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TRANSPORT NOTE: SECTION 73 PLANNING APPLICATION

1. INTRODUCTION

1.1 Background

- 1.1.1 Apex Transport Planning Ltd ('Apex') has been instructed by Pathfinder Clean Energy (PACE) to prepare this Technical Note in support of a Section 73 application relating to the approved Tophams Solar Farm development at Land West of Ashwell Road, Bygrave, Hertfordshire.
- 1.1.2 Planning permission was granted in June 2024 by North Hertfordshire District Council (NHDC) for the scheme (App Ref: 22/00741/FP). From a transport and highways perspective, the development proposals were supported by a series of Transport Notes and a Framework Construction Traffic Management Plan (CTMP), which established the suitability of the approved construction route and associated mitigation.
- 1.1.3 As part of the permission, Planning Condition 26 requires the submission and approval of a Construction Traffic Management Plan (CTMP) to manage construction vehicle routing, delivery activity and associated mitigation measures during the construction phase of the development. The Condition also specifically stated that the CTMP should include a commitment to a maximum of 2 articulated lorry visits per day (i.e. 4 two-way trips).
- 1.1.4 The CTMP has subsequently, via the applicant, undergone an extensive review process with the highway authority at Hertfordshire County Council (HCC), including six iterations of review and amendment throughout the discharge process.
- 1.1.5 It is understood that the CTMP is intended to be discharged imminently to avoid delaying the commencement of the approved construction programme.
- 1.1.6 The Applicant is now seeking a temporary and time-limited variation to Condition 26 through a Section 73 application. The proposed variation relates specifically to the photovoltaic (PV) module and mounting frame delivery phase of the construction programme and seeks a temporary uplift to a maximum of 8 articulated lorry arrivals per day, equating to 16 two-way articulated vehicle movements per day, for a period of no more than 4 consecutive weeks.
- 1.1.7 Following the temporary uplift period, the approved baseline articulated vehicle restriction secured through the CTMP would resume for the remainder of the construction programme. The temporary

uplift period is anticipated to accommodate the substantial majority of articulated HGV movements associated with the photovoltaic module and mounting frame delivery phase.

1.1.8 Importantly, the Section 73 proposal does not introduce:

- a new construction route
- revised site access arrangements
- larger articulated vehicle types
- or materially different vehicle manoeuvres on the local highway network.

1.1.9 The proposed variation instead relates solely to a temporary uplift in the frequency of already-approved articulated vehicle movements during a short and defined 4-week phase of the construction programme.

1.1.10 This Technical Note has referenced the transport documentation agreed as part of Planning Permission 22/00741/FP, including TN01–TN04 and the approved Framework CTMP. These remain valid and appropriate for the consideration of the S73 application.

1.1.11 This note sets out more information to demonstrate how the proposed changes to the level of articulated vehicles per day are appropriate, would not lead to an unacceptable impact on road safety, and therefore remain in accordance with the NPPF.

2. APPROVED FRAMEWORK

2.1 Highway Authority Position

2.1.1 Through the planning application and CTMP process, HCC accepted the principle of articulated HGVs using the approved construction route subject to mitigation and operational controls. These measures included:

- temporary junction mitigation works
- restricted delivery hours
- vehicle booking systems
- banksperson controls
- holding areas
- route monitoring
- additional warning signage

2.1.2 The approved TN02 confirms that HCC stated: *“with the various mitigations and measures you propose, along with the additional points we raise below, we are willing to accept an absolute maximum of 2 articulated lorry visits per day...”*

2.1.3 In reviewing the wording and context of the HCC response, it is evident that the restriction on articulated vehicle frequency formed part of the agreed management associated with the temporary construction activity along the approved route.

2.1.4 Importantly, the restriction did not arise because articulated HGV use of the route was considered unacceptable in highway safety terms in principle. Rather, the route itself, the articulated vehicle types and the associated mitigation strategy had already been technically assessed through the approved transport evidence and associated junction mitigation proposals. TN01 included detailed route analysis drawings based on a 16.5m long articulated vehicle, demonstrating how the route can safely

accommodate these and this evidence was accepted by HCC, forming the basis of the approval and conditions.

