HELIOS RENEWABLE ENERGY PROJECT

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Pursuant to:
APFP Regulation 5(2)(a)

Environmental Statement Chapter 10: Transport and Access

June 2024

10. Transport and Access

10.1. Introduction

10.1.1. This chapter of the ES reports on the assessment of the likely significant effects of the Proposed Development on transport and access.

10.1.2. This chapter has been prepared by Transport Planning Associates ('TPA'). TPA is a corporate partner of the Chartered Institution of Highways and Transportation ('CIHT') (refer to **Appendix 1.1 [EN010140/APP/6.3.1.1]**).

10.1.3. This chapter is supported by the following Figures:

- **Figure 10.1 Study Area [EN010140/APP/6.2.10.1]**;
- **Figure 10.2 Sensitivity of Links in Study Area [EN010140/APP/6.2.10.2]**;
- **Figure 10.3 Public Rights of Way [EN010140/APP/6.2.10.3]**;
- **Figure 10.4 Survey Locations [EN010140/APP/6.2.10.4]**; and
- **Figure 10.5 Site Access Locations [EN010140/APP/6.2.10.5]**.

10.2. Planning Policy Context

10.2.1. The proposals have been considered in the context of the following national and local policy documents:

- NPS EN-1; (designated January 2024)[1];
- NPS EN-3 (designated January 2024) [2];
- NPS EN-5 (designated January 2024) [3];

- National Planning Policy Framework (December 2023)[4];
- Selby District Council Core Strategy Local Plan (2013)[5]; and
- Selby Local Plan Revised Publication (2024)[6].

National Planning Policy

NPS EN-1

10.2.2. Section 5.14 of the NPS EN-1 relates to the traffic and transport effects of electricity network infrastructure. It states that:

> *'the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects.*
>
> *Environmental impacts may result particularly from trips generated on roads which may increase noise and air pollution as well as greenhouse gas emissions..*
>
> *Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal'.*

10.2.3. For assessment purposes, paragraph 5.14.5 of the NPS EN-1 states that:

> *'if a project is likely to have significant transport implications, the applicant's ES (see Section 4.3) should include a transport appraisal. The DfT's Transport Analysis Guidance (TAG) and Welsh Governments WelTAG provides guidance on modelling and assessing the impacts of transport schemes'.*

10.2.4. With regards to decision-making, paragraph 5.14.21 of the NPS EN-1 states that:

[4] Available at: https://assets.publishing.service.gov.uk/media/65819679fc07f3000d8d4495/NPPF_December_2023.pdf Accessed January 2024

[5] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010120/EN010120-000986-D2_North%20Yorkshire%20County%20Council%20and%20Selby%20District%20Council_Responses%20to%20the%20Examining%20Authority%E2%80%99s%20written%20questions%20(ExQ1)%20-%20Selby%20District%20Core%20Strategy%20October%202013.pdf Accessed January 2024

[6] Available at: **https://selby-consult.objective.co.uk/file/6303893** Accessed April 2024

'The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision'.

NPS EN-3

10.2.5. Section 2.10.120 of the NPS EN-3 relates to construction traffic impacts from solar PV developments. It states that:

'Modern solar farms are large sites that are mainly comprised of small structures that can be transported separately and constructed on-site, with developers designating a compound on-site for the delivery and assemblage of the necessary components.'

10.2.6. Paragraph 2.10.121 states:

'Many solar farms will be sited in areas served by a minor road network. Public perception of the construction phase of solar farm will derive mainly from the effects of traffic movements, which is likely to involve smaller vehicles than typical onshore energy infrastructure but may be more voluminous'.

10.2.7. For assessment purposes, the NPS EN-3 states that:

'Applicants should assess the various potential routes to the site for delivery of materials and components where the source of the materials is known at the time of the application and select the route that is the most appropriate. (paragraph 2.10.123)

…

Applicants should ensure all sections of roads and bridges on the proposed delivery route can accommodate the weight and volume of the loads and width of vehicles. Although unlikely, where modifications to roads and/or bridges are required, these should be identified, and potential effects addressed in the ES. (paragraph 2.10.125)

Where a cumulative impact is likely because multiple energy infrastructure developments are proposing to use a common port and/or access route and

pass through the same towns and villages, applicants should include a cumulative transport assessment as part of the ES. This should consider the impacts of abnormal traffic movements relating to the project in question in combination with those from any other relevant development. Consultation with the relevant local highways authorities is likely to be necessary'. (paragraph 2.10.126)

10.2.8. In terms of mitigation, the NPS EN-3 sets out the following:

'In some cases, the local highway authority may request that the Secretary of State impose controls on the number of vehicle movements to and from the solar farm site in a specified period during its construction and, possibly, on the routeing of such movements particularly by heavy vehicles'; (paragraph 2.10.139)

'Where the Secretary of State agrees that this is necessary, requirements could be imposed on development consent'; (paragraph 2.10.140)

'Where cumulative effects on the local road network or residential amenity are predicted from multiple solar farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised, and the timings of deliveries are managed and coordinated to ensure that disruption to residents and other highway users is reasonably minimised'; (paragraph 2.10.141)

'It may also be appropriate for the highway authority to set limits for and coordinate these deliveries through active management of the delivery schedules through the abnormal load approval process'; (paragraph 2.10.142)

'Once consent for a scheme has been granted, applicants should liaise with the relevant local highway authority (or other coordinating body) regarding the start of construction and the broad timing of deliveries. Applicants may need to agree a planning obligation to secure appropriate measures, including restoration of roads and verges' (paragraph 2.10.143); and

'Further it may be appropriate for any non-permanent highway improvements carried out for the development (such as temporary road widening) to be made available for use by other subsequent solar farm developments'.

(paragraph 2.10.144)

10.2.9. With regards to operational impacts from solar PV developments, the NPS EN-3 states that:

'Once solar farms are in operation, traffic movements to and from the site are generally very light, in some instances as little as a few visits each month by a light commercial vehicle or car. Should there be a need to replace machine components, this may generate heavier commercial vehicle movements, but these are likely to be infrequent'; (paragraph 2.10.161)

'The Secretary of State is unlikely to give any more than limited weight to traffic and transport noise and vibration impacts from the operational phase of a project'. (paragraph 2.10.162)

National Planning Policy Framework (2023)

10.2.10. Paragraph 115 of the National Planning Policy Framework ('NPPF') states that:

'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

10.2.11. Paragraph 117 of the NPPF states:

'All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed'.

Local Planning Policy

Selby District Council Core Strategy Local Plan (2013)

10.2.12. One of the core objectives of the SDC Core Strategy Local Plan (2013) is to focus new development in the '*most sustainable locations, where reasonable public transport exists, and taking full account of local needs and environmental, social and economic constraints*' (Objective 3 of paragraph 3.5).

10.2.13. Policy SP17 directly relates to low-carbon and renewable energy developments stating that the council will '*consider identifying 'suitable areas' for renewable and low carbon energy sources and supporting infrastructure'*. Development proposals

seeking to implement a new source of renewable energy are required to meet several criteria, whereby they

- Are designed and located to protect the environment and local amenity; or
- Can demonstrate that the wider environmental, economic, and social benefits outweigh any harm caused to the environment or local amenity; and
- Impacts on local communities are minimised.

Sleby Local Plan Revised Publication 2024

10.2.14. Policy IC6 of the Selby Local Plan states that the "*Council will work with other authorities, stakeholders, transport providers and developers to deliver a suitable transport network and associated infrastructure which supports sustainable travel, accessible to all, and helps to deliver net-zero carbon emission across the Plan Area."* In addition, Policy IC7 states that "*development which may have an impact on a Public Right of Way network will only be supported where I can be demonstrated that:*

A. Satisfactory and alternative routes are provided, with adequate signage and the new access is of the same or better standard; and

B. Where appropriate and viable, all reasonable opportunities for enhancement have been taken up. Enhancements can include:

1. *New or improved links to the existing Public Right of Way or sustainable travel network, including public transport, especially where routes can minimise conflict.*
2. *The provision of improved facilities to make routes more accessible or attractive to users."*

10.2.15. Policy SG10 of the SDC Local Plan Publication Version (2022) states that appropriate weight, consideration and mitigation needs to be given to the *'Impact on Infrastructure and Transport Networks including highways, rail, aviation, operations, navigational systems, PROW, television, radio, telecommunications systems'.*

10.3. Assessment Methodology

10.3.1. This section sets out the assessment methodology. It sets out the study area, types

of effects that will be assessed, the significance criteria, and any limitations to the assessment.

10.3.2. This methodology has been prepared with consideration *to 'Guidance on Transport Assessments'*, published by the DfT in March 2007 (which is now archived but still considered relevant), *'Guidelines for the Environmental Assessment for Road Traffic and Movement'*[7], published by the Institute of Environmental Management and Assessment ('IEMA') (referred to as the 'IEMA Guidelines') and the *'Design Manual for Roads and Bridges'* ('DMRB'), published by National Highways.

Study Area

10.3.3. The study area (refer to **Figure 10.1 Study Area [EN010140/APP/6.2.10.1]**) for this assessment has been identified to cover the local roads which comprise the construction and decommissioning vehicle routes to the Site. This is the area within which potential significant effects to transport and access are likely to occur.

10.3.4. The roads included within this study area are as follows:

- M62 near Junction 36;
- A614;
- A645;
- A1041 (Bawtry Road);
- Hardenshaw Lane; and
- Jowland Winn Lane.

10.3.5. Two alternative routes were considered for the routing of construction vehicles:

- The first would route vehicles from Junction 37 of the M62 to the Site via the A63, A19 and A1041. Vehicles would then arrive at the Site from the north. This route was not taken forward for assessment as it is less direct and more convoluted than the proposed route that is assessed; and
- The second route would bring vehicles off the M62 at Junction 34. Vehicles would travel along the A19, A63 and A1041, to access the Site from the north. This route was not taken forward as it is less direct than the proposed route, and routes

[7] Institute of Environmental Assessment & Management (IEMA) (2023), *Guidelines for the Environmental Assessment of Road Traffic and Movement*

through more settlements, including Eggborough, Chapel Haddlesey and Burn.

10.3.6. As these routes will not be used by construction or decommissioning vehicles, they are not included within the study area.

Sources of Information

10.3.7. The following sources of information have been used in this assessment of likely significant transport and access effects resulting from the Proposed Development:

- Automatic Traffic Count ('ATC') surveys;
- DfT 'Road Traffic Statistics' Database[8];
- Personal Injury Accident ('PIA') Data, obtained from North Yorkshire County Council ('NYCC') (now NYC);
- Highway boundary information obtained from NYC;
- Ordnance Survey mapping; and
- Topographical surveys.

Types of Effect

10.3.8. In accordance with the IEMA Guidelines, which comprises best practice guidance for the assessment of the environmental effects of road traffic from a proposed development, the following criteria has been considered in this assessment:

- Road user and pedestrian safety;
- Severance of communities;
- Road vehicle driver and passenger delay;
- Non-motorised delay (incorporating delay to all non-motorised users[9]);
- Non-motorised user amenity;
- Fear and Intimidation and
- Hazardous loads/ large loads.

