

East Anglia TWO Offshore Windfarm

Appendix 21.1

Land Use Cumulative Impact Assessment with the Proposed East Anglia ONE North Project

Preliminary Environmental Information

Volume 3

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Glossary of Acronyms

| | |
|------|--|
| CCS | Construction Consolidation Sites |
| CIA | Cumulative Impact Assessment |
| DCO | Development Consent Order |
| ES | Environmental Statement |
| HDD | Horizontal Directional Drilling |
| MW | Megawatt |
| NGET | National Grid Electricity Transmission |
| Ohl | Overhead Line |
| PEIR | Preliminary Environmental Information Report |

Glossary of Terminology

| | |
|--|--|
| Applicant | East Anglia TWO Limited. |
| Development area | The area comprising the Proposed Onshore Development Area and the Offshore Development Area |
| East Anglia TWO project | The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one offshore operation and maintenance platform, inter-array cables, platform link cables, up to one construction operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure. |
| Evidence Plan Process | A voluntary consultation process with specialist stakeholders to agree the approach to the EIA and the information required to support HRA. |
| Landfall | The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables. |
| National Grid infrastructure | A National Grid substation, connection to the existing electricity pylons and National Grid overhead line realignment works which will be consented as part of the proposed East Anglia TWO project Development Consent Order but will be National Grid owned assets. |
| National Grid overhead line realignment works | Works required to upgrade the existing electricity pylons and overhead lines to transport electricity from the National Grid substation to the national electricity grid |
| National Grid overhead line realignment works area | The proposed area for National Grid overhead line realignment works. |
| National Grid substation | The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO project Development Consent Order. |
| National Grid substation location | The proposed location of the National Grid substation. |
| Onshore cable corridor | The corridor within which the onshore cable route will be located. |
| Onshore cable route | This is the construction swathe within the onshore cable corridor which would contain onshore cables as well as temporary ground required for construction which includes cable trenches, haul road and spoil storage areas. |
| 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 and two fibre optic cables. |
| Proposed onshore development area | The area in which the landfall, onshore cable corridor, onshore substation, mitigation areas, temporary construction facilities (such as access roads and construction consolidation sites), and the National Grid Infrastructure will be located. |
| Onshore infrastructure | The combined name for all of the onshore infrastructure associated with the |

| | |
|-----------------------------|---|
| | proposed East Anglia TWO project from landfall to the connection to the national electricity grid. |
| Onshore substation | The East Anglia TWO substation and all of the electrical equipment, both within and connecting to the National Grid infrastructure. |
| Onshore substation location | The proposed location of the onshore substation for the proposed East Anglia TWO project. |

21.1 Land Use Cumulative Impact Assessment with the Proposed East Anglia ONE North Project

21.1 Introduction

1. This appendix covers the cumulative impact assessment of the proposed East Anglia TWO project with the proposed East Anglia ONE North project in relation to land use and agriculture.
2. The East Anglia ONE North offshore windfarm project (the proposed East Anglia ONE North project) is also in the pre-application phase. The proposed East Anglia ONE North project will have a separate Development Consent Order (DCO) application but is working to the same programme of submission as the proposed East Anglia TWO project. The two projects will share the same landfall location and cable route and the two onshore substations will be co-located, the onshore substation location is shown in **Chapter 21 Land Use Figure 21.7**, and feed into the same National Grid substation.
3. The land use and agriculture proposed East Anglia TWO project Cumulative Impact Assessment (CIA) will therefore initially consider the cumulative impact with only the proposed East Anglia ONE North project against two different construction scenarios (i.e. construction of the two projects simultaneously and sequentially). The realistic worst case scenario of each impact is then carried through to the main body of the CIA assessment which considers other developments which are in close proximity to the proposed East Anglia TWO project.
4. For a more detailed description of the CIA please refer to **Chapter 5 EIA Methodology**.

21.2 Construction Scenarios Realistic Worst Case Parameters

5. This appendix considers the proposed East Anglia TWO project and the proposed East Anglia ONE North project under two construction scenarios:
 - 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.

6. As discussed in **section 21.1**, the realistic worst case (based on the assessment of these two construction scenarios) for each impact is then carried through to the wider CIA which considers other developments, projects or plans which have been screened into the CIA assessment for the proposed East Anglia TWO project.
7. It should be noted that the operational phase impacts on land use and agriculture will be the same irrespective of the construction scenario. Therefore, operational impacts identified in Scenario 1 will be the same as those for Scenario 2.
8. Mitigation measures for the proposed East Anglia TWO project and proposed East Anglia ONE North project will be the same. These are detailed in **Chapter 21 Land Use**.