- 2.1.5 This distinction is reflected within subsequent correspondence with HCC, which confirms: *“Spreading a lower level of movements out over a longer period ensures minimal impact day to day.”*
- 2.1.6 The current Section 73 application therefore principally relates to the concentration and management of already-approved articulated vehicle movements during a temporary construction period, rather than the acceptability of articulated HGV use of the route itself.

2.2 Approved Mitigation

- 2.2.1 The approved CTMP and the transport reports submitted in support of the planning application already include a range of measures specifically intended to manage articulated construction traffic activity along the approved route. These measures included:
- restricted HGV operating hours between 09:30 and 14:30 Monday to Friday
 - vehicle booking and scheduling systems
 - banksperson controls
 - holding areas
 - route monitoring
 - temporary highway mitigation works
 - communication procedures associated with construction traffic management.
- 2.2.2 These measures were developed through the planning application in consultation with HCC and formed part of the basis upon which articulated HGV movements were accepted on the approved construction route.
- 2.2.3 The current Section 73 application does not seek to alter the established mitigation and, indeed, proposes a number of additional mitigation and management measures during the temporary uplift period in response to discussions undertaken with HCC. Accordingly, all articulated HGV movements associated with the proposed temporary uplift period would continue to operate in accordance with the approved framework CTMP and remain subject to the same operational controls and management procedures already agreed with HCC, together with the supplementary mitigation measures set out within this Technical Note.
- 2.2.4 Importantly, the approved transport evidence demonstrates that articulated HGV use of the route was accepted in principle by HCC, subject to appropriate management controls. The restriction on articulated delivery frequency therefore formed part of the agreed management framework associated with temporary construction activity, rather than reflecting any fundamental highway safety objection to articulated HGV use of the approved route itself.
- 2.2.5 The current Section 73 application does not seek to revisit the principle of articulated HGV use of the approved route, nor the previously accepted highway safety conclusions associated with the development proposals. Instead, the proposals relate solely to a temporary uplift in the frequency of already-approved articulated HGV movements during a short and controlled phase of the construction programme.
- 2.2.6 The approved framework CTMP mitigation would remain in place throughout the temporary uplift period. In addition, the Applicant is proposing a number of supplementary mitigation and management measures during the temporary uplift phase, as set out in Section 4 of this Technical Note.

3. POLICY CONTEXT FOR THE EXISTING RESTRICTION

- 3.1.1 The existing restriction of two articulated lorry visits per day was secured as part of Planning Condition 26. The reason for the condition does not cite a specific policy of the North Hertfordshire District Local Plan and relies, in effect, on the general transport policies of the NPPF.
- 3.1.2 The relevant NPPF tests are set out at paragraphs 57, 115 and 116 of the National Planning Policy Framework (December 2024). Paragraph 57 sets the six tests applicable to planning conditions; conditions should only be imposed where they are necessary, relevant to planning and to the development to be permitted, enforceable, precise, and reasonable in all other respects. Paragraph 116 confirms that development should only be prevented or refused on highway grounds where there would be an unacceptable impact on highway safety, or where the residual cumulative impacts on the road network would be severe.
- 3.1.3 The transport evidence supporting the approved planning permission (TN01–TN04 and the Framework CTMP) demonstrated that the approved construction route, the use of 16.5m articulated HGVs, and the proposed mitigation and management measures can be accommodated without an unacceptable impact on highway safety and without a severe residual cumulative impact. That assessment was accepted by HCC and informed the grant of permission.
- 3.1.4 During the subsequent CTMP discharge process, HCC has indicated that an increase to 4 articulated movements per day would be acceptable from a highway perspective. That position confirms that the two articulated vehicles per day figure secured by Condition 26 is not a fundamental safety threshold, but rather a negotiated daily management figure agreed in the context of a longer-running construction phase.
- 3.1.5 Against that background, the present Section 73 application is appropriately considered against the same NPPF tests that applied to the original permission, namely whether the temporary uplift would result in an unacceptable impact on highway safety, or a severe residual cumulative impact on the road network. The remainder of this Technical Note addresses those tests directly.

