East Anglia ONE North and East Anglia TWO Offshore Windfarms

Traffic and Transport Deadline 1 Clarification Note

Applicants: East Anglia ONE North Limited and East Anglia TWO Limited
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Author: Royal HaskoningDHV

Applicable to East Anglia ONE North and East Anglia TWO

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Glossary of Acronyms

AIL	Abnormal Indivisible Load
CIA	Cumulative Impact Assessment
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
EIA	Envrionmental Impact Assessment
ES	Environmental Statement
ESC	East Suffolk Council
ETG	Expert Topic Group
GEART	Guidelines for the Environmental Assessment of Road Traffic
HGV	Heavy Goods Vehcile
SCC	Suffolk County Council
SoCG	Statement of Common Ground
TEMPro	Trip End Model Presentation Program

Glossary of Terminology

Applicants	East Anglia TWO Limited / East Anglia ONE North Limited
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.
Jointing bay	Underground structures constructed at intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
National Grid infrastructure	A National Grid substation, cable sealing end compounds, cable sealing end (with circuit breaker) compound, underground cabling and National Grid overhead line realignment works to facilitate connection to the national electricity grid, all of which will be consented as part of the proposed East Anglia TWO / East Anglia ONE North project Development Consent Order but will be National Grid owned assets.
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

1. 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:

- The general approach to onshore decommissioning with regard to traffic demand and assignment;
- Use of the Guidelines for the Environmental Assessment of Road Traffic (GEART) (Institute of Environmental Assessment, 1993) within the Applications;
- The potential impact of a start date for the Projects which is later than that assessed within the ES;
- The approach to the assessment of Abnormal Indivisible Loads (AIL) movements presented within ES (APP-074); and

- An outline of the number of deliveries that would be classified as AILs, but would not require a Special Order[1].

[1] The Road Vehicles (Authorisation of Special Types) (General) Order 2003 limits gross weight of an AIL to 150 tonnes, axle weight to 16,500kg, length to 30m and width to 6.1m, above which a Special Order is required from Highways England.

2 Approach to Decommissioning

5. Through the SoCG process, the Councils have requested further detail on the general approach to decommissioning of the onshore infrastructure with regard to traffic demand and assignment.

6. ***Chapter 6 Project Description*** of the ES (APP-054) sets out the proposed methodology for decommissioning of the onshore infrastructure. The year in which decommissioning would commence is currently unknown. However, it is considered likely that sufficient time would have passed since submission of the Applications for changes to the baseline environment, industry best practice, legislation, and/or planning policy to have occurred. As such, it is proposed that an Onshore Decommissioning Plan be prepared. This plan is secured by Requirement 30 of the ***draft DCO*** (APP-023) and would be submitted to and approved by the relevant planning authority within six months following the permanent cessation of commercial operation of the transmission works. The Onshore Decommissioning Plan will include detailed decommissioning methodology which reflects relevant legislation and guidance in place at the time and must be implemented as approved.

7. For the purposes of the Applications, it is anticipated that underground infrastructure (i.e. landfall works, onshore cables and jointing bays) would be decommissioned (de-energised) and either left in-situ or removed depending on the requirements of the Onshore Decommissioning Plan. It is likely that above ground equipment at the onshore substation would be safely disconnected from the transmission system, carefully dismantled and the components removed from site to be reused elsewhere or recycled. The land would then be reinstated to an appropriate end use. Regarding the National Grid infrastructure, should it be determined that some or all the equipment is no longer required, this would also be decommissioned in a similar fashion to the onshore substation equipment, as provided for in Requirement 30 of the ***draft DCO*** (APP-023).

8. It is envisaged that the methods and equipment used for decommissioning would be similar to those outlined for construction, but that works are likely to be smaller in scale, particularly if underground infrastructure remains in-situ and substation equipment is dismantled so as to be smaller in size than when delivered to site. As a worst case scenario, ***Chapter 26 Traffic and Transport*** (APP-074) therefore assumes that the traffic movements generated by decommissioning the Projects onshore, and therefore the associated impacts will be no greater than those identified for their construction. AIL routes for decommissioning would be agreed with Highways England and SCC and be subject to the same assessment as the Projects' construction phase (***Appendix 26.3*** of the ES (APP-529)), as well as to similar provisions and would therefore represent a negligible impact.

3 Application of the GEART

9. At a SoCG meeting (29th September 2020) the Councils queried (as a general point and not specific to the Applications) the rigid application of the GEART magnitude thresholds for amenity and severance. It is noted that the GEART indicates that thresholds should be used cautiously as approximations and that assessments should pay full regard to local conditions. To address the Councils' queries, the Applicants have clarified below how the GEART has been applied in the Applications.

10. Paragraph 5.13.3 of the Overarching National Policy Statement for Energy (EN-1) states that:

"the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor".

11. In the context of EN-1, the requirement is for a transport assessment compliant with Department for Transport's (DfT) Guidance on Transport Assessment (2007) to supplement an ES. This guidance (withdrawn in 2014, but superseded by Planning Practice Guidance (its successor)) focusses on the impacts of development traffic on the operation of the transport network (e.g. capacity and delay); it does not provide advice on how to undertake a transport assessment that is fully compliant with the Environmental Impact Assessment (EIA) Regulations. Therefore, the DfT guidance and its successor, along with the Design Manual for Roads and Bridges (DMRB) (Highways England, 1993), can serve to provide input data for a transport assessment, but only in support of the GEART, which remains the current guidance for producing a transport assessment that is compliant with the EIA Regulations.

3.1 Link Sensitivity

12. ***Chapter 26 Traffic and Transport*** (APP074) includes detail on how sensitive receptors for amenity and severance effects have been derived and how these have been applied to the onshore highway study area. The assigned level of sensitivity for each of the links within the onshore highway study area is depicted on ***Figure 26.5*** of the ES (APP-310). This shows that all key settlements located across the onshore highways study area are assigned the highest degree of sensitivity.

13. The methodology for deriving sensitive receptors and the assigned sensitivity was shared with the Councils through the Expert Topic Group (ETG) process. At an ETG meeting (13th May 2019) the Councils provided feedback on the Preliminary Environmental Information Report and advised that the sensitivity of

Lovers Lane should be increased. The final sensitivity of Lovers Lane was therefore raised to 'medium' for the ES.

14. The assessment matrix adopted within the ***Table 26.11*** of the ES (APP-074) ensures where receptors of high sensitivity are identified, only a 'negligible' magnitude of effect would result in an impact that is not significant (i.e. a 'low' magnitude of effect upwards would lead to significant adverse impacts requiring mitigation).

15. It is therefore reasoned that there is an inherent robustness in the Applications' impact assessment significance matrix that ensures a wide banding of adverse significance which is not skewed by minor percentile changes.

3.2 GEART Thresholds

16. The salient guidance for the assessing the impact of changes in traffic flow upon amenity and severance is provided within the GEART. In addition to the GEART, Volume 11, Section 3 Part 8 of the DMRB (now withdrawn) provides guidance definitions to both the direct effects of a new road scheme, and to effects caused by increases in traffic levels on existing roads.

17. The severance definitions from the DMRB have been considered alongside the GEART thresholds to inform a judgement regarding the magnitude of effect.

3.2.1 Amenity

18. The GEART suggests a tentative threshold for judging the significance of impacts from changes in pedestrian amenity, is where the total traffic flow or the heavy goods vehicle (HGV) component is halved or doubled. ***Chapter 26 Traffic and Transport*** (APP 074) evidences that this threshold has not been rigidly applied as both links 4 and 6 experience an increase in HGV traffic of 59% and 49% respectively, yet as the receptors are of high sensitivity, significant impacts are identified and mitigation measures proposed.

3.2.2 Severance

19. Regarding severance, the GEART suggests that changes in total traffic flow of 30%, 60% and 90% are considered to be 'slight', 'moderate' and 'substantial' respectively. However, the GEART notes that these figures should be used cautiously, and an assessment should pay full regard to specific local conditions.

