POWER FOR GOOD

Steeple Renewables Project

Applicant's additional traffic and PRoW survey data submitted at Deadline 2

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Applicant's additional traffic and PRoW survey data submitted at Deadline 2

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1.1.1 Attached are three Technical Notes providing additional survey data and assessment by the applicant that is the subject of ongoing discussion with consultees. Further comment is sought from any participants in the examination process. Any necessary amendments to application documents resulting from these discussions will be made at future deadlines :

- TN02 - Additional Survey information to support Public Right of Way Management Plan contained within the outline Construction Traffic Management Plan - Steeple Renewables Project DCO.
- TN03 - Additional Survey information to support Traffic Impact Assessment - Steeple Renewables Project DCO.
- TN04 - Additional Survey information to support ES Chapter – Transport and Access - Steeple Renewables Project DC0.

Transport Technical Note.

Additional Survey information to support Public Right of Way Management Plan contained within the outline Construction Traffic Management Plan - Steeple Renewables Project DCO.

On behalf of Steeple Solar Farm.

Planning Inspectorate Reference:	EN010163
Date:	07 January 2026
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1. Introduction

1.1. This Transport Technical Note (TN) has been prepared by Pegasus Group on behalf of the Applicant, Steeple Solar Farm. It provides additional data and analysis to confirm the Public Right of Way (PRoW) baseline users within the vicinity of the Steeple Renewables site., and the impact of the Proposed Development in traffic terms.

1.2. The proposed development is located in Nottinghamshire comprising approximately 450MW of solar energy generation and approximately 150MW Battery Energy Storage System (BESS).

1.3. The following information is provided in this TN regarding the traffic impact on the PRoW network in the vicinity of the site:

i. Context and scope of the PRoW assessment;
ii. Baseline Survey Methodology - existing PRoW users;
iii. Baseline Survey Results - existing PRoW users;
iv. Forecast development traffic impact on PRoW network; and
v. Proposed mitigation for the PRoW Routes impacted during construction.

1.4. This TN should be read alongside the Outline Construction Traffic Management (oCTMP) **oCTMP Appendix 13.2 [EN010163/APP/6.3.13]** dated April 2025 submitted with the DCO application. The PRoW Management Plan is provided at Chapter 7 in the oCTMP.

1.5. It is considered that this TN provides additional information to confirm that subject to appropriate mitigation that the traffic impact on the PRoW network is not significant.

2. Context and Scope

2.1. The Public Right of Way (PRoW) Management Plan available within the **oCTMP Appendix 13.2 [EN010163/APP/6.3.13]** Chapter 7 has been developed in order to identify where the proposed haul routes to and through the proposed development site cross or abut PRoW routes, and therefore where mitigation and careful management is required to minimise the potential for conflict between construction vehicles, private vehicles, and non-motorised users (NMU).

2.2. For reference, definitions of PRoW and their classifications are set out below.

2.3. PRoW is defined by Bassetlaw District council (BDC, the LPA) as being a route in which "*anyone may pass or re-pass along a right of way at any time. They provide a route into the countryside and around towns*"[1]. Nottinghamshire County Council (NCC, the LHA) set out four types of PRoW path[2], which are set out below:

i. Footpaths (FP) – This type of PRoW can only be used by walkers and is marked with yellow arrows

ii. Bridleways (BW) – This type of PRoW can be used by walkers, horse riders and cyclists and is marked with blue arrows

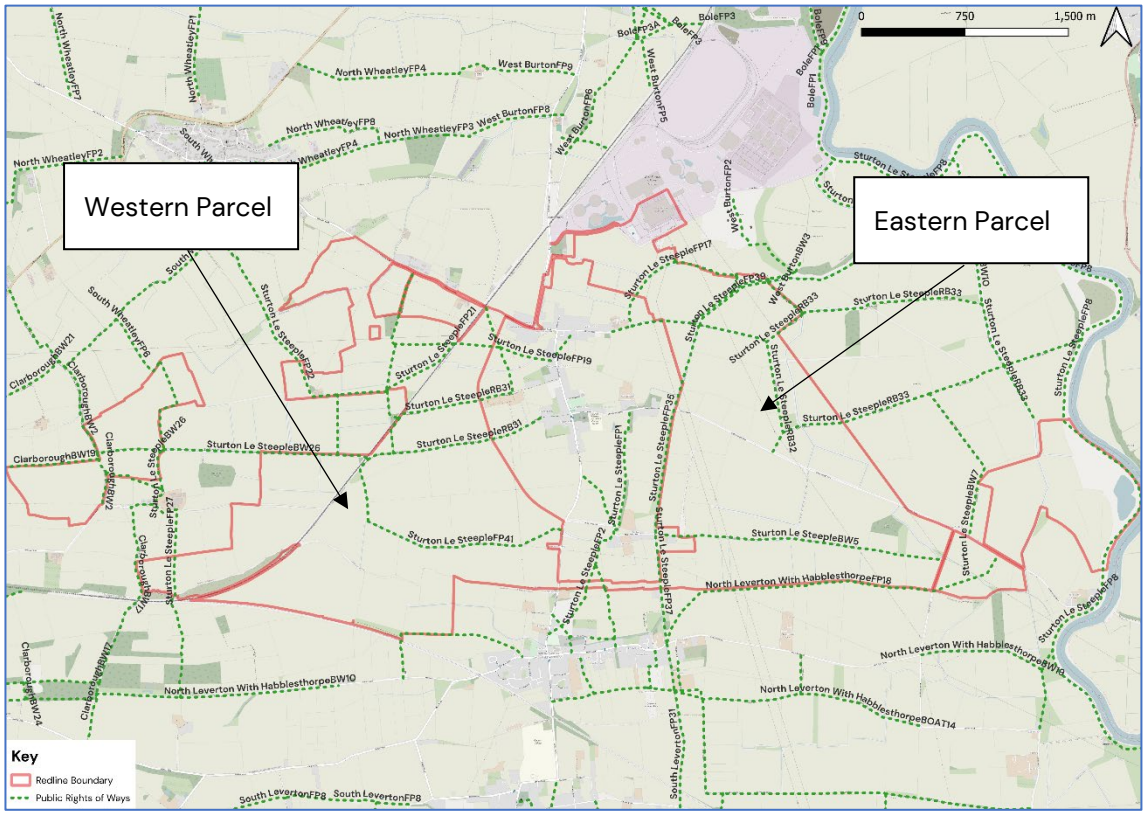
iii. Restricted byways (RB) - This type of PRoW is marked with burgundy arrows and can be used by walkers, horse riders, cyclists and horse and cart users. Cars and motorcycles are not allowed.

iv. Byways or Byway open to all traffic (BOAT) - This type of PRoW is marked with red arrows and can be used by all users, including walkers, horse riders, cyclists, car users, motorcyclists and horse and cart users.

2.4. The PRoW routes affected by the proposed Scheme, during the Construction Phase, are outlined as shown in **Plate 2.1**. The PRoWs that are considered to be affected by Haul Routes are listed in **Table 2.1.**

[1] Bassetlaw District Council – Public Rights of Way (May 2024)
[2] Nottinghamshire County Council – Rights of Way (Public Paths)

Plate 2.1 – PRoW within the vicinity of the site



Source: Open Street Map

Table 2.1 – PRoW Routes Affected by Haul Routes

PRoW Reference	Type of PRoW	Parcel (Western / Eastern)
Sturton le Steeple FP22	Footpath	Western Parcel
Sturton le Steeple RB30	Restricted Byway	Western Parcel
Sturton le Steeple FP21	Footpath	Western Parcel
Sturton le Steeple FP19	Footpath	Western Parcel
Sturton le Steeple RB31	Restricted Byway	Western Parcel
Sturton le Steeple BW25	Bridleway	Western Parcel
Sturton le Steeple FP41	Footpath	Western Parcel
North Leverton with Habblesthorpe FP24	Footpath	Western Parcel
Sturton le Steeple FP20	Footpath	Western Parcel
Sturton le Steeple FP17	Footpath	Eastern Parcel
Sturton le Steeple RB32	Restricted Byway	Eastern Parcel
Sturton le Steeple FP38	Footpath	Eastern Parcel
Sturton le Steeple FP39	Footpath	Eastern Parcel
Sturton le Steeple RB33	Restricted Byway	Eastern Parcel
Sturton le Steeple BW5	Bridleway	Eastern Parcel

2.5. Engagement has been undertaken with Public Rights of Way Officers at Nottinghamshire County Council (NCC) prior to the DCO submission and post-submission. This was to understand the nature and extent of activity along the local PRoW network. Through these discussions, it has been identified that the surrounding public rights of way are used primarily for informal recreational purposes, including village walking loops for example and some local dog walking and leisure use. Further to this anecdotal evidence, additional data and assessment of the PRoW network has been provided.

3. Baseline Survey Methodology

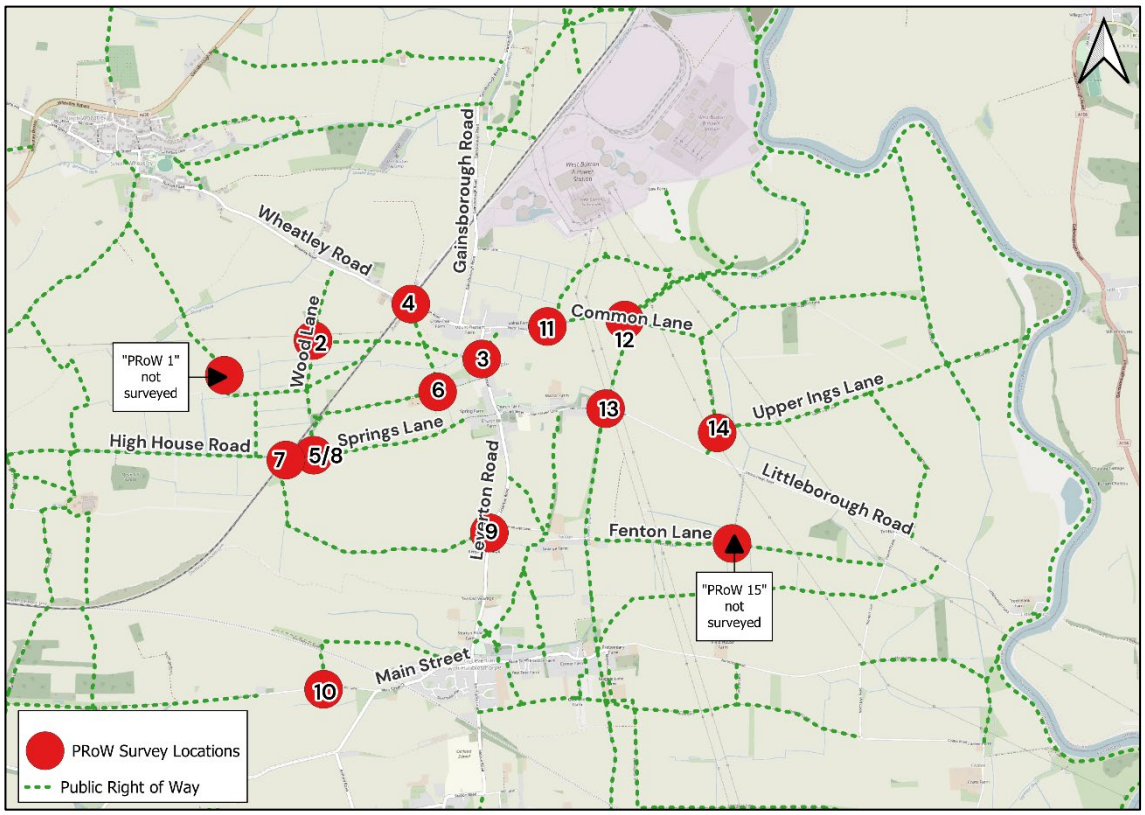
3.1. CCTV surveys of the PRoWs in the local area potentially affected by the Proposed Development haul routes (and associated construction vehicles), were commissioned to understand the number and type of existing users.

3.2. This approach enables a proportionate and informed assessment, based on recorded data, of any construction-related impacts on the existing usage of the PRoW network. Where necessary, appropriate mitigation will be identified as part of that exercise.

3.3. PCC Traffic Information Consultancy Ltd completed CCTV surveys of the PRoW in the local area on a weekday (Wednesday 30th April 2025) and weekend (Sunday 4th May 2025) days. The surveys were carried out over a 12-hour (07:00–19:00) period and were undertaken by CCTV surveys to record movements of pedestrians, horses, cyclists, and vehicle flows (as appropriate).

3.4. A location plan showing the PRoW and the approximate location of the survey equipment is illustrated in **Plate 3.1**.

Plate 3.1 – CCTV Traffic Survey Location Plan



Map Source: Open Street Maps

3.5. The numbering convention above relates to the numbers assigned when the surveys were commissioned. PROW 1 and PROW 15 were unable to be surveyed fully due to on-site conditions, e.g. overgrown vegetation, inaccessible locations (which would indicate that these are not frequently used), and a lack of street furniture

3.6. e.g. overgrown vegetation, inaccessible locations (which would indicate that these are not frequently used), and a lack of street furniture.

4. Baseline Survey Results

4.1. The baseline PRoW user survey results for a weekday and a weekend day are summarised below.

Weekday Survey Results

4.2. The result of the data for a weekday 12-hour period is summarised in **Table 4.1**.

Table 4.1 – Weekday (Wednesday) Survey Data on Local Public Rights of Way Total Users

Survey Ref	Weekday Total Users					
	PRoW	Total Users	Peds	Horse Riders	Cyc-lists	Veh-icles
07:00-19:00						
2	Sturton le Steeple RB30	11	9	0	1	1
	Sturton le Steeple FP19	0	0	0	0	0
3	Sturton le Steeple FP19	10	5	0	0	5
4	Sturton le Steeple FP20	2	2	0	0	0
5 / 8	Sturton le Steeple BW25	17	11	0	1	5
	Sturton le Steeple RB31	22	18	0	1	3
6	Sturton le Steeple FP20 / RB31	32	17	0	1	14
7	Sturton le Steeple BW25	16	12	0	1	3
	Sturton le Steeple BW26	14	10	0	2	2
9	Sturton le Steeple FP41	8	2	0	2	4
10	North Leverton with Habbelsthorpe FP24	16	13	0	0	3
11	Sturton le Steeple FP17	10	10	0	0	0
	Sturton le Steeple RB32 (Common Lane)	65	40	0	2	23
12	Sturton le Steeple FP15	9	9	0	0	0
	Sturton le Steeple RB32	37	26	2	0	9
	Sturton le Steeple FP38	6	6	0	0	0
	Sturton le Steeple FP39	3	3	0	0	0
13	Sturton le Steeple FP38	0	0	0	0	0
	Sturton le Steeple FP35	2	2	0	0	0
14	Sturton le Steeple RB32	17	10	2	0	5
	Sturton le Steeple RB33	12	8	0	0	4

4.3. In summary, all of the PRoW surveyed during the weekday have a relatively low number of total users over the twelve-hour weekday period.

4.4. The highest number of total users was Survey Site 11, where PRoW reference RB32 had a total of 65 users. Over a twelve-hour period, this equates to an average of approximately 6 users an hour, or a user every 10 minutes. Given that, even on the highest utilised link there is a low number of users, it is considered that there are relatively few users that could be in conflict with or impacted by any activity on site.

4.5. Furthermore, **Table 4.2** provides an indication of the times when the PRoW had the highest number of total users during the weekday survey peak hour period.