21.2.1 Scenario 1

9. **Table A21.1** presents the realistic worst case parameters of Scenario 1. In this instance, the proposed East Anglia TWO project and proposed East Anglia ONE North project are built simultaneously.

Table A21.1 Scenario 1 Realistic Worst Case

| Impact | Parameter | Notes |
|---|---|--|
| Construction | | |
| Impacts related to the landfall | HDD temporary works area: 13,300m ² (70m x 190m) Transition bay excavation footprint (for 4 transition bays): 3,108m ² (37m x 42m) Landfall CCS: 40,950m ² (210m x 195m) Landfall transition bays approximate quantity of spoil material (for 4 transition bays): 908m ³ | Landfall to be achieved via HDD. No beach access required. |
| Impacts related to the onshore cable corridor | Onshore cable route: 574,720m ² (8,980m x 64m) Jointing bay construction excavation footprint: 570m ² (30.6m x 18.6m). Total for 72 jointing bays: 41,040m ² (570m ² x 36) HDD (retained as an option to cross SPA / SSSI): <ul style="list-style-type: none"> • Entrance pit CCS (x1): 13,650m² (195m x 70m) • Exit pit CCS (x1): 5,850m² (195m x 30m) Onshore cable route CCS: 40,950m ² (210m x 195m). Total for 5 CCS: 204,750m ² | Onshore cable corridor construction footprint may be located anywhere within the proposed onshore development area. The location strategy for access routes, CCS and jointing bays will be to site them near to field boundaries or roads as far as practical. Two link boxes sit underground beside each jointing bay at a depth of approximately 1.2m. The construction footprint of |

| Impact | Parameter | Notes |
|---|---|---|
| | <p>(40,950m² x 5)</p> <p>Temporary roads:</p> <ul style="list-style-type: none"> Onshore cable route haul road between landfall and Snape Road (4.5m wide with additional 4m for passing places at approximately 87m intervals): 41,376m² Onshore cable route and substation access haul road (9m width): 18,675m² Temporary access road: 23,495m² <p>Onshore cable trench approximate quantity of spoil material: 26,642m³</p> | <p>these is included in the jointing bay construction excavation footprint.</p> |
| Impacts related to the onshore substation(s) | <p>Onshore substation CCS: 17,100m² (190m x 90m). Total for 3 CCS: 51,300m²</p> <p>Permanent footprint (used as CCS during construction): 36,100m² (190m x 190m). Total for 2: 72,200m²</p> <p>Substation operational access road: 12,800m² (1,600m x 8m)</p> | <p>Construction access is included above as the onshore cable route and substation access haul road.</p> |
| Impacts related to the National Grid Infrastructure | <p>National Grid substation CCS: 78,750m² (250m x 315m)</p> <p>Permanent footprint (used as CCS during construction): 45,500m² (325m x 140m)</p> | <p>Design for the required overhead line (OHL) realignment work (including cable sealing end CCSs and pylon realignment CCS) is currently on going. As more detail is made available, this will be fully assessed and included in the Environmental Statement (ES) and DCO application. However, indicative locations for cable sealing end CCSs and pylon realignment CCS are shown in Figure 6.6 of Chapter 6 Project Description.</p> <p>Construction access is included above as the onshore cable route and substation access haul road.</p> <p>Operational access is included above as the substation operational access road,</p> |
| Operation | | |
| Impacts related to the landfall | <p>4 transition bays will be installed underground, each with an operational volume of 227m³</p> | <p>Transition bays will be buried approximately 1.2m underground – there will no above ground infrastructure.</p> |

