
Technical Note TN06: Revised Articulated Vehicle Limit (Condition 26)

Tophams Solar Farm - Section 73
Application 26/01224/S73

15/07/2026
UKF092

Contents

1. Introduction	2
2. The Agreed Revised Proposal	2
3. Delivery Demand and Programme Arithmetic	3
4. Daily Operating Profile and Route Interaction	5
5. Management and Mitigation	7
6. Policy Compliance	8
7. Summary and Conclusions	8

1. Introduction

This Technical Note has been prepared by Pathfinder Clean Energy (PACE) on behalf of PACE Jolt Energy Limited (the applicant) in support of Section 73 application **26/01224/S73**, which seeks to vary Condition 26 (Construction Traffic Management Plan) of planning permission 22/00741/FP at Tophams Solar Farm, Land West of Ashwell Road, Bygrave, Hertfordshire.

The application as originally submitted sought a temporary four-week uplift to a maximum of 8 articulated vehicle visits per day. Following the Highway Authority's consultation response of 16 June 2026 and subsequent discussions between PACE, North Hertfordshire District Council (NHDC) and Hertfordshire County Council (HCC) Highways, the application has been amended. This Note supports the revised proposal and responds to the Highway Authority's request of 13 July 2026 for an updated technical note to accompany the revised description of development.

This Note draws on, and should be read alongside, the transport evidence prepared by Apex Transport Planning in support of the original permission and this application (TN01 to TN05, including TN05 ref. C22208/TN05, 19/05/2026, and the approved Framework CTMP). The route assessment, swept path analysis, ATC survey data and speed surveys contained in that evidence remain valid and are unchanged by the revised proposal. This Note supersedes TN05 only insofar as TN05 supported the now-withdrawn temporary uplift; the underlying evidence base is carried forward.

The revised 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. It relates solely to the daily frequency of already-approved articulated vehicle movements and the hours within which they occur.

2. The Agreed Revised Proposal

The revised proposal reflects the approach suggested by HCC Highways at the meeting of 26 June 2026 between PACE, NHDC and HCC, agreed by PACE by email of 30 June 2026 and approved by the PACE Board on 6 July 2026. HCC Highways confirmed on 30 June 2026 that the exceptional circumstances provision remains acceptable, subject to the circumstances being clearly defined.

Parameter	Consented (Condition 26)	Agreed revised proposal
Maximum articulated vehicle visits per day	2 visits (4 two-way movements)	3 visits (6 two-way movements)
Duration of limit	Whole construction period	Whole construction period (permanent)
Permitted delivery hours	09:30 - 14:30, Mon-Fri	09:00 - 15:00, Mon-Fri
Delivery window length	5 hours	6 hours

Exceptional circumstances provision	None	Up to 4 visits (8 two-way movements) in defined exceptional circumstances
Temporary uplift period	n/a	None - the previously proposed 4-week uplift to 8 visits/day is withdrawn

In clearly defined exceptional circumstances - deliveries delayed or displaced by adverse weather conditions, temporary road incidents, emergency works on delivery routes, or other unavoidable delay (with the specific cause recorded) - a maximum of 4 articulated vehicle visits per day would be permitted. This is consistent with the range suggested by HCC Highways in its correspondence of 2 March 2026 and remains subject to controls: no overlapping articulated movements on Bygrave Road / Ashwell Road, operation within the permitted hours, and recording in a daily movement log available to the LPA and LHA on request.

3. Delivery Demand and Programme Arithmetic

The delivery demand assumptions are unchanged from those reported in Apex TN05 (Table 4-1) and reflect the latest contractor programme:

Item	Approved assessment (estimated)	Latest contractor requirements
Total construction deliveries	750	603
Articulated HGV deliveries	310	226
Other construction deliveries	440	377
Overall construction programme	c.35 weeks	c.35 weeks

Overall construction traffic generation therefore remains lower than that assessed and accepted at application stage. The 226 articulated deliveries (452 two-way movements) relate to the PV module and mounting frame delivery phase; these components are supplied in 40-foot containers and must be delivered by 16.5m articulated HGVs.