20. The DMRB guidance provides example definitions of where severance could be experienced and notes that for pedestrians crossing at grade (i.e. on the same level), Annual Average Daily Traffic (AADT) flows of 8,000 or less, 8,000 to 16,000 and 16,000 plus can be considered 'slight', 'moderate' and 'severe' respectively.

21. In addition, the DMRB guidance notes that:

"Given that relief of severance is not significant where traffic flows are already relatively low, the guidelines do not apply to roads with an existing AADT flow of less than 8,000 vehicles".

22. It can be noted from ***Chapter 26 Traffic and Transport*** (APP 074) that the impacts upon links 4, 9, 11 and 12 are assessed as being negligible as total flows are notably less than 8,000 vehicles AADT and changes in total traffic flows are also notably less than 30%. Regarding those links with traffic flows above 8,000 vehicles ADDT, it can be noted from ***Chapter 26 Traffic and Transport*** (APP 074) that the change in total traffic flows is much less than 30%, a maximum of 17% being derived for any discrete link.

3.3 Conclusion

23. It is concluded that the GEART thresholds have not been rigidly applied and (in keeping with the guidelines) have been used proportionately as approximations, augmented by a comprehensive study of local environmental conditions to determine impact significance.

4 Impact of a Later Construction Start Date

24. Construction of the Projects could commence any time during a window of time between 2023 and 2028. During pre-application engagement for the Projects, it was agreed with SCC that the assessment (***Chapter 26 Traffic and Transport*** (APP-074)) would consider the impact of the additional construction traffic against the likely earliest construction year of 2023. The rationale for this approach was that forecast background traffic flows for 2023 would be lower than later years in proportion to construction traffic and therefore, the potential for the greatest magnitude of effect (and ultimately adverse impact) would occur at this early stage. However, following submission of the Applications, SCC has requested that the impact of a later start date be considered. The purpose of this section of the clarification note is to provide an appraisal of the potential impacts of a later start.

4.1 Evaluation

25. ***Chapter 26 Traffic and Transport*** (APP-074) considered the impact of construction traffic upon receptors within the onshore highway study area for the following effects:

- Amenity;
- Severance;
- Road Safety; and
- Driver Delay.

26. ***Table 4.1*** sets out the magnitude of effect framework adopted for ***Chapter 26 Traffic and Transport*** (APP-074). For the effects of severance, amenity and road safety, the assessment of magnitude has been informed by considering the potential change in total traffic and HG) component influenced by the Projects' traffic demand, compared to the forecast background traffic levels in 2023.

27. For the effect of driver delay (capacity), the assessment is informed by the totality of traffic (Baseline + Projects' demand) and is therefore potentially more sensitive to a later construction start (and associated increase in baseline traffic).

Table 4.1 Traffic and Transport Assessment Framework

Effect	Magnitude of Effect			
	Negligible	Low	Medium	High
Pedestrian and cycle amenity*	Change in traffic flows (or HGV component) less than 100%.		Greater than 100% increase in traffic (or HGV component) and a review based upon the quantum of vehicles, vehicle speed and pedestrian footfall.	
Severance	Changes in total traffic flows of less than 30%.	Changes in total traffic flows of 30 to 60%.	Changes in total traffic flows of 60 to 90%.	Changes in total traffic flows of over 90%.
Road Safety	Informed by a review of existing collision patterns and rates based upon the existing personal injury collision records and the forecast increase in traffic.			
Driver delay (capacity)	Informed by projected traffic increases through sensitive junctions within the onshore highway study area and further detailed junction modelling analysis as required.			
Driver delay (highway geometry)	Informed by swept path analysis at critical locations.			

28. It is implicit that for the effects of severance, amenity and road safety, that a later start date of 2028 would result in a lower overall magnitude of effect than 2023 as background traffic flows would be forecast to be higher. Driver delay (geometry) is related to the physical form of the highway environment and is not influenced by background vehicle growth. For these effects the overall impacts of a later start date would be no greater than assessed within the ES.

29. Regarding the effect of driver delay (capacity), a later start date would result in a higher totality of traffic flows and therefore potentially a higher magnitude of effect.

30. For the derivation of background flows for ***Chapter 26 Traffic and Transport*** (APP-074), it was agreed with SCC that WSP (consultants to SCC) would provide future year growth factors derived from the national Trip End Model Presentation Program (known as TEMPro). Applying these factors (ES ***Appendix 26.10*** (APP-536)) for a weekday evening peak for a 'rural principal road' the following traffic increases have been calculated:

- 1.0588 between 2019 and 2023; and
- 1.1212 between 2019 and 2028.

31. It can be interpolated from the traffic increases that between 2023 and 2028 traffic would be expected to have grown by a factor of 1.0624 (6.24%).

32. ***Chapter 26 Traffic and Transport*** (APP-074) utilised the GEART as the principal guidance for traffic impact. This guidance notes:

"It is generally accepted that accuracies greater than 10% are not achievable. It should also be noted that the day to day variation of traffic on a road is frequently at least some + or -10%. At a basic level, it should therefore be assumed that projected changes in traffic of less than 10% create no discernible environmental impact".

33. The day to day variations referred to by the GEART are evident within the background daily traffic flows recorded for the ***Chapter 26 Traffic and Transport*** (APP-074). ***Table 4.2*** reproduces this data. It can be noted from the data recorded on the A12 (near Stratford St Andrew) and the A1094, that peak weekday traffic flows are approximately 19% and 12% higher than the average weekday traffic flows respectively.

Table 4.2 Fluctuations in Background Traffic

Location	A12	A1094
Peak daily, weekday traffic flows.	13,710	8,605
Average daily, weekday traffic flows.	11,515	7,694
Difference between peak and average weekday traffic flows.	2,195	911
Percentage difference between average and peak weekday traffic flows.	19.1%	11.8%
Notes – data sourced from ***Appendix 26.7*** of the ES (APP - 533)		

4.2 Summary

34. In summary, the forecast increase in background traffic resultant from a later 2028 construction start date of 6.24%, is indiscernible from day to day traffic fluctuations and therefore would represent a negligible change to the assessed impacts for driver delay (capacity).

35. It is therefore concluded that background traffic increases resultant from a later construction start date of 2028 would have a negligible impact on all traffic and transport effects assessed in ***Chapter 26 Traffic and Transport*** (APP-074) and therefore a 2023 reference year is a valid basis for the impact assessments.

5 Abnormal Indivisible Load Routes

36. This section provides clarity on the approach to the assessment of AIL movements presented within ***Chapter 26 Traffic and Transport*** (APP-074). Specifically, the Councils note that AIL movements may be required during operation or decommissioning, and that there may be benefit in the permanent widening of the A1094 / B1069 junction.

37. This section considers the above by addressing:

- The Projects' construction AIL demand;
- The process for the approval of AIL routes;
- A review of future AIL demand for the Projects; and
- A review of future AIL demand for other Projects.

5.1 Background

5.1.1 The Projects' AIL Demand and Routing

38. Construction of the onshore substations would require the delivery of up to two transformers per project (a total of up to four transformers), each of which would be classified as an AIL delivery.

39. ***Chapter 26 Traffic and Transport*** (APP-074) was supported by an AIL study (***Appendix 26.3*** (APP-529)) which considered the impacts of moving the transformers from the nearest available ports to the onshore substation location by road. The AIL study (APP-529) identified that the transformers could travel from either Felixstowe or Lowestoft ports, travelling via the A12. Figures showing these routes are presented within ***Appendix A***.

40. Through ETG meetings, both Highways England and SCC advised that the preferred route should be from Lowestoft (to the north of the onshore substation location), the rationale being that this route is shorter and avoids a tight bend on the A12 at the village of Farnham (known locally as 'Farnham Bends'). The route is also designated as a Heavy Load Route as far as Lover's Lane (***Section 5.1.2*** provides further details on this designation).