Table 4.2 – Weekday (Wednesday) Survey "Peak Hour" and Total Users

Survey Ref	PRoW	"Peak Hour"	Total Users during "Peak Hour"
2	Sturton le Steeple RB30	12:30 – 13:30	3
	Sturton le Steeple FP19	N/A*	0
3	Sturton le Steeple FP19	16:00 – 17:00	4
4	Sturton le Steeple FP20	17:00 – 18:00	2
5 / 8	Sturton le Steeple BW25	08:15 – 9:15	7
	Sturton le Steeple RB31	08:15 – 9:15	7
6	Sturton le Steeple FP20 / RB31	10:45 – 11:45	8
7	Sturton le Steeple BW25	07:15 – 08:15	7
	Sturton le Steeple BW26	07:15 – 08:15	5
9	Sturton le Steeple FP41	09:00 – 10:00	5
10	North Leverton with Habbelsthorpe FP24	18:00 – 19:00	6
11	Sturton le Steeple FP17	08:00 – 09:00	2
	Sturton le Steeple RB32 (Common Lane)	17:15 – 18:15	12
12	Sturton le Steeple FP15	08:15 – 09:15	4
	Sturton le Steeple RB32	17:45 – 18:45	9
	Sturton le Steeple FP38	15:00 – 16:00	2
	Sturton le Steeple FP39	11:00 -12:00	1
13	Sturton le Steeple FP38	N/A	0
	Sturton le Steeple FP35	09:00 – 10:00	1
14	Sturton le Steeple RB32	09:00 – 10:00	5
	Sturton le Steeple RB33	09:00 – 10:00	4

**N/A = not applicable as zero users in total*

4.6. The table above shows that the hour period with the highest total number of users during the survey period varies significantly between the different PRoW surveyed. The total number of users remains relatively low during any given "peak" hour period.

Weekend Survey Results

4.7. The results of the weekend surveys are summarised in **Table 4.3**.

Table 4.3 – Weekend (Sunday) Survey Data on Local Public Rights of Way Total Users

Survey Ref	Weekend Total Users					
	PRoW	Total Users	Peds	Horse Riders	Cyc-lists	Veh-icles
07:00-19:00						
2	Sturton le Steeple RB30	14	6	0	6	2
	Sturton le Steeple FP19	0	0	0	0	0
3	Sturton le Steeple FP19	3	3	0	0	0
4	Sturton le Steeple FP20	0	0	0	0	0
5 / 8	Sturton le Steeple BW25	37	12	0	10	15
	Sturton le Steeple RB31	34	16	0	8	10
6	Sturton le Steeple FP20 / RB31	28	19	0	2	7
7	Sturton le Steeple BW25	35	10	0	10	15
	Sturton le Steeple BW26	23	11	0	10	2
9	Sturton le Steeple FP41	19	8	0	4	7
10	North Leverton with Habbelsthorpe FP24	16	12	0	0	4
11	Sturton le Steeple FP17	14	14	0	0	0
	Sturton le Steeple RB32 (Common Lane)	39	28	0	4	7
12	Sturton le Steeple FP15	8	8	0	0	0
	Sturton le Steeple RB32	30	24	0	5	1
	Sturton le Steeple RB38	9	9	0	0	0
	Sturton le Steeple FP39	6	6	0	0	0
13	Sturton le Steeple FP38	11	11	0	0	0
	Sturton le Steeple FP35	6	6	0	0	0
14	Sturton le Steeple RB32	22	19	0	3	0
	Sturton le Steeple RB33	11	10	0	1	0

4.8. In summary, all of the PRoWs surveyed have a relatively low number of total users over the twelve-hour weekend (Sunday) period.

4.9. The highest number of total users was Survey Site 11, where PRoW reference RB32 had a total of 39 users. Over a twelve-hour period, this equates to approximately four users an hour, or, a user every 15 minutes. Given that, even on the highest utilised link there is a low number of users on a weekend (Sunday), it is considered that there are relatively few users that could be in conflict with or impacted by any activity on site.

Summary

4.10. In summary, given the relatively low numbers of users on the PRoW in the vicinity of the site at the time of the surveys, this indicates that the forecast traffic impacts from the site will affect a relatively low number of people. This is intuitive given that the site is in a relatively rural, remote location; however, this position is now supported by data.

5. Forecast Traffic Impact on PRoW Network

5.1. The potential impact on each of the PRoW routes identified above is set out in a tabular format in **Table 5.1** and **Table 5.2**, for the western and eastern site parcels respectively. This quantifies the number and type of construction vehicle movements using the haul routes that are anticipated to impact each PRoW route. The haul routes are identified in the tables using a haul route reference number, which are indicated on the Haul Routes Location Plan available in the oCTMP.

5.2. The potential impact has also been classified based on advice set out in the Institute of Environmental Management and Assessment (IEMA) 'Guidelines for the Environmental Assessment of Traffic and Movement' (July 2023). This is in the context of the impact on non-motorised user amenity (the relative pleasantness of a journey) and non-motorised user delay (generally defined as the ability of people to cross a road).

5.3. The severity of impact can be broadly classified as 'Negligible', 'Low', 'Medium' and 'High'. Professional judgment and consideration to the definitions and guidance outlined above has been used to classify the impact.

5.4. The baseline traffic flows and number of users on each link at the time of the surveys was low. This means that relatively few users are likely to be impacted and the likelihood of traffic coinciding with each other is also relatively low. For example, the highest number of total users was Survey Site 11, where PRoW reference RB32 had a total of 65 users. Other sites had significantly lower numbers of users. On the highest utilised PRoW surveyed, over twelve hours, the number of users equated to an average of approximately 6 users an hour, or a user every 10 minutes. Given that severity is determined based on factors such as delay and amenity, there would be no perceptible impact to delay (i.e., the ability of persons to cross a road) and a low/negligible impact to amenity (i.e., relative pleasantness) as a result of the forecast construction traffic.

5.5. Therefore, it is considered that the forecast severity of impact is low/negligible across all links and this is detailed in **Table 5.1** and **Table 5.2**.

Table 5.1 – Anticipated average numbers of daily construction vehicles utilising PRoW (Western Parcel)

PRoW Route	PRoW Type	Haul Route Affecting PRoW	Haul Route Interaction with PRoW	Average Daily Cons. Vehicles			Average Daily No. Users (based on survey data)	Severity
				NPL[3]	T&T[4]	Light[5]		
Sturton le Steeple FP22	Footpath	WR-WL	Crossing	2	0	0	No data	Negligible
Sturton le Steeple RB30	Restricted Byway	WR-WL	Shared route	2	0	0	14	Negligible
Sturton le Steeple FP21	Footpath	WR-WL	Crossing	2	0	0	No data	Negligible
Sturton le Steeple FP19	Footpath	WR-WL	Crossing	2	0	0	10	Negligible
		FL-SL		2	8	3		
		FL-HHR		0	2	1		
		FL		0	1	1		
		IHRW		0	0	0		
Sturton le Steeple RB31	Restricted Byway	WR-WL	Crossing	2	0	0	34	Negligible
		FL-HHR		0	2	1		
		FL		0	1	1		
Sturton le Steeple BW25	Bridleway	FL-SL	Shared route	2	8	3	37	Negligible
		FL-HHR		0	2	1		
Sturton le Steeple BW26	Bridleway	FL-HHR	Shared route	0	2	1	23	Negligible
Sturton le Steeple FP41	Footpath	FL-SL	Crossing	2	8	3	19	Negligible
		SRE-LR	Shared route	0	0	4		
North Leverton with Habblesthorpe FP24	Footpath	FL-SL	Shared route	2	8	3	16	Negligible
Sturton le Steeple FP20	Footpath	WR-WL	Crossing	2	0	0	32	Low/Negligible
		WR		0	1	0		
		GR-PCB		6	16	42		

NB: Vehicle numbers are given as One-Way Trips. "Shared route" = haul route travels along the PRoW, "Crossing" = haul route travels across the PRoW.

[3] Non-partitionable loads
[4] Tractors and 20ft trailers
[5] Passenger cars, vans etc.

Table 5.2 – Anticipated average numbers of daily construction vehicles utilising PRoW (Eastern Parcel)

PRoW Route	PRoW Type	Haul Route Affecting PRoW	Haul Route Interaction with PRoW	Average Daily Cons. Vehicles			Average Daily No. Users (based on survey data)	Severity
				NPL[6]	T&T[7]	Light[8]		
Sturton le Steeple FP17	Footpath	CL-UIL	Crossing and shared route	0	2	1	14	Negligible
		CL-TL	Crossing	0	0	0		
		CL-FL		0	1	1		
		CL-LR		1	3	2		
		CL		1	3	2		
		IHRE	Crossing and shared route	0	0	0		
Sturton le Steeple RB32	Restricted Byway	CL-UIL	Crossing and shared route	0	2	1	65	Low/Negligible
		CL-TL		0	0	0		
		CL-FL		0	1	1		
		CL-LR		1	3	2		
Sturton le Steeple FP39	Footpath	CL	Shared route	1	3	2	6	Negligible
Sturton le Steeple RB33	Restricted Byway	CL-UIL	Shared route	0	2	1	12	Negligible
Sturton le Steeple BW5	Bridleway	CL-LR	Shared route	1	3	2	No data	Negligible
		CL-FL		0	1	1		

NB: Vehicle numbers are given as One-Way Trips. "Shared route" = haul route travels along the PRoW, "Crossing" = haul route travels across the PRoW.

[6] Non-partitionable loads
[7] Tractors and 20ft trailers
[8] Passenger cars, vans etc.

6. Proposed Mitigation During Construction

6.1. In consultation with NCC's PRoW team, a series of mitigation measures have been agreed to ensure the continued safe operation of PRoWs during the construction phase. These measures are designed to minimise conflict between construction activity and Non-Motorised Users (NMU), such as pedestrians, cyclists, and equestrians, while maintaining access wherever possible.

6.2. Information regarding PRoW routes and specific site protocols will be incorporated into all on-site worker inductions to ensure awareness and compliance with PRoW safety requirements.

6.3. The proposed mitigation measures will be subject to ongoing review throughout the construction phase with continued engagement with NCC's PRoW team to adapt as necessary and maintain a safe working and public access environment.

HGV and other vehicle Management

6.4. The following vehicle management practises will be provided:

i. All construction vehicles will give way to PRoW users, and a strict speed limit of 10mph will be enforced on haul routes.

ii. Clear and appropriately positioned signage will be provided at either end of PRoW routes affected by construction. These signs will inform users of ongoing works, include emergency contact details for the Site Manager, and specify the expected duration and nature of any impacts.

iii. Additional signage will also be placed on haul routes to alert on-site workers to the presence of PRoWs and the need for caution.

Physical Measures

6.5. Physical mitigation measures will include:

i. the installation of refuge areas for NMUs, helping users safely pause to allow construction vehicles to pass, along with the use of temporary fencing at crossing points, may be considered.

ii. During periods of high activity or when large deliveries are scheduled, site operatives may be deployed as marshals / banksmen to assist with safe crossings.

Condition Survey

6.6. The condition of PRoWs within the vicinity of crossing points, or along any sections where construction vehicles will travel over or along them, will be subject to a highway condition survey both prior to and following construction works. This will ensure that any potential degradation resulting from construction activities is identified and appropriately rectified, thereby further minimising the impact of the scheme on the PRoW network and ensuring routes are restored to their pre-construction condition.

Traffic Impact and Proposed Mitigation on Key PRoW Routes

6.7. The anticipated interaction between construction activities and individual PRoW routes within or adjacent to the site has been set out below. It should be noted that the extent of the likely traffic impact primarily relates to haul route crossings, shared alignments with construction access, or points at which NMUs and construction vehicles may come into proximity. Based on proposed vehicle haul routing, the PRoW routes are affected and suitable mitigation for these key PRoW routes are outlined below.

6.8. Schedule 6 of the draft DCO sets out the minor highways and Public Rights of Way (PRoW) that may be temporarily closed as a result of the project and states the sections of Streets and PRoW to be temporarily stopped up.

Western Parcel

Sturton le Steeple FP22 – Footpath

6.9. A crossing point is proposed between the haul route and the footpath, with **Table 5.1** indicating around two construction vehicles per day (four two-way trips) will be required to cross over the Sturton le Steeple FP22 footpath when using the WR-WL route, potentially affecting NMUs on the PRoW.

6.10. Mitigation may include clear signage and priority for pedestrians, supported by banksmen during peak vehicle movements.

Sturton le Steeple RB30 – Restricted Byway

6.11. The haul route will follow the byway alignment for a short distance. The number of average daily users based on survey data is 14, in total. Daily construction vehicle activity is expected to be low at approximately two per day on average. Therefore, no mitigation measures are proposed at this stage.

Sturton le Steeple FP21 – Footpath

6.12. This footpath is crossed by a low-frequency haul route, with **Table 5.1** confirming that around two construction vehicles per day will be required to cross over the Sturton le Steeple FP21 footpath when using the WR-WL route.

6.13. Standard crossing mitigation such as signage and speed control will likely be sufficient for this crossing.

Sturton le Steeple FP19 – Footpath

6.14. This route is crossed at a location of relatively higher vehicle flows, with **Table 5.1** setting out that around 20 construction vehicles per day will be required to cross over the Sturton le Steeple FP19 footpath at the single crossing point, potentially affecting NMUs on the PRoW. The number of average daily users based on survey data is 10, in total.

6.15. Mitigation may include clear signage and priority for pedestrians, supported by banksmen during peak vehicle movements.

Sturton le Steeple RB31 – Restricted Byway

6.16. This restricted byway is crossed by the haul routes at two locations, with approximately seven construction vehicles using this route per day (14 two-way trips). The number of average daily users based on survey data is 34, in total. Appropriate signage can be introduced at the crossing locations.

Sturton le Steeple BW25 – Bridleway

6.17. Two haul routes, FL-SL and FL-HHR, are expected to travel along this Bridleway with FL-HHR utilising a length of circa 190m of the Bridleway to route from the Wood Lane / Spring Lane junction to the High House Road junction, and the FL-SL haul route routing from the Wood Lane / Spring Lane junction and continuing for up to circa 660m to arrive at various field accesses. The number of average daily users based on survey data is 37, in total. **Table 5.1** sets out an expected 16 construction vehicle and workforce trips per day (32 two-way vehicle movements) between the two haul routes.

6.18. As the bridleway alignment coincides with the haul route, appropriate signage will be implemented to indicate crossing points, with refuge areas, if necessary, also provided to allow for NMUs to wait for oncoming vehicles to pass before continuing along the bridleway.

Sturton le Steeple BW26 – Bridleway

6.19. Construction vehicles will route along BW26 for circa 350m from the Spring Lane / High House Road junction, which passes under a narrow railway bridge. The number of average daily users based on survey data is 23, in total. Additional to signage, timed usage or passing places may be required and at peak times banksmen may be required to co-ordinate movements due to constrained visibility.

Sturton le Steeple FP41 – Footpath

6.20. Field access is taken from the most western extent of the FP41 footpath for a single haul route, with **Table 5.1** setting out 13 daily construction vehicles using the accesses per day (26 two-way trips). The number of average daily users based on survey data is 19, in total.

6.21. As access is provided to three different fields at this point, it is considered that appropriate signage should be sufficient to indicate to both NMU users and Construction traffic as to the location of the access and potential for conflicting movements with stop signs for traffic allowing for non-motorised users to move when it's clear.

North Leverton with Habblesthorpe FP24 – Footpath

6.22. This route is used by a haul route over a short section. The number of average daily users based on survey data is 16, in total. It is likely that signage will be sufficient at this location for the 13 daily construction vehicles using the accesses per day (26 two-way trips) set out in **Table 5.1**.