10.3.9. A description of each criterion is provided below.

[8] Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints Accessed June 2023 for latest data
[9] Non-motorised users comprise pedestrians, cyclist and equestrians

Road User and Pedestrian Safety

10.3.10. The IEMA Guidelines do not include any definition in relation to the assessment of effects on accidents and safety. They advise that obtaining collision cluster data and using professional judgement should be used to assess the implications of local circumstances, or factors which may increase or decrease the risk of accidents.

Severance of Communities

10.3.11. The IEMA Guidelines define severance as *'the perceived division that can occur within a community when it becomes separated by major transport infrastructure'* (paragraph 3.13) that '*separate people from places and other people'*, for example, difficulties crossing existing roads or the physical barrier created by the infrastructure itself.

10.3.12. There are no predictive formulae which give simple relationships between traffic factors and levels of significance. Nevertheless, there are a range of indicators for determining the significance of the relief from severance. The IEMA Guidelines suggest that *'changes in traffic flow of 30%, 60% and 90% are regarded as producing slight, moderate and substantial changes in severance respectively'* (paragraph 3.16). The guidance also suggests that *'very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic*'. To counteract this, the guidance recommends a holistic approach to take into regard the local conditions around the site to determine the significance of severance.

Road Vehicle Driver and Passenger Delay

10.3.13. The IEMA Guidelines state that '*delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system*' (paragraph 3.20). As such, the impact of a proposed development on driver delay is typically considered in relation to background traffic. Junction assessment modelling can be used to estimate increased vehicle delays at junctions, if necessary.

Non-Motorised User Delay

10.3.14. The IEMA Guidelines state that *'changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the*

general level of pedestrian activity, visibility and general physical conditions of the development site' (paragraph 3.24). There are a range of local factors that affect non-motorised user delay, including the level of pedestrian (and all non-motorised users) activity, visibility and general physical conditions of the site. However, the IEMA Guidelines do not set out definitive thresholds for judging the significance of changes in levels of delay and suggest that the assessor uses their judgement to determine whether pedestrian (and all non-motorised user) delay is a significant effect.

Non-motorised User Amenity

10.3.15. Non-motorised user amenity is broadly described in the IEMA Guidelines as *'the relative pleasantness of a journey'* (paragraph 3.29) and can be affected by traffic flow, composition and pavement width/ separation from traffic. Users of public rights of way ('PRoW') may also be affected by construction traffic. This definition includes pedestrian (and non-motorised user) fear and intimidation and can be considered a much broader category when considering the overall relationship between pedestrians (and other non-motorised users) and traffic. The IEMA Guidelines suggest that a threshold for judging this would be *'where the traffic flows (or its lorry component) is halved or doubled'* (paragraph 3.30). However, the IEMA Guidelines encourage full regard to specific local conditions for a better assessment.

Fear and Intimidation

10.3.16. The IEMA Guidelines state that 'a further environmental impact that affects people is the fear and intimidation created by all moving objects'.

10.3.17. The extent of fear and intimidation is dependent on:

- The total volume of traffic;
- The heavy vehicle composition;
- The speed these vehicles are passing; and
- The proximity of traffic to people

10.3.18. The IEMA Guidelines state there is no commonly agreed threshold for estimating levels of fear and intimidation. However, it suggests that a study by Crompton and Gilbert (1976) could be useful. These thresholds define the degree of hazard to pedestrians by average traffic flow, heavy vehicle flow and average speed. The IEMA

Guidelines state that 'while most of these factors can be quantified, there will be a need for judgement to be exercised in determining the degree of fear and intimidation'.

Hazardous Loads / Large Loads

10.3.19. The IEMA Guidelines state that '*some developments may involve the transportation of dangerous or hazardous loads by road and this should be recognised within any traffic and movement assessment*' (paragraph 3.49).

10.3.20. Some deliveries to the Site during the construction phase will be regarded as 'hazardous loads'. These include the deliveries of lithium-ion batteries, transformer oil and insulation gas. All applicable regulations for the movement of hazardous loads will be followed, and the appropriate documentation will be obtained.

10.3.21. In addition, there will be abnormal loads to transport the transformers to the substation. An abnormal load is one where the vehicle exceeds 44 tonnes, the width is more than 2.9m or the length is more than 18.65m. It is not considered hazardous.

Assessment of Significance

10.3.22. The assessment of the Proposed Development's potentially significant effects has taken into account the construction phase, operational phase and the decommissioning phase. The effects for the decommissioning phase are likely to be equivalent to, and no worse than, the construction phase. This is due to best practice changing over time. Whilst the precise decommissioning methodology is not currently known, it will accord with the requirements of NYC and be in line with the Decommissioning Environmental Management Plan ('DEMP'), to be secured by DCO requirement. The significance level attributed to each effect (set out above) has been assessed based on the sensitivity of the affected receptor to change, and the magnitude of change as a result of the Proposed Development.

Sensitivity of Receptor and Magnitude of Change

10.3.23. Table 10.1 provides definitions to determine the sensitivity of a receptor.

Table 10.1: Sensitivity/Importance of Identified Receptor

Sensitivity	Definition
High	Receptors of greatest sensitivity to traffic flows, such as schools, hospitals, playgrounds/recreational spaces, accident blackspots, retirement/nursing homes. Includes areas with no footways with high pedestrian footfall and congested areas.
Medium	Receptors with moderate sensitivity to traffic flow, such as conservation areas, historical buildings, tourist attractions, and residential areas
Low	Receptors with low sensitivity to traffic flows, and those distant from affected roads
Negligible	Receptors with no material sensitivity to traffic flows

10.3.24. The study area, as shown in **Figure 10.1 [EN010140/APP/6.2.10.1]**, mainly comprises A-class roads. There are few receptors on the A-class roads (such as schools, retirement homes, high pedestrian footfall), which are considered to have a high sensitivity to changes in traffic flows. Therefore, these roads are classified as having a low sensitivity. There are also two unclassified roads within the study area that connect the various parcels of land (Hardenshaw Lane and Jowland Winn Lane). Whilst there are no sensitive receptors on these lanes, they are more sensitive to changes in traffic. Notwithstanding this, they do not have significant non-motorised user flows, and do not form non-motorised user desire lines. These lanes are classified as having medium sensitivity.

10.3.25. The sensitivity of receptors along links within the study area are summarised in **Figure 10.2 Sensitivity of Links/Receptors within the Study Area [EN010140/APP/6.2.10.2]**.

10.3.26. The IEMA Guidelines set out two rules which have been used as threshold impacts to define the scale and extent of the assessment, as follows:

- Rule 1: Include highway links where traffic flows will increase by more than 30% (or where the number of heavy goods vehicles ('HGV') will increase by more than 30%); and
- Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.

10.3.27. It is notable that, on roads where baseline traffic flows are low (such as on Hardenshaw Lane and Jowland Winn Lane), any increase in traffic flow may result in a predicted increase that would be higher than the two rules set out in the IEMA Guidelines. However, it is important to consider any overall increase in road traffic in relation to the capacity of the road.

10.3.28. The IEMA Guidelines state at paragraph 4.5:

> *'For many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed up by data or quantified information wherever possible'* and *'those preparing the Environmental Statement will need to make it clear how they have defined whether a change is considered significant or not'.*

10.3.29. The IEMA Guidelines identify general thresholds for traffic flow increases of 10% and 30%. Where the predicted increase in traffic/ HGV flow is lower than these thresholds, then the significance of the effects should be considered to be minor or not significant and further detailed assessment is not required. However, to ensure a robust assessment of the increase in traffic flows in environmental terms, Table 10.2 has been used to help determine the magnitude of change for each effect.

Table 10.2: Magnitude of Change

Effect	Source	Neutral	Negligible	Low	Medium	High
Road User Safety	Professional Judgement	No Change	Based on professional judgement following analysis detailed in the TA on collision history and the nature of movements associated with the Scheme.			
Severance of Communities	IEMA Guidance	No Change	Change in total traffic or HGV flows of 10%-30%	Change in total traffic or HGV flows of 30% to 60%	Change in total traffic or HGV flows of 60% to 90%	Change in total traffic or HGV flows over 90%
Road User Delay	Professional judgement	No Change	Changes which are unlikely to be perceptible (based on a judgement).	Changes which are likely to be perceptible but not to the extent that it would materially change conditions which would otherwise prevail.	Changes which are likely to be perceptible and which would materially change conditions which would otherwise prevail to the extent that it may affect travel behaviour to measurable degree.	Changes which are likely to be perceptible and which could change conditions which would otherwise prevail to the extent that it would significantly affect travel behaviour.
NMU Delay	Professional judgement	No Change				
NMU Amenity	Professional judgement	No Change	Magnitude of impact is based on professional judgement regarding the “pleasantness” of a journey and is affected by the composition, speed or volume of traffic introduced as a result of the Proposed Development. The IEMA Guidance suggests that assessors use their judgement to determine whether pedestrian amenity is a significant effect and as such, the magnitude of change for pedestrian amenity has been defined qualitatively based on professional judgement.			
Fear and Intimidation	IEMA Guidance	No Change	No step changes in line with criteria set out in IEMA guidance	One step change in level, with • <400 vehicles increase in average 18hr AV two-way all vehicle flow; and/or • <500 HV increase in total 18hr HV flow	One step change in level, but with • >400 vehicles increase in average 18hr AV two-way all vehicle flow; and/or • >500 HV increase in total 18hr HV flow	Two step changes in level
Hazardous Loads	Professional judgement	No Change	Magnitude of impact to be based on professional judgement following the outcomes of the abnormal loads assessment which will be an appendix to the Transport Assessment, frequency and size of abnormal loads and consideration of wider traffic effects.			

Significance of Effect

10.3.30. The magnitude of change and receptor sensitivity have been compared to determine the overall significance of effects. This is shown in Table 10.3.

10.3.31. There are four categories demonstrating the significance of the effect. comprise:

- Negligible: Very little change from baseline conditions;
- Minor Beneficial / Adverse: A minor shift away from baseline conditions;
- Moderate Beneficial / Adverse: A material shift away from the baseline conditions; and
- Major Beneficial / Adverse: Substantial alteration from baseline conditions.

Table 10.3: Significance of Potential Effects

Magnitude	Sensitivity			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor/Moderate	Negligible
Low	Moderate	Minor/Moderate	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

10.3.32. Identified effects that are moderate, or major are considered to be 'significant' in EIA terms.

10.3.33. Whilst this is a useful guideline, the effects do need to be reviewed using professional judgement in the context of baseline traffic flows. Within the study area, some roads are rural in nature with low baseline traffic flows. In these locations, the addition of any traffic could result in high percentage changes (over 100% in places). However, as the baseline flows are low, the effects could still be considered minor or negligible and therefore not significant.

10.3.34. The effects can be temporary or permanent, and short, medium or long term in duration. The duration of these effects is considered to be as follows:

- A short-term effect: an effect that will be experienced for up to one years;
- A medium-term effect: an effect that will be experienced for one to five years; and
- A long-term effect: an effect that will be experienced for five years or longer.

Limitations and Assumptions

10.3.35. Several assumptions have been made when forecasting the traffic generation of the Proposed Development, both during construction and operation (it is predicted that decommissioning traffic generation will not exceed that of construction). These forecasts have been developed by the Applicant and the assessor based on professional judgement and derived from experience with other developments similar in size, scale and nature to the Proposed Development. Therefore, they are considered to represent a realistic estimation of traffic generation for the Proposed Development.

