



East Anglia ONE North and East Anglia TWO Offshore Windfarms

Traffic and Transport Deadline 3 Clarification Note

Applicants: East Anglia ONE North Limited and East Anglia TWO Limited

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Traffic and Transport Deadline 3 Clarification Note 15th December 2020



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Glossary of Acronyms

AIL	Abnormal Indivisible Load
DCO	Development Consent Order
ES	Environmental Statement
ESC	East Suffolk Council
HGV	Heavy Goods Vehcile
kph	Kilometers per hour
mph	Miles per hour
OAMP	Oultine Access Management Plan
SCC	Suffolk County Council
SoCG	Statement of Common Ground
TTRO	Temporary Traffic Regulation Order

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Glossary of Terminology

Applicants	East Anglia TWO Limited / East Anglia ONE North Limited
The Councils	Suffolk County Council and East Suffolk Council
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
Onshore cables	The cables which would bring electricity from landfall to the onshore substation. The onshore cable is comprised of up to six power cables (which may be laid directly within a trench, or laid in cable ducts or protective covers), up to two fibre optic cables and up to two distributed temperature sensing cables.
Onshore substation	The East Anglia TWO / East Anglia ONE North substation and all of the electrical equipment within the onshore substation and connecting to the National Grid infrastructure.
Onshore infrastructure	The combined name for all of the onshore infrastructure associated with the proposed East Anglia TWO / East Anglia ONE North project from landfall to the connection to the national electricity grid.





1 Introduction

- This clarification note has been prepared by East Anglia TWO Limited and East Anglia ONE North Limited (the Applicants) to clarify aspects of the East Anglia TWO and East Anglia ONE North Development Consent Order (DCO) applications (the Applications).
- 2. This note sets out the Applicants' clarification on traffic and transport matters in relation to the East Anglia TWO project and the East Anglia ONE North project (the Projects). The information included within this note aims to address queries raised by East Suffolk Council (ESC) and Suffolk County Council (SCC) (the Councils) through their Relevant Representations (RR-002 and RR-007 respectively) and the Statement of Common Ground (SoCG) process.
- 3. This document is applicable to both the East Anglia ONE North and East Anglia TWO DCO applications, and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's procedural decisions on document management of 23rd December 2019 (PD-004). Whilst this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it for the other project submission.

1.1 Purpose of this Clarification Note

- 4. Through their Relevant Representations (RR-002 and RR-007) and the SoCG process, the Councils have sought clarification regarding the assessment presented in *Chapter 26 Traffic and Transport* of the Environmental Statement (ES) (APP-074). In particular, this note provides clarity on the following:
 - Details of all locations where the Applicants consider road closures will be required; and
 - Details of all locations where the Applicants consider speed limits will be required and their durations.





2 Review of Potential Road Closures

2.1 Overview

- 5. **Chapter 26 Traffic and Transport** (APP-074) outlines the requirement for works on or adjacent to the public highway associated with the following activities:
 - Installing construction accesses (Figure 26.2: Access Locations and Associated Onshore Infrastructure (APP-307);
 - Installing the onshore cables under the highway;
 - Delivery of offsite mitigation measures; and
 - Installing drainage connections along Church Road, Friston.
- 6. Chapter 8 of the Traffic Signs Manual (Department for Transport, 2009) outlines the requirements for road works in the UK. It notes that to allow vehicles to pass road works, a minimum lane width of 3.0m should be provided and a lateral safety clearance (between the works and live traffic) of 0.5m should also be provided.
- 7. It is therefore calculated that to maintain access passed road works (by either, traffic signals, stop-go or give-take arrangements) a minimum operational requirement of 3.5m would be required. This minimal operational requirement (depicted in *Plate 1* below) would be required in addition to the area required for the respective works being undertaken by the Applicants.

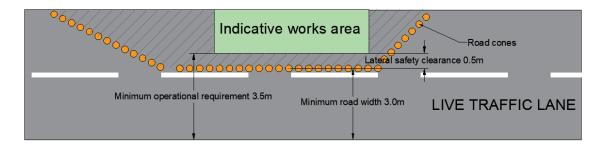


Plate 1: Indicative road works layout, demonstrating minimum operational requirements

8. The following sections therefore include a review of each of the aforementioned activities to understand if the minimum 3.5m operational requirements can be facilitated within the existing highway, and where this is not the case, the arrangements to be followed.

2.2 Construction Access Requirements

9. *Figure 26.2 Access Locations and Associated Onshore Infrastructure* (APP-307) details locations where the Projects would require the construction of new accesses from the public highway.





- 10. To allow the Projects' accesses to be constructed, the appointed Contractor would typically work off the highway within the Order limits. However, there would be periods where construction activities would be undertaken adjacent to, or on the highway to tie-in.
- 11. When these tie-in works are being undertaken, a working area of 2.5m would typically be required to allow vehicles to park on the road and be loaded by excavators. However, where the road width is restricted, vehicles could pull off the highway and park within the order limits. Working from the order limits it is reasoned that the minimum working area could be reduced to 1.5m.
- 12. It can therefore be calculated that to accommodate the new access tie-in works, a minimum road width of 5.0m would be required (i.e. 3.0m active lane, 0.5m lateral safety clearance and 1.5m working area). If a 5.0m highway width is not achievable, alternative accommodation works would be required.
- 13. **Table 2.1** provides a summary of the location and road widths of the accesses.