Sturton le Steeple FP20 – Footpath

6.23. The number of average daily users based on survey data is 32, in total. This footpath forms a crossing with the route into Primary Site Compound B Crossings with 67 average daily construction vehicles forecast in total. With this in mind, a banksman is likely to be

implemented at this location, with appropriate signage put in place to inform drivers and pedestrians of the crossing.

Eastern Parcel

Sturton le Steeple FP17 – Footpath

6.24. This footpath forms a crossing with multiple haul routes departing from Primary Site Compound A, resulting in circa 17 construction vehicle per day (34 two-way trips) requiring to cross FP17. The number of average daily users based on survey data is 14, in total. This crossing is highly likely to be support by a banksman, with appropriate signage put in place to inform drivers and pedestrians of the crossing.

Sturton le Steeple RB32 – Restricted Byway

6.25. Multiple haul routes are expected to route along RB32 which extends along Common Lane and Cross Common Lane. The number of average daily users based on survey data is 65, in total. The daily construction vehicles using this route are expected to be 11 vehicles as per **Table 5.1** (22 two-way trips). Appropriate signage will be put in place at the crossing points, with refuge areas implemented where required.

Sturton le Steeple FP39 – Footpath

6.26. As mentioned, multiple haul routes are expected to route along Common Lane, which FP39 joins onto at its southern extent. The number of average daily users based on survey data is 6, in total. At this crossing point, appropriate signage will be implemented to ensure both driver and NMU awareness.

Sturton le Steeple RB33 – Restricted Byway

6.27. As mentioned, multiple haul routes are expected to route along Common Lane and Cross Common Lane, of which RB33 forms a junction with both at two locations, one at the Common Lane / Cross Common Lane / Cowpasture Lane junction, and again at the Cross Common Lane / Upper Ings Lane junction. The number of average daily users based on survey data is 12, in total. Therefore, at these crossing point, it is deemed suitable for appropriate signage to be implemented to ensure both driver and NMU awareness – with drivers expected to wait and give way to NMU.

Sturton le Steeple BW5 – Bridleway

6.28. This bridleway for a crossing with a single haul route with **Table 5.2** setting out an anticipated two vehicles per day using the crossing (four two-way trips). It is deemed suitable for appropriate signage to be put in place for drivers and NMU of the Bridleway to inform awareness of the crossing point.

7. Operational Phase

7.1. During the Operational Phase, all PRoW Routes will be retained within the proposed layout for the 40-year lifetime of the scheme. Two permissive paths are also proposed to enhance connectivity.

8. Summary and Conclusions

8.1. This TN has been prepared by Pegasus Group on behalf of the Applicant, Steeple Solar Farm. It has provided baseline survey data and analysis for the PRoWs users within the vicinity of the Steeples Renewables Project DCO site.

8.2. The assessment has included a summary of the number of users using the local PRoW routes during a weekday and a weekend. A breakdown of construction vehicles impacting on the PRoW routes based on the haul route location and the number of forecast construction deliveries which will impact on these routes.

8.3. The TN has included a strategy to appropriately manage and mitigate the traffic impact on the PRoWs which are impacted by the Proposed Development during the construction phase.

8.4. It is concluded that, with appropriate mitigation in place, as outlined in the **oCTMP Appendix 13.2 [EN010163/APP/6.3.13]** there is forecast to be a minimal vehicle impact during construction on the PRoW network.

8.5. An update to the submitted **oCTMP [EN010163/APP/6.3.13]** document (Chapter 7 – PRoW Management Plan) (**Appendix 13.2 [EN010163/APP/6.3.13])** will be provided which includes the information in this TN, in due course.

Transport Technical Note.

Additional Survey information to support Traffic Impact Assessment – Steeple Renewables Project DCO.

On behalf of Steeple Solar Farm.

Planning Inspectorate Reference:	EN010163
Date:	07 January 2026
Pegasus Group Reference:	P22-1144 TN03
Author:	CB/KE

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1. Introduction

1.1. This Transport Technical Note (TN) has been prepared by Pegasus Group on behalf of the Applicant, Steeple Solar Farm. It provides additional data and analysis to confirm the baseline traffic data within the vicinity of the Steeple Renewables site., and the impact of the Proposed Development in traffic terms at key locations on the local highway network.

1.2. The proposed development is located in Nottinghamshire County Council (NCC) local highway authority boundary comprising approximately 450MW of solar energy generation and approximately 150MW Battery Energy Storage System (BESS). The proposed construction traffic route also passes through City of Doncaster Council's (CoD) highway boundary.

1.3. This TN should be read alongside the Transport Assessment (TA) dated April 2025 submitted with the DCO application (**Appendix 13.1 [EN010163/APP/6.3.13]**). The Traffic Impact Assessment is provided at Chapter 8 in the TA.

1.4. It is considered that this TN provides additional information to confirm that the temporary traffic impact during the construction period (approximately 24 months) on the local highway network is minimal, with the implementation of vehicle management measures in place.

2. Context and Scope

2.1. This section provides details regarding the potential traffic impact of the site on the surrounding local highway network. This is based on a trip generation exercise, utilising data supplied by the Applicant (Steeple Solar Farm), which has been carried out to forecast the number of vehicular trips anticipated to arise as a result of the Proposed Development during the construction period.

2.2. Due to the DCO application timescales being accelerated, not all of the baseline traffic survey data was available at the time of writing and submitting the **TA (Appendix 13.1) [EN010163/6.3.13]** in April 2025. Therefore, this TN has been prepared to provide supplementary traffic survey data and analysis.

2.3. In particular, the purpose of this TN is to provide the forecasted change in traffic flows during construction, expressed as a percentage (%), at two key junctions on the local highway network that were identified as requiring further consideration during scoping discussions with statutory consultees.

Construction Vehicle Trip Generation Summary

2.4. The forecast vehicle trip generation for construction is detailed in Section 6 of the TA.

2.5. During the 24-month construction period there are two peak periods, one for construction delivery traffic and one for construction workforce traffic.

2.6. As detailed in Section 6 of the TA, for month 7, the delivery peak month, the forecast daily two-way average trips are 153 delivery trips and 183 daily workforce trips. This results in a forecast daily two-way average of 336 trips.

2.7. For month 22, the workforce peak month, the forecast daily two-way average trips are four daily delivery trips and 346 daily workforce trips. This results in a forecast daily two-way average of 350 trips.

Scope of Traffic Impact Assessment

2.8. Throughout the pre-submission stage of the DCO, the Applicant team has been liaising with the local and strategic highway authorities in the preparation of the TA.

2.9. The timescales for the planning application were accelerated, resulting in the need to submit any further Traffic Impact Assessment details necessary in a follow-up TN.

2.10. Two key junctions on the local highway network have been discussed with the local highway authorities and considered further as follows:

1) Bawtry Signal Controlled Junction (A638 / A631); and

2) A631 / Station Road / Bar Road Roundabout.

2.11. Traffic surveys were completed by a third-party surveying company: PCC Traffic Information Consultancy Ltd. PCC conducted traffic surveys on Wednesday, 30th April 2025.

2.12. For this assessment, this traffic survey data represents the "Do Minimum" scenario, i.e., the base traffic flows at each junction without the construction traffic generated by the project.

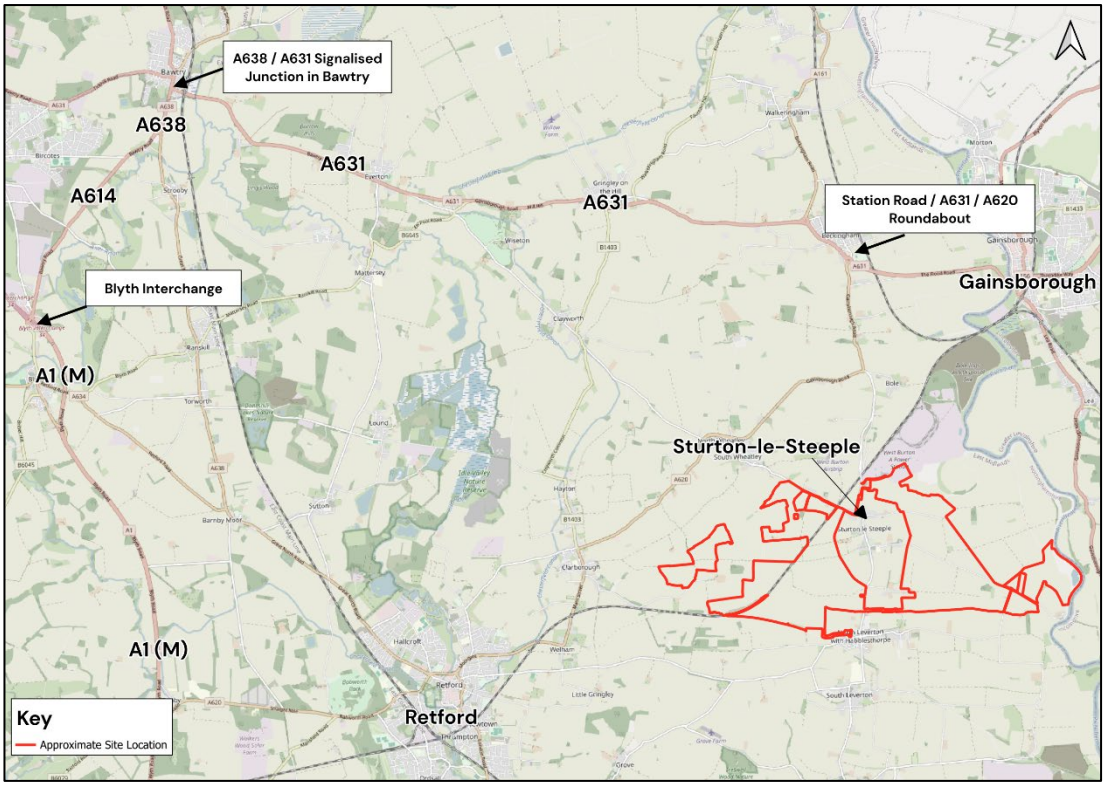
2.13. Manual Classified Count (MCC) data was recorded at the following junctions:

1) Bawtry Signal Controlled Junction (A638 / A631); and

2) A631 / Station Road / Bar Road Roundabout.

2.14. The locations of these junctions is illustrated in **Plate 2.1**.

Plate 2.1 – Location of Junctions



Map Source: Open Street Map

2.15. For the purpose of this section, the "Do Something" scenario is the "Do Minimum" plus forecast construction traffic. It's important to bear in mind when interpreting the traffic data, that the forecast construction traffic is temporary and has been calculated based on a robust, worst-case scenario.

2.16. The values in this section are expressed in Passenger Car Units (PCU). In transport planning, PCU is a metric used to compare the impact of different types of vehicles on traffic flow, with one PCU representing the effect of a single passenger car.

2.17. It's important to note that the figures shown in this section represent a robust, worst case scenario based on the peak of construction traffic. The following assumptions have been included in the assessment:

- A robust assumption has been made regarding workforce trips that these will all occur within a one-hour period, whereas, in reality, these could be staggered and spread over a longer period.

- A robust assumption has been made that workforce trips will coincide with the AM peak and PM peak, whereas, in reality, staff will work staggered shift patterns so that the arrive and depart outside of peak hours.

2.18. The assessment years to be considered are:

- 2025 Base Year (year of DCO application); and
- 2029 Future Year (end of construction period).

2.19. Growth factors were obtained from TEMPro v8.1 in order to estimate future baseline traffic flows for the Bassettlaw 002 middle super output area (MSOA). For the purpose of this assessment, the "core" scenario was selected. The TEMPro growth factors are provided in the table below.

2.20. The proposed background traffic growth **Table 2.1**.

Table 2.1 – Background Traffic Growth / TEMPRO Growth Factors

MSOA	Period	AM Factor	PM Factor
Bassettlaw 002	2025 – 2029	1.0369	1.0371

Forecast Traffic Impact at Bawtry Signal Controlled Junction (A638 / A631)

2.21. The Bawtry Signal Junction (A638 / A631) is a three-arm signalised junction located in the town of Bawtry. It is on the proposed restricted construction traffic route for the site. This section of the construction traffic route is within the CoD local highway authority boundary. During pre-application discussions, highway officers requested the impact of the development is considered at this junction.

2.22. The figures provided in this sub-section illustrate the forecast traffic impact on the local highway network in PCUs, A robust assumption has been made regarding delivery trips that they will coincide with peak hours, whereas, in reality, as detailed in the **OCTMP [EN010163/APP/6.3.13]**, deliveries and workforce trips can be scheduled to occur outside of a network peak hour where possible.

2.23. In summary, during Month 7 of the construction program, the forecasted traffic impact at Bawtry Signal Junction is equivalent to 49 PCUs per hour.

2.24. During Month 22 of the construction program, the forecast traffic impact at Bawtry Signal Junction in a robust, worst-case scenario is equivalent to 129 PCUs per hour. Given this is the largest number, further consideration of Month 22 is provided in this subsection.

2.25. **Table 2.2** provides the forecast change in traffic flows during construction at the junction in a robust, worst-case scenario for the 2025 base year.

Table 2.2 – Bawtry Signal Junction Change in Traffic Flows (2025 Base Do Minimum and Do Something)

Approach	AM Peak (08:00 – 09:00) (PCU)				PM Peak (17:00 – 18:00) (PCU)			
	Do Mini-mum (Base)	Do Some-thing (with develop ment)	Change (PCU)	% Change	Do Mini-mum (Base)	Do Some-thing (with develop ment)	Change (PCU)	% Change
Arm 1 – A631	451	451	0	0%	448	577	129	+29%
Arm 2 – A638 South	656	774	118	+18%	612	612	0	0
Arm 3 – A638 North	713	724	11	+2%	832	832	0	0
Total	**1,820**	**1,949**	**129**	**+7%**	**1,892**	**2,021**	**129**	**+7%**

2.26. **Table 2.2** shows a forecast temporary increase in total traffic flows at the Bawtry Signal Junction during construction in a robust, worst-case scenario of 7% in AM peak and 7% in the PM peak period.

2.27. **Table 2.3** provides the forecast change in traffic flows during construction at the junction for a 2029 future year scenario.

Table 2.3 – Bawtry Signal Junction Change in Traffic Flows (2029 Future Year Do Minimum and Do Something)

Approach	AM Peak (08:00 – 09:00) (PCU)				PM Peak (17:00 – 18:00) (PCU)			
	Do Mini-mum (2029 Future Year)	Do Some-thing (2029 with develop ment)	Change (PCU)	% Change	Do Mini-mum (2029 Future Year)	Do Some-thing (2029 with develop ment)	Change (PCU)	% Change
Arm 1 – A631	468	468	0	0%	465	594	129	+28%
Arm 2 – A638 South	680	798	118	+17%	635	635	0	0%
Arm 3 – A638 North	739	750	11	+1%	863	863	0	0%
Total	**1,887**	**2,016**	**129**	**+7%**	**1,962**	**2,092**	**129**	**+7%**

2.28. **Table 2.3** shows that in the 2029 future year the forecast temporary increase in total traffic flows at the Bawtry Signal Junction during construction in a robust, worst-case scenario is 7% in AM peak and 7% in the PM peak period.

2.29. **Plate 2.2** and **Plate 2.3** below show the forecast traffic impact at the Bawtry Signal Junction in the format of a traffic flow diagram.