10.3.36. On roads where baseline traffic flows are low (such as on Hardenshaw Lane and Jowland Winn Lane), any increase in traffic flow may result in a predicted increase that would be higher than the two rules set out in the IEMA Guidelines. However, it is important to consider any overall increase in road traffic in relation to the capacity of the road.

10.3.37. Notwithstanding the limitations and assumptions referenced, it is considered that the methodology used and the identification of effects from the Proposed Development in this chapter are robust.

Consultation

10.3.38. An EIA Scoping Report was submitted to the Planning Inspectorate ('PINS') on 7th June 2022 (**Appendix 2.1 [EN010140/APP/6.3.2.1]** of the ES). PINS adopted its EIA Scoping Opinion on 14th July 2022 (**Appendix 2.2 [EN010140/APP/6.3.2.2]** of the ES). Separately a virtual meeting was held with a Transport and Development Engineer on 18th August 2022.

10.3.39. As discussed in **Chapter 1 [EN010140/APP/6.1.1]** of this ES, the PEIR was issued on 26th October 2023 for Statutory Consultation. Responses from statutory consultees, including NYC and National Highways were received in December 2023. Following this, a meeting was held with National Highways on 6th February 2024, and with transport officers at NYC on 12th February 2024.

10.3.40. Table 10.4 provides a summary of the transport and access related comments made by relevant stakeholders during the EIA Scoping exercise and Statutory Consultation, and how these responses have been addressed in this ES.

Table 10.4: Summary of Consultation

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
EIA Scoping Opinion			
PINS	EIA Scoping Opinion (4th July 2022)	*'Operational effects are proposed to be scoped out on the basis that the traffic movements associated with maintenance activities will be minimal (up to 10 two-way movements per month). On the basis of the low anticipated operational traffic volumes, the Inspectorate is content to scope this matter out from further assessment provided the ES confirms the type and number of maintenance vehicles and the likely operational traffic flows'.*	Refer to paragraph 10.6.51 which confirms operational traffic will not exceed 10 two-way movements per month.
		'The Scoping Report does not reference providing a transport assessment. The ES should include a Transport Assessment that considers the impacts of the development on access and accessibility, sustainability and the free-flow of traffic to inform the assessment of significant effects'.	A T**ransport Assessment [EN010140/APP/7.8]** has been prepared to support the application.
		'Access routes to the site are not currently specified and are proposed to be set out in a construction access strategy. Mitigation measures set out in Scoping Report paragraph 10.6.22 do not include utilising existing accesses where possible. The Proposed Development should utilise existing accesses where possible and where new accesses are proposed this approach should be justified'.	Refer to paragraph 10.6.3 for confirmation of access points.

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
		'No surveys have been undertaken or are proposed to inform the baseline use of the PRoW that are existing on site. There is also no indication as to whether these PRoW will be retained or if there is scope to alter them. *The ES should appropriately characterise the baseline use of the affected PRoW and describe any alterations to PRoW during construction/decommissioning. Effort should be made to retain and enhance PRoW where possible. Where this has potential to influence other assessments, this should be cross referenced e.g. Landscape and Views'.*	Refer to paragraph 10.4.5 for confirmation of any PRoWs that will be affected due to the Proposed Development. No PRoW will be closed or diverted during the construction, operational or decommissioning phases of the Proposed Development.
Jacobs Systra Joint Venture ('JSJV') on behalf of National Highways	EIA Scoping Response (30th June 2022)	*'Stantec state that a Construction Traffic Management Plan [CTMP] will be prepared and will form a technical appendix to the ES Transport and Access chapter.* *JSJV welcomes this approach and would note that the CTMP should be provided to National Highways for review and agreement in writing prior to commencement of the development'.*	An outline Construction Traffic Management Plan ('OCTMP') has been prepared to support the application and can be found at **Appendix 5.2 [EN010140/APP/6.3.5.2]**. This will be agreed with North Yorkshire Council, who will consult National Highways, prior to commencement of the construction of the Proposed Development.
		'The ES Transport Chapter should be informed by a robust Transport Assessment. National Highways acknowledge that, during the operational phase, there is likely to be a limited number of two-way trips generated, particularly in the peak hour periods. *National Highways would reiterate, nonetheless, that given the nature and scale of development and its proximity to the SRN, the planning*	A **Transport Assessment [EN010140/APP/7.8]** has been prepared to support the application.

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
		application should be accompanied by a TA and this should consider the impacts of the development on access and accessibility, sustainability and the free flow of traffic'.	
		'Whilst traffic generation is likely to be minimal, the Applicant should consider the need for a Travel Plan. National Highways supports and requires the preparation and implementation of Travel Plans to limit the volume of private vehicle trips to and from developments and to promote sustainable modes of travel'.	A Construction Worker Travel Plan has been prepared to support the application and can be found within the oCTMP at Appendix 10.2.
Network Rail	EIA Scoping Response (4th July 2022)	*'[The Application] should also include a Transport Assessment to identify any HGV traffic/haulage routes associated with the construction and operation of the site that may utilise railway assets such as bridges and level crossings during the construction and operation of the site'.*	A **Transport Assessment [EN010140/APP/7.8]** has been prepared to support the application.
NYC	EIA Scoping Response (4th July 2022)	*'We have read through the report and are comfortable that the items identified within the report are acceptable. Included is a statement regarding the committed sites so that is very encouraging. I note the reference to glare from the site. Solar panels are likely to give some glare but at this point we are unsure how we would deal with this. I assume they will erect fencing to protect road users so we look forward to further consultation'.*	Refer to **Appendix 2.5 Solar Photovoltaic Glint and Glare Study [EN010140/APP/6.3.2.5]** of the ES for further information.

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
UK Health Security Agency	EIA Scoping Response (4th July 2022)	*'The traffic and transport assessment should assess the impacts on cyclists and horse riders, including usage data'.*	Refer to paragraph 10.6.46 for the assessment of impacts on cyclists and horse riders, which confirms the impact to be not significant.
Statutory Consultation (Section 42)			
North Yorkshire Council (NYC)	Statutory Consultation Response (15th December 2023)	'*The delivery corridor vehicles will take to access the site is acceptable and has been suggested for other similar projects close to the site. Although clearly programming of each approved project will be needed to avoid congestion on the network. The transport assessment should include such projects and suggest ways each developer shall interact to reduce their combined impact on the highway network'.*	This information is included in the **Transport Assessment [EN010140/APP/7.8]**.
		'*Temporary closures and the like may require all concerned to discuss their separate construction programmes. This should all be included in the C.T.M.P'.*	Temporary road closures would not be required on a day to day basis. Rolling road closures for abnormal loads may be required and will be included in the detailed CTMP to be agreed at detailed design.
		'*The final design of each junction will need agreement with L.H.A'.*	The detailed design of access points will be agreed with the Local Highway Authority ('LHA').
		'*A road safety audit shall be prepared by either the L.H.A or the developer'.*	A Road Safety Audit has been undertaken. The details of this are set out in the Transport Assessment at **Appendix 10.1 [EN010140/APP/6.3.10.1]**

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
		'*The LHA would like the developer to confirm that there are no additional access points being created as part of the project'.*	**Figure 10.5 [EN010140/APP/6.2.10.5]** displays the proposed access locations.
		'*National Highways are responsible for the motorway network of which M62 is part and they have raised questions over the expected numbers to use Junction 34 to access the site. Therefore, the L.H.A notes this and awaits the developer feedback on this point.*'	TPA's response to National Highways is included within the T**ransport Assessment [EN010140/APP/7.8].**
		'*Whilst the LHA agrees existing traffic flows are very low on Jowland Winn Lane and Hardenshaw Lane, the impact of additional vehicles will result in some disruption and damage such as over running the verge as well as damage to the highway construction may occur'.*	A Road Condition Survey will be secured through a requirement of the DCO, and will be included in the detailed oCTMP.
		'*Jowland Winn Lane and Hardenshaw Lane do not have footways of road lights, therefore, the LHA is concerned about pedestrian safety and this needs to be addressed. This should be highlighted in the CTMP*'.	Measures for the mitigation of potential adverse effects are confirmed through the oCTMP.
		'*The residents on Hardenshaw Lane near the junction with the A1041 will be affected by the increase in traffic flows whether they are low at present or not. Therefore, the developer is encouraged to review whether it's possible to avoid using this Lane for the construction element of the site*'.	The proposed construction route does not include the identified section of Hardenshaw Lane close to the A1041, therefore this section and the residents shall not be affected by construction traffic and no further information is provided
		'*Decommissioning of the site will be a similar process to the construction in terms of vehicle numbers. The LHA would expect to be consulted again at this stage to ensure work is undertaken safely*'.	The LHA will be consulted prior to decommissioning.

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
		'*The developer should be aware that any work on the highway will need consultation with the authority on such matters as informing the public and street work approval in connection with implementing the two access points, which will need to be prepared by the developer. The Authority sees this being included in the D.C.O*'.	This is noted.
TransPennine Trail and Sustrans	Statutory Consultation Response (7th November 2023)	'*The term pedestrian is used throughout the documentation to represent pedestrians, cyclists and equestrians. It is recommended that this is changed as legally all have different legal status where public rights of way are concerned. Please change to either a more inclusive term or specify pedestrians, cyclists and equestrians'.*	Following the release of the updated IEMA guidelines in July 2023, all references to pedestrians, cyclists and equestrians have been updated to reflect the change to non-motorised users in the guidance.
		'There is no mention of the eastern spur of the TPT from Selby to Hornsea that passes to the north of the River Ouse to the north of the development'.	The TPT will not be affected by construction traffic or access as the route is to the north of the A1041 and therefore positioned away from the construction route, therefore this has not been included in this assessment.
		'The application provides an opportunity to enhance off-road options as well as the Trans Pennine Trail / National Cycle Network itself'.	The Landscaping Strategy, as described in Chapter 7 Landscape and Views, will enhance the PRoW network on-Site, to encourage public use, through the provision of screening planting or by offsetting the proposed PV arrays by 15m from the PRoW, with a buffer of grassland grown to a substantial sward to integrate the Proposed Development within the landscape. The Proposed Development will also provide permissive footpaths to encourage use of the Site by non-motorised users.