| Impact | Parameter | Notes |
|--|---|--|
| Impacts related to the onshore cable corridor | 72 jointing bays will be installed underground, each with an operational volume of 77m ³ 144 link boxes will be installed underground (2 per jointing bay), each with an operational volume of 3m ³ | Jointing bays will be buried approximately 1.2m underground – there will no above ground infrastructure. Link boxes will be located underground immediately adjacent to jointing bays – there will be no above ground infrastructure. |
| Impacts related to the onshore substation(s) | Operational footprint: 36,100m ² (190m x 190m). Total for 2: 72,200m ² Substation operational access road: 12,800m ² (1,600m x 8m) | The operational footprint does not include the additional landscaping footprint (which will be agreed post-PEIR). |
| Impacts related to the National Grid Infrastructure | National Grid operational substation: 45,500m ² (325m x 140m) | The operational footprint does not include the additional landscaping footprint (which will be agreed post-PEIR). Design for the required overhead line (OHL) realignment work (including cable sealing end CCSs and pylon realignment CCS) is currently on going. As more detail is made available, this will be fully assessed and included in the Environmental Statement (ES) and DCO application. However, indicative locations for cable sealing end CCSs and pylon realignment CCS are shown in Figure 6.6 of Chapter 6 Project Description . |
| Decommissioning | | |
| <p>No decision has been made regarding the final decommissioning policy for the onshore infrastructure as it is recognised that industry best practice, rules and legislation change over time. However, the onshore substation will likely be removed and be reused or recycled. It is expected that the onshore cables will be removed and recycled, with the transition bays and cable ducts (where used) left <i>in situ</i>. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. A decommissioning plan will be provided. As such, for the purposes of a worst-case scenario, impacts no greater than those identified for the construction phase are expected for the decommissioning phase.</p> | | |

21.2.2 Scenario 2

10. Scenario 2, and **Table A21.2**, represents the realistic worst case scenario in the eventuality that the proposed East Anglia TWO project and proposed East Anglia ONE North project are built with a construction gap. It should be noted that there is the commitment to progress construction of the proposed East Anglia TWO project prior to commencing construction of the proposed East Anglia ONE North project.

11. Scenario 2 assumes that when permission is granted, the proposed East Anglia TWO project will be constructed as soon as permission is granted. The proposed East Anglia ONE North project will leave the largest possible gap (between the reinstatement of the proposed East Anglia TWO project and start of construction for the proposed East Anglia ONE North project) to begin construction within the consent period. Further detail regarding the likely construction gap is provided in **Chapter 5 EIA Methodology**.

Table A21.2 Scenario 2 Realistic Worst Case

| Impact | Proposed East Anglia TWO Project Parameters | Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction) | Notes |
|---|--|--|--|
| Construction | | | |
| Impacts related to the landfall | HDD temporary works area: 7,000m ² (70m x 100m) Transition bay excavation footprint (for 2 transition bays): 1,554m ² (37m x 42m) Landfall CCS: 18,400m ² (160m x 115m) Landfall transition bays approximate quantity of spoil material (for 2 transition bays): 454m ³ | HDD temporary works area: 7,000m ² (70m x 100m) Transition bay excavation footprint (for 2 transition bays): 1,554m ² (37m x 42m) Landfall CCS: 18,400m ² (160m x 115m) Landfall transition bays approximate quantity of spoil material (for 2 transition bays): 454m ³ | Landfall to be achieved via HDD. No beach access required. |
| Impacts related to the onshore cable corridor | Onshore cable route: 287,360m ² (8,980m x 32m) Jointing bay construction excavation footprint: 570m ² (30.6m x 18.6m). Total for 36 jointing bays: 20,520m ² (570m ² x 36) HDD (retained as an option to cross SPA / SSSI): • Entrance pit CCS (x1): | Onshore cable route: 287,360m ² (8,980m x 32m) Jointing bay construction excavation footprint: 570m ² (30.6m x 18.6m). Total for 36 jointing bays: 20,520m ² (570m ² x 36) HDD (retained as an option to cross SPA / SSSI): • Entrance pit CCS (x1): | Onshore cable corridor construction footprint may be located anywhere within the proposed onshore development area. The location strategy for access routes, CCS and jointing bays will be to site them near to field |

