

Ashwell Road, Bygrave

Transport Note: Summary of Post-Application Discussions

Client: Pathfinder Clean Energy Ltd

REPORT DETAILS

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1. INTRODUCTION

1.1 Overview

- 1.1.1 This Transport Note (TN) has been produced to provide a summary of post-application discussions and correspondence on highways matters in relation to an application for a proposed solar farm development at Ashwell Road, Bygrave (App Ref: 22/00741/FP).
- 1.1.2 A Transport Statement (TS) and CTMP report was produced to support the application. Following the application, further information was provided to HCC and NHDC within a Transport Note (TN01) prepared by Apex (Ref: C22028.TN01) in relation to concerns which were raised. TN01 included analysis of the construction route along Bygrave Road / Ashwell Road, traffic flows and speeds along the route, consideration of non-motorised user movements, road safety analysis, and mitigation measures.
- 1.1.3 Following on from TN01, this TN provides a summary of the follow up correspondence with the planning authority, North Hertfordshire District Council (NHDC), and the highway authority, Hertfordshire County Council (HCC). This relates to amendments to the site access and mitigation measures and summarises the agreements reached in relation to transport and highways matters. Copies of email discussions with NHDC and HCC can be found at Appendix A.
- 1.1.4 All work within the previously produced TS and TN01 remains valid, unless superseded by more recent information which has been shared with HCC and NHDC as summarised in this TN. In particular, this TN sets out the most recent position for the construction and operational access, construction and operational vehicle movements and their impacts, and mitigation measures to be adopted during the temporary construction period.
- 1.1.5 For ease, this TN references specific HCC / NHDC comments in **navy boxes**, where required.

2. SITE ACCESS

2.1 Overview

- 2.1.1 Apex and the applicant have held extensive discussions with the highway authority in relation to the proposed access points via email correspondence and shared additional information including vehicle types and numbers. Following these discussions, the applicant has obtained an agreement in principle with the highway authority for both the location of the temporary construction access and the use of the existing access for the operational phase, subject to a suitably worded planning condition. These discussions are outlined as follows.

2.2 Temporary Construction Access

- 2.2.1 Following discussions, the applicant has obtained an agreement in principle with the highway authority on the location of a temporary construction access, subject to further details to be provided as part of a suitably worded planning condition. As part of this, the applicant has agreed with the highway authority not to use the existing agricultural access to the north of the site during construction.
- 2.2.2 The proposed location is to be used during the temporary construction period (and reinstated during demolition). The access location was based on analysis of visibility splays along the site frontage with Ashwell Road and speed data obtained for Ashwell Road.

- 2.2.3 The following has been extracted from email correspondence, which includes HCC's in-principle agreement on the access:

"...the principle of a new construction access somewhere in this vicinity is accepted, but the exact final location and design needs further thought, including a speed survey along this stretch. If the CTMP can commit to this by stating additional detailed plans and supporting information will be provided before commencement then that may cover it, but a separate pre-commencement condition covering construction access design and implementation is the better way to go, if you are agreeable".

- 2.2.4 These discussions have also been shared with NHDC who have requested a plan indicating the potential location of the temporary construction access for planning purposes. The response is shown as follows with the indicative access location included at Appendix B. This shows that there is a length of frontage which can provide suitable visibility in each direction. The exact location of the construction access within this area will be determined by HCC at post-application stage following a speed survey which will form part of a suitably worded condition.

"As the Highways Authority have indicated their agreement to the final position of the construction access being dealt with via the CTMP condition, it will still be necessary to have a drawing prior to determination which clearly identifies the particular stretch of road within which this will be provided (marked by two points and a coloured line). This will provide some certainty and clarity of approximate position for all consultees and in particular, local people".

2.3 Operational Access

- 2.3.1 Discussions have been held with the highway authority to agree the use of the existing agricultural access during the proposed temporary operation of the site, which is expected to last 40 years.
- 2.3.2 The existing access is considered suitable for the low level of traffic expected during the site's operational period. Operational traffic would only comprise 1-2 arrivals per month (2-4 movements) associated with maintenance vehicles. There will likely be a net decrease in vehicle movements as a result of the proposals when compared to the current agricultural use of the site.
- 2.3.3 The proposals would also reduce the number of large HGVs and farming vehicles (including plant machinery) associated with the current agricultural use of the site. These vehicles will be replaced with smaller operational vehicles such as long wheelbase vans, for example a Mercedes Sprinter. This information was shared with the highway authority.
- 2.3.4 The applicant has also submitted additional information in relation to the expected ongoing operational requirements of the proposed site, to be accommodated via the existing access. There will be spare parts and panels kept in the storage building as submitted with the application. The applicant PACE will be the end occupier and operator of the site. The expected maintenance requirements are summarised in Table 2-1.