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
		'There could be a better option to provide and upgrade the 'pink route' below to bridleway status: [see figure]…'There may also be an opportunity to provide a link from Drax to the Trans Pennine Trail / National Cycle Network, particularly if Note 2 was progressed, as shown below [see figure]'.	As above.
		'Reference should include the eastern spur of the Trans Pennine Trail / National Cycle Network that travels north of the site on the northside of the River House via Hemingbrough and Barmby on the Marsh'.	The TPT will not be affected by construction traffic or access as the route is to the north of the A1041 and therefore positioned away from the construction route therefore this has not been included in this assessment.
		'Table 10.5 should clearly indicate the status of the Prow noted, eg footpath or bridleway'.	Table 10.5 has been amended to reflect the status of each PRoW.
		'Where is the detail to indicate what will happen to these PRoW – should include reference to 10.6.43'.	Additional details regarding the ProW are included within the **oCTMP [EN010140/APP/6.3.5.2]** (Appendix 10.2) and a PRoW Management Plan will be produced at detailed design.
		'This application also provides an opportunity to enhance the current PRoW offer – where is this detailed?'	The enhancement of the existing PRoW network is discussed in **Chapter 7 Landscape and Views [EN010140/APP/6.1.7]**.
		'Advanced warning with onsite signage is advised on PRoW that may include horses who can be easily spooked by heavy machinery.'	PRoW Management Measures are included within the **oCTMP [EN010140/APP/6.3.5.2]** (Appendix 10.2)

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
National Highways	Statutory Consultation Response (20th November 2023)	*'Further, we would expect the ES to be informed by a Transport Assessment [TA] and Travel Plan [TP], developed in accordance with prevailing policy, particularly Circular 01/2022. For example, we would expect to see multi-modal [person] trip rates before and after the implementation of measures to maximise active and sustainable travel and limit the use of the private car.'*	The **Transport Assessment [EN010140/APP/7.8]** and Travel Plan [APPLICATION REF] state the policy and best practice that these documents are written in accordance with. Multi-modal trip rates are not required due to the nature of the Proposed Development.
		'With regard to the TA and TP, in accordance with our previous comments we note that the trip generation methodology and its assignment on to the SRN should be discussed and agreed with National Highways.'	Discussions have been held between the Applicant and National Highways on 6th February 2024 to discuss the trip generation and assignment.
		'Further, we also reiterate that the TA should include a collision data analysis covering the most recently available complete five-year period for the SRN, including the M62 junction 36; M62 / M18 junction; and M62 junction 34 and elsewhere on the SRN where traffic generation is considered to result in a material impact.'	Collision data has been included for the M62 Junction 36 and is shown in Table 10.8 of this Chapter.
		'The PEIR notes that a Construction Traffic Management Plan [CTMP] will also be submitted to accompany the ES. The CTMP should include the following: • *A dust management plan;* • *A noise management plan;* • *Pollution prevention measures;* • *Staffing numbers;* • *Contractor parking;* • *Construction traffic routes;*	The oCTMP has been updated to reflect this (**Appendix 5.2**) **[EN010140/APP/6.3.5.2]**. The dust management plan is provided within the Construction Dust Risk Assessment provided at **Appendix 2.3 [EN010140/APP/6.3.2.3]**; these measures will be implemented through the detailed CEMP. Measures to mitigate potential adverse noise effects are provided at **Chapter 11 Noise [EN010140/APP/6.1.11]**, and are detailed in the oCEMP at **Appendix 5.1**

Consultee	Type and Date	Summary of Response	Response to Consultee: ES
		• *Details of delivery arrangements (including for any abnormal loads); and* • *Measures to limit and manage transfer of debris onto the highway.'*	**[EN010140/APP/6.3.5.1]**. These will be implemented via the detailed CEMP.
Hirst Courtney and West Bank Parish Council	Statutory Consultation Response (7th December 2023)	*'7. Alongside various projects locally expected around the same time, there will be a huge impact in terms of traffic'*	An assessment of potential cumulative impacts has been set out in Section 10.9 of this Chapter.
		'11. Loss of public access routes'	Access to the existing PRoWs will be maintained through all phases of the Proposed Development; should temporary closures be required to ensure the safety of PRoW users, these will be for a short period during construction and decommissioning and alternate routes will be provided.

10.4. Baseline Conditions

The Site and Context

10.4.1. The Site is located to the west of Drax Power Station. Within the vicinity of the Site are the A1041 to the north and east, Hirst Road to the south and the East Coast Main Railway Line to the west. The land within the Site is connected via several unclassified roads, which are currently used primarily for the movement of agricultural vehicles. A full description of the Site and the Proposed Development is provided in **Chapter 3 Site and Development Description [EN010140/APP/6.1.3]** of the ES.

Non-Motorised Users (Walking, Cycling and Equestrians)

10.4.2. The pedestrian and cycling facilities within the study area are as summarised below:

- Goole Interchange/ A614: The Goole Interchange features a shared pedestrian and cycle way alongside the westbound carriageway, which develops into a footway on the A614. This continues onto the A614 until the Glew services roundabout, where the footway/cycleway crosses onto the opposite side of the carriageway. After a short section, the path becomes a footway only, which continues along the whole of the A614 until the A645 roundabout;
- There are no pedestrian or cyclist facilities on the A645 between the A614 roundabout and A645/ Main Road/New Road (Drax Power Station) Roundabout;
- After the A645/ Main Road/ New Road roundabout, footways are present along both sides of the carriageway for 500m until the westbound footway ends. The eastbound footway continues and links onto the A1041 at the roundabout. There are no cycling facilities on this section of the network;
- On the A1041, the footway continues to route along the south-eastbound side of the A1041's carriageway. However, from the 'Council Houses' bus stop, the footway ends on the eastbound side and resumes on the westbound side. The westbound footway continues to route along the A1041 until ending past the Black Dog Inn. The footways do not resume along the A1041 within the vicinity of the Site past this point; and
- There is limited dedicated cycle infrastructure surrounding the Site within the study area. However, the National Cycle Network Route 62 does operate alongside Hirst Road, to the south of the Site, and along Common Lane to the

east of the Site. National Cycle Network Route 62 connects Fleetwood in Lancashire with Selby in North Yorkshire. It forms the west and central sections of the Trans Pennine Trail, which is a long-distance path running from coast to coast across northern England.

Public Rights of Way

10.4.3. There are several PRoWs that run through or nearby the Site. The PRoWs are summarised in Table 10.5 and shown in **Figure 10.3 Public Rights of Way [EN010140/APP/6.2.10.3]**.

Table 10.5: Public Rights of Way

PROW Ref	PROW Type	Approximate Route
35.14/8/3	Footpath	This PRoW routes from Hagg Bush House in a south-easterly direction to connect onto 35.14/9/3 to the west of Fair Oaks.
35.14/9/3	Footpath	This PRoW routes east-west from 35.14/9/3 to 35.14/11/3.
35.14/11/3	Footpath	This PRoW routes from the track by Fair Oaks up to where the track joins onto Hagg Bush Lane in the north.
35.14/12/1	Footpath	This PRoW connects from 35.14/11/3 near Hagg Bush Lane and routes east and up through Primrose Hill to end on Common Lane.
35.14/13/1	Footpath	Extends from Common Lane, approximately 50m east of 35.14/12/1, and routes south to the copse of woods to the south of Apple Blossom Farm.
35.14/14/1	Footpath	Routes through the copse of woods, connecting between 35.14/13/1 and 35.14/11/3.
35.14/14/2	Footpath	This PRoW connects from 35.14/13/1, routes east and exits by the lake, approximately 200m east of the copse of woods.
35.17/1/1	Footpath	This PRoW routes from the brook by Fair Oaks for approximately 400m before heading east and then north to connect onto Chestercourt Lane from Chestercourt Hall Farm.
35.17/5/1	Footpath	Accessed from Drax Golf Club delivery access and continues south over the railway line
35.17/6/1	Footpath	Routes south from the A645 through fields and over the railway line to the west of 35.17/5/1
35.17/8/1	Footpath	Cuts through between Mill Lane of Camblesforth and onto the A645
35.18/1/2	Footpath	This PRoW connects from Common Lane and connects onto 35.14/11/3 by Fair Oaks.
35.18/3/2	Footpath	This PRoW begins on Brick Lands Lane, approximately 1km north of Old Lane and routes northeast through Quosquo Cottages and onto Jowland Winn Lane.

PROW Ref	PROW Type	Approximate Route
35.18/6/1	Footpath	This PRoW routes from Camilla Close to Claypit Lane (track) in a north-westerly direction.
35.18/13/1	Bridleway	This bridleway follows the track from Race Lane to Sandwith Lane in a north-south alignment.
35.18/14/1	Footpath	This PRoW extends between Jowland Winn Lane, where 35.18/3/2 originates and extends northwest to connect onto 35.18/1/2.
35.38/2/1	Footpath	This PRoW connects between Old Lane and Brick Lands Lane cutting through the field.

Public Transport

Bus

10.4.4. The nearest bus stops with waiting facilities are located on the A1041. The east bound bus stop situated 900m to the east of the nearest access point on Hardenshaw Lane, referred to as 'Council Houses', features a dedicated bus layby and bus flag. The westbound stop situated 850m east of the Hardenshaw Lane access, referred to as 'Poplar Tree Farm', features a sheltered seating area with bus flag and timetable information. The stops are served by three services, these are summarised in Table 10.6.

Table 10.6: Summary of Existing Bus Services

Route Number	Approximate Frequency	Route Summary
2	One service per day	Newport – Howden – Camblesforth – Selby
8	Every 120 minutes	Drax – Camblesforth – Brayton – Selby
401	Every 60-90 minutes	Goole – Howden – Camblesforth – Selby

Rail

10.4.5. Snaith Railway Station is located approximately 4.8km south of Camblesforth. The railway station operates on the Pontefract Line, which runs between Leeds Railway Station to the west and Goole Railway Station to the east. There are only two services per day in each direction for Snaith Railway Station.

10.4.6. Selby Railway Station is located approximately 8km north of Camblesforth. Train destinations include York, Hull, London Kings Cross, and Liverpool Lime Street with services operating from the station at an approximate frequency of between 20 and 60 minutes.

Local Highway Network

10.4.7. An overview of the local highway network within the study area is provided below.

A614

10.4.8. The A614 is a two-way single carriageway road subject to a 60 miles per hour (mph) speed limit. The road extends from Junction 36 of the M62 motorway (Goole Interchange) and routes east where it joins the A645 via a three-arm roundabout.

A645

10.4.9. The A645 is a two-way single carriageway road subject to a 60-mph speed limit. The road routes between the A614 and Drax before continuing to the south of Camblesforth to connect to the A1041.

A1041

10.4.10. The A1041 is a two-way single carriageway road subject to a 60-mph speed limit. The road connects the village of Snaith, to the south of the Site, to Selby, to the north of the Site. On-Site observations and traffic surveys indicate that the A1041 within the vicinity of the Site is already well used by HGVs.

10.4.11. The A1041 forms 'Station Road' and 'High Street' within the village of Carlton, to the south of the Site. On these parts of the A10411, the speed limit reduces to 30mph. There are a number of side junctions into local residential streets, and footways on both sides of the road.

Unnamed Roads

10.4.12. A number of unnamed rural roads and private lanes are located within the Site. These have low existing traffic flows and are largely used for access to the surrounding agricultural fields, including within the Site.

Traffic Flows

10.4.13. ATC surveys have been undertaken for all roads within the study area. These were undertaken between 4th March 2022 and 10th March 2022. In addition, DfT data[10] and

[10] Department for Transport Road Traffic Statistics, Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints Accessed in June 2023

WebTRIS[11] data has been reviewed for the A614 and M62 near to junction 36. The average weekday two-way traffic count for the ATC survey locations within the vicinity of the Site are set out in Table 10.7. The ATC survey locations are shown in **Figure 10.4 Survey Locations [EN010140/APP/6.2.10.4]**.

Table 10.7 Baseline Traffic Flows – Average Day (24 HR), Two-Way

ATC Survey Location	Link	Sensitivity	Total Vehicles	%HGV[12]
1	A614	Low	12,171	8%
2	A645	Low	7,382	8%
3	A1041 (Bawtry Road)	Low	12,207	6%
4	Jowland Winn Lane	Medium	50	6%
5	Hardenshaw Lane	Medium	104	2%
6	M62 near J36	Low	52,000	24%

10.4.14. The traffic flows in Table 10.8 show that HGVs are already present in the baseline conditions on all local roads, which therefore demonstrates a precedent for HGV use on these roads.