41. Government policy (Highways England, undated) dictates that the closest available port of access should be used for the delivery of AILs. At the time the Applications were made, there was uncertainty regarding the long-term availability of an abnormal load facility at Belvedere Yard in Lowestoft. As such, the option for vehicles to travel via Felixstowe was also considered in the AIL study (AP-529) given Felixstowe could be the closest available port of access at the time of construction. This included further assessment that demonstrated that

the transformer loads can safely traverse through Farnham Bends (***Appendix 26.6*** of the ES (APP-532)).

42. Analysis of both routes identified the requirement for the temporary removal of some street furniture (signs, railing etc.), widening of the junction of the A1094 / B1069 and (for AIL deliveries originating from Felixstowe) potential strengthening of the A12 River Ore crossing near Marlesford.

5.1.2 Process for Approval of AIL Routes

43. In 1972 the Department of the Environment issued Circular 61/72, which remains current. The Circular establishes a series of 'heavy-load' routes capable of carrying gross loads of up to 400 tons, including a route from Lowestoft to the Sizewell B nuclear power station. This route is now classified by Highways England as Heavy Route 100 (HR100) and includes the A12, B1122 and Lover's Lane / Sizewell Gap between Lowestoft and the Sizewell B nuclear power station. The route is identified by Highways England as being suitable for carrying abnormal loads and is assigned to weight group D, equivalent to a trailer weight of approximately 264 tonnes across 12 axels or approximately 299 tonnes across 14 axels.

44. Circular 61/72 outlines that it is essential that heavy load routes should not be compromised by any new highway schemes and provides a mechanism for highway authorities to request funding for additional requirements that may be needed to maintain them. Regarding improvements and extensions of the AIL grid routes (grids), Circular 61/72 notes that if experience shows that the grids can be improved on or extended to cater for frequent abnormal load movements in their area, highway authorities are requested to advise the Regional Controller (now Highways England) of the changes or additions they may wish to make. The Circular concludes that it is confidently expected that highway authorities will co-operate in keeping the grids open and in advising the Department of the Environment (now part of the Department for Transport duties) of possible alterations.

45. The Applicants have discussed the process to extend the current grid network with Highways England, who advised that it is not currently minded to include additional routes to the highway and heavy load grid map.

5.2 Future AIL Demand

5.2.1 Operational AIL Demand of the Projects

46. The transformers within the onshore substation are reliable items of equipment which undergo a thorough quality assurance, factory inspection and testing regime during construction, and are not anticipated to require replacement during the lifetime of the onshore substations. Any replacement would be due to an

unplanned failure / emergency only and would be a rare event. Routine maintenance would not require the replacement or removal of the transformers.

47. It is therefore reasonably expected that once the transformers are installed, there would be no requirement for AIL movements during operation the Projects and therefore impacts are assessed as negligible.

5.2.2 Decommissioning AIL Demand of the Projects

48. As noted in ***Section 2***, for the purposes of the Applications it is likely that above ground equipment at the onshore substation would be safely disconnected from the transmission system, carefully dismantled and the components removed from site to be reused elsewhere or recycled. The transformers may be removed as AILs or reduced into smaller components and removed. The land would then be reinstated to an appropriate end use. Regarding the National Grid infrastructure, should it be determined that some or all the equipment is no longer required, this would also be decommissioned in a similar fashion to the onshore substation equipment.

49. It is envisaged that the methods and equipment used for decommissioning would be similar to those outlined for construction, but that works are likely to be smaller in scale, particularly if underground infrastructure remains in-situ. As a worst case, ***Chapter 26 Traffic and Transport*** (APP-074) therefore assumes that the impacts of decommissioning the Projects onshore infrastructure will be no greater than those identified for its construction.

50. It is therefore considered that decommissioning of the Projects could generate up to a maximum of four AIL movements. Any AIL routes for decommissioning would be agreed with Highways England and SCC and would be subject to the same assessment as the Projects' construction phase (***Appendix 26.3*** (APP-529)), and subject to similar provisions would represent a negligible impact.

5.2.3 Other Projects' AIL Demands

51. It is noted that the Councils have raised the following comment in their ***Additional Submission*** (AS-058), which notes:

"The Councils understand that National Grid Electricity System Operator (NG-ESO) has offered grid connections to a number of projects which are anticipated in the future (namely the Nautilus Interconnector; the Eurolink Interconnector and the Galloper Extension (now known as the Five Estuaries)) and that a further connection offer is also likely to be made to the Greater Gabbard Extension".

52. The approach used by the Applicants for the cumulative impact assessment (CIA) presented in ***Chapter 26 Traffic and Transport*** (APP-074) follows Planning Inspectorate Advice Note 17. Where it is helpful to do so, 'Tiers' have been defined regarding the development stratus of these projects, as well as the

availability of information to be used within the CIA. The three tier system proposed in Planning Inspectorate Advice Note 17 is summarised in the following:

- Tier 1 – Projects under construction, permitted or submitted applications;
- Tier 2 – Projects on the Planning Inspectorate's Programme of Projects where a scoping report has been submitted; and
- Tier 3 – Projects on the Planning Inspectorate's Programme of Projects where a scoping report has not been submitted; projects identified in the relevant Development Plan (and emerging Development Plans); and projects identified in other plans and programmes (as appropriate) which set out the framework for future development consent.

53. Further to the above tiers, discussions were held with the Councils during pre-application ETG meetings to determine which topic specific cumulative projects should be assessed. Regarding Traffic and Transport, the following projects were agreed and included within the CIA (APP-074 refers):

- Sizewell B relocation;
- Sizewell C; and
- The Energy Gateway.

54. Following the guidance in Advice Note 17, the below projects were not considered in the CIA because at the time of the Applications there was inadequate detail upon which to base any meaningful assessment (with no information on, for example, project design and timescales):

- Nautilus;
- EuroLink;
- Greater Gabbard Offshore Windfarm Extension; and
- Galloper Offshore Windfarm Extension.

55. Each of these projects is nationally significant and therefore will require its own EIA and as part of that will need to undertake a CIA. Each project will have to consider the Projects in their respective applications as they progress through the planning process.

56. The mitigation proposed by the Applicants to accommodate AILs (A1094 / B1069 widening and potential strengthening of the A12 River Ore crossing) relate to the works required only for the Projects. Subsequent projects of any nature that come

forward and require modifications at these locations must secure their own consent for undertaking any such works. The Applicants would explore synergies with any such project, such as the Sizewell C New Nuclear Power Station, to facilitate a co-ordinated approach to undertaking such works insofar as the respective development consents allow.

57. It is not however for the Applicants to secure AIL routes for the benefit of any other potential project.

6 Non-Special Order Abnormal Indivisible Loads

58. Through the SoCG process, SCC has requested clarification on the number of non-Special Order AIL movements that the Projects may require. This section presents a disaggregation of the number of non-Special Order AILs included in the Applications.

6.1 Methodology

59. ***Chapter 26 Traffic and Transport*** (APP-074) assessed two separate construction scenarios for the Projects:

- Scenario 1 – the proposed East Anglia TWO project and proposed East Anglia ONE North project are built simultaneously; and
- Scenario 2 – the proposed East Anglia TWO project and the proposed East Anglia ONE North project are built sequentially.

60. ***Appendix 26.13*** (APP-539) details the forecast HGV demand per month that could be expected for construction scenario 2. ***Appendix 26.22*** (APP-548) includes the derivation forecast HGV demand per month that could be expected for construction scenario 1. These appendices have been interrogated to extract those items of plant and material deliveries that would exceed the following parameters and therefore be classified as a non-Special Order AIL:

- A weight of more than 44,000kg, but less than 150,000kg;
- An axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle, but less than 16,500kg in weight per axle;
- A width of more than 2.9m, but less than 6.1m; or
- A rigid length of more than 18.65m but less than 30m.