Table 2-1: Maintenance Schedule

Maintenance Activity	Frequency
Check general status of vegetation	Monthly
- Check any decolouring effects / mould, algae and delamination / damage on the surface of the PV modules - Visual check of junction boxes / connectors and cables / stability, rigidity and fixing of the PV modules / foundation members, look for damage or cracks / corrosion of the structure / electrical bonding and grounding - Check door seal integrity for damage and water ingress / door and locking mechanisms for correct operation / check the labels are present and readable - Check circuit breakers if tripped, record / check the condition of the circuit breakers for overcurrent protection for damage	Quarterly
- Grass cutting (if needed) - Hedge maintenance	Bi-annually
- Check conduits and conductive component earth bonding / connectors / inspect cable insulation, sheath and joints for defects - Continuity check of grounding system / Measurement of earth loop resistance & lightning protection system - Thermal analysis 100% strings in combiner boxes & tightening control of wires - Annual inspection in line with manufacturers inspection program - Check fastener integrity: torque, impacts, breaks or deformation - Check the condition of the surge arrestors, replace if necessary, record. - Check absence of alarm signs etc. - Exterior surfaces to be cleaned as required - Check function of UPS by opening supply breaker - Electrical assembly general cleaning if necessary (vacuum cleaning) - Cleaning and greasing of LV switches and disconnectors - Status check perimeter fence for corrosion and damages. - Check of water drainage system and swales, clean as required. - Check of internal and access roads and maintain that the inverters can be accessed	Annually

2.3.5 Following discussions with HCC and the submission of additional information shown in Table 2-1, the highway authority has responded stating it has no objection to the existing access being utilised for the operational access of the site, subject to appropriate conditions. This was relayed in the following email response received on 12/06/23:

“..no objection in principle subject to appropriate conditions” (12/06/23)

3. TEMPORARY CONSTRUCTION TRAFFIC ROUTE AND CONSTRUCTION MOVEMENTS

- 3.1.1 Apex and the applicant have held extensive discussions with the highway authority in relation to the proposed temporary construction route along Bygrave Road and Ashwell Road via emails, online meetings and through the submission of the previously submitted TN01 produced by Apex (including a site visit).
- 3.1.2 Information on the number construction vehicle movements expected during the temporary construction period was included within the TS and CTMP document, which was submitted with the application. The TN01 included analysis of the proposed route and additional measures to mitigate the impact of construction movements during the temporary period. This analysis remains valid and has not been updated within this TN.

3.1.3 Further evidence was requested by HCC on the number and type of construction movements along the proposed route. In response, Apex submitted additional information via email which is summarised as follows and updated where necessary.

3.2 Construction vehicle movements

3.2.1 Table 2.1.1 of the TS and CTMP sets out the number of construction vehicles required by the delivery type. This identifies a mixture of low loader, rigid HGVs, pickups, flatbed, waste trucks as well as articulated vehicles. An articulated vehicle of up to 16.5m in length will only be required for the delivery of the panels and mounting frames. This is forecast at approximately 310 vehicles of the total 750 construction vehicles, or 41% of the construction vehicle movements. Not all of these movements may be required as 16.5m long articulated vehicles. As set out within the TS and CTMP this suggests articulated vehicles would be 12m long.

3.2.2 Section 2.1.2 of the TAS shows a 30-35 week construction period. This would equate to between 165 days and 193 working days, assuming a 5.5 day working week. Based on this, there would be an average of 1-2 articulated vehicle arrivals per day across the construction period.

3.2.3 By way of verifying these figures and proportions, a review of applications for other similar solar farm sites within the vicinity of the site was undertaken. The Transport reports submitted with the applications have been reviewed and the percentage of articulated movements has been obtained. A summary is provided in Table 3-1.