Table 2.1 Proposed Access Locations and Associated Road Widths

Location	Accesses	Road Width
Sizewell Gap (east)	Access 1	6.1m
Sizewell Gap (west)	Access 2	6.4m
B1353	Accesses 3 and 4	6.0m
B1122	Accesses 5 and 6	6.2m
Sloe lane	Accesses 7 and 8	3.0m
B1069	Accesses 9 and 10	6.1m
Grove Road	Accesses 11 and 12	4.3m
B1121	Access 13	5.8m

- 14. It can be noted from *Table 2.1* that Sloe Lane and Grove Road are less than 5.0m wide. All other roads are therefore wide enough to allow the accesses to be installed without the requirement for alternative works.
- 15. Sloe Lane is a single carriageway, no through road and provides access to two residential properties at its northern extent, and Billeaford Hall self-catering and bed and breakfast accommodation complex to its southern extent. However, the two residential properties are north of the proposed works location and would not be directly impacted by the works. To ensure the residents of, and visitors to Billeaford Hall can gain access whilst the access tie-in works are undertaken, a temporary section of road widening would be installed within the Order limits. This





- would increase the road width from its current width of ~3.0m to a minimum of 5.0m, thereby allowing vehicles to pass.
- 16. Grove Road would also be temporarily widened within the Order limits to achieve a minimum 5.0m road width.

2.3 Onshore Cable Crossings of the Highway

- 17. **Chapter 26 Traffic and Transport** (AP-074) outlines that to allow installation of the onshore cables across the public highway (at the B1353, B1122, Sloe Lane, B1069 and Grove Road), the road would have to be excavated.
- 18. This process would involve the installation of ducts halfway across the road, before swapping to install ducts on the other half of the road, thereby allowing the onshore cables to be pulled through at a later date. To allow the ducts to be installed halfway across the road whilst maintaining the 3.5m operational requirement, the road would need to be at least 7.0m wide.
- 19. It can be noted from *Table 2.1* that none of the roads where cable crossings are proposed are over 7.0m wide, therefore alternative accommodation works would be required.
- 20. **Chapter 26 Traffic and Transport** (APP-074) outlines that accommodation works would include the temporary widening of the road into the adjacent Order limits. For example, the B1353 is approximately 6.0m wide, so the road would need to be widened by at least 1.0m. **Plate 2** details this concept.

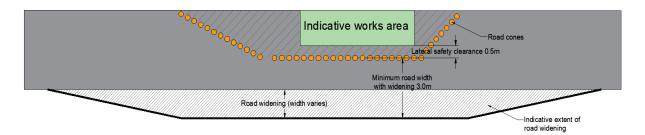


Plate 2: Conceptual temporary widening of road within Order Limits

21. This approach would allow all the roads to remain open whilst the onshore cables are installed.

2.4 Offsite Mitigation Measures

22. The potential for road closures associated with offsite mitigation measures are outlined below.





2.4.1 Footway Improvements

- 23. **Chapter 26 Traffic and Transport** (APP-074) identifies the requirement to provide new footways and crossing points along the B1122 through Theberton and the A1094 through Snape. These works are detailed in **Appendix 26.17** of the ES (APP-543).
- 24. The B1122 and A1094 are 6.3m and 6.2m wide respectively. It can therefore be calculated that the minimum 3.5m operational requirement can be provided whilst allowing at least 2.7m for the works. A width of 2.7m is considered to be sufficient as it would allow space for a heavy goods vehicle (HGV) (~2.5m wide) to be parked and loaded on the highway. Therefore, no alternative measures are required at this location.

2.4.2 A1094 / B1069 Widening

- 25. Chapter 26 Traffic and Transport (APP-074) identifies the requirement for mitigation measures to provide widening at the junction of the A1094 and B1069. These works are detailed in Appendix 26.5 of the ES (APP-531).
- 26. In the vicinity of the junction, the B1069 and A1094 are 6.5m and 6.4m wide respectively. It can therefore be calculated that the minimum operational requirement of 3.5m can be provided with at least 2.9m available to undertake the works. A width of 2.9m is considered to be appropriate to undertake the works as it allows space for a HGV (~2.5m wide) to be parked on the highway. Therefore, no alternative measures are required at this location.

2.4.3 A12 / A1094 Improvements

27. **Chapter 26 Traffic and Transport** (APP-074) identifies the requirement for mitigation measures to provide road safety improvements at the junction of the A12 and A1094 known as Friday Street. The Applicants and SCC are separately discussing the final form of mitigation measures required at this junction.

2.4.4 A12 Marlesford Bridge

- 28. **Chapter 26 Traffic and Transport** (APP-074) outlines that the abnormal indivisible load (AIL) movements associated with the delivery of the Projects' transformers could come from either Felixstowe or Lowestoft ports.
- 29. If AIL movements originate from Felixstowe, Chapter 26 Traffic and Transport (APP-074) identifies the potential requirement for works to strengthen the A12 River Ore crossing. The need to strengthen the crossing would be further investigated once the chosen port is adopted. These investigations would consider if the crossing could accommodate the load or if accommodation works would be required. Should accommodation works be required, the form of works would be agreed with SCC. This would also include discussions regarding the

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form of traffic management that may be required. Substantial works to Marlesford Bridge are not proposed under the Projects' DCOs.