Plate 2.2 – Bawtry Signal Junction 2025 Base Year Do Minimum Traffic Flows

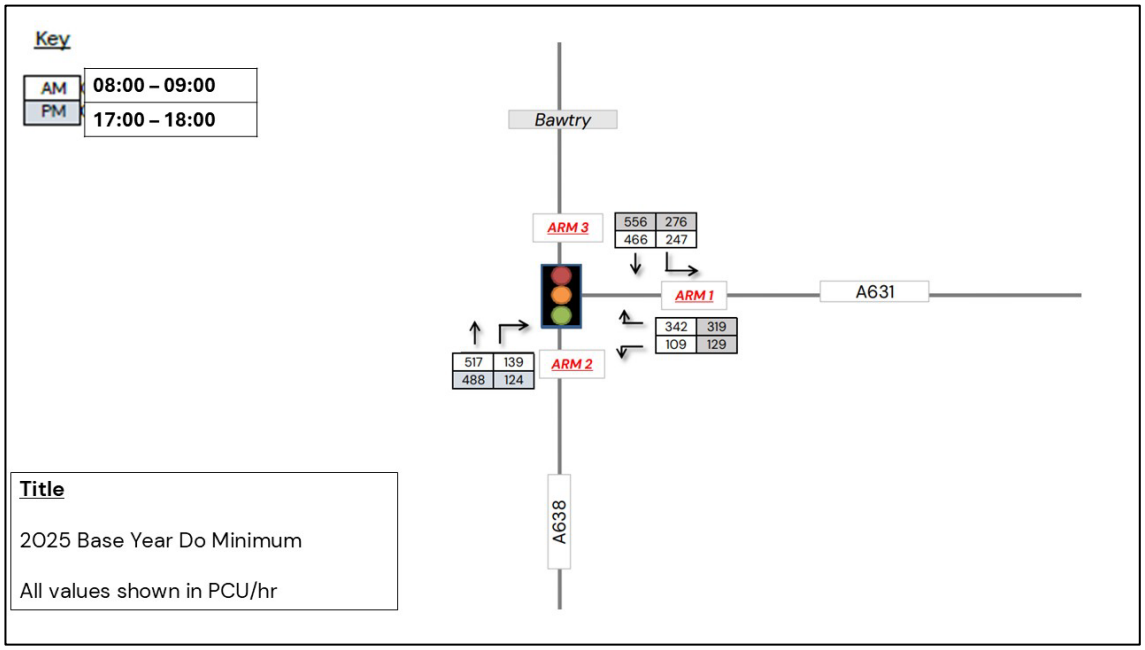
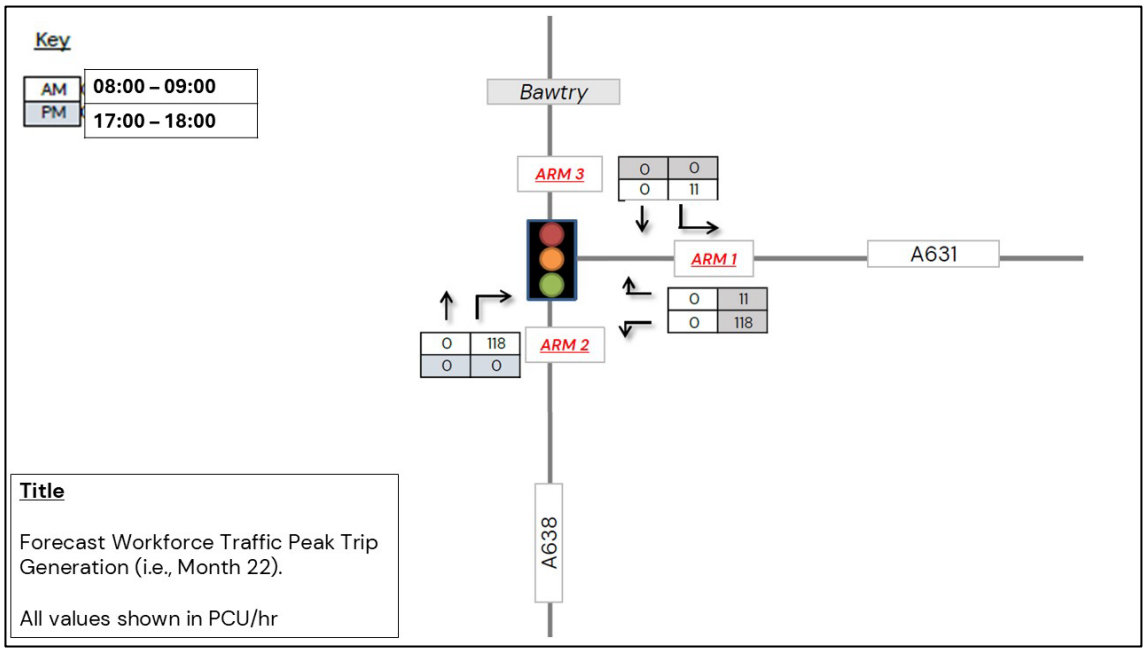


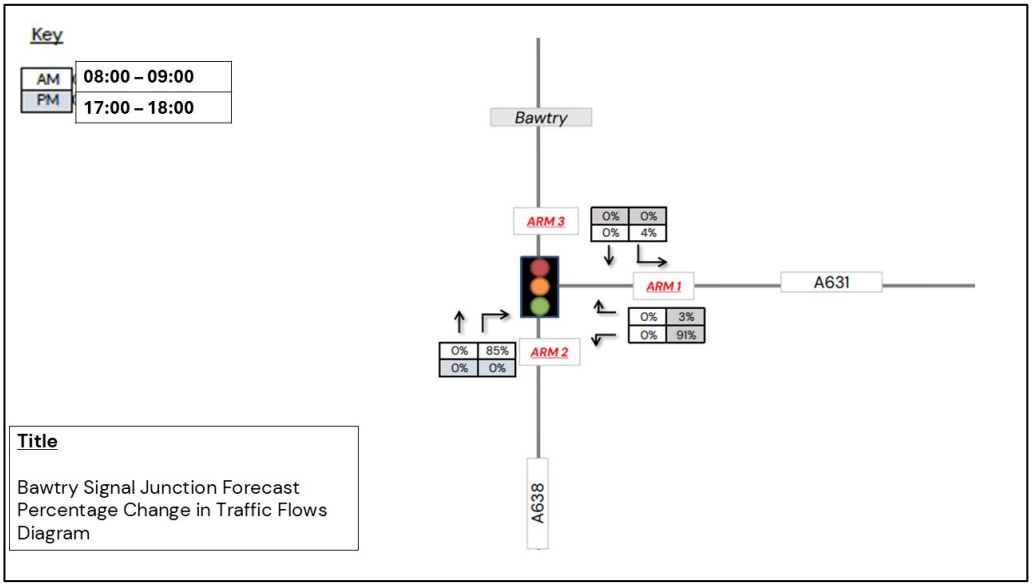
Plate 2.3 – Bawtry Signal Junction Forecast Workforce Traffic Peak Trip Generation



2.30. The forecast traffic impact at the junction in a robust, worst-case scenario is equivalent to 129 PCUs per hour. It's essential to note that the construction traffic impacts are temporary in nature. Additionally, by scheduling deliveries and worker arrival/departure times so that these occur outside of peak hours, reserve capacity in the highway network can be utilised and any adverse traffic impacts at this junction can be mitigated. Therefore, further junction capacity assessment is not considered necessary as the forecast temporary impacts can be sufficiently mitigated through application of mitigation strategy set out in the **OCTMP Appendix 13.2 [EN010163/APP/6.3.13]**.

2.31. **Plate 2.4** below provides a diagram illustrating individual directional movements at each arm of the Bawtry Signal Junction, expressing the forecast construction traffic as a percentage of the baseline traffic recorded during the traffic survey.

Plate 2.4 – Bawtry Signal Junction Forecast Percentage Change in Traffic Flows Diagram



2.32. The forecast traffic impact at the junction in a robust, worst-case scenario is equivalent to 129 PCUs per hour. This would be equivalent to an 85% increase in right-turning traffic on the A638. However, it's important to note that although the percentage increase appears high, this is due to the relatively low recorded baseline traffic volumes. In absolute terms, the increase may be within the junction's capacity. Regardless, through the mitigation proposed in the **OCTMP Appendix 13.2 [EN010163/APP/6.3.13]** (e.g., scheduling worker and delivery vehicle arrival/departure times so that these occur outside peak hours), any temporary traffic impacts can be effectively mitigated, and therefore, further junction capacity assessment is not considered necessary.

2.33. A631 / Station Road / Bar Road junction is a four-arm roundabout located south of Beckingham. The forecast change in traffic flows during construction at the junction in a robust, worst-case scenario is provided below for the 2025 base year.

Table 2.4 – A631 / Station Road / Bar Road Roundabout Change in Traffic Flows (2025 Base Do Minimum and Do Something)

Approach	AM Peak (08:00 – 09:00) (PCU)				PM Peak (17:00 – 18:00) (PCU)			
	Do Mini-mum (2025 Base)	Do Some-thing (2025 with develop ment)	Change (PCU)	% Change	Do Mini-mum (2025 Base)	Do Some-thing (2025 with develop ment)	Change (PCU)	% Change
Arm A – A631 (East)	693	743	50	+7%	830	830	0	0%
Arm B – A620 Bar Road	330	330	0	0%	420	599	179	+43%
Arm C – A631 (West)	689	818	129	+19%	532	532	0	0%
Arm D - Station Road	100	100	0	0%	83	83	0	0%
Total	**1,812**	**1,991**	**179**	**+10%**	**1,866**	**2,045**	**179**	**+10%**

2.34. **Table 2.4** above shows that there will be an increase in total traffic flows of 10% in AM peak period of the Do-Something Scenario and 10% in the PM peak period.

2.35. **Table 2.5** below provides the forecast change in traffic flows during construction at the roundabout for a 2029 future year scenario.

Table 2.5 – A631 / Station Road / Bar Road Roundabout Change in Traffic Flows (2029 Future Year Do Minimum and Do Something)

Approach	AM Peak (08:00 – 09:00) (PCU)				PM Peak (17:00 – 18:00) (PCU)			
	Do Mini-mum (2029 Base)	Do Some-thing (2029 with develop ment)	Change (PCU)	% Change	Do Mini-mum (2029 Base)	Do Some-thing (2029 with develop ment)	Change (PCU)	% Change
Arm A – A631 (East)	718	768	50	+7%	861	861	0	0%
Arm B – A620 Bar Road	342	342	0	0%	435	614	179	+41%
Arm C – A631 (West)	714	843	129	+18%	552	552	0	0%
Arm D - Station Road	104	104	0	0%	86	86	0	0%
Total	**1,878**	**2,057**	**179**	**+10%**	**1,935**	**2,114**	**179**	**+9%**

2.36. **Table 2.5** shows that there will be an increase in total traffic flows of 10% in AM peak period of the 2029 future year do-something scenario and 9% in the PM peak period.

2.37. **Plate 2.5** and **Plate 2.6** below show the forecast traffic impact at A631 / Station Road / Bar Road Roundabout in the format of a traffic flow diagram.

Plate 8.5 – A631 / Station Road / Bar Road Roundabout 2025 Base Year Do Minimum Traffic Flows

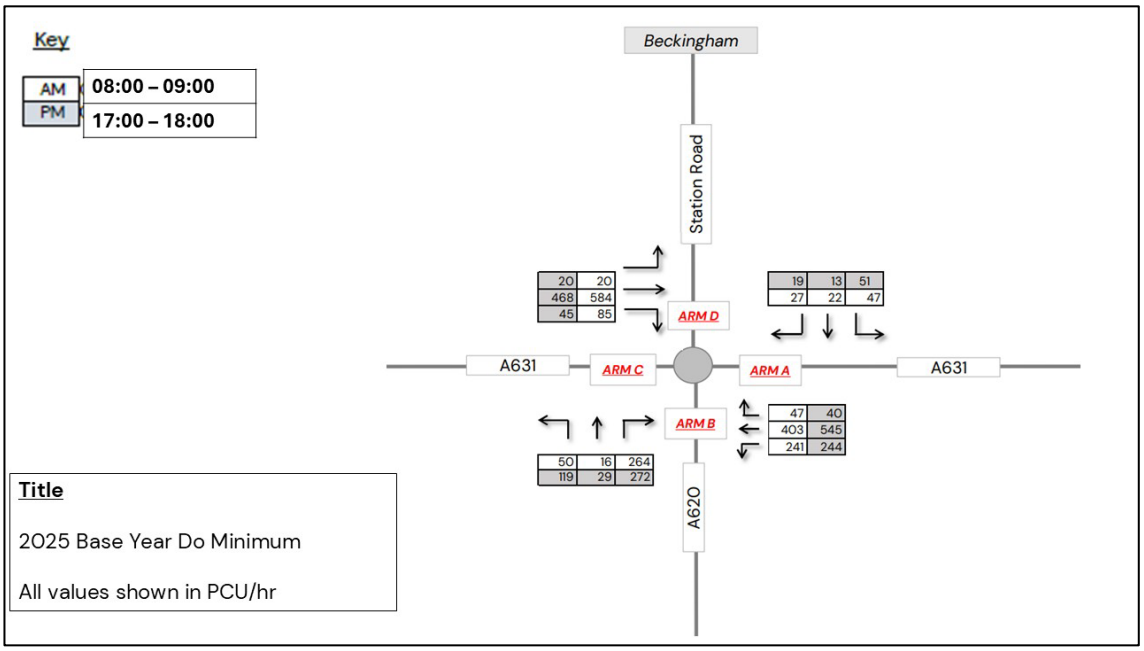
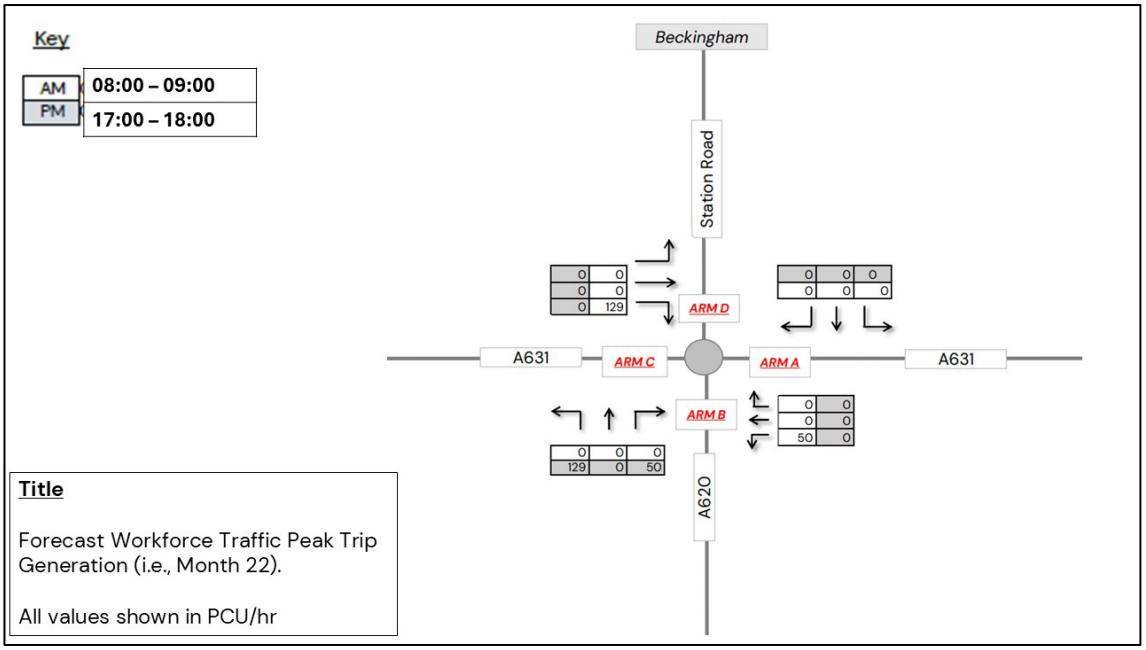


