# BEANE SOLAR FARM

## Construction Traffic Management Plan

794-PLN-TRP-JNY11727-03
Beane Solar Farm Construction
Traffic Management Plan
Version B
28 November 2024

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## Document Status

| Version | Purpose of document | Authored by | Reviewed by | Approved by | Review date |
|---|---|---|---|---|---|
| B | Planning Application | Joanna Gunn | David Archibald | David Archibald | 28 November 2024 |
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# Contents



## Appendices

# 1 INTRODUCTION

1.1 This Construction Traffic Management Plan (CTMP) has been prepared by RPS for the proposed Solar Farm (the Proposed Development) on land to the north and east of Cottered, Hertfordshire ('the Site'). A copy of the Site Layout Plan is shown on Drawing Reference 05003-RES-LAY-DR-PT-004, attached at **Appendix 1.**

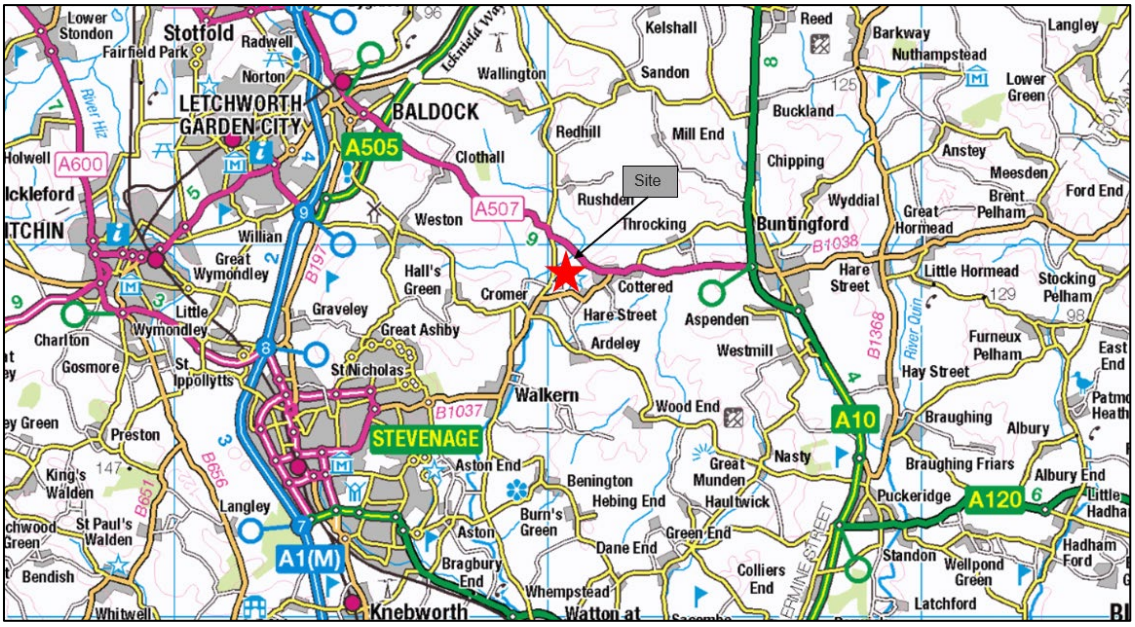
1.2 The 'Proposed Development' comprises a solar farm and associated infrastructure including energy storage. The Proposed Development would contribute to local and national 'Net Zero' targets with an export capacity of up to 49.9 Megawatts (MW) of renewable energy.

1.3 The centre of the site is located approximately 1.5km to the west of Cottered and approximately 8km southeast of Letchworth Garden City. Hertfordshire County Council (HCC) are the Local Highway Authority (LHA).

1.4 The solar farm would occupy several field parcels of the wider holding and is proposed in an area that would enable ongoing co-located agricultural use. The site area encompasses 196.3 acres / 79.5 hectares.