2.5 Church Road Drainage

- 30. The **Works Plans (Onshore)** (and updated version has been submitted at Deadline 3, document reference 2.3.2) identify the potential requirement to undertake works along Church Road in Friston. The works would involve the construction of a surface water discharge connection from the onshore substation along Church Road for approximately 105m.
- 31. Church Road is less than 3.0m wide and as such would not provide sufficient space to accommodate the minimum 3.5m operational requirement and the works. Furthermore, it would not be possible to widen Church Road within the Order limits. Therefore, there would be a requirement for a temporary closure of Church Road for a short period of time.
- 32. The impacted section of Church Road provides access to a number of residential properties, St Mary the Virgin Church and Friston Village Hall. Access to these buildings would be maintained throughout.





3 Speed Limit Changes

- 33. This section of the clarification note provides further clarification on the locations, extent, estimated duration and nature of speed limit reduction measures associated with the Projects. All reductions would be temporary in nature, no permanent speed limit changes are proposed.
- 34. The purpose for temporary reductions in speed limits is for the:
 - Safety of road workers during the construction of the highway works (roadworks); and/or
 - Safe passage of traffic during the construction phase of the Projects.

3.1 Speed Limit Reduction Locations

- 35. For highway safety reasons, reductions in the posted speed limit would be required for offsite highway works (required to mitigate transport impacts) and the Projects' accesses and crossings collectively referred to as 'highway works' (shown in *Figure 1, Appendix 1*).
- 36. The offsite highway works authorised by the *draft DCO* (APP-023) are:
 - Work No. 35 highway alterations to the junctions between the A1094 and the B1121 and the A1094 and the B1069 including widening of the highway and vegetation clearance.
 - Work No. 36 highway alterations to the junction between the A12 and the A1094 including widening of the highway and vegetation clearance.
 - Work No. 37 highway alterations comprising reinforcement of bridge together with temporary construction works area and formation of access from the A12.
- 37. The requirements for speed limit reduction at each of these offsite highway works are outlined below.

3.1.1 Work No. 35

- 38. **Section 26.4.3.1.5** of **Chapter 26 Traffic and Transport** (APP-074) identifies that to accommodate the movement of AlLs associated with the delivery of the transformers, there would be a requirement for temporary widening of the highway and vegetation clearance at the junction of the A1094 and B1069. The extent of these works is shown in **Appendix 26.5** (APP-531).
- 39. In order to construct these offsite highway works, roadworks will need to be implemented to maintain highway safety and to minimise delays to road users.





The roadworks will include a temporary reduction in the posted speed limit on the A1094 and the B1069 from 60mph to 30mph.

3.1.2 Work No. 36

- 40. **Section 26.6.1.10** of **Chapter 26 Traffic and Transport** (APP-074) identifies that the increase in construction traffic through the junction of the A12 and A1094 (cluster 3 shown in **Figure 26.6** (APP-311)) could result in a major adverse impact upon road safety.
- 41. A package of mitigation measures has been developed for this junction for the Projects' overall construction phase. These measures include a proposed temporary reduction in the posted speed limit on the A12 from 50 miles per hour (mph) to 40mph in advance of the junction for the duration of the Projects' construction. **Section 26.6.1.10** of **Chapter 26 Traffic and Transport** (APP-074) identifies that the application of these mitigation measures would results in a reduction in the impact significance to minor adverse.
- 42. In order to construct the offsite highway works required, roadworks will also be implemented to maintain highway safety and to minimise delays to road users. The roadworks will include a temporary reduction in the posted speed limit on the A1094 from 40mph to 30mph and on the A12 from 50mph to 30mph.

3.1.3 Work No. 37

- 43. **Chapter 26 Traffic and Transport** (APP-074) outlines two potential ports for the import of the transformers for the Projects: Lowestoft and Felixstowe. Should the transformers come from Felixstowe, the AIL would need to pass over the Marlesford Bridge of the A12 on route to the onshore substation site.
- 44. The scope and scale of structural alterations that may be required to this bridge have not been determined at this stage as the final port and transformer size has not been defined. If the A12 south is identified as the preferred AIL haul route, there are a broad range of interventions available ranging from temporary load bearing solutions to, at the top end of the scale, bridge alterations. These will be determined pre-construction and the necessary technical approvals will be acquired from SCC.
- 45. In order to deliver the interventions, it is likely that there would be a requirement for roadworks to maintain highway safety and to minimise delays to road users. The roadworks may also include a requirement for a temporary reduction in the posted speed limit on the A12 from 40mph to 30mph or even 20mph.

3.1.4 Accesses and Crossings

46. The accesses provide for access and egress to and from the existing public highway, whilst crossings would only permit construction traffic to cross from one

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- side of the existing public highway to the other. No construction access or egress would be permitted from the crossing points.
- 47. The *Outline Access Management Plan* (OAMP) (an updated version has been submitted at deadline 3, document reference 8.10) sets out that the general guiding principle for the access design is to keep engineering works to a minimum to reduce the environmental impact of the Projects and ensure timely reinstatement to baseline conditions. This approach has entailed minimising vegetation that needs to be removed to provide forward visibility (known as the visibility splay) of oncoming vehicles for drivers egressing at accesses and crossings.
- 48. Where visibility splays are limited, the OAMP introduces temporally reduced speed limits. Where full visibility splays can be achieved, a precautionary approach of reducing speed limits to manage the potential for adverse road safety impacts has been adopted.
- 49. Sketches and details of the proposed temporary speed limit reductions at accesses and crossings are provided in *Appendix 26.18* (APP-544) and reproduced in *Table 3.1* and *Appendix 2* of this note.



