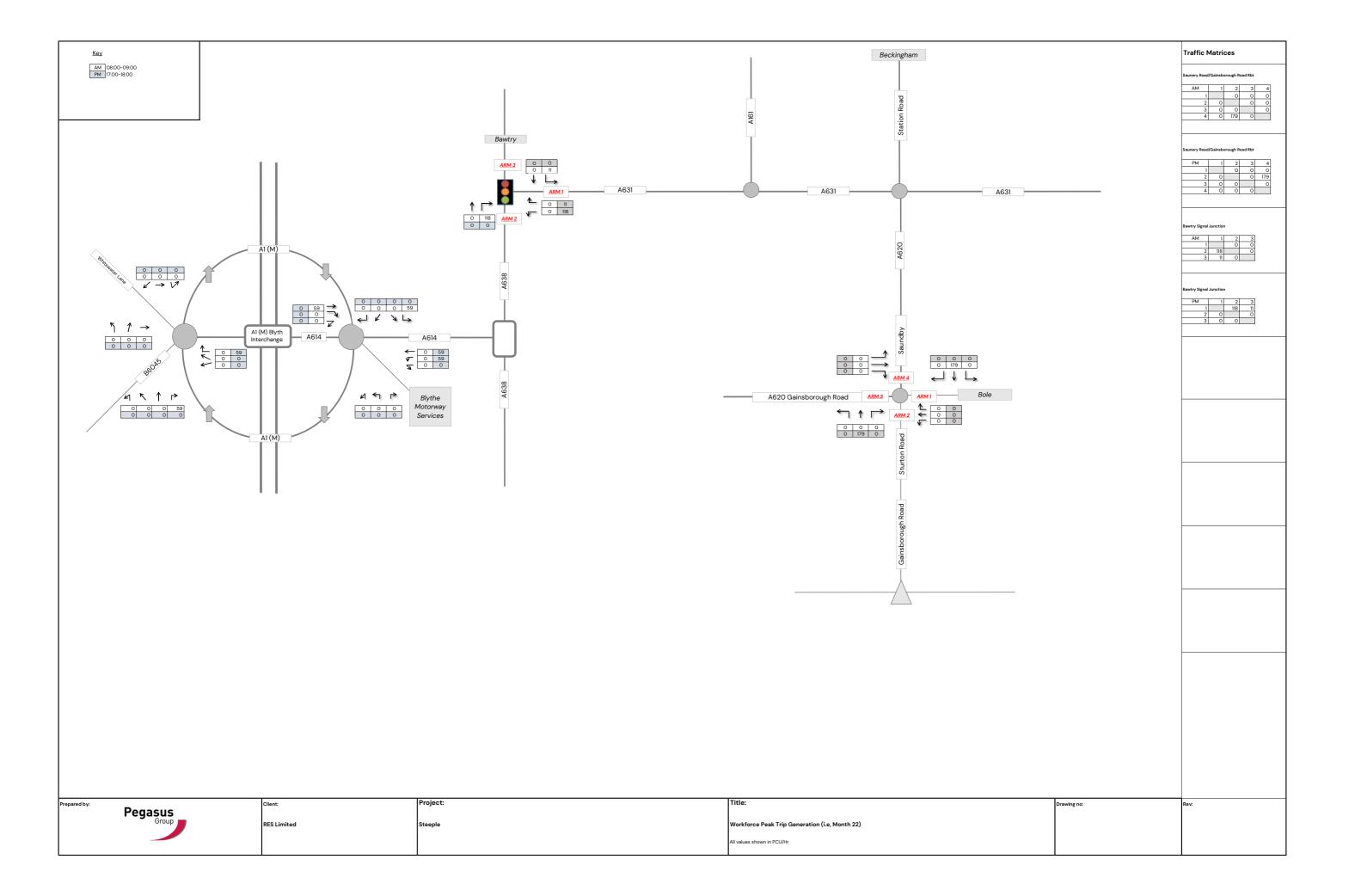
Appendix G – Traffic Flow Diagrams













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