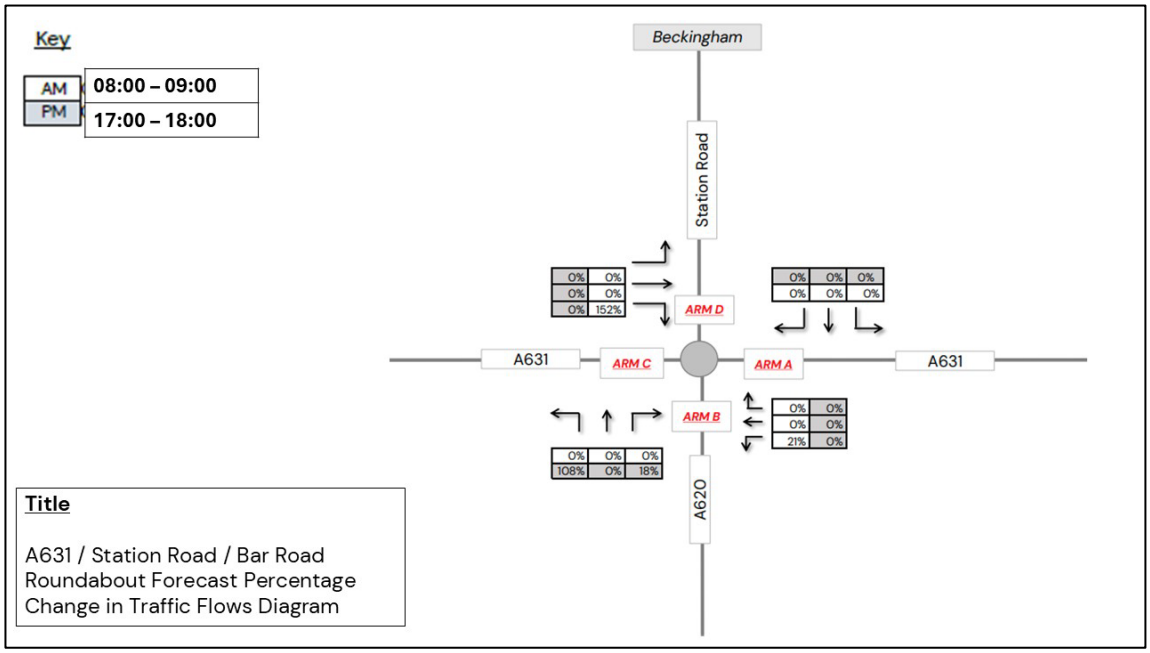
Plate 8.6 – A631 / Station Road / Bar Road Roundabout Forecast Workforce Traffic Peak Trip Generation



2.38. The forecast traffic impact at the junction in a robust, worst-case scenario is equivalent to 179 PCUs per hour. It's essential to note that the construction traffic impacts are temporary in nature. Therefore, further junction capacity assessment is not considered necessary as the forecast temporary impacts can be sufficiently mitigated.

2.39. **Plate 8.7** below provides a diagram illustrating individual directional movements at each arm of the roundabout and expresses the forecast construction traffic as a percentage of the baseline traffic recorded during the traffic survey.

Plate 8.7 – A631 / Station Road / Bar Road Roundabout Forecast Percentage Change in Traffic Flows Diagram



2.40. The forecast traffic impact at the junction in a robust, worst-case scenario is equivalent to 179 PCUs per hour. This would be equivalent to an 152% increase in right-turning traffic on the A631. However, it's important to note that although the percentage increase appears high, this is due to the relatively low recorded baseline traffic volumes. In absolute terms, the increase may be within the junction's capacity. Regardless, through the mitigation proposed (e.g., scheduling worker arrival/departure times so that these occur outside peak hours), any temporary traffic impacts can be effectively mitigated, and therefore, further junction capacity assessment is not considered necessary.

3. Summary and Conclusions

3.1. This TN has been prepared by Pegasus Group on behalf of the Applicant, Steeple Solar Farm. It has provided baseline traffic survey data and analysis for the local highway network in the vicinity of the Steeples Renewables Project DCO site.

3.2. Based on traffic baseline survey data undertaken in April 2025, the forecast total change in traffic flows during construction in a robust, worst-case scenario are:

- Bawtry Signal Junction: 7% in the AM peak and 7% in the PM peak period.
- A631 / Station Road / Bar Road Roundabout: 10% in AM peak and 10% in the PM peak period.

3.3. It's important to note that the construction traffic impacts are temporary in nature, and the **OCTMP Appendix 13.2 [EN010163/APP/6.3.13]** document outline a range of measures that can be enforced to mitigate the forecasted traffic increase at these junctions.

3.4. The comprehensive approach outlined in the **OCTMP [EN010163/APP/6.3.13]** will sufficiently mitigate the temporary impact of construction traffic through established best practices in construction traffic management. These include, but are not limited to, the scheduling of vehicle movements to avoid current peak travel times on the highway network where possible, the use of designated routing to avoid sensitive areas, continuous monitoring and review mechanisms, and clear communication with local stakeholders. Collectively, these targeted interventions provide a robust and adaptable framework to ensure that any residual impacts on the highway network are mitigated throughout the construction period.

3.5. In summary, therefore, whilst it is acknowledged that there will be a temporary traffic impact on the local and strategic highway network during construction: this can be sufficiently mitigated by the measures contained in the **oCTMP Appendix 13.2 [EN010163/APP/6.3.13]** and therefore it is considered that no further junction capacity assessment is required.

3.6. It is concluded that, with appropriate mitigation in place as outlined within the **oCTMP Appendix 13.2 [EN010163/APP/6.3.13]**, there is forecast to be a minimal vehicle impact during construction on the local highway network.

3.7. An update to the submitted TA Chapter 8 – Traffic Impact Assessment document (submitted in April 2025) (**Appendix 13.1 [EN010163/APP/6.3.13])** will be provided which includes the information in this TN, in due course.

Transport Technical Note.

Additional Survey information to support ES Chapter – Transport and Access - Steeple Renewables Project DCO.

On behalf of Steeple Solar Farm.

Planning Inspectorate Reference:	EN010163
Date:	07 January 2026
Pegasus Group Reference:	P22-1144 TN04
Author:	CB/KE

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1. Introduction

1.1. This Transport Technical Note (TN) has been prepared by Pegasus Group on behalf of The Applicant (Steeple Solar Farm).

1.2. This TN considers the likely effects of the Proposed Development in terms of Transport and Access including the potential effects of traffic flows on the road network, accidents and safety, severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation, hazardous loads, and dust and dirt.

1.3. This TN provides additional information to support the ES Chapter **EN010163 (Chapter 13: Transport and Access)** document dated April 2025, and includes the review of three additional highway links whereby base data was collected in April 2025 after submission of the DCO.

1.4. The proposed development is located in Nottinghamshire County Council (NCC) local highway authority boundary comprising approximately 450MW of solar energy generation and approximately 150MW Battery Energy Storage System (BESS).

1.5. This TN is not intended to be read as a standalone assessment, and reference should also be made to the **Transport Assessment (TA)** and **Outline Construction Traffic Management Plan (OCTMP)** which are included at **Appendix 13.1 [EN010163/APP/6.3.13]** and **Appendix 13.2 [EN010163/APP/6.3.13]** respectively.

1.6. It is considered that this TN provides additional information to confirm that the traffic impact on the local highway network and the PRoW network is not significant, with the implementation of vehicle and PRoW management measures in place.

2. Assessment Methodology

2.1. The assessment in this TN has been prepared in accordance with the IEMA/ISEP Guidance.

2.2. The pertinent issues for the ES in terms of transportation are the magnitude and consequences of changes at the assessment highway links within the study area as a result of the construction, operational and decommissioning phases of the Proposed Development on:

- Vehicular traffic flows.
- Accidents and safety.
- Severance of communities.
- Road vehicle driver and passenger delay.
- Non-motorised user (NMU) delay.
- NMU amenity.
- Fear and intimidation on and by road users; and
- Hazardous loads.

Assessment of Significance

2.3. There are four levels of impact magnitude considered which are Negligible, Low, Medium, and High.

2.4. The IEMA Guidance sets out two rules to be considered when assessing the impact of Proposed Development traffic on a highway link[1] as follows:

- Rule 1: include highway links where traffic flows will increase by more than 30% (or where the number of heavy goods vehicles will increase by more than 30%); and
- Rule 2: include highway links of high sensitivity where traffic flows have increased by 10% or more.

2.5. The 30% threshold is based on research and experience and the IEMA Guidance suggests that less than a 30% increase results in imperceptible changes in the environmental effects of traffic, apart from in sensitive locations.

2.6. Sites that are considered to be sensitive receptors with reference to the IEMA Guidance are Conservation Areas, schools, health facilities, community facilities, and congested junctions.

2.7. Definitions of magnitude set against the criteria to be considered have been based on these guidelines and are shown in **Table 2.1**.

[1] A highway link is a length of road between two junctions (DMRB CD109 Highway Link Design)

Table 2.1: Criteria for magnitude of impact

Impact	Magnitude of impact / threshold			
	Negligible	Low	Medium	High
Traffic flow	Change in peak or 24 hours traffic within the study area by less than 5%.	Change in peak or 24-hour traffic within the study area between 5% and 15%.	Change in peak or 24-hour traffic within study area between 15% and 30%.	Change in peak or 24-hour traffic within study area by 30% or more.
Severance	Change in peak[2] or 24-hour traffic within study area by less than 30%.	Change in peak or 24-hour traffic within study area of 30%-60%.	Change in peak or 24-hour traffic within study area of 60%-90%.	Change in peak or 24-hour traffic within study area by 90% or more.
Driver Delay	Change in peak or 24-hour traffic within study area by less than 5%.	Change in peak or 24-hour traffic within study area between 5% and 15%.	Change in peak or 24-hour traffic within study area between 15% and 30%.	Change in peak or 24-hour traffic within study area by 30% or more.
Road Safety	Personal Injury Collisions (PICs) data does not show an accident pattern or cluster which could indicate an existing highway safety issue. This analysis will be interpreted with professional judgement and used to inform and determine the impact of the Proposed Development on Road Safety.		The number of observed PICs will be compared against the predicted number of PICs that could be expected over the time period of the observed data (i.e. three years) in accordance with the COBA Manual (DMRB Volume 13, Section 1, Chapter 4). The calculations will be based on variables including: observed Average Annual Daily Traffic (AADT) flow, road speed, length of road section, and type of road. This analysis will be interpreted with professional judgement and used to inform and determine the impact on Road Safety and consideration of mitigation should the accident risk	

[2] 'Peak' traffic relates to the busiest times on the highway network, usually 0800-0900 and 1700-1800.

Impact	Magnitude of impact / threshold			
	Negligible	Low	Medium	High
			perceived to be excessively over and above the PICs that could be expected under baseline conditions.	
NMU Amenity	NMU amenity (formerly Pedestrian Amenity) is impacted by traffic flow, composition, and width of pavement, and is related to Fear and Intimidation thresholds. A threshold of where traffic or HGV flows have halved or doubled will be used to indicate whether there is a significant effect.			
Fear and Intimidation	As suggested by IEMA, a threshold of where traffic or HGV flows have halved or doubled will be used to indicate whether there is a significant effect.			
NMU Delay	The IEMA Guidance recommends that professional judgement is used to determine the impact on NMU Delay (formerly Pedestrian Delay) considering local factors such as pedestrian activity, visibility, and the physical conditions of the site.			

2.8. Negligible, Low, Medium, and High Magnitudes of Impact can have either a beneficial or adverse Impact Significance.

Sensitive Receptors

2.9. Sensitive receptors have been identified using the principles set out in the IEMA guidance (paragraph 1.30) for the categories of effect assessed in this TN.

2.10. The criteria for assessing the sensitivity of a receptor are set out in **Table 2.2.**

Table 2.2: Criteria for sensitivity of receptor

Receptor Sensitivity	Receptor Type
High	Receptors of greatest sensitivity to traffic flows, such as schools, playgrounds, accident blackspots, retirement homes, areas with no footways with high pedestrian footfall.
Medium	Traffic flow sensitive receptors, such as congested junctions, hospitals, shopping areas with active frontages, narrow footways, parks, and recreational areas.
Low	Receptors with some sensitivity to traffic flow, such as conservation areas, listed buildings, tourist attractions, and residential areas.

Receptor Sensitivity	Receptor Type
Negligible	Receptors with low sensitivity to traffic flows, and those distant from affected roads.

2.11. The sensitivity of each of the links is set out in more detail below. No links have been identified as 'High' Receptors.

Significance of Effect

2.12. The Significance of Effect is determined by combining the predicted Magnitude of Impact with the assigned sensitivity of the receptor. The Significance of Effect is set out in **Table 2.3** below. The significance thresholds can be categorised as 'beneficial' (positive i.e. reduction in traffic flows), 'negligible' (no real impact), or 'adverse' (negative i.e., increase in traffic flows). The shading indicates significance ratings that are deemed to be 'Significant' effects, this includes effects identified as 'Major' or 'Moderate'.

Table 2.3- Significance matrix

	Magnitude of Impact			
Sensitivity of Receptor	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor to Moderate	Negligible
Low	Moderate	Minor to Moderate	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

2.13. Significance thresholds can also be categorised as temporary or permanent and can have an effect for the short, medium, or long term. The relevant definitions in terms of longevity of the effect are set out below:

- A short-term effect: - an effect that will be experienced for 0 to five years.
- A medium-term effect: - an effect that will be experienced for five to 15 years; and
- A long-term effect: - an effect that will be experienced for 15 years onwards.

Stakeholder Engagement

2.14. Stakeholder engagement since the DCO submission in April 2025 is set out in **Table 2.4.**

Table 2.4: Baseline Information

Consultee	Summary of Comment	Applicant Response
Nottinghamshire County Council (NCC) 2nd July 2025	Post submission update meeting. Discussed the position of the transport work (traffic and PRoW) and the strategy going forward.	A revised ES Chapter will be provided in due course which will include additional data analysis.

Baseline Conditions

2.22. As stated in ES Chapter 13 (April 2025), supplementary survey traffic and NMU data has been obtained on various highway links and various locations on the PRoW network, in addition to the baseline data provided initially.

Baseline Survey Information

2.23. Additional baseline datasets were collected in April 2025 after the DCO submission. The sources of additional baseline information are included at **Table 2.5**.