Table 3-1: Similar planning applications within the vicinity of the site

Site Name	Planning Ref	Local Authority	Distance from Site	Site Area	No. of construction vehicles	No. of Articulated Vehicles	% of Articulated Vehicles
Sperberry Hill	22/00709/FP	North Hertfordshire District Council	12.5km	c.106ha	561	164	29.2%
Priory Farm	21/03380/FP	North Hertfordshire District Council	9.5km	c.85ha	1,078	396	36.7%
Endurance Energy, Wickham Hill	3/21/2601/FUL	East Herts Council	24.3km	c.115ha	1,182	349	29.5%
						Average	32.2%

3.2.4 The three identified solar sites showed a broadly similar, albeit slightly lower level of articulated vehicle generation. As such, the proposed solar farm at Ashwell Road may generate a lower level of articulated vehicles than set out above (310 vehicles). If 32.2% of the overall construction vehicle movements were articulated vehicles, this would equate to 242 vehicles, although this would remain at a similar level of 1-2 arrivals per day across the temporary construction period.

3.2.5 This is a minimal level of articulated vehicles and these would occur over a short term period as part of a controlled and managed construction period, supported by a range of mitigation measures, as agreed with HCC (Section 4). It is expected that these measures will be underpinned by suitably worded conditions.

3.2.6 In relation to the construction staff movements, this was shown at 2,475 vehicle arrivals across the construction period. This equates to an average of around 15 staff arrivals per day across the construction period. These vehicles would arrive before and depart after the construction vehicle delivery times and would be in light goods vehicles / cars, therefore can be suitably accommodated on Ashwell Road.

- 3.2.7 Following these discussions and submission of additional information, the applicant has obtained an agreement in principle with the highway authority to use this route during construction and demolition, subject to a number of mitigation measures and on the basis that articulated vehicle movements are limited to four per day. The highway authority has stated the following:

“However, 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 (i.e. a total of 4 two-way movements per day)”

- 3.2.8 The applicant has agreed to this measure as well as the additional measures included in Section 4, which are additional to or supersede those included in TN01 and the submitted TS/CTMP report.

4. MITIGATION MEASURES

4.1 Overview

- 4.1.1 Mitigation measures were included within the TS and CTMP report submitted with the application. These included measures in relation to delivery hours and timings, warning signs, on-site parking controls and construction compound, on-site storage, and the use of a bankperson at the access.
- 4.1.2 Additional mitigation measures were included in email correspondence and submitted within TN01. This included mitigation at the North Road / Bygrave Road junction, a booking system and a commitment to car sharing. The highway authority requested more information on the mitigation at North Road / Bygrave, and this has subsequently been submitted and agreed with HCC as follows.

4.2 North Road / Bygrave Road Junction

- 4.2.1 Swept path analysis of the construction route undertaken by Apex TP identified North Road / Bygrave Road junction as requiring mitigation to ensure it can safely accommodate HGVs alongside other vehicles. The applicant suggested temporary improvements at this junction including the relocation of the pedestrian refuge island on Bygrave Road to allow HGV movements, as well as minor widening to the northern kerbline. As part of the mitigation at North Road / Bygrave Road junction, the applicant has committed to locating a bankperson at the Ashwell Road / Bygrave Road junction to manage construction movements. The proposed mitigation is shown indicatively at Appendix C.
- 4.2.2 The highway authority responded to these proposals by stating the following:

“In terms of the widening of the North Road / Bygrave Road junction, our Safety team has not identified significant initial concerns”.

- 4.2.3 As part of this response, the highway authority also relayed the following observations:

“i) Care will be needed in moving the refuge island in the bellmouth closer to the main carriageway, as the visibility to the right may be partly obstructed if the keep left bollard is poorly located. As an aside, is there is an opportunity to make use of solar powered bollards at this location?

ii) Visibility to and from the junction may be degraded by new vegetation growth, in particular, overhanging vegetation to the south along North Road / the southern visibility splay. In addition, overhanging vegetation on the downward slope of Bygrave Road when approaching North Road is notable. This new growth should be cut back more frequently, with larger vehicles being present and turning at the junction, since they take longer to complete such manoeuvres”.

- 4.2.4 In response to this, the design will ensure visibility will not be impacted by the proposed mitigation. A review of the latest seven years of road safety data does not show a road safety issue at this junction

which would be exacerbated by the low level of HGV movements predicted as part of the development, and as such, there is no evidence to suggest that the proposed mitigation would have an unacceptable impact on safety.