6.2 Summary

61. ***Table 6.1*** provides a disaggregation of the items of plant and material deliveries listed within ***Appendix 26.13*** (APP-539) and ***Appendix 26.22*** (APP-548) that are envisaged to be categorised as a non-Special Order AILs. In addition, pertinent details of the typical load specification are provided. Transport of non-Special Order AILs (especially construction plant) is relatively common along public highways and most applications can be simply approved through the online Electronic Service Delivery for Abnormal Loads process.

Table 6.1 Construction Plant / Materials Considered as Non Special Order AILs

Plant / Material	Height (m)	Width (m)	Length (m)	Weight (tonnes)
D6 Dozer	3.2	3.3	5.4	19
30t Excavator	3.7	3.3	10.4	29
20t Dumper	3.4	2.9	9.1	16
Mobile Crane *	4.0	3.0	19.9	52 **
Grader	3.7	3.4	12.0	33.7
Cable Drums	4.5	4.1	2.8	37
Note: * Sized for the largest lift / ** Gross Vehicle Weight				

62. Having established those items of plant and materials that would be classified as non-Special Order AILs, a summary of the number of movements per month to each of the onshore cable route sections (see ***Appendix B***) has been produced. ***Appendix C*** of this note summarises the numbers of non-Special Order AILs that would be required throughout the construction phase for scenario 1. ***Appendix D*** summarises the numbers of non-Special Order AILs that would be required throughout construction scenario 2 (i.e. sequential construction of the Projects).

63. It can be noted from the appendices that some items of plant will come on and offsite multiple times as the demand changes. This approach assumes all items of plant are to be returned to the supplier when not in use and was adopted as a worst case assessment for ***Chapter 26 Traffic and Transport*** (APP-074) in line with the Rochdale Envelope approach.

64. ***Table 6.2*** provides a summary of the total numbers of worst case non-Special Order AIL deliveries per month and per day (assuming a conservative 22 day working month) for both construction scenarios. The total construction period considered for both scenarios is 36 months (three years), which is the minimum realistic duration that the onshore works can be completed in, resulting in the highest traffic demand due to the intensity of activities.

Table 6.2 Forecast non-Special Order AIL Movements (Deliveries / Returns) per Month

	Months																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27 - 30	31	32	33	34	35	36
Scenario 1 - Total Monthly Deliveries / Returns	39	14	23	23	44	8	26	21	2	16	26	22	6	2	16	2	24	14	24	26	34	0	0	0	24	0	0	4	0	0	64	0	60
Scenario 1 - Total Daily Deliveries / Returns	2	1	1	1	2	0	1	1	0	1	1	1	0	0	1	0	1	1	1	1	2	0	0	0	1	0	0	0	0	0	3	0	3
Scenario 2 - Total Monthly Deliveries / Returns	35	5	27	11	35	8	30	15	0	15	14	16	4	1	10	1	4	9	24	14	34	0	0	0	24	0	0	2	0	0	47	0	47
Scenario 2 - Total Daily Deliveries / Returns	2	0	1	1	2	0	1	1	0	1	1	1	0	0	0	0	0	0	1	1	2	0	0	0	1	0	0	0	0	0	2	0	2

65. It can be summarised from ***Table 6.2*** that the worst case period for the movement of non-Special Order AILs would be during month 34 when there is a peak in site clearance and reinstatement activities. During this period there would be a peak of up to three non-Special Order AIL deliveries per day. More typically, it can be noted from ***Appendix C*** and ***Appendix D*** that on average there would be less than one non-Special Order AIL delivery per day.

66. ***Appendix E*** and ***Appendix F*** have also been produced to show how the peak monthly non-Special Order AIL deliveries (for scenarios 1 and 2 respectively) would be distributed on to the local highway network. ***Appendix E*** and ***Appendix F*** show a map of the local highway network with Road Link numbers from 1 to 15 as defined in the traffic and transport onshore highway study area ES **Figure 26.1** (APP-306). The total deliveries along each of the road linkages are provided.

7 References

Department of the Environment (7 November 1972) Circular Roads No 61/72 – Routes for Heavy and High Abnormal Loads.

Department for Transport (2007) Guidance on Transport Assessment.

Highways England (1993) Design Manual for Roads and Bridges – Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects.

Highways England (no date) Water preferred policy: Guidelines for the movement of abnormal indivisible loads.

Institute of Environmental Assessment (1993) Guidelines for the Environmental Assessment of Road Traffic.

Appendix A: AIL Routes

ROUTE OPTION 2

ROUTE OPTION 1

Legend

- Order Limits (Deadline 1)
- Lowestoft to Onshore Substation Proposed Route Options

SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment	Prepared:	AB
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1	01/11/2020	AB	First Issue.	Approved:	PP

1:200,000 Scale @ A3

0 5 10 Km

East Anglia ONE North and East Anglia TWO

Lowestoft to Onshore Substation Proposed Route

Drg No	EA1N-EA2-DEV-DRG-IBR-001222
Rev	1
Date	01/11/20
Figure	1

Coordinate System: BNG Datum: OSGB36

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ROUTE OPTION 4

ROUTE OPTION 3

Legend

- Order Limits (Deadline 1)
- Felixstowe to Onshore Substation Proposed Route Options

HARWICH INTERNATIONAL PORT to

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1:200,000 Scale @ A3

0 5 10 Km

East Anglia ONE North and East Anglia TWO

Felixstowe to Onshore Substation Proposed Route

Drg No	EA1N-EA2-DEV-DRG-IBR-001223
Rev	1
Date	01/11/20
Figure	2

Coordinate System: BNG Datum: OSGB36

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ROUTE OPTIONS 1 & 4

ROUTE OPTIONS 2 & 3

Legend

- Order Limits (Deadline 1)
- Felixstowe to Onshore Substation Proposed Route Options
- Lowestoft to Onshore Substation Proposed Route Options

SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment
1	01/11/2020	AB	First Issue.