1.5 The site location is shown on **Figure 1.**

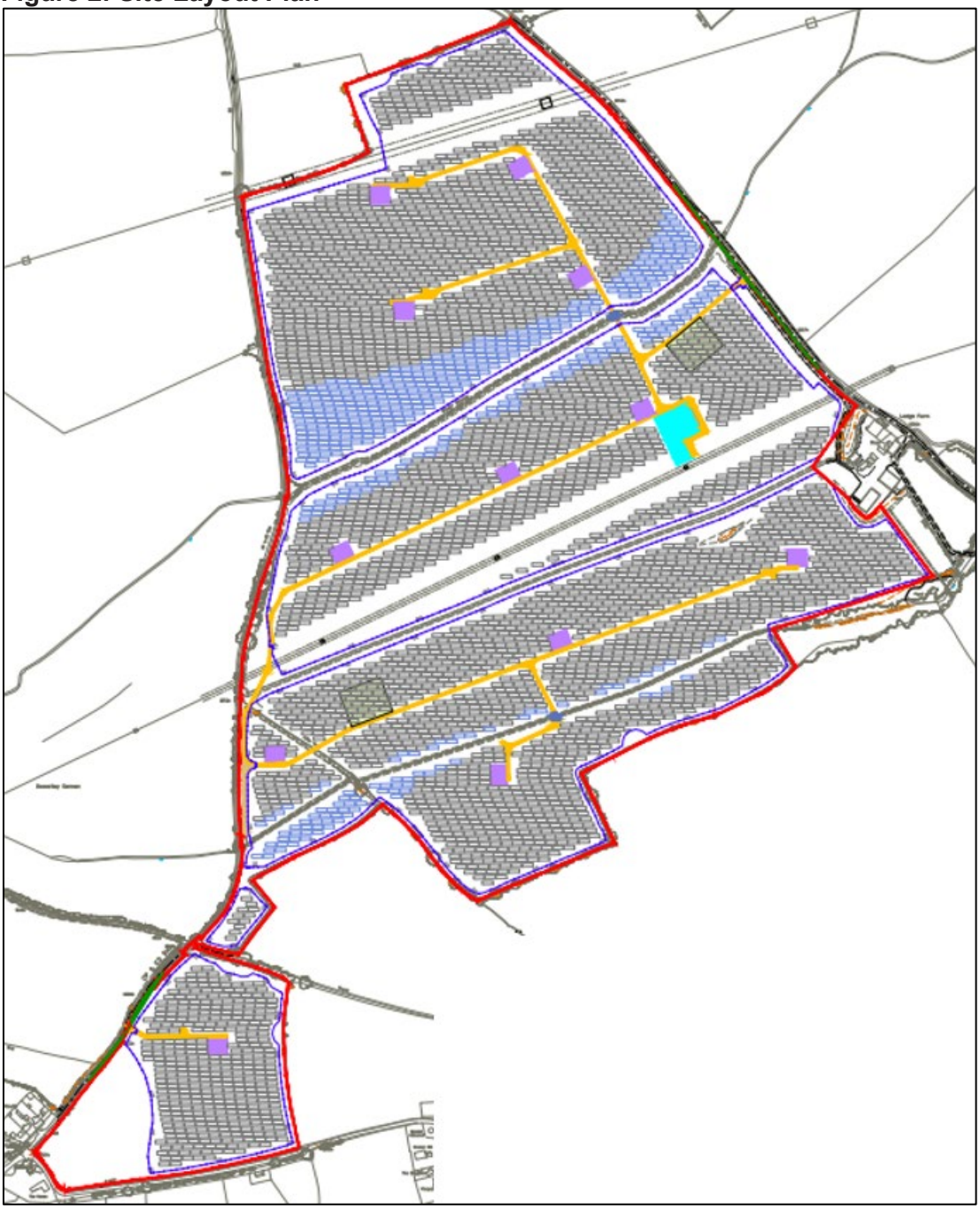
**Figure 1: Strategic Site Location Plan**




Source: Streetmap

1.6 The Site Layout Plan is shown on Drawing Reference 05003-RES-LAY-DR-PT-004, attached at **Appendix 1.** An extract of the site layout plan is shown on **Figure 2.**

**Figure 2: Site Layout Plan**



## Report Context

1.7 The principal aim of this CTMP is to ensure that the construction works are organised and delivered in a manner that safeguards the highway impact, highway safety and amenity of the area surrounding the Site.