- 4.2.5 In addition, the applicant has agreed to undertake a Stage 2 road safety audit as part of the S278 agreement, as requested by the highway authority in the following statement:

“Please note that all changes to the public highway, including to the North Road / Bygrave Road junction, will need to go through the s278 process and stage 2 road safety audit – in good time, and work completed to our satisfaction before commencement of the development”.

- 4.2.6 In relation to vegetation growth it is considered that HCC can commit to maintaining these areas prior and during the construction phase to maximise the available visibility.
- 4.2.7 The highway authority has requested that this amended junction be monitored during the construction period to understand if the proposed widening would benefit users on a more permanent basis or if the layout should be reinstated following construction. The applicant has agreed to this.

4.3 Additional measures suggested by HCC

- 4.3.1 Upon agreeing the proposed temporary construction route via Ashwell Road and Bygrave Road, HCC requested a number of mitigation measures over and above those included within TN01 and the TS / CTMP document. The applicant has agreed to all these additional measures in the understanding that these can be agreed within a suitability worded condition, and this was acknowledged by HCC in an email dated 22 May 2023.
- 4.3.2 The following provides a summary of the additional mitigation measures proposed by HCC and agreed with the applicant which would form part of a CTMP and can be included within a suitably worded planning condition (as per an email dated 18 June 2023):
- All HGVs, including articulated lorries, must only use this route between 9:30am and 2:30pm, to avoid peak hours and school opening and closing times
 - Additional road safety analysis
 - Provision of additional signage such as ‘pedestrians in road’ along Ashwell Road
 - HGV holding areas which enable HGVs to stop, call ahead and check all is clear, before proceeding
 - Regular monitoring of the full route, from the junction with North Road up to the site access. Consideration of grass verges being damaged in places, debris being carried out onto the highway, or other damage
 - Road cleaning along the route if necessary
 - Minor road widening / passing places to be considered

5. CONCLUSION

- 5.1.1 Based on the further information presented to HCC as part of the post-application discussions, they have stated that they have no objection to the scheme in principle. As such, there should be no reasons relating to transport to refuse the application.

Appendix A Relevant Email Correspondence

Grant Price

From: Matthew Armstrong <Matthew.Armstrong@hertfordshire.gov.uk>
Sent: 22 May 2023 17:07
To: Grant Price
Cc: NM North; harman.sond@pathfinderce.com; gill.eaton@pathfinderce.com; Manjinder Sehmi; David Chapman
Subject: RE: Solar and battery farm, Land west of Ashwell Rd - NHDC ref 22/00741/FP

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Grant and Harman. Thanks for confirming your broad agreement.

In terms of the new access, visibility to the north looks like it requires quite a bit of vegetation to be cut down, plus I'm not sure how high the bank is:



To the south, visibility is constrained around the bend by a tree and vegetation on the opposite side of the road, although I note the splays drawn on your plan are in line with the speed survey further south along Ashwell Road:



However, the speed survey location is quite some way from this location, and even then, the standard deviation (i.e. the difference between the mean speed and 85th percentile speed) is high, at more than 9mph. This means a greater variance in actual speeds.

Rather than prolong this further, the principle of a new construction access somewhere in this vicinity is accepted, but the exact final location and design needs further thought, including a speed survey along this stretch. If the CTMP can commit to this by stating additional detailed plans and supporting information will be provided before commencement then that may cover it, but a separate pre-commencement condition covering construction access design and implementation is the better way to go, if you are agreeable.

In terms of the long term use of the existing access for maintenance vehicles, I understand your point, and indeed there are vehicle tyre tracks from this access demonstrating its current use. However, the access here has very restricted visibility to the north, and the field can currently be accessed from a number of wider points, including an informal access point from Ashwell Road further south. If only 1 vehicle per month is genuinely going to visit the site then there may be a case, but providing more detail of the existing access use would help. Presumably the site owner knows, or can find out, rough vehicle use at present? I would guess seasonal with very few movements in the winter months and more in the summer months, but confirmation would be of benefit.

I hope that helps.