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1:25,000 Scale @ A3

0 0.5 1 Km

East Anglia ONE North and East Anglia TWO

Leiston to Onshore Substation
Proposed Route

Drg No	EA1N-EA2-DEV-DRG-IBR-001224
Rev	1
Date	01/11/20
Figure	3

Coordinate System: BNG Datum: OSGB36

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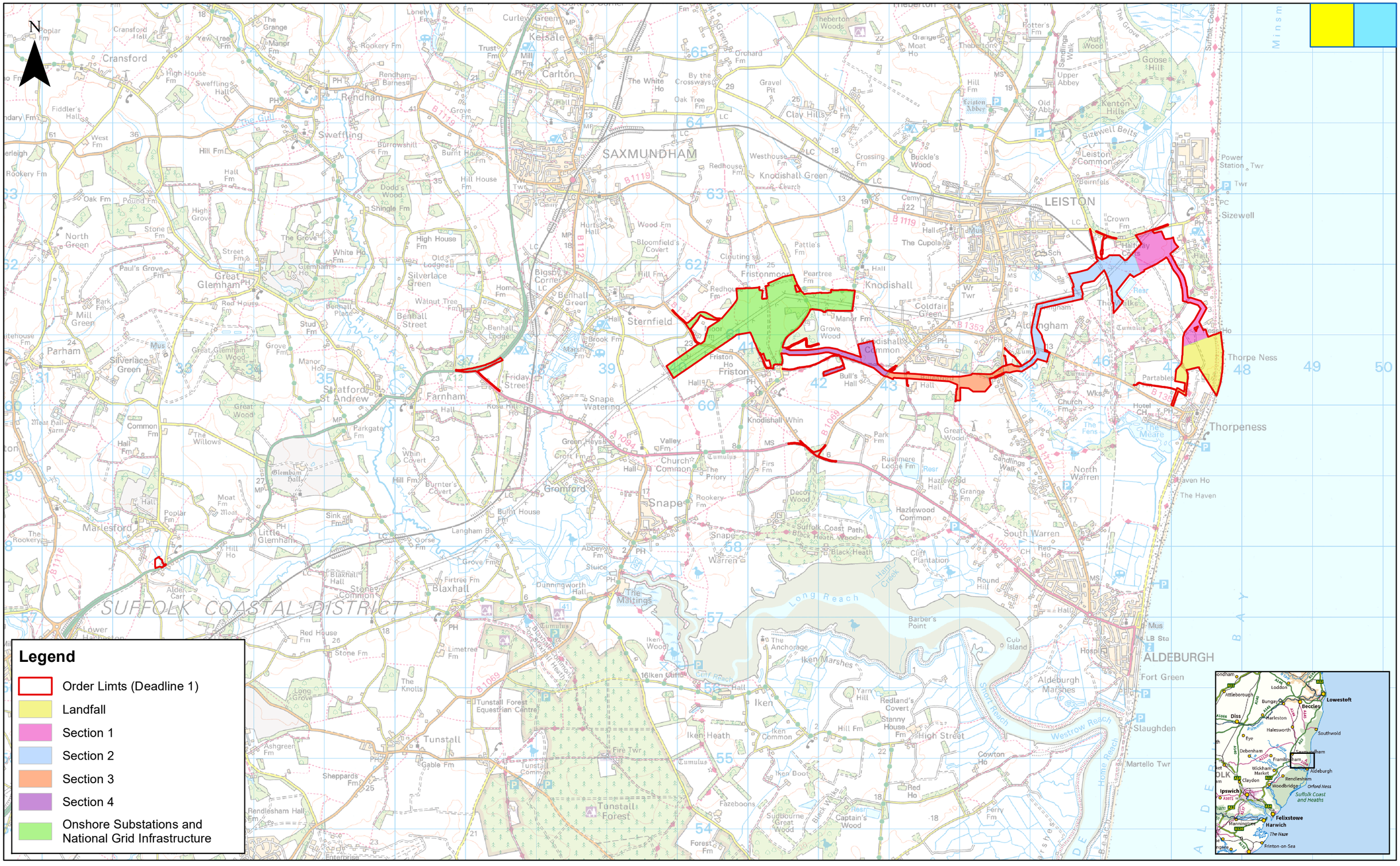
Appendix B: Onshore Cable Route Sections (ES Figure 6.2a-e)



Rev	Date	By	Comment		
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1:50,000 Scale @ A3

0 1 2 Km

East Anglia ONE North and East Anglia TWO

East Anglia ONE North and East Anglia TWO Onshore Development Area

Drg No	EA1N-EA2-DEV-DRG-IBR-001221
Rev	1
Date	30/10/20
Figure	6.2a

Coordinate System: BNG Datum: OSGB36

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Legend

- Order Limts (Deadline 1)
- Landfall
- Section 1
- Section 2
- Section 3
- Section 4
- Onshore Substations and National Grid Infrastructure

SCOTTISHPOWER RENEWABLES

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1:30,000 Scale @ A3

0 0.5 1 Km

East Anglia ONE North and East Anglia TWO

East Anglia ONE North and East Anglia TWO Onshore Development Area

Drg No	EA1N-EA2-DEV-DRG-IBR-001221
Rev	1
Date	30/10/20
Figure	6.2b

Coordinate System: BNG Datum: OSGB36

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N

The Common

Old School

Track

Path

Track

Track

Knodishall Whin

Whin Cottages

17m

B1069

8m

Firs Farm Bungalow

Pit (dis)

Track

Firs Farm

Track

13m

13m

Track

Track

Oakyard Covert

Drain

Drain

Pit (dis)

2m

Blackheath Corner

B1069

6m

A1094

West Lodge

Iss

Drain

Drain

Decoyhill Covert

Drain

18m

SNAPE ROAD

Park Farm Cottages

Track

Park House

Park Farm

12m

Park Farm New Covert

Track

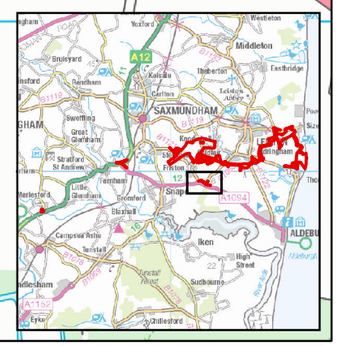
6m

Drain

Rushm Fa

ALDEBURGH ROAD

Track



Legend

Order Limts (Deadline 1)

SCOTTISHPOWER RENEWABLES

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1:5,000 Scale @ A3

0 100 200 Metres

East Anglia ONE North and East Anglia TWO

East Anglia ONE North and East Anglia TWO Onshore Development Area

Drg No	EA1N-EA2-DEV-DRG-IBR-001221	
Rev	1	Coordinate System: BNG Datum: OSGB36
Date	30/10/20	
Figure	6.2c	

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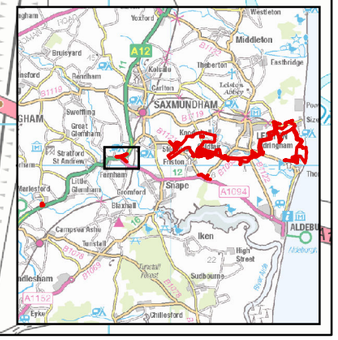
N

Butcher's Hole
Harrow Corner
Pit (dis)
Track
HARROW LANE
Path
The Heater
PARK ROAD
Benhall Lodge
18m
Track
10m
FB
The Canal
Whitearch Park
DRIFT
Honey Pot Lod
ALDEC
Sewage Works
Track
Track
A12
24m
A12
18m
THE STREET
The Old Police House
Path
Track
17m
FB
Manor Farm House
Moat
Drain
Friday Street Farm
12m
Track
Mast
Track
Rosehill Cottages
Pit (dis)
Mollett's Farm
Track
Elm Tree Farm
reet Farm
9m
Path
16m
Rose Hill House
A1094
15m
Friday Street
Hall Cottages
Monks Valley House
Pit (dis)
Foxburrow Wood
Palant's Grove



Legend

Order Limts (Deadline 1)

SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment		
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1	30/10/2020	AB	First Issue.	Checked:	BD
				Approved:	FM