Road Safety

10.4.15. Statistics showing Personal Injury Collisions (PIC) on the local road network within the study area have been obtained from NYCC (now NYC) for the most recent five-year period up to and including May 2023. At the request of National Highways (NH), the M62 Junction 36 has been included. PICs records for this junction have been taken from the CrashMap database.

10.4.16. A breakdown of the accidents is shown in Table 10.8.

Table 10.8: Personal Injury Collision Data (2018-2023)

Ref	Link	Slight	Serious	Fatal	Total
1	A614	3	4	0	7
2	A645	10	1	0	11
3	A1041 (Bawtry Road)	6	0	0	6
4	Jowland Winn Lane	0	0	0	0
5	Hardenshaw Lane	0	0	0	0
6	M62 Junction 36	3	1	0	4
Total		22	6	0	28

[11] Flows taken from National Highways WebTRIS data for the M62 (November 2023)
[12] A HGV refers to any Heavy Goods Vehicle that has a gross weight over 3.5 tonnes. '*A Simplified Guide to Lorry Types and Weights*' *Department for Transport, October 2003*.

10.4.17. Table 10.8 indicates a total of 28 collisions within the study area over the five-year period. Of these collisions, 22 resulted in slight injuries, and six was serious. There were no fatal accidents within the study area.

10.4.18. Generally, collisions appear to be distributed throughout the study area and no specific highway safety issue has been identified as a result.

Future Baseline Conditions

10.4.19. There are currently no planned highway works within the study area beyond routine maintenance.

10.4.20. Traffic flows may change slightly as a result of cumulative developments in the area. This is discussed further in section 10.9 'Cumulative Effects' of this chapter.

10.4.21. To pick up background traffic growth, industry standard TEMPro growth factors, which have been adjusted in line with the National Traffic Model (NTM), have been applied to the observed traffic flows. A baseline year of 2027 has been assumed, as the start date for construction of the Proposed Development.

10.4.22. The TEMPro growth factor for Selby District is shown in Table 10.9.

Table 10.9: TEMPro Growth Factor (2022-2027) – Average Day

Year	Growth Factor
2022-2027	1.0351

10.4.23. The 2027 future baseline traffic flows are shown in Table 10.10.

Table 10.10: Future Baseline (2027) Traffic Flows – Average Weekday (24HR), Two-way

Link	Sensitivity	Total Vehicles	%HGV
A614	Low	12,598	8%
A645	Low	7,641	8%
A1041 (Bawtry Road)	Low	12,635	6%
Jowland Winn Lane	Medium	51	6%
Hardenshaw Lane	Medium	108	2%
M62	Low	53,825	24%

10.5. Likely Significant Effects

Embedded Mitigation

Construction Phase

10.5.1. The following embedded mitigation measures will be implemented during the construction phase:

- Maintaining access to all existing PRoWs within the Site. Should temporary closures be required to ensure the safety of PRoW users, these will be for a short period during construction and decommissioning and alternate routes will be provided or closures; and
- Providing suitable points of access for construction vehicles.

Operational Phase

10.5.2. The following embedded mitigation measures will be implemented during the operational phase:

- Maintaining access to all existing PRoWs within the Site. Should temporary closures be required to ensure the safety of PRoW users, these will be for a short period during construction and decommissioning and alternate routes will be provided or closures;
- Providing suitable points of access for operational vehicles; and
- The planting of landscaping and screening to conceal any reflections from the panels, which could affect drivers on the local highway network.

Decommissioning Phase

10.5.3. The following embedded mitigation measures will be implemented during the decommissioning phase:

- Maintaining access to all existing PRoWs within the Site. Should temporary closures be required to ensure the safety of PRoW users, these will be for a short period during construction and decommissioning and alternate routes will be provided or closures; and
- Providing suitable points of access for decommissioning vehicles.

Measures to be Adopted by the Project

Construction Phase

10.5.4. An **Outline CTMP ('oCTMP') [EN010140/APP/6.3.5.2]** has been prepared and is included as. A detailed CTMP will be secured through a DCO requirement at detailed design.

10.5.5. The oCTMP provides a framework for the management of construction vehicle movements to and from the Proposed Development, to ensure that the effects of the temporary construction phase on the local highway network are minimised. The oCTMP sets out construction access arrangements, construction vehicle routing, construction vehicle trip generation, and the management/mitigation measures. It also summarises the requirements for vehicles transporting abnormal loads (for elements such as transformers).

10.5.6. A number of management measures are set out within the oCTMP for the control of vehicles associated with the construction phase, and will be formalised through the detailed CTMP. These include, but are not limited to the following:

- Signs to direct construction vehicles associated with the development to be installed along the agreed construction traffic route. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to the Site to ensure that vehicles follow the identified route;
- Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road;
- All signage on the designated route will be inspected twice daily by the Site Manager (once in the morning and once at lunchtime), to ensure they are kept in a well-maintained condition and located in safe and appropriate locations;
- A compound area for contractors to be set up on-Site including appropriate parking spaces. Contractors and visitors will be advised that parking facilities will be provided on-Site in advance of visiting the Site and that they should not park on-street;
- A wheel wash facility to be provided ahead of exiting the Site allowing vehicles to be hosed down so that no construction vehicles will take mud or debris onto the local highway network;
- A road sweeper to be provided for surrounding local roads along the designated

route to alleviate any residual debris generated during the construction phase, as required;

- The Site to be secured at all times with Heras fencing;
- A requirement for engines to be switched off on-Site when not in use;
- Spraying of areas with water supplied as and when conditions dictate to prevent the spread of dust;
- Vehicles carrying waste material off-Site to be sheeted;
- Banksmen to be provided at the Site access junctions to indicate to construction traffic when it is safe for them to enter and exit the Site;
- Measures to ensure the safety of public rights of way users;
- Residents in the vicinity of the Site along the designated route to be provided with contact details of the Site Manager, which will also be provided on a Site-board at the Site access and egress junctions; and
- Agreement of a Road Condition Survey with NYC to be provided prior to construction, and agreed by DCO requirement.

Decommissioning Phase

10.5.7. A DCO requirement for a Decommissioning Traffic Management Plan ('DTMP') will be agreed with NYC prior to the commencement of the decommissioning phase of the Proposed Development, which will be secured through a DCO requirement**.** This will follow the principles of the oCTMP. It is not anticipated that the effects associated with decommissioning will be worse than during the construction phase.

Assessment of Likely Significant Effects

Construction Phase

10.5.8. This section summarises the likely effects associated with the movement of vehicles during the construction phase for the Proposed Development.

Construction Programme

10.5.9. The construction programme for the Proposed Development is anticipated to last 12 months, which equates to approximately 260 working days.

Construction Vehicle Accesses

10.5.10. There will be two main vehicle access points to the Site.

10.5.11. There will also be a number of locations where the internal access track will cross over the public highway.

10.5.12. Where the cable installation goes across the Drax Power Station railway line, works will be undertaken to the south of the A645. Therefore, there will be two cable route accesses .

10.5.13. The access locations are summarised in Table 10.11 and shown in **Figure 10.5 Site Access Locations [EN010140/APP/6.2.10.5]**.

Table 10.11 Access Locations

Ref	Location	Description	Use
1	A1041 (S)	Improved existing access	Construction Operation Decommissioning
2	A1041 (N)	New access	Construction Operation Decommissioning
3 and 4	Hardenshaw Lane and Sandwith Lane	Short section of public highway connecting the northern and southern section of the Site	Construction Operation Decommissioning
5	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
6	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
7	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
8	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
9	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
10	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
11	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning

Ref	Location	Description	Use
12	Unclassified road within Site	Field connection over public highway	Construction Operation Decommissioning
13	A645/Drax Sports and Social Club	Cable Route Access	Construction
14	A645/Drax Sports and Social Club	Cable Route Access	Construction

10.5.14. The locations shown for the field connections (access 5-12) are indicative at this stage, with the exact location to be fixed during the detailed design phase.

Construction Traffic Flows: HGVs Movements

Non-Grid Connection Elements

10.5.15. The construction phase will include the use of HGVs to bring the equipment onto the Site and this will be strictly managed to ensure that vehicle movement is controlled and kept to a minimum. On a day-to-day basis, the largest vehicle that will be used to deliver equipment to the Site will be a 16.5m articulated vehicle, although a significant proportion of movements will be by smaller vehicles. A summary of the construction activity that requires HGV movements is as follows:

- Delivery of solar modules and mounting structures – these make up the majority of deliveries. The largest vehicle used in these deliveries will be 16.5m articulated vehicles;
- Delivery of Inverters and Transformers;
- Delivery of Substation and BESS equipment;
- Delivery of material for the access track construction; and
- Other deliveries for items such as waste, fencing, sand and gravel, and for non-grid connection elements such as landscaping.

10.5.16. In total across the duration of the construction programme, there will be three abnormal load movements to transport large transformers.

Grid Connection/ Underground Cable Corridor

10.5.17. The grid connection route of the Proposed Development within the Underground Cable Corridor (shown on **Figure 3.2 Parameter Plan [EN010140/APP/6.2.3.2]** of the ES) will be approximately 2.1km in length. The construction of the grid connection

route includes the following elements:

- Construction of temporary haul road, and laydown areas;
- Open cut excavation;
- Construction of joint bays; and
- Cabling/jointing.

10.5.18. For the section of the cable corridor to the south of the Power Station, where it has to cross the railway line, access to the works area will be taken from the A645 via the existing access to Drax Sports and Social Club.

Total HGV Trips

10.5.19. Table 10.12 summarises the number of HGVs expected at the Site during the construction phase. It is expected that there will be a relatively consistent trip profile of deliveries throughout the construction period. Therefore, the average number of deliveries per day has been calculated based on the duration of the construction phase.

10.5.20. Whilst an average day is presented, it is acknowledged that there will be a small peak within the construction period, especially during the set up at the Site. To account for this, a 50% uplift on vehicle movements has been applied for the purposes of assessment to provide a reasonable worst-case scenario.

10.5.21. Construction vehicles will avoid travel during the network peak hours where possible. Therefore, deliveries will be scheduled for between 09:30 and 16:30, where possible.

Table 10.12: Construction Traffic Flows/HGVs Deliveries

Construction Activity	Vehicle Size (Maximum)	Non-grid Connection Elements of the Proposed Development	Grid Connection Element of the Proposed Development	Total
Construction Period (Working Days)		260	260	260
Ground Mounted PV Modules	16.5m Articulated	1,350	-	1,350
Conversion Units	16.5m Articulated	25	-	25
Access Track	10m Tipper	450	-	450
General (Fencing, Landscaping, etc.)	10m Rigid	1,100	-	1,100
BESS	16.5m Articulated	450	-	450
Substation	27.5m Abnormal Indivisible Loads ('AIL') Vehicle	3	-	3
Grid Connection	10m tipper	-	1,200	1,200
Total		3,378	1,200	4,578
Total Movements (Arrivals + Departures)		6,756	2,400	9,156
Average Arrivals per Day		13	5	18
Average Movements per Day (Arrivals + Departures)		26	10	36
Average Arrivals per Day (Peak Period – Plus 50%)		19	7	26
Average Movements per Day (Peak Period – Plus 50%)		38	14	52

10.5.22. In summary:

- Average HGV Arrivals + Departures per Day – 13 (26 Trips) for the non-grid connection elements and 5 (10 trips) for the grid connection element of the Proposed Development; and
- Peak HGV Arrivals + Departures per Day – 19 (38 Trips) for the non-grid connection elements and 7 (14 trips) for the grid connection element of the Proposed Development.