Regards

Matt Armstrong

**Area Manager (North & East) | Highways Development Management | Environment
Transport | Hertfordshire County Council**

Address: County Hall, Pegs Lane, Hertford, SG13 8DN. Postal Point: CHN203

T: 01992 556065 (Internal: 26065) E: matthew.armstrong@hertfordshire.gov.uk



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We improve
Residents' lives

We work with
Integrity

We act
Sustainably

We champion
Equality & fairness

From: Grant Price <grantprice@apexpt.co.uk>

Sent: 09 May 2023 11:55

To: Matthew Armstrong <Matthew.Armstrong@hertfordshire.gov.uk>

Cc: NM North <NM.North@hertfordshire.gov.uk>; harman.sond@pathfinderce.com; gill.eaton@pathfinderce.com; Manjinder Sehmi <Manjinder.Sehmi@hertfordshire.gov.uk>; David Chapman <davidchapman@apexpt.co.uk>

Subject: RE: Solar and battery farm, Land west of Ashwell Rd - NHDC ref 22/00741/FP

Hi Matthew, hope you're well.

Thank you for providing a response in relation to the construction access route to serve the proposed site via Ashwell Road and Bygrave Road.

The applicant and development team have reviewed these, and would be happy to accept the restrictions and measures proposed in the expectation that the route can be agreed with HCC Highways and allows you to provide a positive recommendation on the application. It is assumed that the restrictions and measures can be agreed to within suitably worded conditions and/or a CTMP report, as needed. We would be grateful if you could confirm that the route is acceptable on this basis please?

In relation to the comment on the proposed construction access, the applicant agrees to relocate this to the south along the site boundary with Ashwell Road, as you have suggested (Google maps location <https://goo.gl/maps/Ad5U6MErxsPoPsjQ6?coh=178571&entry=tt>). We have attached an indicative location for this access, which is based on analysis of visibility splays along the site frontage. The distances have been based on a speed survey obtained on Ashwell Road, although this was to the southwest of the site access location, it is considered likely that speeds would be similar (possibly higher) at the survey location and therefore visibility is suitable. Construction access signage will be placed at the access and on approach to the access, which will also assist in constraining vehicle speeds. Further details on the speed data and visibility is included on the attached sketch.

If you could also agree that the location of this access point is suitable in principle, we will produce a suitable formal drawing / swept paths to demonstrate it can accommodate vehicles appropriately.

Related to this, it would be our intention to use this access for construction and then reinstate this access for decommissioning purposes. However, for the ongoing operation, considering only one vehicle per month is likely to visit the site (on average), we would propose to utilise the existing access point, as previously proposed, adjacent to the bridleway. We'd consider this more suitable for operational traffic, given the access is existing and currently accommodates large agricultural vehicles and the operation will likely decrease movements to and from the access in comparison with the existing field use. The vehicles will also be smaller e.g. Transit van / panel vans. Please may you review this approach and confirm at your earliest convenience?

Many thanks

Grant

Grant Price

From: Peter Bull
Sent: 25 May 2023 14:11
To: harman.sond; 'Matthew Armstrong'
Cc: 'NM North'; gill.eaton; 'Manjinder Sehmi'; David Chapman;alex.ross; Grant Price
Subject: RE: Solar and battery farm, Land west of Ashwell Rd - NHDC ref 22/00741/FP

To clarify the LPAs position, we will need to re-consult interested parties including local people and interest groups/organisations on the proposed highway and other changes. As the Highways Authority have indicated their agreement to the final position of the construction access being dealt with via the CTMP condition, it will still be necessary to have a drawing prior to determination which clearly identifies the particular stretch of road within which this will be provided (marked by two points and a coloured line). This will provide some certainty and clarity of approximate position for all consultees and in particular, local people.

Kind regards,



Peter Bull
DipTP MRTPI
Senior Planning Officer
Development Management Team
01462 474165



www.north-herts.gov.uk

Grant Price

From: Matthew Armstrong <
Sent: 12 June 2023 10:05
To: harman.sond
Cc: NM North; gill.eaton; Manjinder Sehmi; David Chapman;alex.ross; Grant Price; 'Peter Bull'
Subject: RE: Solar and battery farm, Land west of Ashwell Rd - NHDC ref 22/00741/FP

Harman – on that basis then no objection in principle subject to appropriate conditions. I assume you will formally submit the latest details to the LPA for us to be consulted and formally respond?