The duration of the articulated delivery phase under each scenario follows directly from the daily limit, assuming a 5-day working week:

Scenario	Arithmetic	Working days	Duration
Consented limit (2 visits/day)	226 deliveries / 2 per day	113 days	c.22.6 weeks

Agreed revised limit (3 visits/day)	226 deliveries / 3 per day	c.75.3 days	c.15.1 weeks
Withdrawn proposal (8/day for 4 weeks + residual at 2/day)	160 in uplift + 66 residual	20 + 33 days	c.10.6 weeks

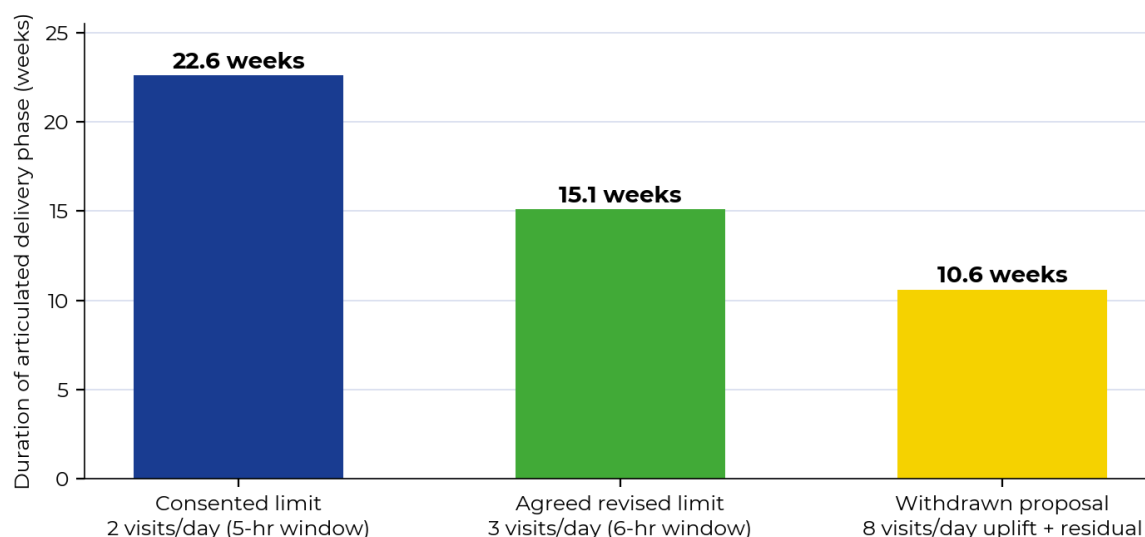


Figure 1: Duration of the articulated delivery phase by scenario

The agreed revised limit therefore shortens the articulated delivery phase by approximately **7.5 weeks** (from c.22.6 to c.15.1 weeks) relative to the consented limit - a reduction of approximately one third. In practice a range of c.14-15 weeks is anticipated: the extended six-hour delivery window materially improves booking-slot reliability and daily scheduling resilience, and provides scope for cabling and ancillary items to be carried on smaller, non-articulated vehicles, reducing the total number of articulated deliveries required below 226. This supports delivery of the project as close as practicable to the c.35-week construction programme committed to at application stage.