| Impact | Proposed East Anglia TWO Project Parameters | Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction) | Notes |
|---|--|--|---|
| | <p>7,000m² (100m x 70m)</p> <ul style="list-style-type: none"> Exit pit CCS (x1): 3,000m² (100m x 30m) <p>Onshore cable route CCS: 18,400m² (160m x 115m). Total for 5 CCS: 92,000m² (18,400m² x 5)</p> <p>Temporary roads:</p> <ul style="list-style-type: none"> Onshore cable route haul road between landfall and Snape Road (4.5m wide with additional 4m for passing places at approximately 87m intervals): 41,376m² Onshore cable route and substation access haul road (9m width): 18,675m² Temporary access road: 23,495m² <p>Onshore cable trench approximate quantity of spoil material: 13,321m³</p> | <p>7,000m² (100m x 70m)</p> <ul style="list-style-type: none"> Exit pit CCS (x1): 3,000m² (100m x 30m) <p>Onshore cable route CCS: 18,400m² (160m x 115m). Total for 5 CCS: 92,000m² (18,400m² x 5)</p> <p>Temporary roads:</p> <ul style="list-style-type: none"> Onshore cable route haul road between landfall and Snape Road (4.5m wide with additional 4m for passing places at approximately 87m intervals): 41,376m² Onshore cable route and substation access haul road (9m width): 18,675m² Temporary access road: 23,495m² <p>Onshore cable trench approximate quantity of spoil material: 13,321m³</p> | <p>boundaries or roads as far as practical.</p> <p>Two link boxes sit underground beside each jointing bay at a depth of approximately 1.2m. The construction footprint of these is included in the jointing bay construction excavation footprint.</p> |
| Impacts related to the onshore substation | <p>Onshore substation CCS: 17,100m² (190m x 90m)</p> <p>Permanent footprint (used as CCS during construction): 36,100m² (190m x 190m)</p> <p>Substation operational access road: 12,800m² (1,600m x 8m)</p> | <p>Onshore substation CCS: 17,100m² (190m x 90m)</p> <p>Permanent footprint (used as CCS during construction): 36,100m² (190m x 190m)</p> <p>Substation operational access road: 12,800m² (1,600m x 8m)</p> | <p>Construction access is included above as the onshore cable route and substation access haul road.</p> |
| Impacts related to the National Grid Infrastructure | <p>National Grid substation CCS: 78,750m² (250m x 315m)</p> <p>Permanent footprint (used as CCS during construction): 45,500m² (325m x 140m)</p> | <p>National Grid substation CCS: 78,750m² (250m x 315m)</p> <p>Permanent footprint (used as CCS during construction): 45,500m² (325m x 140m)</p> | <p>Design for the required overhead line (OHL) realignment work (including cable sealing end CCSs and pylon realignment CCS) is currently on going. As more detail is</p> |

| Impact | Proposed East Anglia TWO Project Parameters | Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction) | Notes |
|---|---|---|---|
| | | | <p>made available, this will be fully assessed and included in the Environmental Statement (ES) and DCO application. However, indicative locations for cable sealing end CCSs and pylon realignment CCS are shown in Figure 6.6 of Chapter 6 Project Description.</p> <p>Construction access is included above as the onshore cable route and substation access haul road.</p> <p>Operational access is included above as the substation operational access road,</p> |
| Operation | | | |
| Impacts related to the landfall | 2 transition bays will be installed underground, each with an operational volume of 227m ³ | 2 transition bays will be installed underground, each with an operational volume of 227m ³ | Transition bays will be buried approximately 1.2m underground – there will no above ground infrastructure. |
| Impacts related to the onshore cable corridor | 36 jointing bays will be installed underground, each with an operational volume of 77m ³ 72 link boxes will be installed underground (2 per jointing bay), each with an operational volume of 3m ³ | 36 jointing bays will be installed underground, each with an operational volume of 77m ³ 72 link boxes will be installed underground (2 per jointing bay), each with an operational volume of 3m ³ | Jointing bays will be buried approximately 1.2m underground – there will no above ground infrastructure. Link boxes will be located underground immediately adjacent to jointing bays – there will be no above ground infrastructure. |
| Impacts related to the onshore | Operational footprint: | Operational footprint: | The operational footprint does not |

| Impact | Proposed East Anglia TWO Project Parameters | Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction) | Notes |
|--|--|--|---|
| substation | 36,100m ² (190m x 190m) Substation operational access road: 12,800m ² (1,600m x 8m) | 36,100m ² (190m x 190m) Substation operational access road: 12,800m ² (1,600m x 8m) | include the additional landscaping footprint (which will be agreed post-PEIR). |
| Impacts related to the National Grid Infrastructure | National Grid operational substation: 45,500m ² (325m x 140m) | National Grid operational substation: 45,500m ² (325m x 140m) | The operational footprint does not include the additional landscaping footprint (which will be agreed post-PEIR). Design for the required overhead line (OHL) realignment work (including cable sealing end CCSs and pylon realignment CCS) is currently on going. As more detail is made available, this will be fully assessed and included in the Environmental Statement (ES) and DCO application. However, indicative locations for cable sealing end CCSs and pylon realignment CCS are shown in Figure 6.6 of Chapter 6 Project Description . |
| Decommissioning | | | |
| <p>No decision has been made regarding the final decommissioning policy for the onshore infrastructure as it is recognised that industry best practice, rules and legislation change over time. However, the onshore substation will likely be removed and be reused or recycled. It is expected that the onshore cables will be removed and recycled, with the transition bays and cable ducts (where used) left <i>in situ</i>. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. A decommissioning plan will be provided. As such, for the purposes of a worst-case scenario, impacts no greater than those identified for the construction phase are expected for the decommissioning phase.</p> | | | |

21.3 Cumulative Impact Assessment

12. In terms of construction impacts relating to land use and agriculture, cumulative impacts are predominantly dictated by:

- The total onshore footprint of the construction works;
- The quality of the land which falls within this construction footprint; and
- The length of the expected construction duration.