1.8 Pre-application advice was obtained from HCC on the access route options set out within RPS Report reference JNY11727-01B. The pre-application advice has been considered within a Transport Statement (RPS Report Reference 797-PLN-TRP-JNY11727-02B) which also accompanies the planning application. This CTMP has also been prepared in accordance with the feedback received from HCC. A copy of the HCC pre-application response is attached at **Appendix 2.**

## Report Structure

- **Section 2** details the proposed indicative development schedule and construction methodology;
- **Section 3** outlines the anticipated composition and volume of traffic during the construction phase of the Development;
- **Section 4** details the construction access route;
- **Section 5** focuses on the consent proposals to ensure that a suitable management strategy and structure is in place to control activity on Site and to ensure a suitable reporting procedure for local residents and stakeholders; and
- Travel Plan measures are outlined in **Section 6**.

# 2 CONSTRUCTION PROCESS

2.1 This section outlines the proposed indicative development schedule, construction methodology and the way in which deliveries will be controlled with regards to the local highway network.

## Development Schedule

2.2 The construction of the solar farm may be over a 12-to-18-month period and typically generate a small daily number of HGV deliveries and construction staff movements over that period.

2.3 The construction can broadly be split into the following phases:

- Erection of security fencing and gate;
- Installation of access tracks;
- Setting down the temporary construction lay-down area;
- Delivery of solar panels, mounting frames, inverters, and battery storage units;
- Pile driven framework installation;
- Cable trenching, ducting & backfilling;
- Installation of mounting system and solar panels;
- Installation of inverter units;
- Installation of battery storage units;
- Installation of customer switchgear substation;
- Installation of DNO substation and point of connection;
- Commissioning of the solar farm equipment and grid connection;
- Site reinstatement and ecological enhancement; and
- Demobilisation from site.

2.4 It should be noted however that the construction programme may be subject to change prior to work commencing on site. In this unlikely event, any changes will be relayed to HCC.

## Delivery of Plant and Materials

2.5 Two temporary storage compounds will facilitate the construction process. One will be located adjacent to the main entrance track and a short distance west of the A507. The second compound will be to the southwest of the main parcel.

2.6 The locations of the proposed temporary compounds are illustrated in the Drawing Pack that forms part of the Planning Application – see Drawing Reference 05003-RES-LAY-DR-PT-004, attached at **Appendix 1**. The compounds will be surrounded by a temporary fence to secure the contents and will typically enclose:

- A site office;
- Containers and areas of storage for panels, tools, components and other construction materials;
- Areas of parking and HGV turning;
- Temporary site facilities including kitchen and welfare facilities;
- Segregated and covered waste skips; and
- Refuel Area

2.7 The typical layout for the temporary construction compounds is shown on Drawing Reference 05003-RES-CTN-DR-PT-001, attached at **Appendix 3.**

2.8 All materials and plant associated with the development process will be stored within the footprint of the site. A loading and unloading area for plant and materials will be provided within the construction compounds. The majority of deliveries will be made via articulated and rigid HGVs.

## Working Hours

2.9 All work will be conducted between 08:00 and 18:00 hours Monday to Friday with limited construction activities on Saturdays between 08:00-13:00. No construction activities will take place on a Sunday or Bank Holiday.