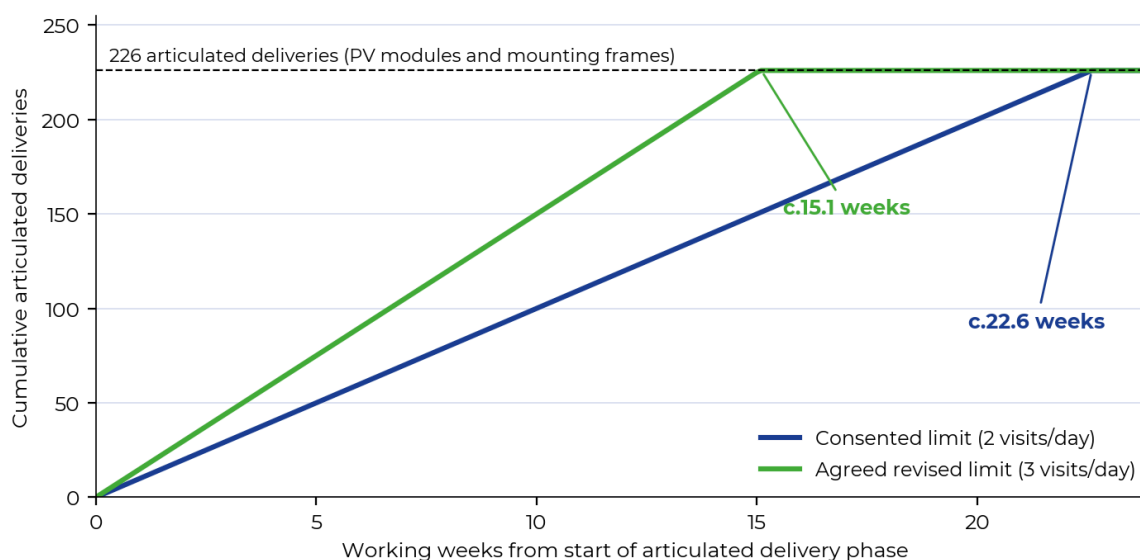


Figure 2: Cumulative articulated deliveries - consented limit vs agreed revised limit

A shorter articulated delivery phase also reduces the cumulative period over which construction traffic, including the site operative and supervisory trips associated with managing deliveries, is present on the local road network, directly serving the stated reason for Condition 26: to ensure the impact of construction vehicles on the local road network is minimised.

4. Daily Operating Profile and Route Interaction

The daily operating profile under the revised proposal is set out below, on the same basis as Apex TN05 (Table 4-3):

Item	Consented limit	Agreed revised limit	Exceptional circumstances
Delivery window	09:30-14:30 (5 hrs)	09:00-15:00 (6 hrs)	09:00-15:00 (6 hrs)
Maximum articulated deliveries	2/day	3/day	4/day
Maximum articulated movements	4/day	6/day	8/day
Average articulated movements per hour	0.8	1.0	1.33
Average interval between articulated movements	c.75 minutes	c.60 minutes	c.45 minutes
Average interval between inbound	c.150 minutes	c.120 minutes	c.90 minutes