Regards

Matt Armstrong

**Area Manager (North & East) | Highways Development Management | Growth & Env
Hertfordshire County Council**

Address: County Hall, Pegs Lane, Hertford, SG13 8DN. Postal Point: CHN203



[Our vision](#) is to create a cleaner, greener and healthier Hertfordshire, guided by our RISE values

We improve
Residents' lives

We work with
Integrity

We act
Sustainably

We champion
Equality & fairness

From: harman.sond
Sent: 02 June 2023 09:43
To: Matthew Armstrong
Cc: NM North <NM.North@; gill.eaton; Manjinder Sehmi<Manjinder.Sehmi>; 'David Chapman' <davidchapman>; alex.ross; 'Grant Price' <grantprice>; 'Peter Bull' <
Subject: RE: Solar and battery farm, Land west of Ashwell Rd - NHDC ref 22/00741/FP

Matthew

Taking the field out of farming where the proposed solar farm will go will mean less traffic associated with farming this field entering and existing the entrance. This will reduce a proportion of those existing vehicle movement numbers I provided.

Our proposal will see any vehicles entering and exiting the access associated with the farming the field replaced with between 2 and 4 vehicles movements (1-2 maintenance trips) a month. Therefore there will be a net decrease in monthly vehicle movements via this access.

The type of maintenance vehicles that would typically be used would be long wheel base vans like the Mercedes Sprinter for example.

Below is a typical schedule of the type of maintenance and frequency:

Monthly (summer months)

- Check general status of vegetation

Quarterly

- Check any decolouring effects / mould, algae and delamination / damage on the surface of the PV modules
- Visual check of junction boxes / connectors and cables / stability, rigidity and fixing of the PV modules / foundation members, look for damage or cracks / corrosion of the structure / electrical bonding and grounding
- Check door seal integrity for damage and water ingress / door and locking mechanisms for correct operation / Check the labels are present and readable
- Check circuit breakers if tripped, record / Check the condition of the circuit breakers for overcurrent protection for damage

Bi-annually

- Grass cutting (if needed)
- Hedge maintenance

Annually

- Check conduits and conductive component earth bonding / connectors / inspect cable insulation, sheath and joints for defects
- Continuity check of grounding system / Measurement of earth loop resistance & lightning protection system
- Thermal analysis 100% strings in Combiner boxes & Tightening control of wires
- Annual inspection in line with manufacturers inspection program
- Check fastener integrity: torque, impacts, breaks or deformation
- Check the condition of the surge arrestors, replace if necessary, record.
- Check absence of alarm signs etc.
- Exterior surfaces to be cleaned as required
- Check function of UPS by opening supply breaker
- Electrical assembly general cleaning if necessary (vacuum cleaning)
- Cleaning and greasing of LV switches and disconnectors
- Status check perimeter fence for corrosion and damages.
- Check of water drainage system and swales, clean as required.
- Check of internal and access roads and maintain that the inverters can be accessed

There will be spare parts and panels kept in the storage building as submitted with the application and as attached for ease of reference (drawing ref UKF092_12 Storage Building).

PACE will be the operator of the site so will keep a tight grip on all of the above matters. This is unlike some solar farm applicant's that sub contract the operation of the farm to a third party.

I trust the above is acceptable and you are able to support the scheme with suitable conditions. Please review and revert back with confirmation.

Regards

Harman Sond

Grant Price

From: Matthew Armstrong
Sent: 18 April 2023 14:16
To: David Chapman; harman.sond
Cc: NM North; Grant Price; gill.eaton; Manjinder SehmiSolar and battery
Subject: farm, Land west of Ashwell Rd - NHDC ref 22/00741/FP

Hello Harman and David

Sorry again for the delay - I was off sick for a time and my colleague in Network Management was also on leave for a while. We've now reviewed, as well as spoken to our Safety team. I appreciate you and your team have undertaken a lot of work on this, and I can advise as follows:

- The overriding point is that Ashwell Road / Bygrave Road is not designed for routine articulated lorry movements. The fact that its access with North Road needs widening to accommodate them testifies to this. However, 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 (i.e. a total of 4 two-way movements per day). I believe this level is what was presented early on, and a "slightly higher demand of 3-4" is a newer proposal which in our view tips this over the edge to a more routine daily use – along a stretch of highway which is not designed for this, and where many of its users will not be expecting vehicles of this size to approach.

- All HGVs, including articulated lorries, must only use this route between 9:30am and 2:30pm, to avoid peak hours and school opening and closing times.