# 3 CONSTRUCTION TRAFFIC GENERATION

3.1 This section of the report sets out the estimated volume and type of vehicles that will be generated throughout the construction phase of the development. This information has been used in subsequent sections that consider the geometry and safety of the adjoining highway networks, in order to inform the suite of management measures proposed.

3.2 It should be noted that the construction programme and corresponding construction traffic strategy may be subject to change following the appointment of a construction contractor and prior to work commencing on site. Any substantial changes in the build program and / or number of vehicular movements will be communicated to HCC in advance.

## Construction Vehicles

3.3 The trip generation potential of the construction phase of Proposed Development has been informed though discussion with the applicant on the anticipated construction programme and is based on experience of delivering similar developments in the United Kingdom.

3.4 Based on Applicant project experience, it is anticipated that the construction phase is proposed to occur over a period of 18 months. Overall, the delivery of materials to site will generally occur within the first 5 months of the project's construction period, with a peak at Month 3 (primarily associated with piles and mounting frame delivery and civil works and material delivery with combined 20 HGV deliveries per day, equating to 40 HGV movements).

3.5 A total of approximately 1,500 deliveries are expected over the construction phase, of which, approximately 1,300 deliveries will be within the first five months of the construction period, with the remaining approximately 200 deliveries spread out across the following 13 months. This equates to a total of 2600 HGV movements within the first five months of construction, equating to an average of 23 HGV movements per day.

3.6 Although the types of construction vehicles are subject to the contractor, typical vehicle types used for elements of the construction are set out in **Table 3.1**.

**Table 3.1: Typical Construction HGV Movements**

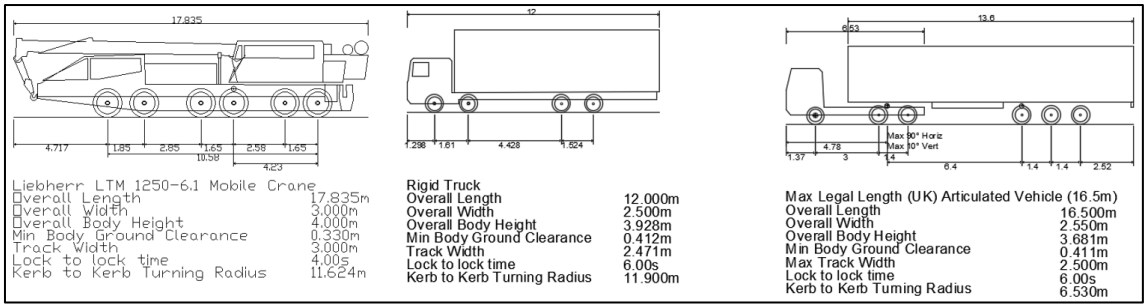
| Item | Vehicle Type |
|---|---|
| Solar Panels | Rigid / Articulated HGVs |
| Battery Energy Storage Units | Articulated HGVs |
| Transformer / Invertor Units | Rigid / Articulated HGVs |
| Mounting System | Rigid HGV |
| Prefabricated Buildings | Articulated HGVs |
| Unloading Buildings | Mobile Crane |
| Cables | Rigid HGV |
| Fencing | Rigid HGV |

| | |
|---|---|
| Small Deliveries | Rigid HGV |
| Plant Delivery | 10t-20t HGV (normally Rigid HGV) |

## Construction Vehicle Types

3.7 It is noted that a variety of vehicles will need to access the site during construction. These will include rigid and articulated HGVs and a large mobile crane associated with delivering the requisite materials (including aggregate, mounting frames and the solar panels) and prefabricated buildings. The dimensions of the vehicle types are shown below on **Figure 3.**

**Figure 3: Typical Construction Vehicle Dimensions**




## Dwell Times

3.8 Delivery vehicles are likely to attend the site for approximately one hour per vehicle. There will be sufficient space within the site along the access track as well as the curtilage of the temporary construction compounds to ensure that no vehicles would have to wait on the surrounding highway network.