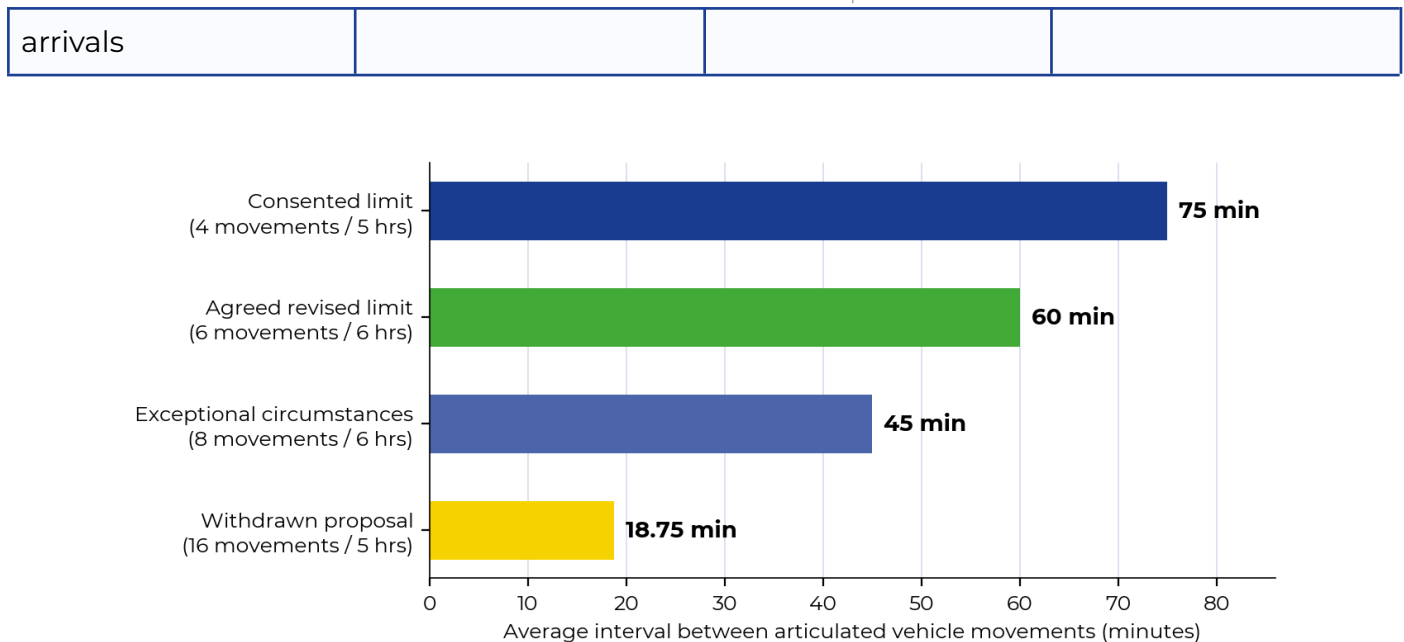


Figure 3: Average interval between two-way articulated vehicle movements

On an average basis the revised limit changes the interval between articulated vehicle movements on the route from approximately one movement every 75 minutes to one every 60 minutes - equal to a rate of one movement per hour. By comparison, the withdrawn uplift proposal would have generated one movement every c.18 minutes 45 seconds on peak days. The revised proposal is therefore of a fundamentally lower intensity than the proposal to which the Highway Authority objected, and is closely comparable to the consented baseline.

The route interaction analysis reported in Apex TN05 (paragraphs 4.3.5-4.3.11) is unchanged by the revised proposal and remains applicable. Using the robust worst-case opposing southbound flow of 72 vehicles per hour (recorded 08:00-09:00, Thursday 26 January 2023), a theoretical average headway of c.50 seconds applies between opposing vehicles. An articulated HGV traverses the assessed 3.6km section of Ashwell Road / Bygrave Road in approximately 4 minutes 29 seconds at an average route speed of 30mph, encountering approximately 5 opposing vehicles per traverse. The revised proposal does not change any of these per-movement characteristics; it changes only the number of traverses per day, from a maximum of 4 to a maximum of 6 (8 in exceptional circumstances).

The extended delivery window remains wholly outside the 08:00-09:00 peak hour on which the worst-case opposing flow is based, and continues to avoid the busiest weekday commuter periods. Materially lower opposing flows, and correspondingly greater headways, can therefore reasonably be expected in practice across the 09:00-15:00 window.

ATC surveys undertaken in January 2023 and January 2024, reviewed and accepted by the Highway Authority, confirm that Ashwell Road already accommodates an average of approximately 46 two-way HGV movements per weekday, including up to 13 OGV2 (4-axle rigid and articulated) movements, independently of the development. Against that baseline, the agreed revised limit adds a maximum of 6 two-way articulated movements per day - an

increase of approximately 13% in daily HGV activity - and the exceptional circumstances provision a maximum of 8 (c.17%).

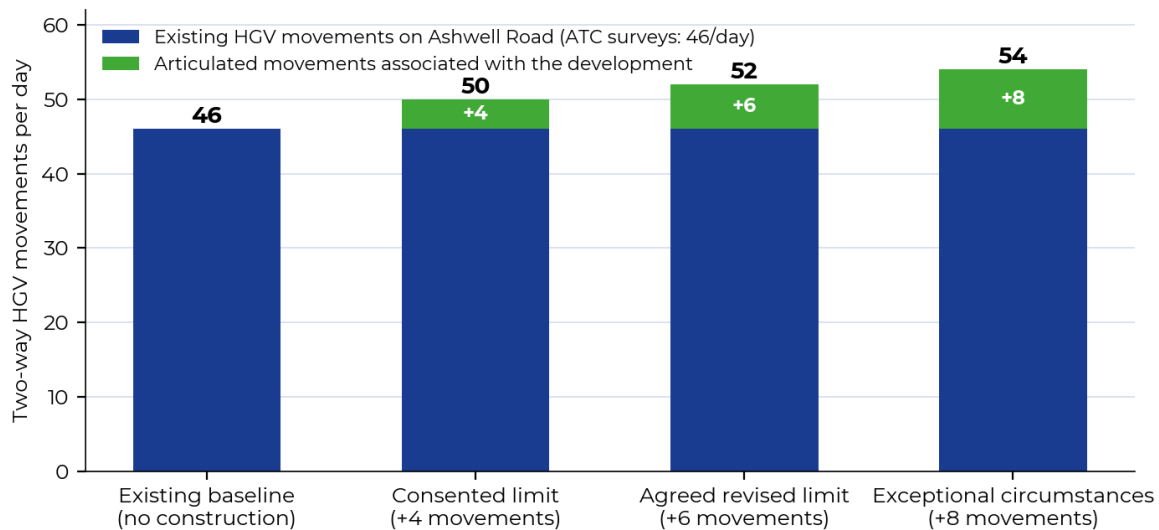


Figure 4: Daily two-way HGV movements on Ashwell Road in context of the existing baseline

Articulated-to-articulated meeting events - the highest geometric demand on the route - are actively prevented by the booking system and marshal arrangements, which ensure articulated vehicles operate on a one-at-a-time basis along Ashwell Road / Bygrave Road. The remaining articulated-to-other-HGV meeting case is the same case already accepted at the consented baseline and at the existing 46 HGV/day background level.