Construction Traffic Flows: Car/Light Goods Vehicle ('LGV') Movements

10.5.23. Estimates of construction worker flows are informed by Chapter 13 Socio-Economics, which calculates that up to 200 direct full time equivalent ('FTE') jobs could be supported by the Proposed Development during the construction phase. For this assessment, construction workers have been spread across the Site on a proportional basis.

10.5.24. For the grid connection of the Proposed Development, there will be approximately 10 construction workers on that part of the Site on a typical day.

10.5.25. Construction worker shifts will be scheduled so that workers are not traveling during the network peak hours of 08:00-09:00 and 17:00-18:00.

10.5.26. An Outline Construction Worker Travel Plan has been included within the **oCTMP [EN010140/APP/6.3.5.2]** which includes a measure for the provision of shuttle buses to transport construction workers to and from the Site. This is particularly important for non-local workers, who will stay in local accommodation and be transported to the Site. It can also be utilised by other workers as appropriate. It is expected that an average sized shuttle bus will be able to accommodate 20 workers. In addition, workers who drive will be encouraged to car share, where possible.

10.5.27. Therefore, it has been assumed that 50% of workers will arrive at the Site by shuttle bus. The remaining workers will arrive by car, with an assumed 1.5 construction workers per car, based on the national car occupancy average.

10.5.28. Based on a total of 200 construction workers, plus 10 for the grid connection, the forecast number of cars/LGVs are set out in Table 10.13.

Table 10.13: Cars and LGVs

	Non-Grid Connection Elements of the Proposed Development	Grid Connection Element of the Proposed Development	Total
Construction Workers	200	10	210
Shuttle Bus (20 workers per Bus)	5	-	5
Cars (1.5 Workers per Car)	67	7	74
Total Car/LGV (Arrivals)	72	7	79
Total Car/LGV Movements (Arrivals + Departures)	144	14	158

Construction Traffic Flows: Total Peak Day

10.5.29. The total traffic flows, based on the information set out above, is summarised in Table 10.14.

Table 10.14: Construction Phase Traffic Flows: Peak Day

Construction Traffic	Non-Grid Connection Elements of the Proposed Development	Grid Connection Element of the Proposed Development	Total
HGVs	19	7	26
Cars/LGVs	72	7	79
Total	91	14	105
Total Trips (Two-Way)	182	28	210

10.5.30. Table 10.14 demonstrates that there could be up to 210 arrivals and departures during a peak day during the construction phase. This is a reasonable 'worst-case' assessment, and on a typical day, traffic flows will be lower than this.

Construction Traffic Routes

10.5.31. The designated routes for all vehicles associated with the construction phase form the basis for the study area for this assessment. The routes are shown in **Figure 10.1 Study Area [EN010140/APP/6.2.10.1]**.

10.5.32. Delivery drivers, contractors and visitors will be advised of the route in advance of driving to the Site. The route has been designed to utilise the most appropriate roads available, avoid designated or protected areas, height and weight restrictions and residential area.

10.5.33. A summary of the construction vehicle route to both accesses is set out below:

- M62 J36 exit→A614→A645→A14041 Bawtry Road→Access 1 and Access 2

10.5.34. Vehicles will exit from the M62 via Junction 36. If vehicles arrive from the east, they will take the first exit of the roundabout onto the A614, if arrival is planned from the west, vehicles will take the third exit onto the A614, continue across the motorway bridge and then take the first exit of the second roundabout to continue onto the A614.

10.5.35. From here, vehicles will continue onto the A614 roundabout with Rawcliffe Road taking the second exit to stay on the A614 for approximately 1.3km. At the A614/A645 roundabout, vehicles will take the second exit onto the A645 heading northwest for approximately 4.6km until arriving at the roundabout of the A645 with New Road.

10.5.36. Vehicles will take the 1st exit to stay on the A645 heading south west towards Camblesforth. Approximately 2km southwest of the roundabout, vehicles will encounter the roundabout with the A1041. Vehicles will take the second exit onto the A4041.

10.5.37. From here, the first access point is approximately 2.2km northwest of this roundabout, and the second access point is approximately 2.8km northwest.

10.5.38. Further information on the construction traffic routes is set out in the **Transport Assessment [EN010140/APP/7.8]**.

Construction Traffic Flows

10.5.39. Table 10.15 sets out the construction traffic flows for the links within the study area on a peak day.

Table 10.15: Construction Traffic Flows

Ref	Link	Sensitivity	Total Vehicles	HGV
1	A614	Low	210	52
2	A645	Low	210	52
3	A1041 (Bawtry Road)	Low	182	38
4	Jowland Winn Lane	Medium	90	20
5	Hardenshaw Lane	Medium	46	10
6	M62	Low	210	52

2027 Baseline plus Construction Traffic Flows

10.5.40. The construction traffic flows set out in Table 10.15 have been added to the future baseline (2027) traffic flows set out in Table 10.10. This is summarised in Table 10.16 for all vehicles, and Table 10.17 for HGVs.

Table 10.16: Future Baseline (2027) Traffic plus Construction Traffic (Total)

Ref	Link	Sensitivity	Base 2027	Base 2027 plus the Proposed Development's Construction Traffic	% Change
1	A614	Low	12,598	12,808	2%
2	A645	Low	7,641	7,851	3%
3	A1041 (Bawtry Road)	Low	12,635	12,817	1%
4	Jowland Winn Lane	Medium	51	141	175%
5	Hardenshaw Lane	Medium	108	154	43%
6	M62	Low	53,825	54,035	0.4%

Table 10.17: Future Baseline (2027) Traffic plus Construction Traffic (HGVs)

Ref	Link	Sensitivity	Base 2027	Base 2027 plus the Proposed Development's Construction Traffic	% Change
1	A614	Low	1,054	1,106	5%
2	A645	Low	607	659	9%
3	A1041 (Bawtry Road)	Low	697	735	5%
4	Jowland Winn Lane	Medium	3	23	644%
5	Hardenshaw Lame	Medium	2	12	576%
6	M62	Low	12,758	12,810	0.4%

Further Assessment

10.5.41. As set out within this chapter, the IEMA Guidelines set out two rules which will be used as threshold impacts to define the scale and extent of the assessment, as follows:

- Rule 1: Include highway links where traffic flows will increase by more than 30% (or where the number of HGVs will increase by more than 30%); and
- Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.

10.5.42. Based on these 'Rules', Table 10.18 sets out which links should be taken forward for further assessment, on the basis of the percentage change in traffic flows and HGVs. Low sensitive links have been assessed against Rule 1, medium sensitive links have been assessed against Rule 2.

Table 10.18: Percentage Change and Total Vehicles and HGVs – Further Assessment

Ref	Link	Sensitivity	Total Vehicles	HGVs	Further Assessment Required
1	A614	Low	2%	5%	No
2	A645	Low	3%	9%	No
3	A1041 (Bawtry Road)	Low	1%	6%	No
4	Jowland Winn Lane	Medium	175%	644%	Yes
5	Hardenshaw Lane	Medium	43%	576%	Yes
6	M62	Low	0.4%	0.4%	No

10.5.43. Table 10.18 shows that two links have over a 30% increase in total vehicles or HGVs. This is on Jowland Winn Lane, from Access 1, and Hardenshaw Lane which connects the north and south of the Site. It should be noted that high percentage changes are more to do with low baseline traffic flows rather than the intensity of the construction traffic flows. For example, on Jowland Winn Lane, the baseline traffic flows consist of 51 vehicles per day, including three HGVs. Any change in traffic flow on this link will result in a large percentage change. This also applies to Hardenshaw Lane.

10.5.44. Whilst the majority of the links set out in Table 10.18 do not require further assessment, they have been commented on in the 'Likely Effects' section below.

Likely Effects: Road User and Pedestrian Safety

10.5.45. As set out in Table 10.8, there have been a total of 28 collisions within the study area during the most recent five-year period (up to and including 2023). Of these collisions, 22 resulted in slight injuries and six in serious injuries. No fatalities were recorded.

10.5.46. The IEMA Guidelines state that professional judgement should be used to assess the implications of local circumstances, or factors which may increase or decrease the risk of accidents.

10.5.47. Generally, accidents appear to be spread throughout the study area, rather than in

a specific location. Whilst the addition of any amount of traffic can increase the risk of accidents, it is considered that the low level of construction traffic associated with the Proposed Development is unlikely to materially affect safety on the links in the study area, irrespective of percentage changes in traffic flows. Therefore, the effects on road user and pedestrian safety from the Proposed Development's construction phase will be negligible (**not significant**).

10.5.48. In light of this, the likely effects on road user and pedestrian safety during the construction phase are set out in Table 10.19. All effects are temporary. In conclusion, the effects on accidents and safety are not considered to be significant.

Table 10.19: Effects on Road User and Pedestrian Safety

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Accidents & Safety
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Negligible (**not significant**)
5	Hardenshaw Lane	Medium	Short-term, Temporary	Negligible (**not significant**)
6	M62	Low	Short-term, Temporary	Negligible (**not significant**)

Likely Effects: Severance of Communities

10.5.49. As stated, the IEMA Guidelines define severance as '*the perceived division that can occur within a community when it becomes separated by major transport infrastructure'* (paragraph 3.13) that '*separate people from places and other people'*, for example, difficulties crossing existing roads or the physical barrier of the road itself. The IEMA Guidelines go on to suggest that '*changes in traffic flow of 30%, 60% or 90% are regarded as producing slight, moderate and substantial changes in severance respectively'* (paragraph 3.16). The guidance also suggests that *'very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic*. To counteract this, the guidance recommends a holistic approach to take into regard the local conditions around a site to determine the significance of severance.

10.5.50. On the A614, A645, A1041 and M62, changes in traffic flows are less than 10% Where baseline traffic flows are low, which is the case for the local roads within the study area, applying a percentage change in traffic to determine the effects for severance is not considered appropriate. For example, on Jowland Winn Lane, there is a 175% increase in total traffic flow during the Proposed Development's construction phase. However, this only relates to an increase to 142 movements over a 24-hour period. This will result in a negligible effect on severance. This also applies to Hardenshaw Lane. Therefore, professional judgement has also been applied to judge the effects on severance.

10.5.51. None of the roads in the study area are currently considered to act as a barrier that separates communities. For example, the settlement of Camblesforth is situated entirely to the north and east of the A1041 and is not severed by the A1041. Footways and crossings support non-motorised users. Both Hardenshaw Lane and Jowland Winn Lane are not major transport links that separate communities. They are mainly used for access to agricultural land. The addition of the construction traffic associated with the Proposed Development will not change this.

10.5.52. Therefore, the likely effects on severance during the construction phase are set out in Table 10.20. The effects are considered to be negligible and temporary. In conclusion, the effects on severance are **not considered to be significant**.