3.9 Further measures that will be employed to control the number and frequency of vehicles arriving at the site are detailed further below.

## Construction Staff

3.10 The number of construction staff on site will vary over the construction period depending on the activity that is taking place.

3.11 The proposed development requires a total of 146 staff across the site. Construction staff will typically arrive in teams of up to 10 persons in working 10-person minivans, as per most construction sites.

3.12 Whilst the number of construction staff will vary across the construction phase, in accordance with a worst-case scenario approach, this assessment considers the above referenced Month 3 (associated with peak HGV deliveries) as well as anticipated peaks in construction staff in Months 9 and 16. During Month 3 there will be 19 vehicles carrying construction staff arriving on site per day and in months 9 and 16 there will be 37 and 16 vehicles arriving per day respectively.

3.13 Car sharing promotion by the contractor will reduce the number of cars, and this will be achieved through management of staff travel patterns and actively encouraging car sharing as set out further in **Section 6**.

3.14 All staff are anticipated to arrive at the construction site during the 30 minute period preceding the start of the operating day (i.e. 07:30 to 08:00 Monday to Saturday) and depart during the 30 minute period that follows the end of the operating day (i.e. 18:00 to 18:30 Monday to Friday and 13:00 to 13:30 on Saturdays). Staff trips are likely to travel to / from different origins / destinations and hence spread their movement across the highway network.

3.15 Provision will be made to enable all vehicles to park within the construction compound to avoid obstruction to the operation of the public highway and this shall be strictly enforced. **Section 6** sets out full details on construction worker trips and also contains a Construction Worker Travel Plan that seeks to minimise construction workers' travel.

## Maintenance

3.16 When operational, the only traffic demand is from maintenance vehicles, which is typically a 4x4 / panel van approximately once per week.

3.17 The impact of maintenance vehicles is negligible given the infrequent nature of maintenance visits.

## Decommissioning

3.18 At the end of the project's operational life the solar farm will be fully decommissioned.

3.19 All project elements will be removed from site and where possible will be recycled. Any waste generated during the decommissioning process will be removed and transported by a certified and licensed contractor. The site will be restored leaving no permanent visible trace. The solar panels will be removed from the site in the same way they were transported to the site originally. The cables interconnecting the panels to the electricity grid system will be de-energised and removed from the site, with any cable marker signs removed.

3.20 Over this time any landscaping associated with proposals and over this period will establish and grow to form mature hedgerows and shrubbery. All landscaping will be retained in situ.

3.21 The decommissioning of the Proposed Development will be expected to generate a similar (or fewer) number of trips as the construction phase, since there is not the same requirement to transport the material separately. The traffic associated with the decommissioning phase will be discussed with the Highway Authority prior to commencement, and appropriate measures will be agreed as necessary at that time.

# 4 CONSTRUCTION VEHICLE ACCESS AND ROUTEING

4.1 The site takes access from the A507 which in turn routes to the A10 Buntingford Bypass to the east, and the A505 to the west. The local highway network is shown on **Figure 4.**

**Figure 4: Local Highway Network**


4.2 Pre-application advice on the construction access routes was obtained from HCC. Regarding the A507, the pre-application advice stated the following:

> **"Having investigated all the access routes along with their associated accesses, and in the absence of detailed on-the-ground assessments from the applicant at this stage, the only potentially acceptable access for large HGV movements during the construction phase would be Access A onto the A507. We do however need additional detailed information to make any informed recommendation. Therefore, this means that out of all the proposed access arrangement only this access (subject to routing) would be appropriate for HGV movements during construction."**

4.3 The pre-application advice also advised of a Traffic Regulation Order (TRO) which would be implemented on the A507:

**"There is currently in process a weight limit restriction of 7.5 tonnes along the A507 which is likely to come into effect in the near future and likely before this proposal reach any sort of planning stage. The applicant will need to demonstrate their site is covered under any 'except for access' exemption to this TRO."**