5. Management and Mitigation

All articulated movements will continue to operate under the approved Framework CTMP (s73 - V7.3 CTMP Tophams amended 15.05.26) as amended by the CTMP Addendum (V2, prepared 15/07/2026) submitted with the revised application. Under the Addendum (V2), the enhanced management measures originally proposed for the temporary uplift window will now apply **throughout the construction period**, namely:

- Vehicle booking and scheduling system, with a maximum of 3 articulated visits booked per day (4 under the exceptional circumstances provision) and no unscheduled articulated deliveries;
- Two dedicated traffic marshals (southern access to Bygrave village and the Great North Road layby) during the busy module delivery phase, in radio contact with the site, ensuring articulated vehicles do not overlap on the route;
- Holding capacity for 8 articulated vehicles clear of the public highway (6 within the construction compound and 2 in the Great North Road layby);
- Community notification and liaison, including a dedicated WhatsApp group with Bygrave Parish Council representatives and letters to all residential properties within

500m of the site access on Ashwell Road and Bygrave Road ahead of articulated deliveries commencing;

- A daily movement log recording every articulated arrival and departure, any use of the exceptional circumstances provision (with cause), and any incidents or complaints, available to the LPA and LHA on request.

These measures exceed the management framework under which HCC accepted articulated HGV use of the route at application stage, and now apply across the whole construction period rather than a four-week window only.

6. Policy Compliance

The governing test remains NPPF (December 2024) paragraph 116: development should only be prevented or refused on transport grounds where there would be an unacceptable impact on highway safety, or where the residual cumulative impacts on the road network would be severe. As Apex TN05 records (paragraph 3.1.4), HCC's willingness during the CTMP discharge process to accept up to 4 articulated movements per day in defined circumstances confirms that the 2-visit figure secured by Condition 26 is a negotiated daily management figure, not a fundamental safety threshold.

The revised limit of 3 visits per day sits within the parameters HCC Highways has itself suggested, was proposed by the Highway Authority, and is agreed between the applicant and the Highway Authority. The per-movement route characteristics are unchanged from the accepted evidence base; daily intensity increases only marginally against both the consented baseline and existing background HGV activity; and the shortened delivery phase reduces cumulative impacts. The revised proposal accordingly satisfies NPPF paragraph 116 and, in reducing the cumulative period of construction traffic, better serves the stated reason for Condition 26 and the six tests for conditions at NPPF paragraph 57.

7. Summary and Conclusions

- The Section 73 application (26/01224/S73) as amended seeks a permanent limit of 3 articulated vehicle visits per day (6 two-way movements) with delivery hours of 09:00-15:00, in place of the consented 2 visits per day within 09:30-14:30. The previously proposed 4-week uplift to 8 visits per day is withdrawn.
- The revised approach was suggested by HCC Highways on 26 June 2026 and agreed by the applicant on 30 June 2026, including a provision for 4 visits per day in clearly defined exceptional circumstances, confirmed acceptable by HCC subject to definition.
- The arithmetic is straightforward: 226 articulated deliveries at 3 per day equates to c.15.1 weeks, against c.22.6 weeks at 2 per day - a saving of c.7.5 weeks (one third) in the duration of intensive articulated activity on the local road network, with c.14-15 weeks anticipated in practice given the extended window and vehicle-mix flexibility.

- Daily intensity changes modestly: from one articulated movement every c.75 minutes to one every c.60 minutes, against an existing background of c.46 HGV movements per day on Ashwell Road. Per-movement route characteristics are unchanged from the evidence base accepted by HCC.
- Enhanced management measures - booking system, dedicated marshals, off-highway holding for 8 vehicles, community liaison and daily logging - will apply throughout the construction period under the CTMP Addendum (V2).
- The revised proposal satisfies the NPPF paragraph 116 test, is supported by the Highway Authority's own suggested approach, and better delivers the stated objective of Condition 26. There is no transport or highway reason to withhold support for the amended application.