4. CONSTRUCTION PROGRAMME AND VEHICULAR ACTIVITY

4.1 Construction Programme and Vehicle Composition

- 4.1.1 The approved CTMP considered approximately 750 total construction deliveries across the overall construction programme, equivalent to approximately 1,500 two-way vehicle movements.
- 4.1.2 Following refinements in the construction programme, the overall construction traffic generation associated with the development is now anticipated to be lower than that previously assessed and accepted as part of the approved planning application. This is primarily due to the proposed delivery strategy, which seeks to accommodate a greater proportion of construction materials via articulated HGVs over a short and tightly controlled temporary uplift period.
- 4.1.3 Based on the latest contractor programme and delivery assumptions, the construction programme is anticipated to generate approximately 603 construction deliveries overall, equivalent to approximately 1,206 two-way vehicle movements.
- 4.1.4 The transport reports submitted with the approved planning application considered an estimate of approximately 310 articulated HGV deliveries across the construction programme for assessment

purposes. However, TN02 also recognised that the final number of articulated vehicle movements could ultimately vary depending on contractor logistics and delivery arrangements.

- 4.1.5 Since the original planning application submissions, the contractor construction methodology and logistics strategy have continued to evolve. Based on the latest contractor programme requirements, approximately 226 deliveries associated with the photovoltaic module and mounting frame phase now require the use of 16.5m long articulated HGVs. This equates to approximately 452 two-way articulated HGV movements across the construction programme. This comparison is illustrated in Table 4-1.

Table 4-1: Summary of Changes

Item	Approved Assessment (Estimated)	Latest Contractor Requirements	Change
Total construction deliveries	750	603	-147
Articulated HGV deliveries	310	226	-84
Other construction deliveries	440	377	-63
Overall construction programme	c.35 weeks	c.35 weeks	No change

- 4.1.6 Whilst the concentration of articulated HGV activity associated with the construction programme has evolved compared with the earlier assessment assumptions, the updated contractor requirements indicate that the overall construction traffic generation associated with the development is now anticipated to be lower than that previously assessed and accepted as part of the approved planning application.
- 4.1.7 This updated delivery profile, combined with the proposed temporary uplift period, allows the approved construction programme duration of approximately 35 weeks to be maintained whilst reducing the overall number of construction deliveries across the wider programme, lowering non-articulated vehicle activity across the remainder of the construction phase, and providing greater flexibility for contractor sequencing, material deliveries and component availability.

4.2 Programme Comparison: Approved Limit and Proposed Uplift

- 4.2.1 The proposed temporary uplift would allow the articulated HGV delivery phase to be undertaken more efficiently within the approved construction programme period.
- 4.2.2 The uplift would accommodate a greater proportion of deliveries within a short and tightly controlled period, whilst overall construction vehicle generation is now anticipated to remain lower than previously assessed and accepted as part of the approved planning application. The proposed approach also better aligns with contractor sequencing, material delivery requirements and component availability associated with the photovoltaic module and mounting frame installation phase
- 4.2.3 Table 4-2 sets out a comparison between the existing Condition 26 restriction and the proposed temporary uplift strategy, including the implications for the wider contractor construction programme, articulated delivery phase duration and residual construction traffic activity across the remainder of the approved construction period.

Table 4-2: Comparison of Existing Restriction and Proposed Uplift Strategy

Scenario	Existing Articulated HGV Restriction (4 two-way movements)	Proposed Temporary Articulated HGV Uplift Strategy (16 two-way movements)
Total articulated movements (latest)	452 two-way movements	452 two-way movements
Maximum articulated movements per day	4 two-way movements/day	16 two-way movements/day during temporary uplift period
Approximate articulated delivery phase required with restrictions	22.6 weeks	4-week articulated uplift period + c.6.6 weeks remaining under approved restriction
Remaining programme duration outside peak restricted articulated phase	c.12.4 weeks / 62 working days (5-day week)	c.31 weeks / 155 working days (5-day week)
Overall construction programme	c.35 weeks	c.35 weeks