Table 3.1 Proposed Speed Reduction Locations at Accesses and Crossings Access Sketch Location **Proposed Speed Reduction** Landfall and Access 1 Visibility splays in accordance with the existing TP-PB4842-DR001 onshore cable measured speeds can be provided, however, a 8 (Sizewell route section 1 precautionary temporary reduction in speed limit from Gap) 60 to 40mph is proposed. (Drawing 001 in Appendix 2). ACCESS 1 1 VISIBILITY DETAILS SCALE - 1:2000 Access 2 Onshore cable The visibility splay to the east is less than required for a design speed of 100kph (62.5mph). It is therefore (Sizewell route section 2 ℰ proposed to temporarily reduce the speed limit from 60 Gap) 40 STATE OF STA to 40mph. (Drawing 003 in Appendix 2). VISIBILITY DETAILS 8ÇALE - 12000 Accesses 3 Onshore cable Due to the anticipated construction traffic movements TP-PB4842-DR007 and 4 (B1353) route section 2 and the volume of background traffic, it is proposed that **(2)** 40 A End construction vehicles would cross the public highway (crossing) Part time signals under traffic signal control. Visibility to the proposed traffic signal heads cannot be provided for a design speed of 100kph (62.5mph). It is therefore proposed to ACCESS 3 temporarily reduce the speed limit from 60 to 40mph. (Drawing 007 in Appendix 2). 40 T SHE WAY TO SEE

VISIBILITY DETAILS



Location	Access	Proposed Speed Reduction	Sketch
Accesses 5 and 6 (B1122)	Onshore cable route section 3B	The visibility splays for both accesses are less than required for a design speed of 70kph (43.8mph). It is therefore proposed to temporarily reduce the speed limit from 40 to 30mph. (Drawing 008 in Appendix 2).	TIPPB4842-DR008 WORKS ACCESS OUT TO SERVICE SERVICE ACCESS 6 VISIBILITY DETAILS SOLAT-1-2500
Accesses 7 and 8 (Sloe Lane) (crossing)	Onshore cable route section 3A	The crossing points at Sloe Lane are located at sections of the highway where existing traffic flows and speeds are low. It is proposed therefore that construction vehicles would give-way to traffic on the public highway and cross in gaps in traffic when safe to do so. Visibility splays for both crossings are less than required for a design speed of 100kph (62.5mph). It is therefore proposed to temporarily reduce the speed limit from 60 to 30mph and trim/ cut back existing vegetation to ensure a visibility splays can be achieved in both directions. (Drawing 027 in Appendix 2).	TPPBA942-ORDIT TOTAL STATE OF THE STATE OF
Access 9 and 10 (Snape Road)	Onshore cable route section 3A	Visibility splays are less than required for a design speed of 70kph (43.8mph). It is therefore proposed to temporarily extend the existing 40mph speed limit further south along the B1069 to reduce the speed of vehicles on the approach to access 9. In addition, existing vegetation will be removed/ cut back to ensure a visibility splays can be achieved in both directions. (Drawing 011 in Appendix 2).	TP-Pe4842-DR011 ACCESS 10 ACCESS 9 ACCESS 9 ACCESS 9 ACCESS 9 ACCESS 9 ACCESS 9



Location	Access	Proposed Speed Reduction	Sketch
Access 11 and 12 (Grove Road) (crossing)	Onshore cable route section 4, onshore substations and National Grid Substation	The crossing point at Grove Road is located at a section of the highway where existing traffic flows and speeds are low. It is proposed therefore that construction vehicles would give-way to traffic on the public highway and cross in gaps in traffic when safe to do so. Visibility splays for both crossings are less than required for a design speed of 100kph (62.5mph). It is therefore proposed that existing vegetation will be removed/ cut and to temporarily reduce the speed limit from 60 to 30mph to ensure a visibility splays can be achieved in both directions. (Drawing 014 in Appendix 2).	ACCESS 11 ACCESS 12 ACCESS 11 ACCESS 11 ACCESS 11 ACCESS 11 ACCESS 11 ACCESS 11
Access 13 (B1121 Saxmundham Road)	Access 13 would provide a permanent access to the onshore substations and National Grid substation following completion of construction. During construction, the access would only be used by National Grid employees and for the delivery of the Projects transformers.	Visibility splays in accordance with the existing measured speeds can be provided, however, a temporary reduction in the speed limit from 60 to 40mph is proposed as a safety measure. (Drawing 020 in Appendix 2).	TRAPAGES TO THE TALLS WASHINGTON THE TALLS

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- 50. In order to implement the accesses and crossings, the roadworks must maintain highway safety and minimise delays to road users. The roadworks will incorporate a temporary reduction in the posted speed limit.
- 51. It would be proposed that the extent of the proposed speed limit changes for the roadworks would mirror those detailed in *Table 3.1*. In the case of accesses 1, 2, 3, 4, 9, 10 and 13 speed limits would be restricted to a maximum of 30mph for the roadworks, reverting to 40mph for the duration of the Projects' construction phase.

3.2 Speed Limit Durations

52. **Table 3.2** provides a summary of the proposed change in speed limit for all highway works and the approximate durations.