Table 2.4: Baseline Information

Baseline Topic	Data Source	Date
Automatic Traffic Count Surveys	PCC Traffic Information Consultancy (PCC TIC)	April 2025
Manual Classified Turning Count Surveys	PCC TIC	April 2025
CCTV NMU Count Surveys	PCC TIC	April 2025

Baseline Traffic Flows

2.36. Additional ATC counts have been undertaken in April 2025 at the following locations listed below and are also shown in **Inset 2.1**:

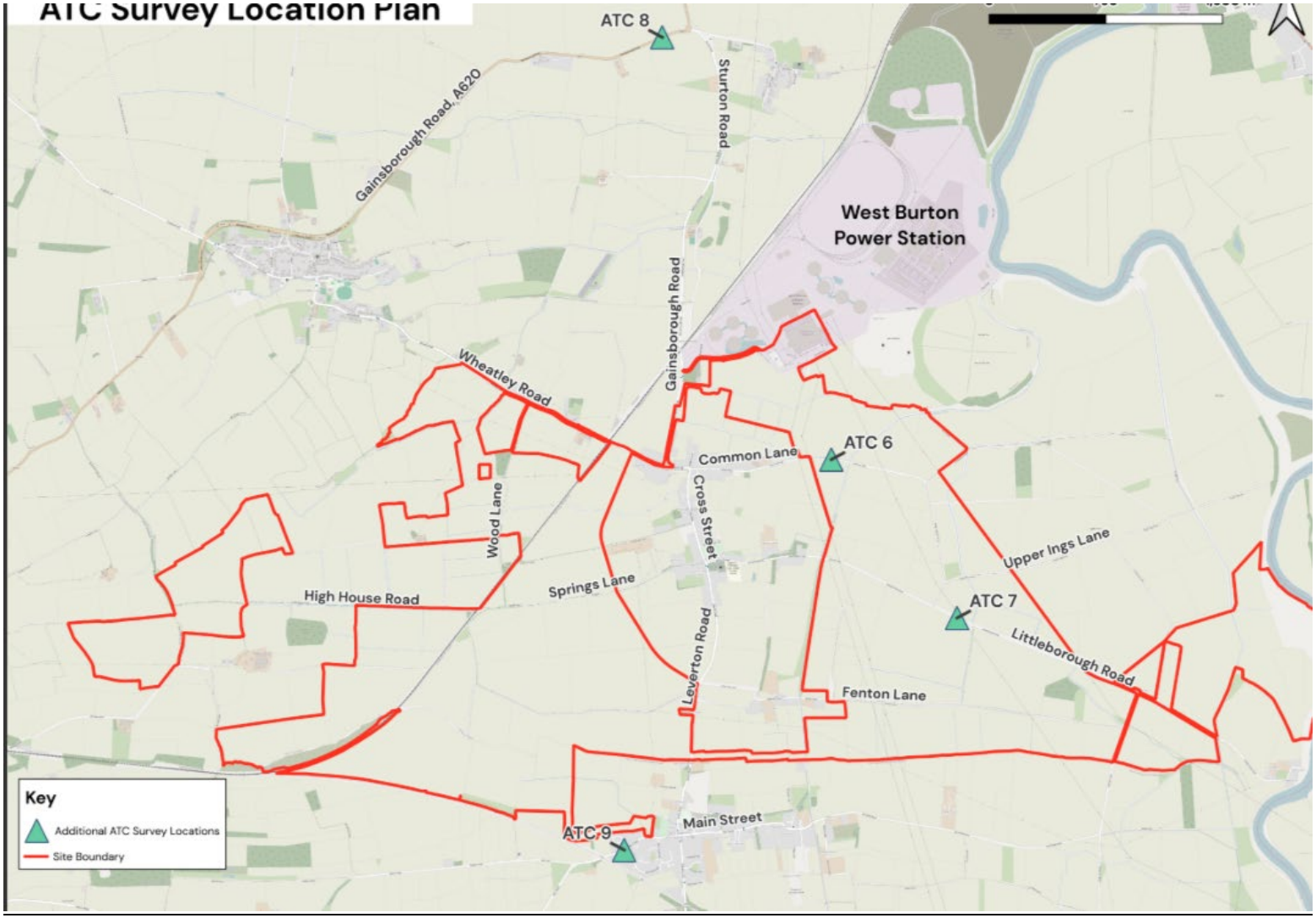
1 ATC 6 - Common Lane, west of the bridge crossing the Catchwater Drain

2 ATC 7 - Littleborough Road, circa 170m south east of the Littelborough Road / Upper Ings Lane junction

3 ATC 8 - Gainsborough Road, A620, circa 200 west of the Saundby Road, A620 / Sturton Road / Gainsborough Road, A620 roundabout junction

4 ATC 9 - Main St (within North Leverton with Habblesthorpe), circa 10m east of the St Martins Road / Main Street simple priority junction

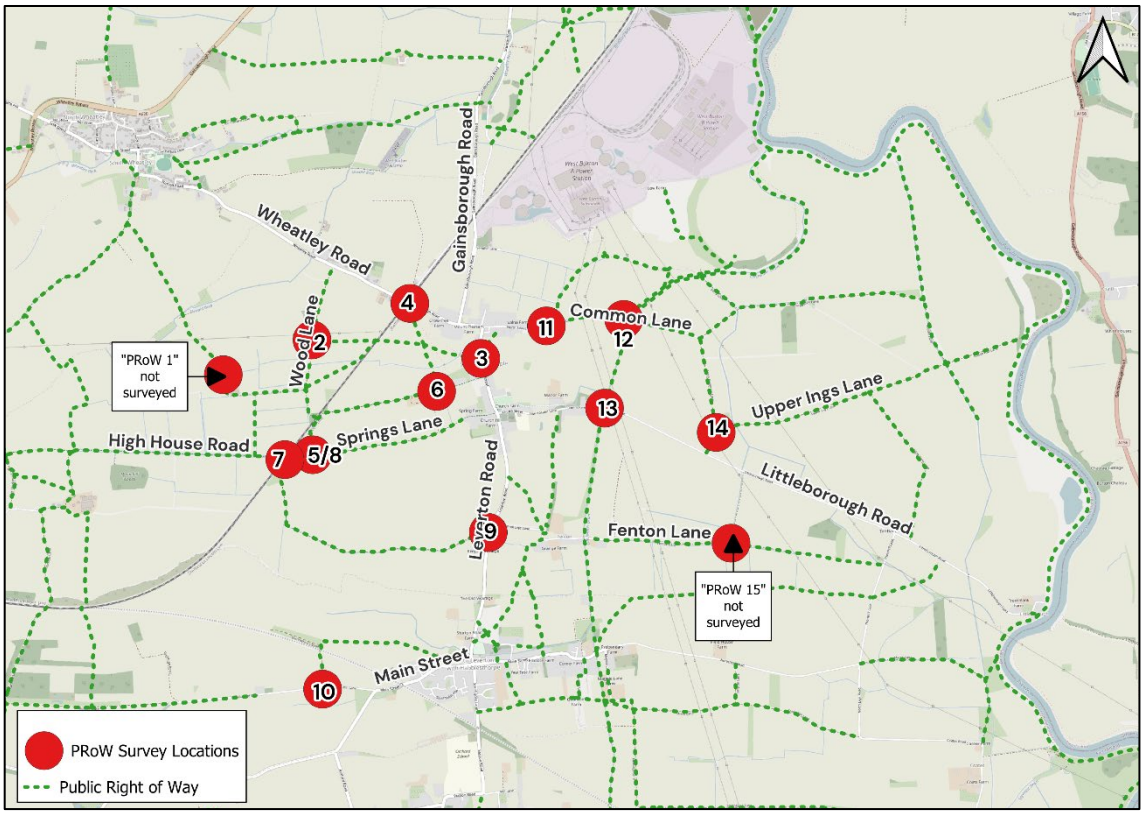
Inset 2.1 – ATC Survey Locations



2.37. Manual Classified Turning Count Surveys (MCC) have been carried out in April 2025 at the A631 / Station Road / Bar Road Roundabout.

2.38. Due to the interaction of the haul routes with the Public Rights of Way (PRoWs), count surveys (by CCTV) of existing NMUs have been carried out in April 2025 at the approximate locations shown on **Inset 2.2.**

Inset 2.2 – CCTV Traffic Survey Location Plan (approximate locations)



2.39. The growth rates have been applied to the existing traffic data for a future year of 2027 (the first year of the proposed construction programme) and 2029 (the end year of the proposed construction period) using factors derived from the TEMPro National Trip End Model (NTEM) for the Bassetlaw 002 area.

2.40. The resultant growth rate is as follows:

- 2025 – 2027 AADT: 1.0182
- 2025 – 2029 AADT: 1.0385

2.41. **Table 2.6** sets out the forecast baseline AADT flows for the 2027 and 2029 future year scenario. Whilst ATC data was collected for Main Street, the proposals will not impact on Main Street (ATC 9) due to the access strategy and restricted traffic routing (primarily from the north of the site), and therefore has been removed from the assessment.

Table 2.5: 2027 and 2029 Baseline Traffic Flows

Link		2027 Future Year		2029 Future Years	
		AADT Flow	AADT HGV Flow / (%)	AADT Flow	AADT HGV Flow / (%)
6	Common Lane	12	0 / 0%	12	0 / 0%
7	Littleborough Road	140	4 / 3.2%	143	5 / 3.2%
8	Gainsborough Road (A620)	5,376	148 /2.8%	5,483	151 / 2.8%

2.67. **Note that HGVs are included within the total traffic flow.*

Highway Boundary and Public Rights of Way (PRoW)

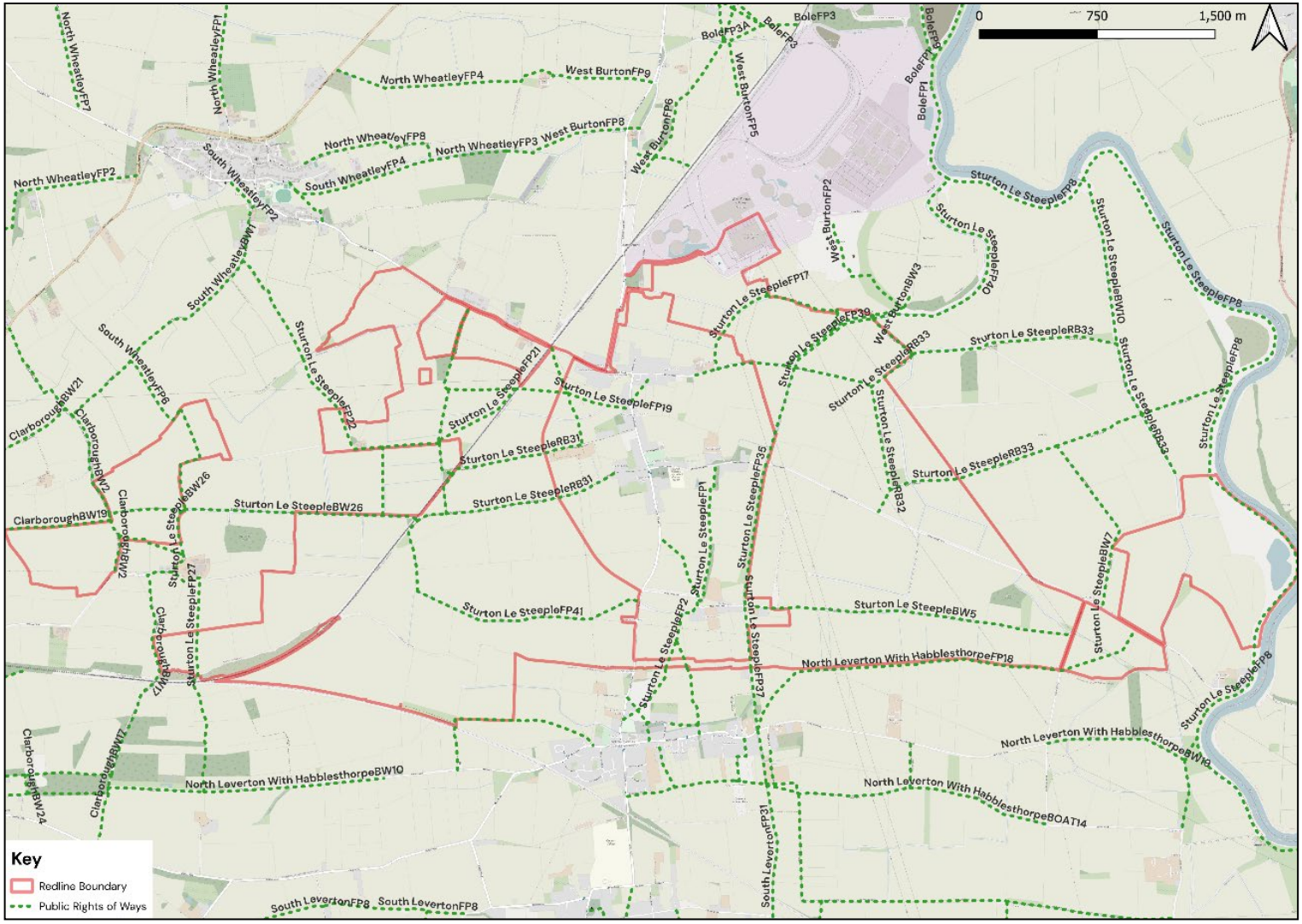
2.68. Records of Highways Maintainable at Public Expense (HMPE) and an extract of the Definitive PRoW map were obtained from NCC through online mapping and by East Midlands Councils on behalf of NCC.

2.69. The PRoW which cross or abut the site are summarised in **Table 2.7** below and are shown in relation to the Proposed Development at **Inset 2.3**. This plan is also shown in **Figure 3.3 – Public Rights of Way Routes in the Local Area [EN010163/6.4.3]** submitted with the DCO**.**

Table 2.6: Relevant PRoW Routes

Location	Type of PRoW	PRoW Name / Reference	Responsible Authority
'Western parcel'	Footpath	24, 27, 29, 41	NCC
	Bridleway	23, 25, 26, 28	NCC
	Restricted byway	30, 31	NCC
'Eastern parcel'	Footpath	17, 1, 16, 39, 15, 18, 37, 6	NCC
	Bridleways	32, 5	NCC
	Restricted byways	7, 10	NCC
Sturton le Steeple	Footpath	18, 19, 41	NCC

Inset 2.3: Relevant PRoW Route Plan



2.98. CCTV surveys, as set out above, have been carried out on the PRoW network that crosses or abuts the Site (and could therefore be affected by the construction of the Proposed Development) to determine the number of MNUs including vehicles applicable (where on a restricted byway) currently using each route. This has allowed for a comprehensive assessment to determine the likely impact on these users a result of the construction of the Proposed Development. To obtain the data during a neutral time period, this data was collected following the submission of the DCO and is now provided.

2.99. The CCTV surveys and counts have been carried out in April 2025, by an independent surveyor. It is not common practice to 'growth' NMU counts to a future year scenario, as it is unlikely that the use of these routes will significantly change in the intervening period and it would not be possible to precisely quantify any increase (or decrease) in use that could be experienced by NMUs on the routes.

Link Sensitivity

2.100. Each of the highway links set out in **Table 2.8** below will be considered 'scoped in' to the assessment of traffic impacts until they are 'ruled out' through the application of the IEMA rules set out above. As such, each link has been assigned a 'Sensitivity' value with reference to **Table 2.2**. The results of this are set out in Table 2.8 below.

Table 2.7: Link Sensitivity – local highway network

Link		Sensitivity	Justification
Highway Links			
6	Common Lane	Negligible	No proximity to sensitive receptors.
7	Littleborough Road	Negligible	No proximity to sensitive receptors.
8	Gainsborough Road (A620)	Medium	Narrow footway provided.

2.117. The PRoWs within the vicinity of the Site have been categorised with reference to the haul routes impacting the PRoW routes. These include PRoW routes that are 'shared' (PRoW route and the Haul Route share a section of the routes) 'crossed' (the PRoW route is crossed over by a haul route) or 'shared and crossed' with haul routes. It has been considered to be scoped into the assessment if the PRoWs are 'shared' and/or 'shared and crossed' by haul routes.