13. The following sections discuss which of the two construction scenarios detailed in **section 21.2** will be the realistic worst case in terms of cumulative impacts to land use and agriculture.

21.3.1 Impact 1: Land Taken out of Existing Use

14. Land would be directly taken out of existing use or isolated due to construction activities and effectively taken out of use. During construction scenario 1 or 2, land taken out of existing use will be double the footprint size than that affected by the proposed East Anglia TWO project alone.

15. Taking into account the combined footprint of the proposed East Anglia TWO and East Anglia ONE North projects, this represents a small contribution to county resource of farmed land and the areas of land take ranging from ALC Grades 2-4, the sensitivity of this land is of medium sensitivity. Under construction Scenario 1, this impact would have a low magnitude due to the construction duration. However, under Scenario 2 due to the increase in construction phase duration, therefore increasing the magnitude of impact to medium. Under construction Scenario 2 as the worst case, the impact is considered to be of **moderate adverse** significance.

21.3.2 Impact 2: Impact to Environmental Stewardship Schemes

16. During the construction period, there would be the potential for impacts on ESS. The effect on individual landowners / occupiers is likely to be specific to their own scheme and may potentially result in ecological and/or financial implications. During construction Scenario 1 or 2, land taken out of existing use will be double the footprint size than that affected by the proposed East Anglia TWO project alone.

17. Taking into account the combined footprint of the proposed East Anglia TWO and East Anglia ONE North projects, this represents a small contribution to county resource of ESS and the level of the ESS impacted being a lower, entry level area, the sensitivity of this receptor is medium. Under construction Scenario 1, this impact would have a low magnitude due to the. However, under Scenario 2 due to the increase in construction phase duration, therefore

increasing the magnitude of impact to medium. Under construction Scenario 2 as the worst case, the impact is considered to be of **moderate adverse** significance. The Applicant will engage in consultation with those landowners affected and land will be reinstated following construction in such a way that similar ESS agreements being re-established will not be inhibited.

21.3.3 Impact 3: Impact to Land Drainage

18. Construction works such as excavation and stockpiling of soils has the potential to cause an impact to the natural and artificial field drainage systems. It would be necessary to truncate the drainage systems temporarily during excavation and installation and reinstate following construction. Given the soil types found within the proposed onshore development area, some sections would have existing field drainage systems in place. The sensitivity of the receptor is considered to be high overall as the soil is vulnerable to erosion or structural damage.
19. During construction Scenario 1 or 2, the soil resource impacted will be double that affected by the proposed East Anglia TWO project alone. The sensitivity of the receptor remains high, as it is for the proposed East Anglia TWO project alone.
20. The magnitude of the effect is considered to be low for Scenario 1. This magnitude will increase to medium under construction Scenario 2 due to the increase in construction phase duration. Under construction Scenario 2 as the worst case, the impact is considered to be of major adverse significance. Additional mitigation measures which could include the use of a specialist drainage contractor and the development of a drainage remediation plan means that the residual impact on land drainage under Scenario 2 is **moderate adverse**.

21.3.4 Impact 4: Degradation to Natural Resource

21. There is the potential for soils to be compacted and soil structure to deteriorate during the construction of the proposed East Anglia TWO and East Anglia ONE North projects. The effect of this impact is usually reduced fertility and crop yields. During construction Scenario 1 or 2, land taken out of existing use will be double the footprint size than that affected by the proposed East Anglia TWO project alone.
22. The soils within the proposed onshore development area are dominated by freely draining slightly acid sandy soils, therefore susceptible to compaction, and difficult to handle during wet periods using machinery without causing structural degradation. Given these characteristics, the soil resource at the site

is conservatively considered to be of high sensitivity with respect to potential for degradation during the construction period.

23. The magnitude of the effect is considered to be low for Scenario 1. This magnitude will increase to medium under construction Scenario 2 due to the increase in construction phase duration. Under construction Scenario 2 as the worst case, the impact is considered to be of major adverse significance. Additional mitigation measures which could include the Applicant consulting on private agreements with landowners regarding any measures required in relation to crop loss incurred as an indirect consequence of degradation of the soil resource. This additional mitigation results in the residual impact on land drainage under Scenario 2 being **minor adverse**.