Table 3.2 Proposed Speed Limit Changes and Durations

Location		Construction of the Highways Works		Projects Construction Phase	
		Proposed speed limit change	Approximate Duration	Proposed speed limit change	Approximate Duration
Offsite Highway Works	Works No. 35 (A1094/ B1069 junction)	60 to 30mph	Approx. 2 weeks	n/a	n/a
	Works No. 36 (A12/ A1094 Friday Street)	A12: 50 to 30mph A1094: 40 to 30mph	Up to 26 weeks	A12: 50 to 40mph A1094: no change	Duration of construction for this Stage of the works. Approx. 48 months
	Works No. 37 (A12 Marlesford Bride)	40 to 30 or 20mph	To be confirmed depending upon scope of works required at Marlesford Bridge	n/a	n/a
Accesses and crossings	Access 1 and 2 (Sizewell Gap)	60 to 30mph	Approx. 4 weeks	60 to 40mph	For defined phases during construction
	Accesses 3 and 4 (B1353) (crossing)	60 to 30mph		60 to 40mph	and reinstatement period which spans







Location		Construction of the Highways Works		Projects Construction Phase	
		Proposed speed limit change	Approximate Duration	Proposed speed limit change	Approximate Duration
	Accesses 5 and 6 (B1122)	40 to 30mph		40 to 30mph	approximately 48 months.
	Accesses 7 and 8 (Sloe Lane) (crossing)	60 to 30mph		60 to 30mph	
	Access 9 and 10 (Snape Road)	60 to 30mph		60 to 40mph	
	Access 11 and 12 (Grove Road) (crossing)	60 to 30mph		60 to 30mph	
	Access 13 (Saxmundham Road)	60 to 30mph		60 to 40mph	