Table 10.20: Effects on Severance of Communities

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Negligible (**not significant**)
5	Hardenshaw Lane	Medium	Short-term, Temporary	Negligible (**not significant**)
6	M62	Low	Short-term, Temporary	Negligible (**not significant**)

Likely Effects: Road Vehicle Driver and Passenger Delay

10.5.53. The IEMA Guidelines state that '*delays are only likely to be significant when the*

traffic on the network surrounding the development is already at, or close to, the capacity of the system' (paragraph 3.20).

10.5.54. Capacity assessments on local junctions have not been undertaken for the assessment. As stated, construction vehicles will be coordinated through implementation of the detailed CTMP to avoid peak hour travel, the period where capacity constraints may occur, and, where possible, there will be no construction traffic on roads within the study area between 08:00-09:00 or 17:00-18:00.The forecast change in traffic flows on the M62, A645, A614 and A1041 is less than 3% over a daily period, which will not result in any material effect on driver and passenger delay.

10.5.55. As with severance, applying a percentage change in traffic to determine the effects for driver delay on local roads is not considered appropriate when the baseline traffic flows are low. Whilst the rural links in the network have high percentage changes in traffic flows during the construction phase, they start from a low baseline. For example, on Hardenshaw Lane, there is a 43% increase in traffic flows during the Proposed Development's construction phase. However, the 2027 baseline flows predict 108 two-way movements per day. This will increase to 153 two-way movements as a result of the Proposed Development's construction traffic. In this instance, whilst the percentage change in traffic flows is high, there will not be any significant delay to drivers or passengers associated with 154 two-way movements per day.

10.5.56. As such, the likely effect of construction traffic on road vehicle driver and passenger delay within the study area is unlikely to perceptible and is considered to be negligible and temporary, which is **not significant**. The likely effects are summarised in Table 10.21.

Table 10.21: Effects on Road Vehicle Driver and Passenger Delay

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Negligible (**not significant**)

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
5	Hardenshaw Lane	Medium	Short-term, Temporary	Negligible (**not significant**)
6	M62	Low	Short-term, Temporary	Negligible (**not significant**)

Likely Effects: Non-motorised User Delay

10.5.57. The IEMA Guidelines do not set out thresholds for judging the significance of changes in levels of non-motorised user delay and suggest that the assessor uses their judgement to determine whether there is a significant effect on non-motorised user delay.

10.5.58. PRoWs that cross the Site will generally remain open during the construction phase of the Proposed Development. There may be the requirement for some very temporary diversions of PRoWs where the cable is laid. This will only be required when the cable is being installed, will not likely last more than a day and alternate routes will be provided. If a temporary diversion of a PRoW is required for this short period, it will be appropriately managed in consultation with the local highway authority.

10.5.59. There may be some slight perceptible delay to non-motorised user movement if a construction vehicle is crossing a PRoW within the Site. Where vehicles are required to cross a PRoW within the Site, management and safety measures will be implemented. More information is provided within the **oCTMP [EN010140/APP/6.3.5.2].**

10.5.60. The likely effects on non-motorised user delay during the construction phase is set out in Table 10.22. The effects are considered to be negligible and temporary on the A614, A645 and A1041 and minor and temporary on Jowland Winn Lane, Hardenshaw Lane and on PRoWs within the Site. In conclusion, the effects on non-motorised user delay are **not significant**.

Table 10.22: Effects on Non-Motorised User Delay

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Minor (**not significant**)
5	Hardenshaw Lane	Medium	Short-term, Temporary	Minor (**not significant**)
6	M62	N/A	N/A	N/A

Likely Effects: Non-Motorised User Amenity (including Fear and Intimidation)

10.5.61. The IEMA Guidelines suggest that a threshold for judging effects on non-motorised user amenity would be '*where the traffic flows (or its lorry component) is halved or doubled*' (paragraph 3.30). As with other environmental impact criteria in the IEMA Guidelines, applying a percentage change in traffic to determine the effects is not considered appropriate when the baseline traffic flows are low.

10.5.62. As stated, the level of non-motorised user activity on the roads surrounding the Site is very low and therefore the sensitivity of the receptor is low. However, it is acknowledged that the addition of HGVs to the network will affect the relative pleasantness of any non-motorised user journey in the area.

10.5.63. With regards to fear and intimidation, the low level of change in traffic flows will not result in a step change in the level of fear and intimidation magnitude in line with the IEMA guidance.

10.5.64. The likely effects on non-motorised user amenity (including fear and intimidation) during the construction phase of the Proposed Development is set out in Table 10.23. The effects are considered to be negligible and temporary on the A614, A645 and A1041 and minor and temporary on Jowland Winn Lane, Hardenshaw Lane and on PRoWs within the Site. In conclusion, the effects on non-motorised user amenity are **not significant**.

Table 10.23: Effects on Non-Motorised User Amenity (including Fear and Intimidation)

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects – Severance
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Minor (**not significant**)
5	Hardenshaw Lane	Medium	Short-term, Temporary	Minor (**not significant**)
6	M62	N/A	N/A	N/A

Likely Effects: Hazardous Loads / Large Loads

10.5.65. There will be a maximum of three abnormal loads to transport the transformers for the Proposed Development's 132 kilo-volt ('kV') Substation to the Site. These movements will be managed by a specialist haulage company so that the potential effects are mitigated. The exact measures to be agreed with the LHA and police prior to the movements occurring. Additional details will be set out in the detailed CTMP, which will be secured through the DCO.

10.5.66. Overall, it is considered that the likely effects of the construction traffic on hazardous loads/ large loads will be negligible and temporary and therefore **not significant**.

Summary of Effects during Construction

10.5.67. The likely significant effects of the Proposed Development during the construction phase are summarised in Table 10.24.

Table 10.24 Summary of Effects during Construction Phase

Ref	Link	Sensitivity	Nature of Effect	Road User and Pedestrian Safety	Severance	Road Vehicle Driver Delay	Non Motorised-User Delay	Non-Motorised User Amenity (including Fear & Intimidation)	Hazardous Loads
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Minor (**not significant**)	Minor (**not significant**)	Negligible (**not significant**)
5	Hardenshaw Lane	Medium	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Minor (**not significant**)	Minor (**not significant**)	Negligible (**not significant**)
6	M62	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	N/A	N/A	Negligible (**not significant**)

Operational Phase

10.5.68. During the Proposed Development's operational phase, there are anticipated to be around five visits to the Site per month for maintenance purposes (less than one trip per day on average). These would typically be made by light van or 4x4 type vehicles. Whilst the construction compounds will have been removed at the end of the Proposed Development's construction phase, space will remain within the Site on the access tracks to enable a maintenance vehicle to turn around to ensure that reversing will not occur onto the highway. The access locations remain as those set out in Table 10.11 and shown in **Figure 10.5 Site Access Locations [EN010140/APP/6.2.10.5].**

10.5.69. There will be no operational phase effects on transport and access associated with the installed grid connection cables, as these will be located underground. Access may be required for maintenance, but this is only likely to be required once or twice a year, and is therefore negligible in scale and scoped out from further consideration.

10.5.70. In light of this, effects on road vehicle driver and passenger safety, severance, road vehicle driver delay, non-motorised user delay and amenity, and hazardous loads / large loads during the operational phase of the Proposed Development are considered to be negligible and **not significant**. The effects will be long-term temporary, as the modelled operational lifespan for the Proposed Development is 40 years.

Decommissioning Phase

10.5.71. As set out above, the modelled operational lifespan for the Proposed Development is 40 years, after which it will be decommissioned. The number of vehicles associated with the decommissioning phase are not anticipated to exceed the number set out for the construction phase, as set out in Table 10.12. An Outline Decommissioning Plan will be submitted to NYC for approval prior to decommissioning. This will be secured by a DCO requirement.

10.5.72. In light of this, the Proposed Development's decommissioning phase effects on road vehicle driver and passenger safety, severance, road vehicle driver delay, non-motorised user delay and amenity and hazardous loads/large loads are considered to be the same as shown in Table 10.24, as a reasonable worst-case assessment, and are therefore **not significant**. The effects will also be short term and temporary.

10.6. Mitigation Measures

Construction

10.6.1. No additional mitigation measures are required for the Proposed Development's construction phase.

Operational Phase

10.6.2. No additional mitigation measures are required for the Proposed Development's operational phase.

Decommissioning Phase

10.6.3. No additional mitigation measures are required for the Proposed Development's decommissioning phase.

10.7. Residual Effects

Construction Phase

10.7.1. The likely significant residual effects of the Proposed Development during the construction phase are summarised in Table 10.25. Table 10.25 shows that the residual effects in relation to transport and access as a result of the construction phase of the Proposed Development remain unchanged from those set out in section 10.5 'Likely Significant Effects' of the chapter (including accounting for the implementation of additional mitigation measures set out in section 10.6 'Mitigation Measures' above) and therefore will be **not significant**.

Table 10.25: Summary of Residual Effects during the Proposed Development's Construction Phase

Ref	Link	Sensitivity	Nature of Effect	Road User and Pedestrian Safety	Severance	Road Vehicle Driver Delay	Non-Motorised User Delay	Non-Motorised User Amenity	Hazardous Loads/Large Loads
1	A614	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)
2	A645	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)
3	A1041 (Bawtry Road)	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)
4	Jowland Winn Lane	Medium	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Minor (**not significant**)	Minor (**not significant**)	Negligible (**not significant**)
5	Hardenshaw Lane	Medium	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	Minor (**not significant**)	Minor (**not significant**)	Negligible (**not significant**)
6	M62	Low	Short-term, Temporary	Negligible (**not significant**)	Negligible (**not significant**)	Negligible (**not significant**)	N/A	N/A	Negligible (**not significant**

Operational Phase

10.7.2. During the operational phase of the Proposed Development, the residual effects on accidents and safety, severance, driver delay, non-motorised user delay and amenity and hazardous loads/ large loads will remain negligible as set out in in section 10.5 'Likely Significant Effects' of the chapter. Therefore, all residual effects in relation to Transport and Access as a result of the operational phase of the Proposed Development will be **not significant**.

Decommissioning Phase

10.7.3. The number of vehicles associated with the decommissioning phase are not anticipated to exceed the number set out for the construction phase, as set out in Table 10.15. An Outline Decommissioning Plan will be submitted to the local planning authority for approval prior to decommissioning. This will be secured by a requirement of the DCO.

10.7.4. In light of this, effects on road vehicle driver and passenger safety, severance, road vehicle driver delay, non-motorised user delay and amenity, and hazardous loads/large loads for the Proposed Development's decommissioning phase are considered to be the same as shown in Table 10.25, as a reasonable worst-case assessment. Therefore, all residual effects in relation to transport and access as a result of the decommissioning phase of the Proposed Development will be **not significant**.

10.8. Cumulative Effects

Construction Phase

10.8.1. From the shortlist of schemes selected for an assessment of cumulative effects (provided in **Chapter 15 Cumulative Effects [EN010140/APP/6.1.15]**), the following cumulative schemes are considered likely to have an effect on the study area, and are therefore scoped into an assessment of cumulative effects pertaining to transport and access. These are:

- Drax Power Station Bioenergy with Carbon Capture and Storage Project NSIP (Ref: EN010120);
- Land off New Road, Drax (Ref: 2020/1357/FULM);
- Land off Hales Road, Drax (Ref: 2021/1089/FULM);

- Land North and South of Camela Lane, Camblesforth (Ref 2021/0788/EIA);
- Drax Power Station, Drax (Ref: 2022/0107/NYSCO);
- Rusholme Grange, Rusholme Lane, Newland, Selby (Ref: 2021/0601/FUL);
- Land south of the A645, Drax (Ref: 2023/0128/EIA); and
- East Yorkshire Solar Farm NSIP (PINS Ref: EN010143).