2.118. The PRoWs which are crossed by haul routes have been scoped out including FP19 (Footpath), FP20 (Footpath), FP21 (Footpath), FP22 (Footpath), FP31 (Footpath), FP41 (Footpath). These would be scoped out because the impacts of the development traffic would not be adding to the main route of the PRoW routes, however because there could be potential impacts where users meet a vehicle at a crossing we have included for robustness and these routes are considered in the assessment as set out in **Table 2.9.**

2.119. Applying the criteria above, each of the PRoW links set out in **Table 2.9** below will be considered 'scoped in' to the assessment of traffic impacts until they are 'ruled out' through the application of the IEMA rules set out above. As such, each link has been assigned a 'Sensitivity' value with reference to **Table 2.2**. The results of this are set out in **Table 2.9**.

Table 2.8: Link Sensitivity – public rights of way (PRoW)

Link		Sensitivity	Justification
Public Rights of Way Links			
1	RB30 (Restricted Byway) – shared by Haul Route ref WR-WL	Negligible	No proximity to sensitive receptors.
2	BW25 Bridleway – shared by haul routes ref FL-SL and FL-HHR	Negligible	No proximity to sensitive receptors.
3	BW26 Bridleway – shared by haul routes ref FL-HHR	Negligible	No proximity to sensitive receptors.
4	FP24 Footpath – shared by haul routes ref FL-SL	Negligible	No proximity to sensitive receptors.
5	FP17 Footpath – shared and crossed by haul route ref CL-UIL and IHRE, CL-TL, CL-FL CL-LR	Negligible	No proximity to sensitive receptors.
6	RB32 Restricted Byway – shared and crossed by haul route CL-UIL, CL-TL, CL-FL, CL-LR	Low/Negligible	Proximity to a small number of residential dwellings.
7	FP39 Footpath – shared route with haul route CL	Negligible	No proximity to sensitive receptors.
8	RB33 Restricted Byway – shared route with haul route CL-UIL	Negligible	No proximity to sensitive receptors.
9	BW5 Bridleway – shared route with haul route CL-LR and CLFL	Negligible	No proximity to sensitive receptors.

2.149. **Tables 2.8 and 2.9** confirms that there are no highway links assumed to be particularly sensitive (a Sensitivity of Medium or High). The PRoW links are assumed to be largely negligible in sensitivity, with one link assumed to be low in sensitivity due to proximity to a small number of dwellings.

3. Assessment of Likely Significant Effects

The Proposed Development

3.1. The Proposed Development is set out in detail at **Chapter 4: Proposed Development [EN010163/APP/6.2.4]** of the ES and comprises the construction of a solar photovoltaic (PV) scheme, designated a 'Nationally Significant Infrastructure Project' (NSIP), with a generating capacity of more than 50MW with associated infrastructure and equipment.

Construction Phase

3.2. Details of the arrangement / alignment of the access points are set out in the ES Chapter 13 and in the **TA** and **OCTMP** included at **Appendix 13.1 [EN010163/APP/6.3.13]** and **Appendix 13.2 [EN010163/APP/6.3.13]**.

3.3. Further information on this first principles approach to traffic generation during the construction phase is provided in the **TA** and the **OCTMP** provided in **Appendix 13.1 of the DCO ES Chapter [EN010163/APP/6.3.13]** and **Appendix 13.2 [EN010163/APP/6.3.13].**

3.4. In summary, it is estimated that the construction of the Proposed Development would result in around 12,887 one-way (25,774 two-way) delivery construction vehicle movements, and 42,000 one-way (84,000 two-way) workforce construction vehicle movements over the full 24 month (730 days) construction period. This equates to an Average Annual Daily Traffic (AADT) value of 152 vehicles (comprising 36 delivery trips and 116 workforce trips) based on 109,774 trips divided by 730 days (equivalent of 24 months construction period).

3.5. These vehicle numbers represent an approximate average (AADT) value, as it may be that the volume of construction traffic will be higher or lower on some days. However, measures contained within the **OCTMP** (**Appendix 13.2, [EN010163/APP/6.3.13]**) will assist in controlling these movements.

3.6. The percentage change for the 2027 and 2029 baseline traffic scenarios, including the anticipated construction traffic at each of the additional three links along the construction route, are summarised at **Table 3.1.**

3.7. The development traffic impact for Links 6 and 7 are only associated with the 'secondary loads' i.e. deliveries which have been decanted from HGV into smaller vehicles (e.g. tractor and trailer) at the Primary Compounds prior to impacting on the Links, and therefore larger HGVs (e.g. 16.5m HGVs) will not impact on these links.

3.8. Link 8 is not located on the construction traffic delivery route and therefore is only impacted by a proportion of workforce associated trips prior to vehicle joining/or after leaving the restricted routing to the north of the site, and will therefore not be associated with HGV delivery development traffic.

Table 3.9: Construction Average Annual Daily Traffic (AADT) and Percentage Change (2027 and 2029)

Link		Base (AADT)	Base + Construction Phase (AADT)	Base HGVs (AADT)	Base + Construction Phase HGVs (AADT)	Change in AADT / Percentage Change (%)	Change in AADT HGV / Percentage Change (%)	Ruled in/out based on IEMA Rules i.e. over a 30% impact requires further assessment
Highway Links 2027								
6	Common Lane	12	33	0	21	174%	N/A	Ruled In
7	Littleborough Road	140	157	4	22	12%	380%	Ruled In
8	Gainsborough Road	5,376	5,396	148	148	0%	0%	Ruled Out
Highway Links 2029								
6	Common Lane	12	33	0	21	170%	N/A	Ruled In
7	Littleborough Road	143	160	5	22	12%	373%	Ruled In
8	Gainsborough Road	5,483	5,504	151	151	0%	0%	Ruled Out

3.75. **Table 3.1** demonstrates that, with reference to the IEMA rules set out above, during the 2027 and 2029 scenario the HGV impact on Link 6 and Link 7 requires assessment, as this is in excess of 30% impact.

3.76. Link 6 also has an AADT impact of above 30% and will also be assessed, however in real terms the impact is based on 21 HGV vehicles which is low in real terms, but in percentage impact terms, as the existing baseline flows are low, the proportion is therefore above the threshold for assessment. Links 7 and 8 have an impact which is below the thresholds outlined in the IEMA rules and therefore do not require assessment.

Traffic Flow

Link 6

3.77. In accordance with Table 2.1, Link 6 is considered to be subject to a high magnitude of change in traffic flows based upon the increase of vehicle HGV traffic flows of more than 30% (baseline is zero HGVs AADT and 21 HGVs AADT are forecast). The sensitivity of the link, as noted above, is considered negligible on Common Lane. This has been categorised as negligible as the link is rural in nature with a low number of users affected. Therefore, the significance of effect is considered to be **Negligible** when the thresholds at Table 2.3 are applied, which is considered **not significant**.

Link 7

3.78. In accordance with Table 2.1, Link 7 is considered to be subject to a high magnitude of change in traffic flows based upon the increase of vehicle HGV traffic flows of more than 30%. The sensitivity of the link, as noted above, is considered negligible on Littleborough Road as it is rural in nature with a low number of user affected. Therefore, the significance of effect is considered to be **Negligible** when the thresholds at Table 2.3 are applied, which is considered **not significant**.

Severance

Link 6

3.79. In accordance with Table 2.1, Link 6 is considered to be subject to a high magnitude of change in severance based upon the increase of vehicle traffic flows of more than 90%. The sensitivity of the link is categorised as low. Therefore, the significance of effect is considered to be **Moderate** when the thresholds of Table 2.3 are applied, which is considered **significant without mitigation**.

Link 7

3.80. In accordance with Table 2.1, Link 7 is considered to be subject to a high magnitude of change in severance based upon the increase of vehicular traffic flows of more than 90%. The sensitivity of the link is categorised as low. Therefore, the significance of effect is considered to be **Moderate** when the thresholds of Table 2.3 are applied, which is considered **significant without mitigation**.

Driver Delay

Link 6

3.81. In accordance with Table 2.1, Link 6 is considered to be subject to a high magnitude of change based upon the increase of vehicle traffic flows of 30% or more. The sensitivity of the link is negligible. Therefore, the significance of effect is considered to be **Negligible** when the thresholds at Table 2.3 are applied, which is considered **not significant** when appropriate mitigation is put in place and will only occur during the temporary construction period.

Link 7

3.82. In accordance with Table 2.1, Link 7 is considered to be subject to a high magnitude of change based upon the increase of vehicle traffic flows of 30% or more. The sensitivity of the link is negligible. Therefore, the significance of effect is considered to be **Negligible** when the thresholds at Table 2.3 are applied, which is considered **not significant** when appropriate mitigation is put in place and will only occur during the temporary construction period.

Non-Motorised User Amenity

3.83. The IEMA traffic guidance suggests that a threshold for judging this would be 'where the traffic flows (or its HGV component) is halved or doubled' as set out in Table 2.1.

Link 6

3.84. Link 6 has an increase in traffic of over 100 percent across the course of 24 hours (174% AADT in 2027, 170% AADT in 2029). The IEMA guidance advises that the thresholds should be starting point to assess pedestrian amenity and the assessment should be used cautiously and have full regard to local conditions. Whilst in percentage terms the impact is over 100%, in real terms the impact on Link 6 is an additional 21 AADT on a carriageway which can be considered rural. Therefore, it is considered that there will be a negligible impact on NMU amenity. Therefore, the overall significance of effect is considered to be **neutral /negligible** when the thresholds at Table 2.3 are applied, which is considered **not significant**.

Link 7

3.85. Link 7 has an increase in traffic of over 100 percent across the course of 24 hours (380% AADT HGV in 2027, 373% AADT HGV in 2029). The IEMA guidance advises that the thresholds should be starting point to assess pedestrian amenity and the assessment should be used cautiously and have full regard to local conditions. Whilst in percentage terms the impact is over 100%, in real terms the impact on Link 7 is an additional 17 AADT on a carriageway which is can be considered rural. Therefore, it is considered that there will be a negligible impact on NMU amenity. Therefore, the overall significance of effect is considered to be **neutral /negligible** when the thresholds at Table 2.3 are applied, which is considered **not significant**.

Accidents and Safety

3.86. The collision records received from NCC are summarised in the **TA** at **DCO Appendix 2.1 [EN010163/APP/6.3.13].** The sensitivity of Links 6 and 7 are categorised as Negligible and given that there is no existing highway safety pattern or trend, the magnitude of change is considered to be negligible. Therefore, the overall significance of effect is considered to be **neutral / negligible** when the thresholds are applied, which is considered **not significant**.

Fear and Intimidation

Link 6

3.87. The IEMA traffic guidance suggests that a threshold for judging this would be assessing the degree of hazard with reference to previously established thresholds. Link 6 is forecast to be associated with zero AADT HGVs during the 'without development' 2027 and 2029 scenarios respectively, and 21 AADT HGVs during the 'with development' scenario. The posted speed limit is 60mph with vehicle average and 85th percentile speeds less than 20mph on this link, which will not change as a result of the Proposed Development. The Proposed Development therefore falls within the lowest category, both with and without development, leading to being categorised as a 'Small' level of fear and intimidation. Therefore Link 6 has a '**neutral / negligible**' Magnitude of Impact for fear and intimidation as a result of the Proposed Development.

3.88. The overall significance of effect is considered to be **neutral / negligible** when the thresholds are applied, which is considered **not significant**.

Link 7

3.89. The IEMA traffic guidance suggests that a threshold for judging this would be assessing the degree of hazard with reference to previously established thresholds. Link 7 is forecast to be associated with four AADT HGVs during the 'without development' 2027 and 2029 scenarios respectively, and 21 AADT HGVs during the 'with development' scenario. The posted speed limit is 60mph with vehicle average speeds 40mph and 85th percentile speeds 55mph on this link, which will not change as a result of the Proposed Development. The Proposed Development therefore falls within the lowest category, both with and without development, leading to being categorised as a 'Small' level of fear and intimidation. Therefore Link 7 has a '**Moderate adverse**' Magnitude of Impact for fear and intimidation as a result of the Proposed Development.

3.90. The overall significance of effect is considered to be **low** when the thresholds are applied in relation to the step change methodology, which is considered **not significant**.

Hazardous Loads

3.91. The Proposed Development is not forecast to be associated with any hazardous loads.

Likely Impacts on Public Right of Way

3.92. With reference to the IEMA guidance, the assessment criteria relating to PROW links include pedestrian delay, non-motorised user amenity, fear and intimidation. The guidance recommends that definitive thresholds do not need to be applied and that judgement should used to determine the significance of impacts.

3.93. The results of the baseline NMUs surveys undertaken in April 2025 are set out in **Table 3.2**. The scope of the surveys were discussed with NCC prior to being carried out. The Proposed Development construction traffic impact is also provided for each public right of way within the western and eastern parcels based on the proposed haul routes.

3.94. Each PROW link has been assessed in relation to the Proposed Development's impact and are identified in **Table 3.2**

3.95. The highest volume of users was on PRoW reference RB32 in the eastern parcel which had a total of 65 daily users over a 12-hour period based on the survey data. Other sites had significantly lower numbers of users. RB32 is not considered to be a 'Sensitive Link' and is classed as **low** sensitivity as although it is rural, there are a small number of dwellings close by. Pedestrian delay, non-motorised user amenity, fear and intimidation impacts, are considered to be **negligible** due to the low volume of existing users and low volume of construction traffic, and in the context that the guidance recommends that professional judgement should be applied when assessing MNU impact resulting from a Proposed Development. The users of the PRoW are the focus of this assessment, rather than the residents in their dwellings specifically, and therefore the **negligible** category is considered most appropriate in this instance.

3.96. For three PRoWs (FP21, FP22 and BW5) no NMU data is available. This was due to the location being in an inaccessible location and / or there wasn't appropriate street furniture to attach CCTV equipment to, and as such whilst there has been no data collected for these locations, the data collected within the area is considered to provide a range of locations and a good level of coverage of the NMUs within and surrounding the site.

Table 3.2 – Forecast Impact on PRoW Routes During Construction Phase (Wednesday base survey data included)

PRoW Route	PRoW Type	Haul Route Affecting PRoW	Haul Route Interaction with PRoW	Average Daily Cons. Vehicles			Average Daily No. Users (based on survey data)	Severity
				NPL[3]	T&T[4]	Light[5]		
Western Parcel								
Sturton le Steeple FP22	Footpath	WR-WL	Crossing	2	0	0	No data	Negligible
Sturton le Steeple RB30	Restricted Byway	WR-WL	Shared route	2	0	0	14	Negligible
Sturton le Steeple FP21	Footpath	WR-WL	Crossing	2	0	0	No data	Negligible
Sturton le Steeple FP19	Footpath	WR-WL	Crossing	2	0	0	10	Negligible
		FL-SL		2	8	3		
		FL-HHR		0	2	1		
		FL		0	1	1		
		IHRW		0	0	0		

[3] Non-partitionable loads
[4] Tractors and 20ft trailers
[5] Passenger cars, vans etc.