1:5,000
Scale @ A3

0 100 200 Metres

East Anglia ONE North and East Anglia TWO

East Anglia ONE North and East Anglia TWO Onshore Development Area

Drg No	EA1N-EA2-DEV-DRG-IBR-001221
Rev	1
Date	30/10/20
Figure	6.2d

Coordinate System: BNG
Datum: OSGB36

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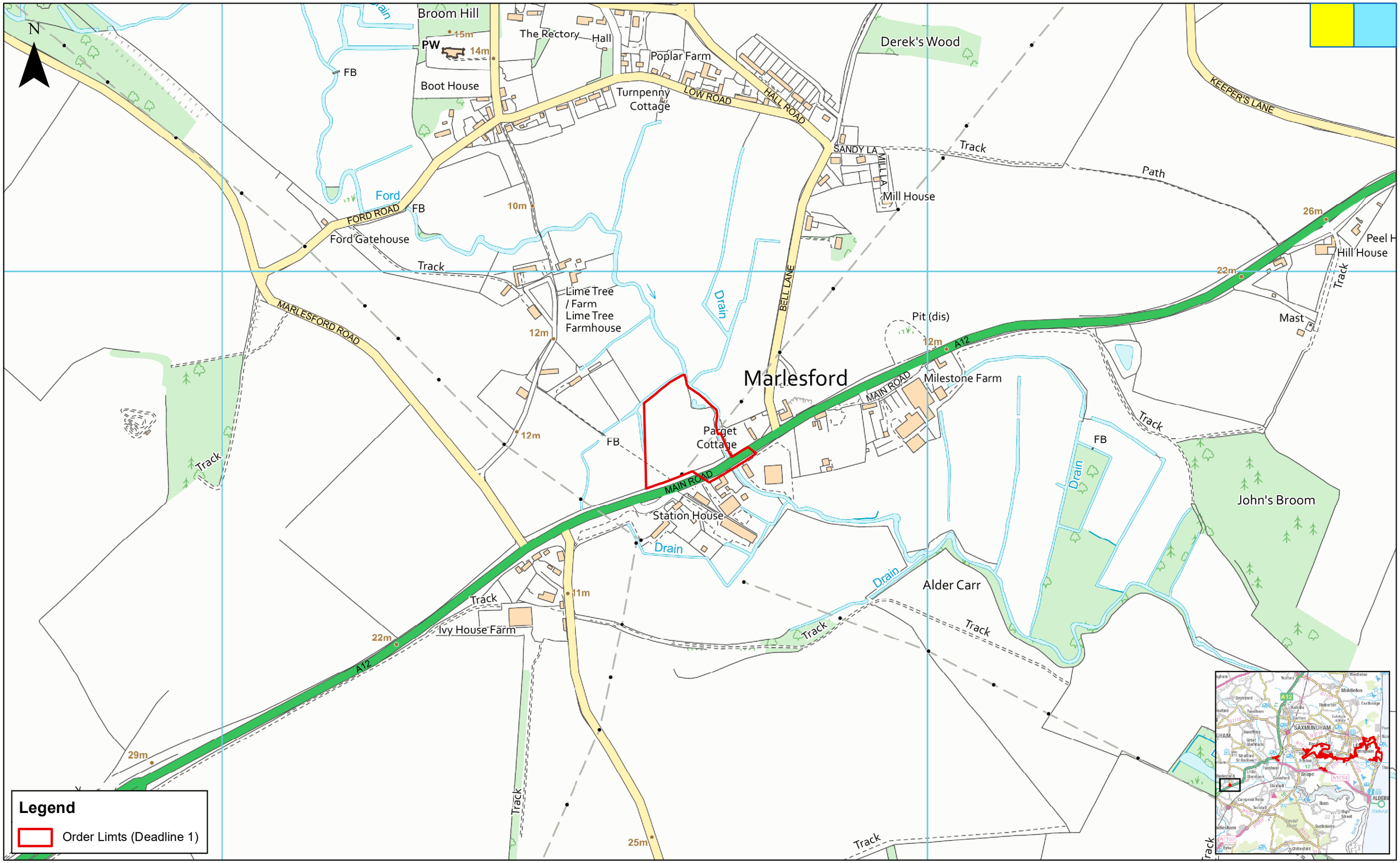

Legend

Order Limts (Deadline 1)

					Prepared:	AB	1:5,000 Scale @ A3	Metres 0 100 200	**East Anglia ONE North and East Anglia TWO** East Anglia ONE North and East Anglia TWO Onshore Development Area
1	30/10/2020	AB	First Issue.		Checked:	BD	Source: © Crown copyright and database rights 2020. Ordnance Survey 0100031673. This map has been produced to the latest known information at the time of issue, and has been produced for your information only. Please consult with the SPR Onshore GIS team to ensure the content is still current before using the information contained on this map. To the fullest extent permitted by law, we accept no responsibility or liability (whether in contract, tort (including negligence) or otherwise in respect of any errors or omissions in the information contained in the map and shall not be liable for any loss, damage or expense caused by such errors or omissions.		
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Date	30/10/20
Figure	6.2e

Coordinate System: BNG Datum: OSGB36

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Appendix C: No-Special Order AIL Routes (Scenario 1)

Section 1	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	2	2			2	2	1								2	2	2				2	2	2	2										2	2	2
30T excavator	6	6			4	4	4	4	4	4	4	4	4	4	4	4	4	2			2	2	2	2										3	3	3
20T Dumper	6	6			5	5	5	6	6	6	6	6	6	6	8	8	4	2			2	2	2	2										6	6	6
Cable drum											7	7	7	7	7	7	7	7	7																	
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader	1	1			1	1	1																													
Crawler Crane							1	1	1	1	1	2	2	2	2	2	1	1	1	1																
Total Plant Onsite	15	15	0	0	12	12	12	11	11	11	18	20	20	20	24	24	19	13	9	2	6	6	6	6	0	0	0	0	0	0	0	0	0	11	11	11
Deliveries / Returns	15	0	15	0	12	0	2	3	0	0	7	2	0	0	4	0	5	6	4	7	8	0	0	0	6	0	0	0	0	0	0	0	0	11	0	11

Substation	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer				4	6	6	6	6	4	4	4	2	2	2	2	2	2	2																2	2	2
30T excavator				4	6	6	6	6	6	4	4	2	2	2	2	2	2	2																2	2	2
20T dumper				4	6	6	6	6	6	4	4	2	2	2	2	2	2	2																2	2	2
Grader				4	4	4	4	4	4	4	4	2	2	2	2	2	2	2																2	2	2
Mobile crane (light for general use)														2	2	4	4	4	4	4	2	2	2	2	2	2	2	2	2	2						
Mobile crane (heavy)				0														2	2	2	2	2	2	2	2	2	2	2	2	2						
Total Plant Onsite	0	0	0	16	22	22	22	23	21	16	16	8	8	10	10	12	12	14	6	6	4	4	4	4	4	4	4	4	4	4	0	0	0	4	4	4
Deliveries / Returns	0	0	0	16	6	0	0	1	2	5	0	8	0	2	0	2	0	2	8	0	2	0	0	0	0	0	0	0	0	0	4	0	0	8	0	4

Section 2	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	1	1	2	2	2	1								2	2	2				2	2	2	2										2	2	2
30T excavator	3	3	3	6	4	4	4	4	4	4	4	4	4	4	4	4	4	2			2	2	2	2										3	3	3
20T Dumper	3	3	3	6	5	5	5	6	6	6	6	6	6	6	8	8	4	2			2	2	2	2										6	6	6
Cable drum											8	8	8	8	8	8	8	8	8																	
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader	1	1	1	1	1	1	1																													
Crawler Crane							1	1	1	1	1	2	2	2	2	2	1	1	1	1																
Total Plant Onsite	8	8	8	15	12	12	12	11	11	11	19	21	21	21	25	25	20	14	10	2	6	6	6	6	0	0	0	0	0	0	0	0	0	11	11	11
Deliveries / Returns	8	0	0	7	3	0	2	3	0	0	8	2	0	0	4	0	5	6	4	8	8	0	0	0	6	0	0	0	0	0	0	0	0	11	0	11

Section 3	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer					4	4															2	2	2	2										2	2	2
30T excavator					5	5	2	4	4	4	4	4	4	4	4	4	2	2			2	2	2	2										3	3	3
20T Dumper					5	5	2	6	6	6	6	6	6	6	6	6	2	2			2	2	2	2										6	6	6
Cable drum											5	5	5	5	5	5	5	5	5																	
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader					1	1																														
Crawler Crane							1	1	1	1	1	2	2	2	2	2	1	1	1	1																
Total Plant Onsite	0	0	0	0	15	15	5	11	11	11	16	30	31	32	33	34	11	29	7	2	6	6	6	6	0	0	0	0	0	0	0	0	0	11	11	11
Deliveries / Returns	0	0	0	0	15	0	12	6	0	0	5	2	0	0	0	0	7	0	4	5	8	0	0	0	6	0	0	0	0	0	0	0	0	11	0	11

Section 4	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	2	2	2	2	2			0												2	2	2	2										2	2	2
30T excavator	3	4	4	4	2	2	2	4	4	4	4	4	4	4	4	4	2	2			2	2	2	2										3	3	3
20T Dumper	3	6	6	6	2	2	2	6	6	6	6	6	6	6	6	6	2	2			2	2	2	2										6	6	6
Cable drum											6	6	6	6	6	6	6	6	6																	
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader	1	2	2	2																																
Crawler Crane							1	1	1	1	1	2	2	2	2	2	1	1	1	1																
Total Plant Onsite	8	14	14	14	6	6	5	11	11	11	17	19	19	19	19	19	12	12	8	2	6	6	6	6	0	0	0	0	0	0	0	0	0	11	11	11
Deliveries / Returns	8	6	0	0	8	0	3	6	0	0	6	2	0	0	0	0	7	0	4	6	8	0	0	0	6	0	0	0	0	0	0	0	0	11	0	11