- 4.2.4 As shown in Table 4-2, under the existing approved restriction, the articulated delivery phase alone would extend across approximately 22.6 weeks of the approved construction programme.
- 4.2.5 By contrast, the proposed temporary uplift would allow the majority of articulated HGV activity to be accommodated within a short and tightly controlled 4-week period, based on a maximum of 8 articulated HGV arrivals per day, equivalent to 16 two-way articulated HGV movements per day.
- 4.2.6 Following the temporary uplift period, the remaining articulated movements would continue to operate under the approved restriction secured through the Framework CTMP (4 two-way articulated movements). This would leave approximately 132 two-way articulated HGV movements to be accommodated outside of the temporary 4-week uplift period.
- 4.2.7 At the approved maximum of 4 two-way articulated HGV movements per day, this would equate to approximately 33 working days, or c.6.6 weeks based on a 5-day working week, although these residual articulated movements could also be accommodated flexibly across the remaining approximately 31 weeks of the approved construction programme.
- 4.2.8 The proposed daily cap of 16 two-way articulated HGV trips would therefore represent a maximum operational limit, rather than the expected average daily occurrence across the full uplift period, recognising that delivery activity would vary depending on logistics coordination, weather conditions, contractor programming and site operations.
- 4.2.9 Under the proposed temporary uplift, the articulated delivery phase would operate on the basis of a maximum of 16 two-way articulated HGV movements per day across the approved 5-hour delivery window, equivalent to approximately 3.2 articulated vehicle movements per hour, or approximately one articulated vehicle movement every 18-19 minutes on average during the busiest delivery days.
- 4.2.10 The proposed uplift would therefore allow the peak articulated HGV activity to be concentrated within a short and controlled temporary period, providing greater flexibility across the wider contractor construction programme for material deliveries, contractor sequencing and component availability. This would also reduce the duration over which the principal articulated delivery phase would occur.

4.3 Route Operation and Interaction with Background Traffic

- 4.3.1 The approved construction route utilises rural roads characterised by relatively low traffic flows and dispersed vehicle activity. This is evidenced by the traffic survey information previously obtained along Ashwell Road and presented within the transport reports submitted in support of the approved

application. TN01 reported observed 85th percentile vehicle speeds of approximately 45mph along the relevant section of Ashwell Road to the south of Bygrave, materially below the posted 60mph speed limit. In addition, TN02 included ATC survey data within the vicinity of the site access which identified observed vehicle speeds of approximately 40mph.

4.3.2 The proposed uplift would allow a maximum of 8 articulated HGV visits per day, equating to 16 two-way articulated vehicle movements during the 09:30–14:30 delivery window.

4.3.3 The operational characteristics of the proposed uplift are summarised within Table 4-3.

Table 4-3: Estimated Vehicle Profile – Proposed Uplift Period

Item	Result
Delivery window 09:30 – 14:30	5 hours
Maximum articulated HGV deliveries	8/day
Maximum articulated movements	16/day
Average articulated movement per hour	3.2 movements/hour
Average inbound articulated arrival per hour	1.6 arrivals/hour
Average interval between articulated movements	One vehicle every c.18 minutes 45 seconds
Average interval between inbound articulated arrivals	One vehicle every c.37 minutes 30 seconds

4.3.4 As shown in Table 4-3, the proposed uplift would equate to approximately one articulated vehicle movement in either direction every 18 minutes 45 seconds, on average, on a maximum delivery vehicle day during the uplift delivery period. In terms of inbound articulated deliveries travelling towards the site, this would equate to approximately one articulated HGV arrival every 37 minutes 30 seconds, on average.

4.3.5 The key opposing movement for inbound articulated HGVs travelling northbound towards the site would be southbound background traffic. A peak southbound flow of approximately 72 vehicles per hour has been used as a robust basis for considering the likelihood of interactions between inbound articulated HGVs and opposing background traffic. This is based on the ATC survey data recorded on Ashwell Road to the south of Bygrave in 2023, between 08:00–09:00 on Thursday 26 January 2023.

4.3.6 For the purpose of this assessment, the peak opposing southbound flow of 72 vehicles per hour equates to a theoretical average headway of approximately 50 seconds between successive vehicles.

4.3.7 This assessment is based on the maximum observed southbound hourly flow and therefore represents a robust worst-case scenario, particularly given that construction deliveries would avoid this peak hour period.