Sturton le Steeple RB31	Restricted Byway	WR-WL	Crossing	2	0	0	34	Negligible
		FL-HHR		0	2	1		
		FL		0	1	1		
Sturton le Steeple BW25	Bridleway	FL-SL	Shared route	2	8	3	37	Negligible
		FL-HHR		0	2	1		
Sturton le Steeple BW26	Bridleway	FL-HHR	Shared route	0	2	1	23	Negligible
Sturton le Steeple FP41	Footpath	FL-SL	Crossing	2	8	3	19	Negligible
		SRE-LR	Shared route	0	0	4		
North Leverton with Habblesthorpe FP24	Footpath	FL-SL	Shared route	2	8	3	16	Negligible
Sturton le Steeple FP20	Footpath	WR-WL	Crossing	2	0	0	32	Low/Negligible
		WR		0	1	0		
		GR-PCB		6	16	42		
Eastern Parcel								
Sturton le Steeple FP17	Footpath	CL-UIL	Crossing and shared route	0	2	1	14	Negligible
		CL-TL	Crossing	0	0	0		

		CL-FL		0	1	1		
		CL-LR		1	3	2		
		CL		1	3	2		
		IHRE	Crossing and shared route	0	0	0		
Sturton le Steeple RB32	Restricted Byway	CL-UIL	Crossing and shared route	0	2	1	65	Low/ Negligible
		CL-TL		0	0	0		
		CL-FL		0	1	1		
		CL-LR		1	3	2		
Sturton le Steeple FP39	Footpath	CL	Shared route	1	3	2	6	Negligible
Sturton le Steeple RB33	Restricted Byway	CL-UIL	Shared route	0	2	1	12	Negligible
Sturton le Steeple BW5	Bridleway	CL-LR	Shared route	1	3	2	No data	Negligible
*Further information on the haul routes and definitions of interaction are provided in the **OCEMP (Appendix 4.1, [EN010163/APP/6.3.4]).**								

4. Mitigation, Enhancement and Residual Effects

Construction

Mitigation by Design/Embedded Mitigation

4.1. As set out in the **OCEMP (Appendix 4.1, [EN010163/APP/6.3.4]**) standard measures and the adoption of construction best practice methods are to be incorporated and embedded into the design of the Proposed Development and the methods of its construction, in order to avoid, minimise, or manage adverse environmental effects.

4.2. An **OCTMP** (**Appendix 13.2, [EN010163/APP/6.3.13]**) which includes a PRoW Management Plan has been prepared as part of the DCO submission. This will be implemented during the construction phase of the Proposed Development as applied mitigation. Measures and controls to minimise the impact on NMU where the internal site access tracks cross or abut PRoW routes are also included. This will be agreed with the appropriate stakeholders prior to construction of the Proposed Development commencing and are secured by way of DCO requirement.

4.3. The aim of the **OCTMP (Appendix 13.2, [EN010163/APP/6.3.13])** is to minimise the effect of the construction phase on local residents, businesses, and the local and strategic highway network. It contains a package of embedded and applied mitigation measures which include:

- The responsibilities of the various parties / stakeholders.
- Details of the primary and secondary construction compounds, including the facilities at these (workforce welfare, security, parking etc.), and how material and equipment will be transferred between these.
- Movement plans, showing the consented construction traffic routes on the local and strategic highway network, and the internal movement routes (and controls where these tracks cross or abut a PRoW).
- Controls on delivery hours.
- An agreed routing strategy from the north of the site so that vehicles avoid the villages to the south of the site.
- Provision of cycle parking within the Primary Construction Compounds parking areas.
- A Construction Worker Travel Plan (CWTP) including measures and initiatives to minimise numbers of single occupancy car trips by personnel such as use of minibuses and car sharing within.
- Mitigation for the production / transfer of dust and dirt on the local highway network.
- Monitoring, reporting, and recording in connection with the OCTMP.

4.4. Dust will be managed through the provision of sprinklers, as appropriate. The transfer of mud onto the local highway network will be managed through the provision of wheel washing facilities at each point where the access tracks meet the adopted highway, although this is likely to be minimal owing to the use of internal access tracks within the Site. A road sweeper

can also be provided as and when necessary. All such measures are included in the submitted **OCTMP** (**Appendix 13.2, [EN010163/APP/6.3.13])** which and will be secured in a detailed CTMP via DCO requirement.

4.5. The PRoW management measures include:

- Fencing and appropriate buffer and/or waiting zones to allow for PRoW routes to remain open during the construction and operation of the Proposed Development. Any gates required will open away from PRoW routes to avoid obstructions.
- Speed limits enforced on internal site tracks (anticipated to not be in excess of 10mph).
- Schedule 6 of the draft DCO sets out the minor highways and PRoW that may be temporarily closed as a result of the project and states the sections of Streets and PRoW to be temporarily stopped up. These will ensure the potential for conflict between construction vehicles and NMUs reduced.
- All construction staff to be made aware of PRoW routes as part of on-site inductions.
- Signage on internal access tracks and PRoWs warning of the presence of NMU and construction traffic, as appropriate.
- Advertisement of any diversions of PRoW routes, if necessary, to be made via appropriate channels, arranged either by the Applicant or the LHA / LPA.

4.6. A summary of the mitigation to be implemented during the construction phase of the Proposed Development is set in **Table 4.1.**

Table 4.1: Mitigation- Construction

Ref	Measure to avoid, reduce, or manage any adverse effects and/or to deliver beneficial effects	How the measure will be secured	
		By Design	By DCO Requirement
1	OCTMP	X	X
2	PRoW Management Plan (contained in the OCTMP)	X	X
3	Construction Worker Travel Plan (CWTP) (contained in the OCTMP)	X	X
4	Schedule 6 of the draft DCO sets out the minor highways and PRoW that may be temporarily closed as a result		X

	of the project and states the sections of Streets and PRoW to be temporarily stopped up.		

Additional Mitigation

4.7. No additional mitigation is proposed during the construction phase with respect to transport and access.

Enhancements

4.8. Enhancements are provided through two Permissive Paths being embedded into the proposed layout design. These will be in place for the 40 year lifetime of the scheme, and are indicated on **Figure 2.1 submitted with the DCO – Indicative Site Layout [EN010163/APP/6.4.2].**

Residual Effects

Construction Phase

4.9. The residual effects of the construction phase are considered to be '**negligible**' and therefore '**not significant'** on a typical construction day, following the successful implementation of mitigation measures for all transport impacts identified. The mitigation measures for the construction period discussed above are forecast to reduce the impact of the Proposed Development.

Operation and Decommissioning

4.10. The operational phase Transport and Access impacts have been scoped out at EIA Scoping and PEIR stages.

4.11. The decommissioning phase Transport and Access impacts are anticipated to be no worse than the construction phase as dismantling and disposing of parts and equipment is anticipated at this stage to be less traffic intensive compared to the construction phase.

4.12. The residual effects during decommissioning are therefore anticipated to be **negligible'** and **not significant.**

Cumulative and In-Combination Effects

Cumulative Effects

4.13. Given the nature of the Proposed Development, its traffic impact will be the greatest during the Construction phase, and will be negligible during the Operational phase, and Decommissioning phase, however this will be confirmed at the time of decommissioning following the 40 year lifetime of the Proposed Development.

4.14. A review of other local developments, either allocated, consented, or recently built-out and occupied, has been carried out to determine the cumulative effect of these on the local and strategic highway network in the 2027 and 2029 future year scenarios.

4.15. The planning application documents associated with the sites have been reviewed. The traffic associated with the cumulative sites during the timeframe of the Proposed Development construction period have been considered in the assessment. This may be considered as a worst-case scenario as it is unlikely that the peak period of construction across all the sites will coincide at the same time.

4.16. It has been necessary to include an assessment of traffic-generating committed development that is due or forecast to come forward within the Site's study area which could impact upon the assessment scenarios set out in this TN. Other potential emerging / approved developments (referred to as 'committed developments') that have the potential for cumulative effects alongside the Proposed Development, which have been reviewed and scoped into the assessment are outlined below. Other sites in the area were reviewed however have been scoped out as construction programmes did not overlap time periods with the Proposed Development construction and/or did not impact on the proposed construction traffic route. Schemes which were considered to be committed but not yet consented, were also considered appropriate to include in the assessment due to the potential impact.

4.17. **Table 7.1** in the **TA (Appendix 13.1, [EN010163/APP/6.3.13])** includes the list of committed development sites which have been included in the cumulative assessment which can be summarised as:

- National Grid Electricity Transmission (North Humber to High Marnham) (NSIP) Ref: EN020034 (NSIP)
- West Burton Solar Project (NSIP) Ref: EN010132 (NSIP)
- Land to the East of Bumble Bee Farm, Gainsborough Road, Saundby Ref: 22/00358/FUL
- Land north west and south of Field Farm, Wood Lane Ref: 20/00117/FUL
- Land east of Gainsborough Road, Bole Ref: 22/01713/FUL
- Land at Sturton le Steeple, Gainsborough Road Ref: V/4386

4.18. The sites with reference to the cumulative impacts are identified in **Table 4.1.** The traffic flow diagrams for the cumulative schemes to assess the cumulative effects are provided in the **TA** (**Appendix 13.1, [EN010163/APP/6.3.13]**).

Table 4.1: Construction Average Annual Daily Traffic (AADT) and Percentage Change (2027 and 2029) Including cumulative effects

Link		Base (AADT) plus Cumulative Traffic Impact	Base + Cumulative + Construction Phase (AADT)	Base HGVs (AADT) plus Cumulative Traffic Impact	Base + Cumulative + Construction Phase HGVs (AADT)	Change in AADT / Percentage Change (%)	Change in AADT HGV / Percentage Change (%)	Ruled in/out based on IEMA Rules i.e. over a 30% impact requires further assessment
Highway Links 2027								
6	Common Lane	12	32	0	21	174%	N/A	Ruled In
7	Littleborough Road	140	143	4	21	12%	380%	Ruled In
8	Gainsborough Road	5,610	5,213	196	84	0%	0%	Ruled Out
Highway Links 2029								
6	Common Lane	12	33	0	21	170%	N/A	Ruled In
7	Littleborough Road	143	160	5	22	12%	373%	Ruled In
8	Gainsborough Road	5,717	5,738	199	199	0%	0%	Ruled Out

4.19. **Table 4.1** demonstrates that, with reference to the IEMA rules set out above, during the 2027 and 2029 scenario, that Links 6 and 7 above have been scoped into the assessment for AADT total traffic impact, and / or for HGV impact to consider with reference to the cumulative impact.

4.20. Links 6 and 7 are ruled into the assessment based on the proportional impacts, however these are not considered to be 'Sensitive Links' and traffic associated with cumulative schemes do not impact on Common Lane (Link 6) or Littleborough Road (Link 7) and therefore in terms of applying the IEMA assessment criteria, the assessment is applicable and can be applied to assessing the cumulative impacts as well. As such no further assessment has been set out and the scheme impacts are overall considered to be not significant.

In-Combination Effects

4.21. The in-combination effects arising from Transport and Access during the Construction, Operational and Decommissioning phases of the Proposed Development which could adversely affect air and noise quality are considered separately within **ES Chapter 13** and **Chapter 9 - Noise and Vibration [EN010163/APP/6.2.9]** and **Chapter 14 - Air Quality' [EN010163/APP/6.2.14]** of the ES.

5. Summary and Conclusions

Summary

5.1. This TN assesses the potential likely significant effects of the Proposed Development on vehicular traffic flows, severance, NMU delay, driver delay, MNU amenity, accidents and safety, fear and intimidation, hazardous loads, and dust and dirt.

Baseline Conditions

5.2. The Proposed Development comprises two parcels of land in the vicinity of the villages and hamlets of Sturton le Steeple, North Leverton with Habblesthorpe, North Wheatley and Fenton.

5.3. Traffic data has been collected in 2024, and further traffic data has been undertaken in April 2025.

Assessment Links

5.4. In accordance with the IEMA (now ISEP) guidance 'Environmental Assessment of Traffic and Movement' (July 2023) in relation to determining the scale and extent of assessment. The sensitivity of the links has been determined on a link-by-link basis, with no links identified as sensitive. The assessment links in this TN have included Links 6 and 7 which have been based on the traffic data collected in April 2025.

5.5. The assessment of Links 6 and 7 have also been considered in detail within this TN due to the impact of AADT and / or HGV AADT during the construction period. These were also ruled in as part of the cumulative impact assessment. However due to the Links not having any impact by cumulative schemes the assessment of the likely impacts is also applicable to the cumulative assessment.

Likely Significant Effects

5.6. Standard measures and the adoption of construction best practice methods to avoid, minimise, or manage adverse environmental effects to have been incorporated into the approach to the construction methodology and design of the Proposed Development so far as practicable. In particular, the requirements for deliveries and workforce to route to the development from the north of the site through the restricted construction traffic route. As a result, the assessment of the likely significant effects for HGVs during the construction period (2027 and 2029) are summarised below.

Construction

5.7. The HGV Traffic Flows on Links 6 and 7 are considered negligible effect due to the low numbers of base flow traffic, and low numbers of construction traffic.

5.8. HGV Severance on Links 6 and 7 are considered to have a Moderate Adverse significance effect as the impact is above 90% but the sensitivity of the link is low.

5.9. HGV impact on driver and passenger on Links 6 and 7 are considered to be Neutral / Negligible, due to the low numbers.

5.10. Links 6 and 7 proportionally more than double the AADT and / or HGV AADT however based on the guidance the low numbers of base traffic and development traffic have been taken into consideration and result in a negligible impact.

5.11. Accidents and Safety has been assessed and based on the low number of existing accidents recorded, the impact has been assessed as neutral / negligible on Links 6 and 7.

5.12. The Proposed Development falls into the lowest category for Fear and Intimidation and is therefore categorised as a 'small' level for Link 6 and falls into a natural / negligible category. Link 7 falls into the Moderate Adverse category due to the existing vehicle speeds, but mitigation on Littleborough Road will reduce the impact as outlined in the **OCTMP (Appendix 13.2 [EN010163/APP/6.3.13]).**

5.13. The Proposed Development is not forecast to be associated with any hazardous loads.

Operation and Decommissioning

5.14. The operational and decommissioning phases of the Proposed Development have been scoped out as the traffic impacts are considered to be low and would therefore not create significant effects.

Mitigation and Enhancement

5.15. An OCTMP including a PRoW Management Plan and CWTP, are contained at **Appendix 13.2 [EN010163/APP/6.3.13],** and will be implemented during the construction phase of the Proposed Development.

5.16. The aim of the **OCTMP (Appendix 13.2 [EN010163/APP/6.3.13])** is to minimise the effect of the construction phase on local residents, businesses, and the local and strategic highway network and it contains a package of mitigation measures.

5.17. The PRoW Management Plan (embedded into the OCTMP **(Appendix 13.2 [EN010163/APP/6.3.13]))** will mitigate the effect of the Proposed Development on the PRoW routes which cross and abut the scheme, and the potential impact on NMUs. The CWTP (embedded into the TA) encourages lift-sharing, minibuses and restricted routing for deliveries and workforce.

5.18. These will be agreed with the LHA and NH prior to the commencement of the construction phase and will be secured by DCO requirement.

5.19. The mitigation measures discussed above are forecast to reduce the residual impact of the Proposed Development on each of the assessed links during the construction phase to an Adverse Minor significance, which is considered to be not significant.

5.20. **Table 5.1** provides a summary of effects, mitigation and residual effects.

Table 5.1: Summary and Residual Effects – Transport and Access

Receptor/ Receiving Environment	Description of Effect	Nature of Effect	Sensitivity Value	Magnitude of Effect	Significance of Effects	Mitigation/ Enhancement Measures	Residual Effects
CONSTRUCTION Users of local highway network, PROWs, residents and businesses	Additional vehicles (deliveries and workforce) on the highway network.	Temporary	Minor / Moderate (Not Significant)	Minor / Moderate (Not Significant)	Minor Adverse / Negligible (Not Significant)	None	Minor Adverse / Negligible (Not Significant)
CUMULATIVE Users of local highway network, PROWs, residents and businesses	Additional vehicles on the highway network.	Temporary	Not Applicable (Not Significant)	Negligible (Not Significant)	Minor (Not Significant)	None (Not Significant)	Negligible (Not Significant)

Conclusion

5.21. It is concluded that the proposed package of mitigation measures ensure that the Proposed Development is acceptable and that there will be no likely significant effects.