21.3.5 Impact 5: Impact to Utilities

24. The onshore cable corridor of the proposed East Anglia TWO project alone has been selected to avoid major buried utilities; however, the additional footprint affected by the proposed East Anglia TWO and East Anglia ONE North projects together (under Scenario 1 or 2), there is potential that additional utilities will intersect with the onshore infrastructure than for the proposed East Anglia TWO project alone.
25. However, the Applicant would be required to contact potentially affected utility providers and identify the location of existing services on the ground prior to construction. Major utilities will be covered by identifying protective provisions in the drafting of the DCO, and with the use of crossing agreements. The Applicant would undertake utility crossings or diversions in accordance with the appropriate standards for such crossings or works. The continuation of water supplies will be ensured. Therefore, **no impacts** associated with existing utilities are anticipated during the construction of the proposed East Anglia TWO and East Anglia ONE North projects regardless of construction scenario.

21.3.6 Impact 6: Impact to Common Land

26. During the construction period, there is potential for impacts on common access land. One area of common land falls within the proposed onshore development area, at the landfall Thorpeness Common) and five are adjacent to the proposed onshore development area. Common access land is of medium sensitivity as it is protected by local planning policy.
27. The magnitude of the impact is low irrespective of construction scenario due to the types of construction activity associated with the common land. Construction works at the landfall will primarily comprise of drilling under the land with no construction footprint on Thorpeness Common (except where emergency access may be required). Potential accesses for construction on

Thorpeness Common will be along already existing access routes. Common land which is adjacent to the proposed onshore development area will not be subject to closures or loss of access because they can be accessed from the side which is not adjacent to the proposed onshore development area, therefore users of the land are unlikely to be affected in terms of access. Overall, the impact on common land is **minor adverse** irrespective of construction scenario.

21.4 Cumulative Impacts Assessment during Operation

28. During the operational phase of the proposed East Anglia TWO project alone, there will be no above ground infrastructure at the landfall or along the onshore cable route. Permanent infrastructure is associated with the onshore substation and National Grid infrastructure.
29. During the cumulative operational phase of the proposed East Anglia TWO and East Anglia ONE North projects, similarly there will be no above ground infrastructure at the landfall or along the onshore cable route. Permanent infrastructure is associated with the East Anglia TWO and East Anglia ONE North onshore substations and National Grid infrastructure, therefore the cumulative operational footprint at the substation site will be greater than that for the proposed East Anglia TWO project alone.
30. The East Anglia TWO and East Anglia ONE North onshore substations will be co-located (**Figure 21.7**) meaning that no differing parcels of land (with an increased sensitivity) will be affected by the addition of the second substation. The footprint increase from the proposed East Anglia TWO project alone is not considerable when agricultural activities considered at a regional level.
31. It should additionally be noted that the East Anglia ONE North onshore substation will be subject to the same mitigation measures as those applied to the East Anglia TWO onshore substation.
32. Overall, cumulative operational impacts on land use and agriculture for the proposed East Anglia TWO and East Anglia ONE North projects will be no greater than operational impacts for the proposed East Anglia TWO project alone.

21.5 Summary

33. **Table A21.3** gives an overarching summary of which of the two construction scenarios, detailed above, will be the realistic worst case in terms of impacts relating to land use and agriculture.

Table A21.3 Summary of Scenario 1 and Scenario 2 Realistic Worst Case Assumptions

| Impact | Worst Case | Notes |
|---|------------|--|
| Impact 1: Land taken out of Existing Use | Scenario 2 | Duration is longer for scenario 2 |
| Impact 2: Impact to ESS | Scenario 2 | Duration is longer for scenario 2 |
| Impact 3: Impact to Land Drainage | Scenario 2 | Duration is longer for scenario 2 |
| Impact 4: Degradation to Natural Resource | Scenario 2 | Impact is the same regardless of construction scenario |
| Impact 5: Impact to Utilities | n/a | Impact is the same regardless of construction scenario |
| Impact 6: Impact to Common Land | n/a | Impact is the same regardless of construction scenario |

34. Overall, construction scenario 2 creates a realistic worst case in terms of impacts to land use and agriculture. Therefore, scenario 2 will be carried through into the wider CIA with other developments, see **section 21.7** in **Chapter 21 Land Use**.