Landfall	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer			2	2	2								2	2																				2	2	2
30T excavator			2	2	2					2	2		2	2																				2	2	2
20T Dumper			3	3	3					2	2		2	2																				2	2	2
Mobile crane												1	1	1																						
Grader			1	1	1																															
Crawler Crane												1	1	1																						
Total Plant Onsite	0	0	8	8	8	0	0	0	0	4	4	2	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6
Deliveries / Returns	0	0	8	0	0	8	0	0	0	4	0	6	6	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6

National Grid Works	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1						2	2	2																									2	2	2
30T excavator	3						2	2	2																									2	2	2
20T Dumper	3						2	2	2																									2	2	2
Mobile crane									0																											
Grader	1						1		0																											
Crawler Crane								1	1																									0	0	0
Total Plant Onsite	8	0	0	0	0	0	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6
Deliveries / Returns	8	8	0	0	0	0	7	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6

All	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Deliveries / Returns	39	14	23	23	44	8	26	21	2	16	26	22	6	2	16	2	24	14	24	26	34	0	0	0	24	0	0	0	0	0	4	0	0	64	0	60

Appendix D: No-Special Order AIL Routes (Scenario 2)

Section 1	Month																																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	2	2			2	2	1								2	2	2				2	2	2	2										2	2	2
30T excavator	4	4			2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper	4	4			4	4	4	4	4	4	4	4	4	4	4	4	4	2			2	2	2	2										4	4	4
Cable Drum										4	4	4	4	4	4	4	4	4																		
Mobile crane												1	1	1	1	1	1	1	1																	
Grader	1	1			1	1	1																													
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1																	
Total Plant Onsite	11	11	0	0	9	9	9	7	7	7	11	12	12	12	14	14	14	10	6	2	6	6	6	6	0	0	0	0	0	0	0	0	0	8	8	8
Deliveries / Returns	11	0	11	0	9	0	2	2	0	0	4	1	0	0	2	0	0	4	4	4	8	0	0	0	6	0	0	0	0	0	0	0	0	8	0	8

Substation	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer				2	4	4	4	4	4	4	4	2	2	2	2	2	2	2																1	1	1
30T excavator				2	4	4	4	6	6	4	4	2	2	2	2	2	2	2																1	1	1
20T dumper				2	4	4	4	6	6	4	4	2	2	2	2	2	2	2																1	1	1
Grader				2	2	2	2	2	2	2	1	1	1	1	1	1	1	1																1	1	1
Mobile crane (heavy)																		1	2	2	1	1	1	1	1	1	1	1	1	1						
Specialist heavy-lifting gantry & associated equipment																																				
Crawler Crane								1	1																											
Total Plant Onsite	0	0	0	8	14	14	14	19	19	14	14	7	7	8	8	9	9	10	4	4	2	2	2	2	2	2	2	2	2	2	0	0	0	4	4	4
Deliveries / Returns	0	0	0	8	6	0	0	5	0	5	0	7	0	1	0	1	0	1	8	0	2	0	0	0	0	0	0	0	0	0	2	0	0	4	0	4

Section 2	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	2	2	2	2	2	1								2	2	2				2	2	2	2										2	2	2
30T excavator	3	3	3	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper	3	3	3	4	2	2	4	4	4	4	4	4	4	4	4	4	4	2			2	2	2	2										4	4	4
Cable drum											4	4	4	4	4	4	4	4	4																	
Mobile crane												1	1	1	1	1	1	1	1																	
Grader	1	1	1	2			1																													
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1																	
Total Plant Onsite	8	9	9	12	6	6	9	7	7	7	11	12	12	12	14	14	14	10	6	2	6	6	6	6	0	0	0	0	0	0	0	0	0	8	8	8
Deliveries / Returns	8	1	0	3	6	0	5	2	0	0	4	1	0	0	2	0	0	4	4	4	8	0	0	0	6	0	0	0	0	0	0	0	0	8	0	8

Section 3	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer					3	3															2	2	2	2										2	2	2
30T excavator					3	3	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper					4	4	2	4	4	4	4	4	4	4	4	4	2	2			2	2	2	2										4	4	4
Cable drum											3	3	3	3	3	3	3	3	3																	
Mobile crane												1	1	1	1	1	1	1	1																	
Grader					1	1																														
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1																	
Total Plant Onsite	0	0	0	0	11	11	5	7	7	7	10	23	24	25	26	27	9	27	5	2	6	6	6	6	0	0	0	0	0	0	0	0	0	8	8	8
Deliveries / Returns	0	0	0	0	11	0	8	2	0	0	3	1	0	0	0	0	2	0	4	3	8	0	0	0	6	0	0	0	0	0	0	0	0	8	0	8

Section 4	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	2	2	2	3	3															2	2	2	2										2	2	2
30T excavator	3	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper	3	4	4	4	4	4	2	4	4	4	4	4	4	4	4	4	2	2			2	2	2	2										4	4	4
Cable drum											3	3	3	3	3	3	3	3	3																	
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader	1	2	2	2	1	1																														
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1	1																
Total Plant Onsite	8	12	12	12	11	11	5	7	7	7	10	11	11	11	11	11	9	9	5	2	6	6	6	6	0	0	0	0	0	0	0	0	0	8	8	8
Deliveries / Returns	8	4	0	0	3	0	8	2	0	0	3	1	0	0	0	0	2	0	4	3	8	0	0	0	6	0	0	0	0	0	0	0	0	8	0	8

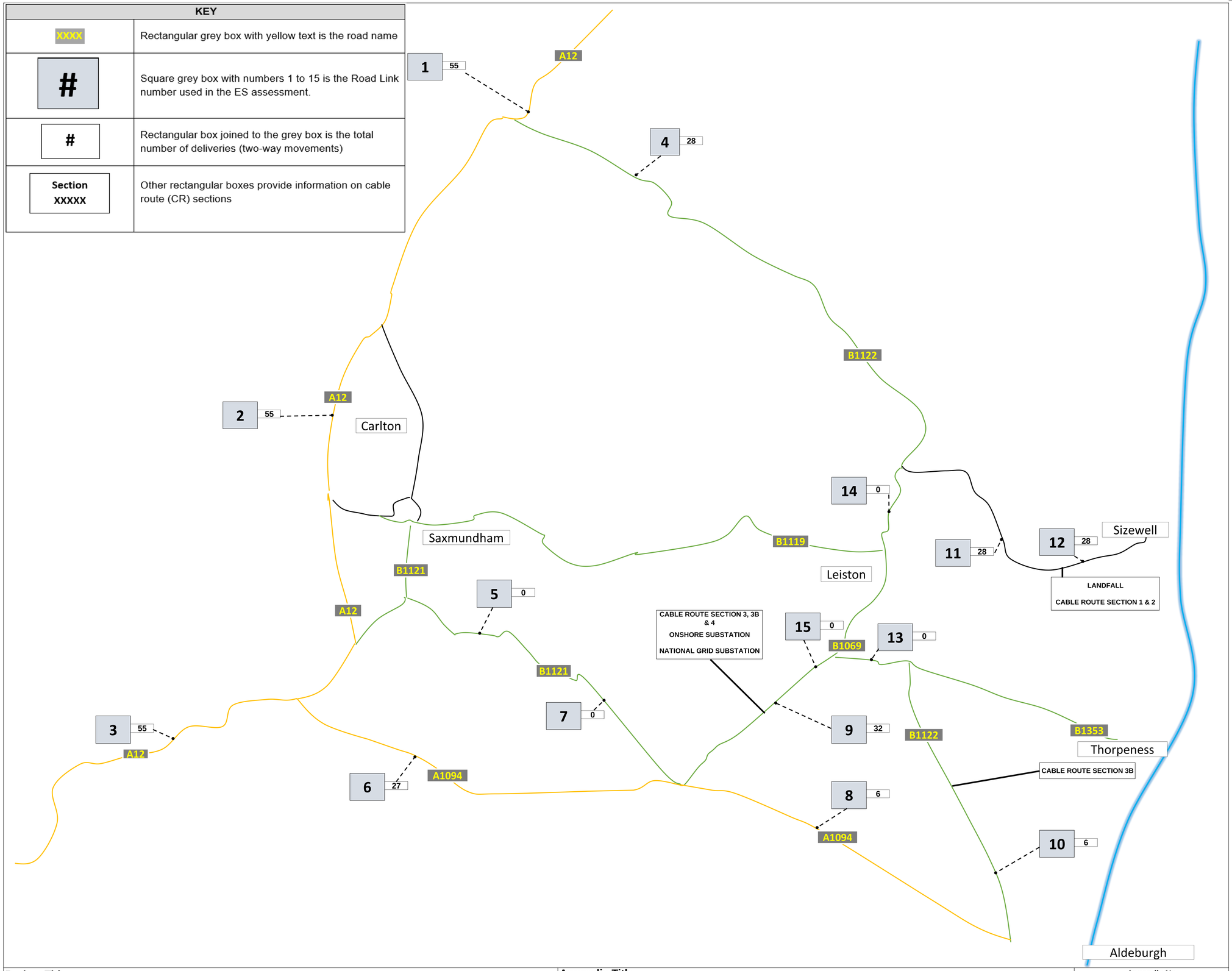
Landfall	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer			2	2	2								1	1																				1	1	1
30T excavator			2	2	2					1	1		1	1																				2	2	2
20T Dumper			3	3	3					2	2		2	2																				2	2	2
Mobile crane												1	1	1																							
Grader			1	1	1																															
Crawler Crane												1	1	1																							
Total Plant Onsite	0	0	8	8	8	0	0	0	0	3	3	2	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5
Deliveries / Returns	0	0	8	0	0	8	0	0	0	3	0	5	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5