10.8.2. These schemes have been selected for cumulative assessment due to their proximity to the Proposed Development or the routes used by construction or operational traffic share part of, or all, of the assigned construction vehicle route.

10.8.3. Table 10.26 sets out the additional traffic flows associated with these schemes, based on information that is publicly available.

Table 10.26: Traffic Flows Associated with Cumulative Schemes (24hr Daily Construction Flows)

Ref	Link	Drax Power Station Bioene-rgy[1]	Land off New Road[2]	Land off Hales Lane[3]	Land North and South of Camela Lane[4]	Drax Power Statio-n[5]	Rushol-me Grange[6]	Land south of A645[7]	East Yorkshire Solar Farm[8]	Total
1	A614	1,042	24	14	6	2	4	10	68	1,180
2	A645	1,042	32	14	6	2	4	10	68	1,188
3	A1041 (Bawtry Road)	398	8	0	6	0	0	0	0	412
4	Jowland Winn Lane	0	0	0	0	0	0	0	0	0
5	Hardenshaw Lane	0	0	0	0	0	0	0	0	0
6	M62	1,042	24	14	6	2	4	10	68	1,180

1. Sourced from Drax Power Station ES Chapter 5 Traffic and Transport. All construction vehicles will route via the A614 and A645 and assumes 30% staff will route via the A1041 from Selby.
2. Sourced from Land off New Road CTMP for route details and construction vehicle numbers taken from the CEMP. Two routes are proposed (preferred and alternative), therefore it was assumed 75% of vehicles would route via the preferred route (A614 and A645) and 25% via the alternative route (A63, A1041 and A645)
3. Sourced from Hales Lane Battery Storage Facility Transport Statement. Construction trips include enabling works, main construction phase and post-construction (includes for installation of fencing and CCTV)
4. Sourced from Land North and South of Camela Lane Construction Management Plan (CMP). All vehicles will route via the A1041, A645 and A614.
5. Sourced from Barlow Ash Mound EIA Scoping Report and Scoping Opinion. Assumes 100% road movement for robustness with the construction route using the A645 and A614 to access the M62.
6. Sourced from Rusholme Lane Transport Statement. All vehicles will route via the A614 and A645.
7. Sourced from Land off Wade House Lane, Carlton, Drax Transport Statement. All vehicles will route via the A614 and A645.
8. Sourced from East Yorkshire Solar Farm Transport Assessment. Vehicles routing to Compound E will route via the A614 and A645.

10.8.4. Table 10.27 sets out the development flows in the context of baseline traffic flows, and traffic flows associated with the cumulative schemes.

Table 10.27: Future Baseline (2027) Traffic plus Cumulative Schemes

Ref	Link	Baseline	Baseline plus Construction	Baseline plus plus Cumulative	%Change*
1	A614	12,598	12,808	13,988	9%
2	A645	7,641	7,851	9,039	15%
3	A1041 (Bawtry Road)	12,635	12,817	13,229	3%
4	Jowland Winn Lane	51	141	141	0%
5	Hardenshaw Lane	108	154	154	0%
6	M62	53,825	54,035	55,215	2%

**Compared to Baseline plus Proposed Development*

10.8.5. Table 10.27 shows that traffic flows associated with the cumulative schemes will have the largest effect on the A614 and A645. This is due to the majority of the schemes located near to these A-roads. These A-Roads have a low sensitivity. Therefore, whilst the cumulative traffic flow increase could be considered to be a moderate change (in line with Table 10.2) the effects remain minor and not significant (in line with Table 10.3). It should be noted that Table 10.27 represents a worst-case scenario, with the construction of all schemes taking place simultaneously.

Operational Phase

10.8.6. During the operational phase, the cumulative effects on accidents and safety, severance, driver delay, non-motorised user delay and amenity and hazardous loads/ large loads will remain negligible (**not significant**); therefore, there are not expected to be any significant cumulative effects in relation to Transport and Access as a result of the operation of the Proposed Development.

Decommissioning Phase

10.8.7. The cumulative effects on accidents and safety, severance, driver delay, non-motorised user delay and amenity and hazardous loads/ large loads for the decommissioning phase are considered to be the same as shown in Table 10.26, as a worst-case assessment; therefore, there are not expected to be any significant cumulative effects (**not significant**) in relation to Transport and Access as a result of the decommissioning of the Proposed Development.

10.9. Summary

10.9.1. This chapter has assessed the likely significant effects of the Proposed Development's construction, operational and decommissioning phases in relation to transport and access. The Proposed Development is not likely to result in any significant transport and access effects during its construction, operational and decommissioning phases.

10.9.2. The chapter has been prepared with consideration given to guidance prepared by the DfT, the IEMA Guidelines for Road Traffic and Movement, and the DMRB. The study area included that of the surrounding road network that will be utilised as part of the construction route to the Proposed Development which included the M62, the A614, A645, A1041 Bawtry Road, Hardenshaw Lane and Jowland Winn Lane. The assessment was assisted via a sourced information including ATC surveys, highway boundary information and topographical surveys.

10.9.3. Several mitigation measures are proposed, and these include the implementation of a detailed CTMP and a Travel Plan. These will be implemented and enforced throughout the construction phase, and an additional outline DTMP will be implemented during the decommissioning phase.

10.9.4. Effects assessed were road vehicle driver and passenger safety, severance, road vehicle driver delay, non-motorised user delay, non-motorised user amenity (including fear and intimidation), and hazardous loads/ large loads.

10.9.5. A peak of 210 two-way construction movements (including 52 HGVs) were predicted per day during the construction phase of the Proposed Development. Using 2027 as the baseline construction year, the modelled traffic for each of the roads within the study area only exceeded the IEMA Guidelines thresholds on two of the roads: Jowland Winn Lane and Hardenshaw Lane. These both exceeded the 30% increase in traffic threshold, although from a very low baseline. As a robust assessment, all roads within the study area were included within the assessment.

10.9.6. During the Proposed Development's construction and decommissioning phases, the majority of effects will be negligible, short-term and temporary. Non-motorised user amenity, resulted in a minor adverse, short-term and temporary effect. No effects will be significant. During the Proposed Development's operational phase, all effects will be negligible.

10.9.7. Several cumulative schemes that may be in effect during the construction of the Proposed Development and these were assessed for the future baseline year 2027. In total, six cumulative schemes would have an effect on the study area, affecting the M62, A614, A645 and the A1041. All roads are considered A-roads, apart from the M62, and as a number of the schemes had relatively low daily movement numbers, it was predicted that the cumulative schemes would result in the same residual effects for the construction of the Proposed Development. As such, depending on the effect, these were either negligible or minor adverse and all not significant. This was the same for the operational and decommissioning phases.

10.9.8. Table 10.28 contains a summary of the preliminary assessment of the likely significant effects of the Proposed Development.

Table 10.28 Table of Significance – Transport and Access

Potential Effect	Nature of Effect*	Significance **	Secondary Mitigation/ Enhancement Measures	Geographical Importance ***							Residual Effects ****
				I	UK	E	R	C	UA	L	
Construction Phase (accounting for Embedded Mitigation and Measures to be Adopted by the Project)											
Effects on Road User and Pedestrian Safety	Short-term, Temporary	Negligible	None required							X	Negligible (**Not Significant**)
Effects on Severance	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Road Vehicle Driver Delay	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Delay	Short-term, Temporary	Negligible/Minor Adverse								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Amenity (including fear and intimidation)	Short-term, Temporary	Negligible/Minor Adverse								X	Minor Adverse (**Not Significant**)
Effects of Hazardous Loads / Large Loads	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Operational Phase (accounting for Embedded Mitigation and Measures to be Adopted by the Project)											
Effects on Road User and Pedestrian Safety	Long-term, Temporary	Negligible	None required							X	Negligible (**Not Significant**)

Potential Effect	Nature of Effect*	Significance **	Secondary Mitigation/ Enhancement Measures	Geographical Importance ***							Residual Effects ****
				I	UK	E	R	C	UA	L	
Effects on Severance	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Road Vehicle Driver Delay	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Delay	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Amenity (including fear and intimidation)	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects of Hazardous Loads / Large Loads	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Decommissioning Phase (accounting for Embedded Mitigation and Measures to be Adopted by the Project)											
Effects on Road User and Pedestrian Safety	Short-term, Temporary	Negligible	None required							X	Negligible (**Not Significant**)
Effects on Severance	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Road Vehicle Driver Delay	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)

Potential Effect	Nature of Effect*	Significance **	Secondary Mitigation/ Enhancement Measures	Geographical Importance ***							Residual Effects ****
				I	UK	E	R	C	UA	L	
Effects on Non-Motorised User Delay	Short-term, Temporary	Negligible/Minor Adverse								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Amenity (including fear and intimidation)	Short-term, Temporary	Negligible/Minor Adverse								X	Minor Adverse (**Not Significant**)
Effects of Hazardous Loads / Large Loads	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Cumulative Effects											
Construction Phase											
Effects on Road User and Pedestrian Safety	Short-term, Temporary	Negligible	None required							X	Negligible (**Not Significant**)
Effects on Severance	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Road Vehicle Driver Delay	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Delay	Short-term, Temporary	Negligible/Minor Adverse								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Amenity (including fear and intimidation)	Short-term, Temporary	Negligible/Minor Adverse								X	Minor Adverse (**Not Significant**)

Potential Effect	Nature of Effect*	Significance **	Secondary Mitigation/ Enhancement Measures	Geographical Importance ***							Residual Effects ****
				I	UK	E	R	C	UA	L	
Effects of Hazardous Loads / Large Loads	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Operational Phase											
Effects on Road Vehicle Driver and Passenger Safety	Long-term, Temporary	Negligible	None required							X	Negligible (**Not Significant**)
Effects on Severance	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Road Vehicle Driver Delay	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Delay	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Amenity (including fear and intimidation)	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects of Hazardous Loads / Large Loads	Long-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Decommissioning Phase											
Effects on Road Vehicle Driver and Passenger Safety	Short-term, Temporary	Negligible	None required							X	Negligible (**Not Significant**)

Potential Effect	Nature of Effect*	Significance **	Secondary Mitigation/ Enhancement Measures	Geographical Importance ***							Residual Effects ****
				I	UK	E	R	C	UA	L	
Effects on Severance	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Road Vehicle Driver Delay	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Delay Delay	Short-term, Temporary	Negligible/Minor Adverse								X	Negligible (**Not Significant**)
Effects on Non-Motorised User Amenity (including fear and intimidation)	Short-term, Temporary	Negligible/Minor Adverse								X	Minor Adverse (**Not Significant**)
Effects of Hazardous Loads / Large Loads	Short-term, Temporary	Negligible								X	Negligible (**Not Significant**)
Nature of Effect * Significance** Geographical Importance *** Residual Effects ****	Permanent or Temporary Short-term, Medium-term, or Long-term Major/ Moderate/ Minor/ Negligible Beneficial/ Adverse I = International; UK = United Kingdom; E = England; R = Regional; C = County; UA = Unitary Authority; L = Local Major / Moderate / Minor / Negligible Beneficial / Adverse										