4.3.8 In practice, lower traffic flows and correspondingly greater vehicle headways would reasonably be expected during the approved off-peak delivery period between 09:30 and 14:30. Furthermore, actual headways may vary due to vehicles travelling in platoons. In such circumstances, platooned vehicles would effectively represent a single interaction with an approaching northbound articulated HGV movement, albeit one which would be controlled through temporary management measures secured through the approved CTMP, including banksperson controls, communication procedures and vehicle management protocols.

4.3.9 The relevant section of Ashwell Road / Bygrave Road is approximately 3.6km in length between the approved construction site access junction and the junction with the A507. At an average route speed of 30mph, an articulated HGV would travel this section in approximately 4 minutes 29 seconds.

4.3.10 Using the peak southbound flow of 72 vehicles per hour, the expected number of opposing vehicles during the time an inbound articulated HGV is travelling along the 3.6km section would be approximately 5 vehicles. This illustrated in Table 4-4.

Table 4-4: Background Traffic Profile

Item	Result
Peak southbound opposing flow	72 vehicles/hour
Theoretical average southbound headway	50 seconds
Route section assessed	3.6km
Approximate HGV travel time over 3.6km	4 minutes 29 seconds
Expected opposing vehicles during HGV route time	c.5 vehicles

- 4.3.11 During the approved delivery period, which avoids the traditional highway network peak periods, lower background traffic flows and greater vehicle headways (gaps) would be expected. As such, the assessment is considered robust and all interactions should be managed appropriately through traffic management measures.
- 4.3.12 In addition, the proposed articulated HGV activity, during the busiest days of operation, would be limited to approximately two inbound vehicles per hour on average and would be controlled through the CTMP measures, as set out in the agreed framework CTMP. The booking system, banksperson controls, holding areas and communication procedures would enable articulated HGVs to be managed on a one-at-a-time basis along Ashwell Road / Bygrave Road, avoiding instances of HGVs passing and ensuring movements are coordinated.
- 4.3.13 The route has also previously been assessed using observed traffic speeds derived from the January 2023 ATC surveys and subsequent January 2024 updated survey information. These surveys demonstrated that actual observed 85th percentile speeds along Ashwell Road are materially slower than the posted national speed limit and formed part of the basis upon which HCC assessed the operation of articulated construction traffic along the approved route.
- 4.3.14 On this basis, the proposed uplift would not result in a continuous or intensive pattern of articulated HGV activity. The uplift would result in a temporary increase in articulated vehicle movements over a short and controlled period and these movements are capable of being appropriately managed through the approved Framework CTMP controls and supplementary mitigation measures set out within this Technical Note.

5. APPROVED AND ADDITIONAL TRAFFIC MANAGEMENT AND MITIGATION

- 5.1.1 All articulated HGV movements associated with the proposed temporary uplift period would continue to be accommodated in accordance with the framework CTMP and associated mitigation measures.
- 5.1.2 The existing agreed framework CTMP controls are summarised in Section 2.2. These measures were specifically developed and agreed with HCC to manage articulated construction traffic activity along the approved route and would continue to apply during the temporary uplift period.
- 5.1.3 The current Section 73 application does not seek to alter the agreed mitigation and, indeed, proposes a number of additional mitigation and management measures during the temporary uplift period in response to discussions undertaken with HCC.
- 5.1.4 The proposed supplementary mitigation measures include:
- enhanced banksperson or traffic marshal presence where required
 - GPS tracking of articulated vehicles
 - additional community liaison procedures
 - resident notification protocols
 - direct communication procedures with the construction management team

- daily monitoring and reporting during the temporary uplift period.

5.1.5 These measures will be set out in detail within the final CTMP which will be agreed with the highway authority. The additional measures will ensure that the articulated vehicles generated during the proposed temporary uplift period can be accommodated safely and suitably, and without an unacceptable impact on highway safety, therefore fully in accordance with the NPPF. They would remain subject to the same operational controls and management procedures already agreed with HCC.

5.1.6 As such, there would be no transport or highway related reasons which would justify an objection to the proposed Section 73 application.