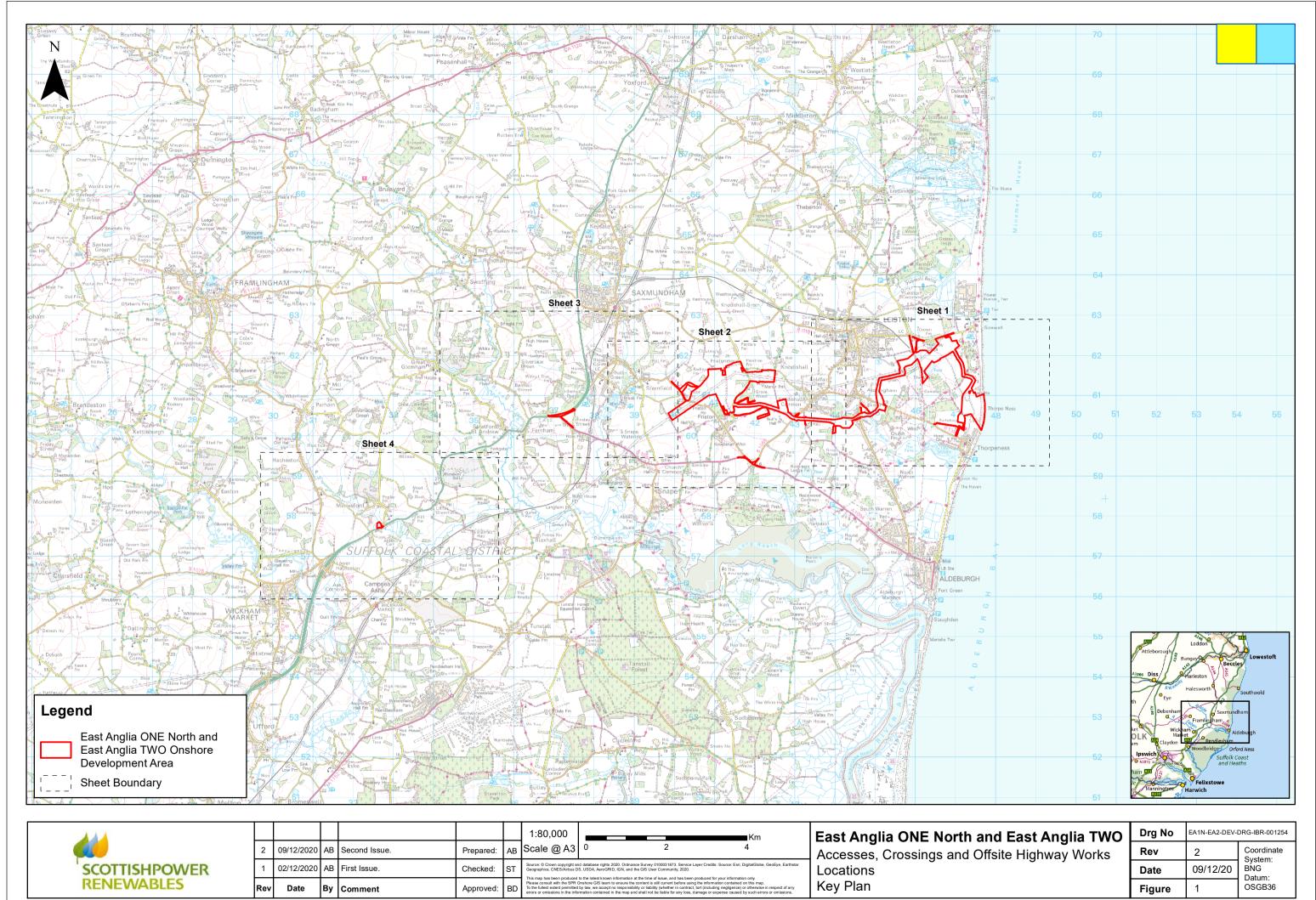
4 References

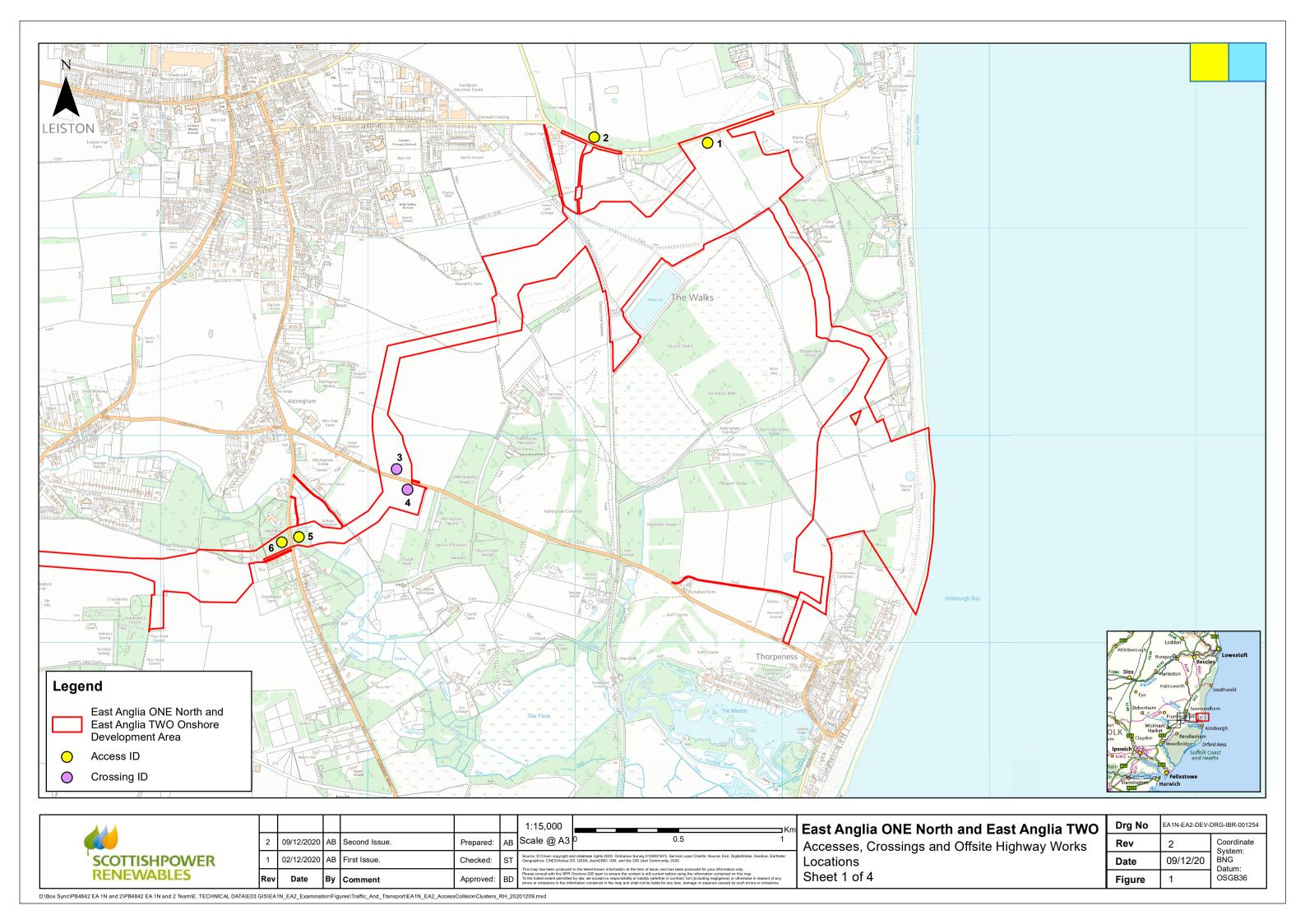
Department for Transport (2009). Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations.