National Grid Works	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	1					2	2	2																									2	2	2
30T excavator	3	3					2	2	2																									2	2	2
20T Dumper	3	3					2	2	2																									2	2	2
Mobile crane																																				
Grader	1	1					1																													
Crawler Crane								1	1																											
Total Plant Onsite	8	8	0	0	0	0	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6
Deliveries / Returns	8	0	8	0	0	0	7	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6

All	Month																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Deliveries / Returns	35	5	27	11	35	8	30	15	0	15	14	16	4	1	10	1	4	9	24	14	34	0	0	0	24	0	0	0	0	0	2	0	0	47	0	47

Appendix E: Distribution of Peak Monthly Non-Special Order AIL Deliveries (Scenario 1)

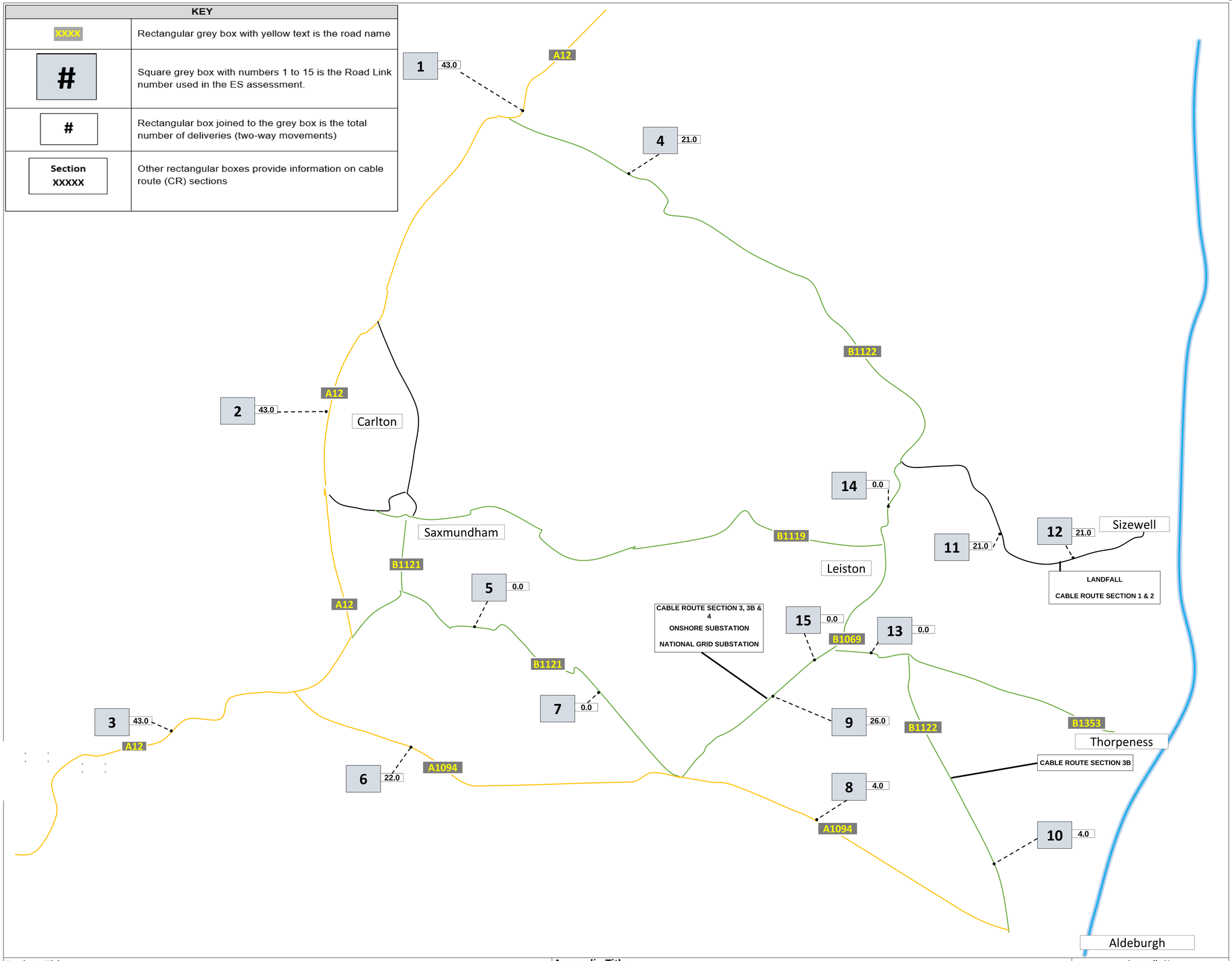
KEY	
XXXX	Rectangular grey box with yellow text is the road name
#	Square grey box with numbers 1 to 15 is the Road Link number used in the ES assessment.
#	Rectangular box joined to the grey box is the total number of deliveries (two-way movements)
Section XXXXX	Other rectangular boxes provide information on cable route (CR) sections



Project Title East Anglia TWO and East Anglia ONE North	**Appendix Title** East Anglia TWO and East Anglia ONE North AIL Distribution (Scenario 1)	**Appendix No** **E**
Client Scottish Power Renewables	**Date** Nov-20	

Appendix F: Distribution of Peak Monthly Non-Special Order AIL Deliveries (Scenario 2)

KEY	
XXXX	Rectangular grey box with yellow text is the road name
#	Square grey box with numbers 1 to 15 is the Road Link number used in the ES assessment.
#	Rectangular box joined to the grey box is the total number of deliveries (two-way movements)
Section XXXXX	Other rectangular boxes provide information on cable route (CR) sections



Project Title East Anglia TWO and East Anglia ONE North	**Appendix Title** East Anglia TWO and East Anglia ONE North AIL Distribution (Scenario 2)	**Appendix No** **F**
Client Scottish Power Renewables	**Date** Nov-20	