6. SUMMARY AND CONCLUSIONS

6.1.1 Apex Transport Planning has been instructed by Pathfinder Clean Energy (PACE) to prepare this Technical Note in support of a Section 73 application relating to the approved Tophams Solar Farm at Land West of Ashwell Road, Bygrave. The Section 73 application seeks a temporary, time-limited variation to Planning Condition 26 of permission 22/00741/FP, allowing a maximum of 8 articulated lorry arrivals per day (16 two-way movements) for a defined period of no more than 4 consecutive weeks during the PV module and mounting frame delivery phase. Outside that window, the existing 2-artic/day baseline secured by the approved Framework CTMP would resume.

6.1.2 The Section 73 application introduces no change to the approved construction route, no change to the approved site access arrangements, no change to the approved vehicle type (16.5m articulated HGVs), and no change to the approved Framework CTMP controls. The proposals relate solely to the frequency of already-approved articulated vehicle movements during a defined and tightly controlled phase of the construction programme.

6.1.3 Following refinements in the construction programme, the overall construction traffic generation associated with the development is now anticipated to be lower than that previously assessed and accepted as part of the approved planning application. This is primarily due to the proposed delivery strategy, which would accommodate a greater proportion of construction materials via articulated HGVs during a short and tightly controlled temporary 4-week uplift period, reducing the overall number of delivery vehicles required across the wider construction programme.

6.1.4 Based on the latest contractor programme requirements, the construction programme is currently anticipated to generate approximately 603 construction deliveries overall, compared with approximately 750 deliveries previously assessed within the approved CTMP submitted in support of the planning application. Whilst the final construction vehicle profile may continue to evolve as contractor logistics and delivery arrangements are refined, the current anticipated construction traffic generation remains materially lower than that previously assessed and accepted.

6.1.5 Of the anticipated construction deliveries, approximately 226 deliveries would comprise 16.5m articulated HGVs associated primarily with the delivery of photovoltaic modules and mounting frames, equating to approximately 452 two-way articulated HGV movements across the overall construction programme.

6.1.6 The route, vehicle types and associated mitigation measures have already been assessed through the planning application, which was accompanied by a framework CTMP. The accommodation of articulated vehicles along the access route has been accepted in principle by HCC subject to the implementation of the agreed management controls and conditions.

- 6.1.7 The two-articulated HGV per day cap secured by Condition 26 was a negotiated daily management figure agreed during the CTMP process, rather than a fundamental safety threshold. The reason for Condition 26 does not cite a specific policy of the North Hertfordshire Local Plan and relies on the general transport policies of the National Planning Policy Framework (December 2024). The proposed temporary variation has accordingly been assessed against the NPPF tests at paragraphs 115 and 116, namely whether the proposals would result in an unacceptable impact on highway safety or a severe residual cumulative impact on the road network.
- 6.1.8 The proposed uplift would result in a relatively low level of articulated HGV activity across the approved delivery window, equating to approximately one articulated vehicle movement in either direction every 18-19 minutes, on average on the peak construction days (which would not occur every day during the uplift period).
- 6.1.9 An inbound articulated HGV travelling along Ashwell Road / Bygrave Road would typically encounter only approximately 5 opposing vehicles, even when assessed against peak southbound background traffic flows, and assuming no vehicle platooning. As such, the proposals would not result in a continuous or intensive pattern of articulated HGV activity and any passing interactions would remain limited and capable of being appropriately managed through the approved CTMP controls and supplementary mitigation measures as part of this S73 application.
- 6.1.10 The proposals would allow the peak articulated delivery phase to be completed within a defined and tightly controlled temporary window, rather than requiring articulated HGV activity to be spread across a substantially longer period of the approved construction programme. This would reduce the duration over which background traffic would be subject to temporary construction traffic activity and associated management measures along the approved route.
- 6.1.11 The proposals would therefore not result in a severe impact on the operation of the surrounding highway network, nor would they give rise to an unacceptable impact on highway safety. As such, they are fully in accordance with the National Planning Policy Framework (NPPF).
- 6.1.12 It is therefore considered that there are no transport or highway related reasons which would justify objection to the proposed Section 73 application.