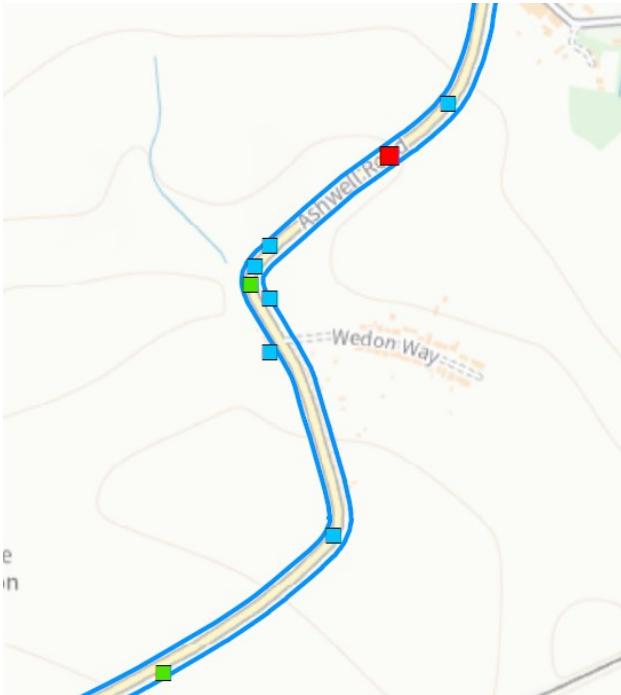
- In terms of the widening of the North Road / Bygrave Road junction, our Safety team has not identified significant initial concerns, but do observe the following:

- i) Care will be needed in moving the refuge island in the bellmouth closer to the main carriageway, as the visibility to the right may be partly obstructed if the keep left bollard is poorly located. As an aside, is there is an opportunity to make use of solar powered bollards at this location?

- ii) Visibility to and from the junction may be degraded by new vegetation growth, in particular, overhanging vegetation to the south along North Road / the southern visibility splay. In addition, overhanging vegetation on the downward slope of Bygrave Road when approaching North Road is notable. This new growth should be cut back more frequently, with larger vehicles being present and turning at the junction, since they take longer to complete such manoeuvres.

- Please note that all changes to the public highway, including to the North Road / Bygrave Road junction, will need to go through the s278 process and stage 2 road safety audit – in good time, and work completed to our satisfaction before commencement of the development. In terms of reinstating the junction after construction, we note that the bellmouth alterations would remove the grass verge separating the carriageway from the narrow footway at the junction. There may instead be an opportunity to widen the footway permanently by providing a simple low retaining structure (such as kerb flags on edge), to retain the base of the bank behind the footway. Otherwise, footway users may feel more vulnerable with a large vehicle manoeuvring much closer to them. I'm not quite sure how this would be secured, but would you be agreeable to the changes you make to this junction being monitored during the construction period, and a decision made nearer the time as to whether the junction should revert to the previous design with x weeks (to be confirmed), remain as is, or be tweaked slightly in line with the above to keep a permanent improvement?

- We have thoroughly investigated accident history along the full stretch of Bygrave Road, going back to when our records started. There have been numerous accidents along the route over the years, however it's clear that most of these are driver error, involve alcohol/drugs, or in the case of pedestrians and cyclists, these have been very infrequent with no obvious pattern. What does stand out however are accidents at or on approach to bends where speed may have been issues, and there's a clear cluster around here:



Whilst accidents arising from speeding is still essentially driver error, the historic accident data implies that there is something more of a pattern and trend here, and it would seem reasonable to expect you to look into this specific section of the route in more detail, and propose measures. There are already some permanent warning signs around here, such as these:



Clearly we don't too want much in the way of sign clutter, but there might be additional signage such as 'pedestrians in road' that could help – please consider “The Traffic Signs Regulations and General Directions 2016” as a starting point, but there may be other options beyond signage too.

- In terms of the site access itself, I know we may have covered this previously, but the current location by the right of way and on a tight bend in the road is far from idea, even with TM. The site boundary extends for a long way southwards along Ashwell Road, and it would seem eminently more sensible for the site access to moved away from the northern boundary / tight bend, further south, along a straight section. Can you look into this further please.