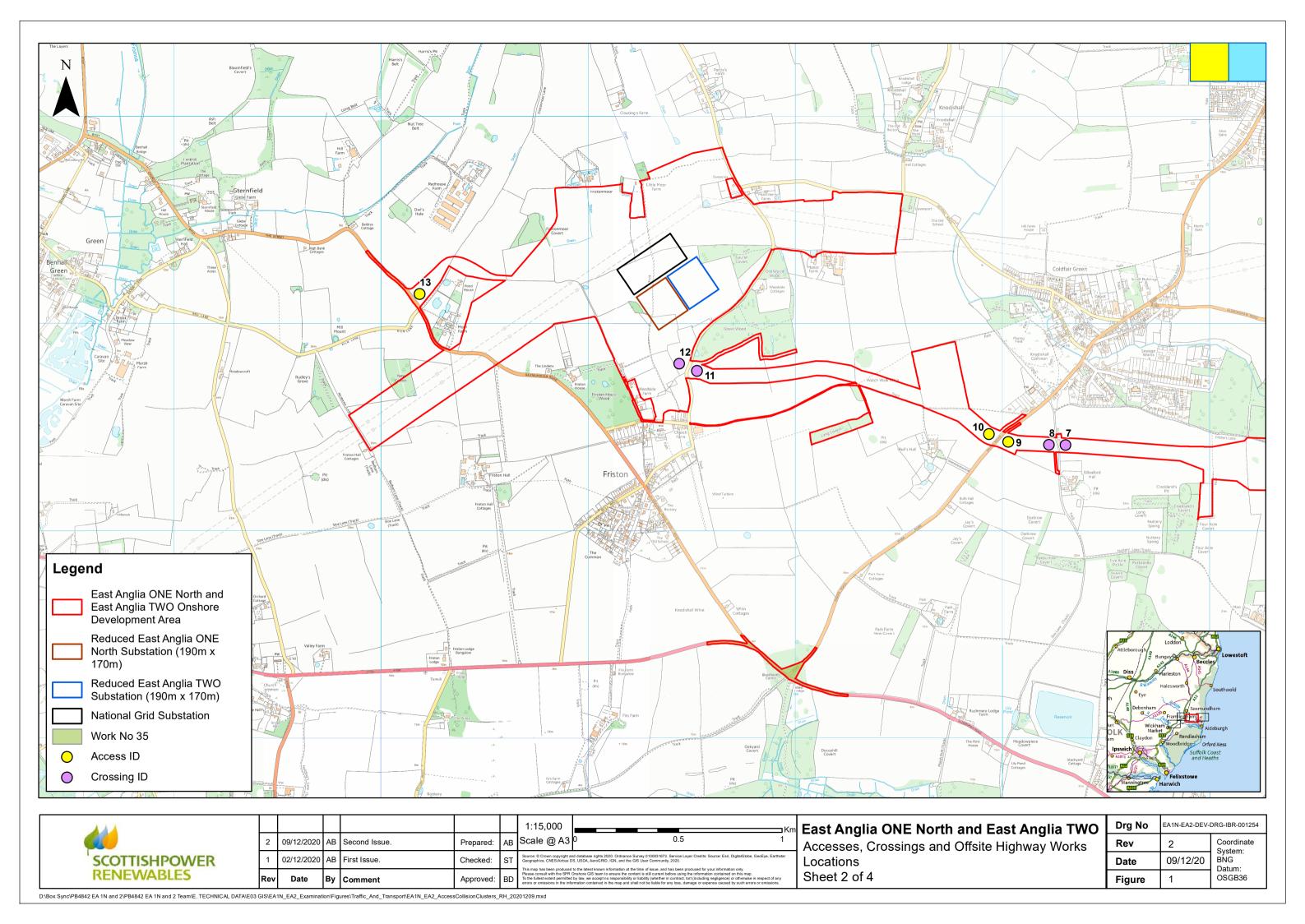


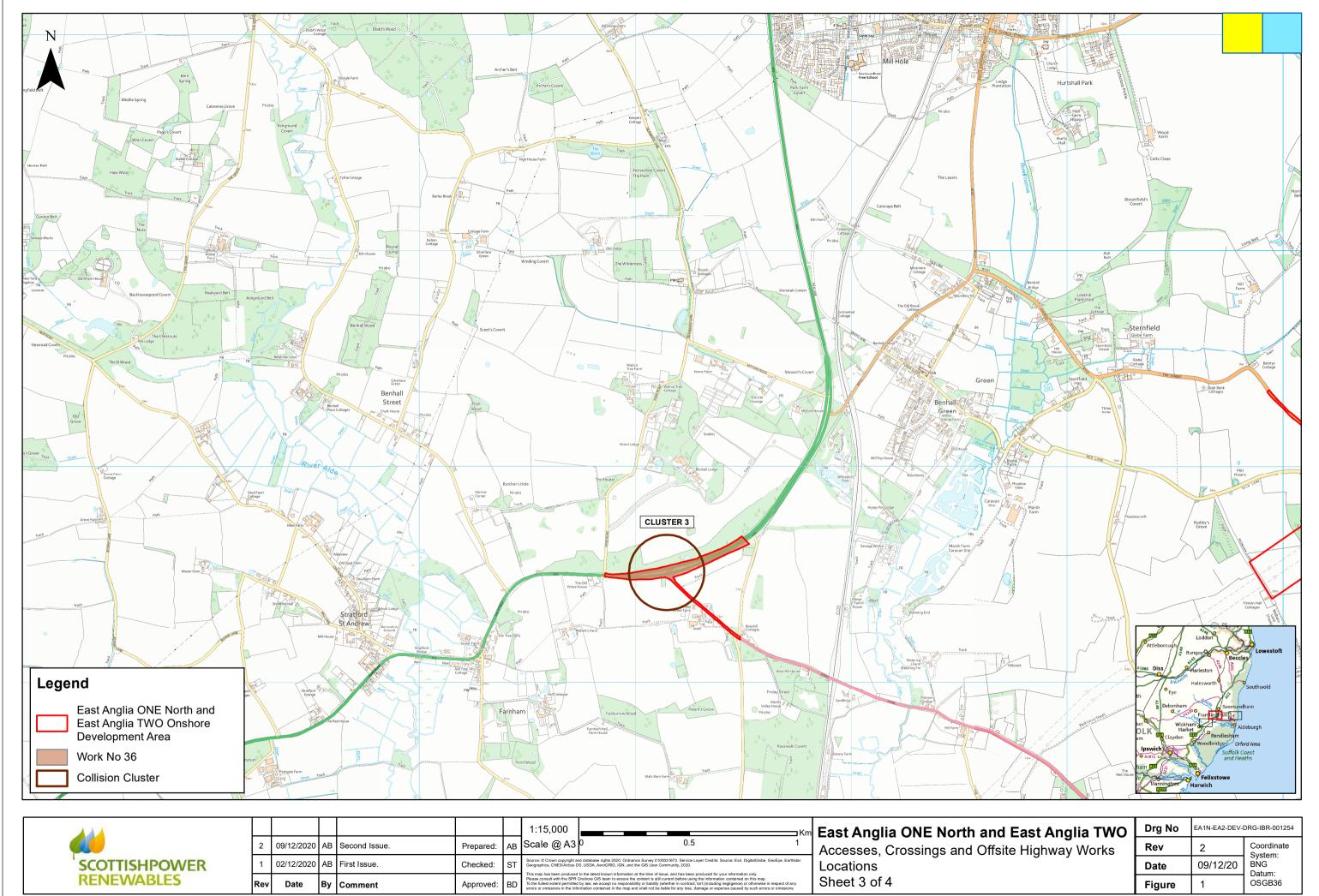


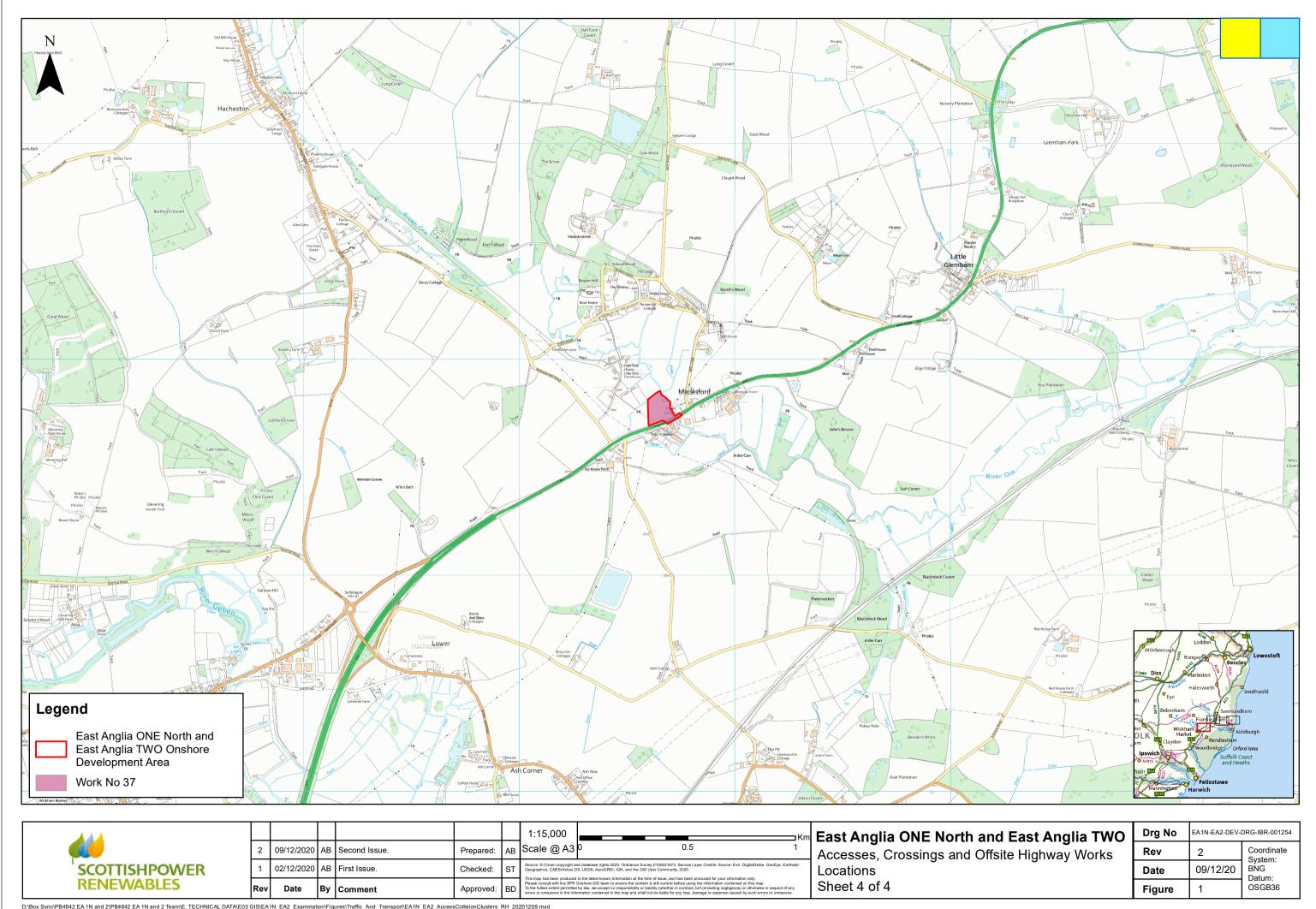
Appendix 1: Highway Works Locations















Appendix 2: Proposed Preliminary Access Concepts