- We're still concerned about the lack of holding bays which may be needed. If two HGVs meet along this route it is more problematic (your route analysis has considered only HGV and car passing by one another). Obviously any HGV on site can be held back if another is approaching, but those travelling to the site don't seem to have any hold-back options at the moment. Can you identify or create new holding areas which enable HGV drivers of the largest HGVs to stop, call ahead and check all is clear, before proceeding? I dealt with another site a few years ago where all HGV driver made use of a GPS tracking system, monitored centrally from the site, and enabled a controller to inform drivers on the road whether to hold back or proceed.

- Finally, we would be seeking a clause within the CTMP that ensures regular monitoring of the full route, from the junction with North Road up to the site access. We of course need to be reasonable in this, as I doubt we could expect construction work to cease if all aspects of the CTMP are being adhered to, but we're concerned about grass verges being churned up in places with mud carried out onto the highway, or other damage. Can you commit to monitoring this, including road cleaning along the route if necessary, and even some minor road widening / passing places identified if there are any obvious points of conflict or issues?

I'm sure you'll agree that this is challenging section of road for such a large construction project, but I believe we've taken reasonable and pragmatic approach in all the above. Yes, it involves a bit more work and consideration, but essentially we now accept the very broad principle of this route subject to the above restrictions and measures.

I hope that helps.

Regards

Matt Armstrong

**Area Manager (North & East) | Highways Development Management | Environment
Transport | Hertfordshire County Council**

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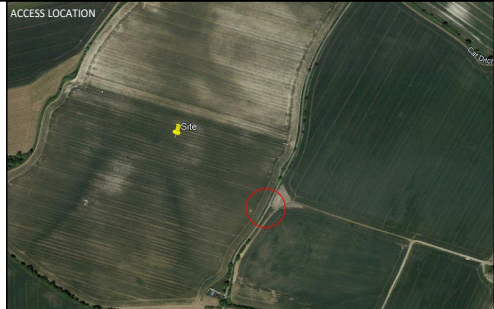
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Appendix B Proposed Temporary Construction Access Location



- NOTES
1. Preliminary drawing for information purposes only.
 2. The content of this drawing is subject to detailed design considerations such as ground conditions, drainage and signage.
 3. Drawing is based on aerial photographic mapping and OS mapping data. Ordnance Survey, (c) Crown Copyright 2023. All rights reserved. Licence number 100022432.
 4. The access will accommodate a minimal number of movements during the temporary construction period which will be controlled through a Construction Traffic Management Plan (CTMP).
 5. All land ownership details and rights of way to be confirmed.
 6. Please do not scale from this drawing.

REVISIONS				
PO1	30/05/23	First Issue.	GP	DC
Rev	Date	Description	By	App

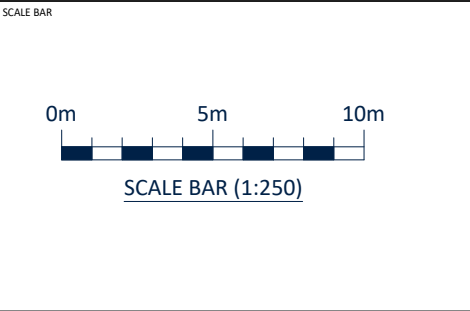
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CLIENT
PACE JOLT ENERGY LIMITED

PROJECT
LAND WEST OF ASHWELL ROAD

TITLE PROPOSED TEMPORARY CONSTRUCTION ACCESS		
ASHWELL ROAD		
PROJECT NO. C22-028	SCALE @ A3 1:1000	
STATUS DESCRIPTION INFORMATION		STATUS S2
DRAWING NO. C22028-ATP-DR-TP-009		

Appendix C Proposed Mitigation - North Road / Bygrave Road Junction



KEY

NOTES
1. Preliminary design for information purposes only
2. The content of this drawing is subject to detailed design considerations such as ground conditions, drainage and signage.
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4. All land ownership details and rights of way to be confirmed.
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REVISIONS (CONTINUED)

REVISIONS				
PO1	01/03/23	First Issue.	DC	DC
Rev	Date	Description	By	App

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CLIENT
PACE JOLT ENERGY LIMITED

PROJECT
LAND WEST OF ASHWELL ROAD

TITLE GENERAL ARRANGEMENT OF PROPOSED AMENDMENT TO A507 / BYGRAVE ROAD JUNCTION	
PROJECT NO. C22-028	SCALE @ A3 1:500
STATUS DESCRIPTION INFORMATION	STATUS S2
DRAWING NO. C22028-ATP-DR-TP-007	