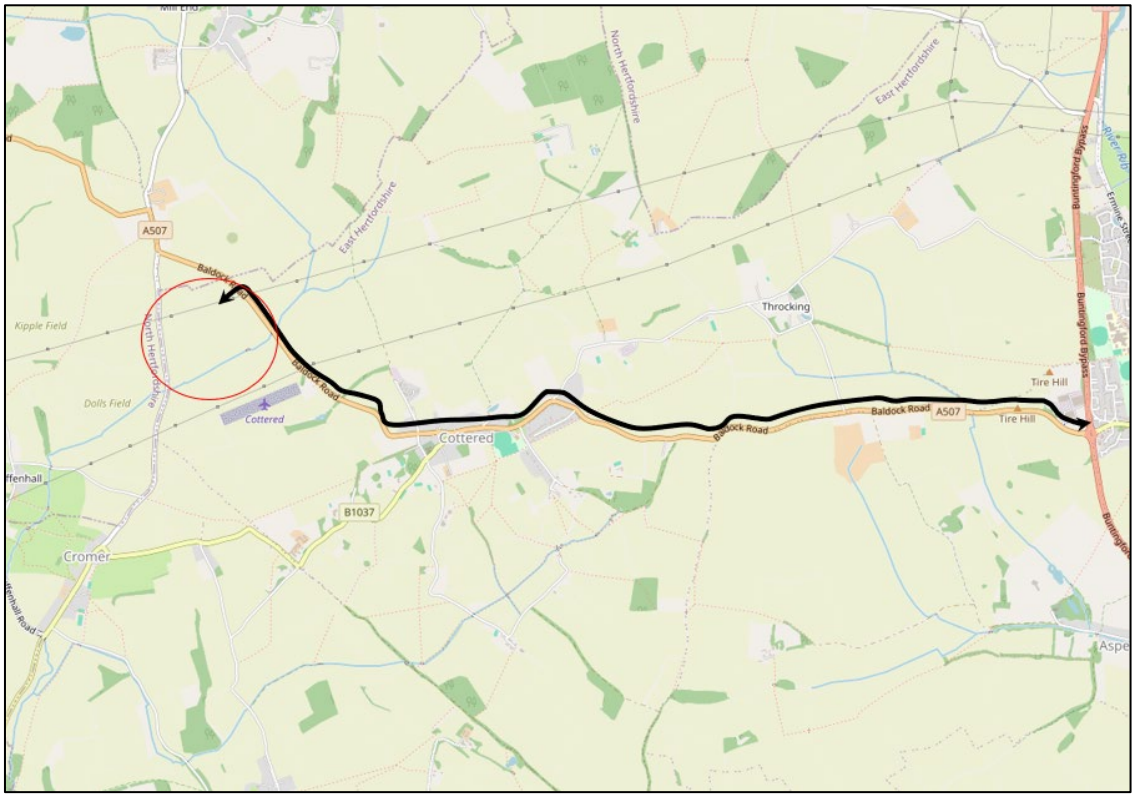
4.4 When construction is underway, there will be a 7.5t weight restriction in place on the A507 except for access; however, as vehicles associated with the Proposed Development would be accessing the site, they would not contravene any such restriction.

## Construction HGV Routeing

4.5 The A507 access arrangements seek to avoid construction HGVs travelling along constrained sections of the public highway. Construction materials will all enter the site via the A507 access into the northern parcel, and materials designated for the southern parcel will be transhipped onto smaller vehicles (e.g. tractor and trailers, or light goods vehicle) within the temporary construction compound (west from the A507). From here they will be moved internally within the site, and to the southern compound for storage and transit between the northern and southern land parcels via tractor and trailer along Cromer Heath. This approach will reduce / minimise the distance travelled by construction HGVs along constrained sections of the public highway, and appropriate traffic management measures can be adopted where necessary.

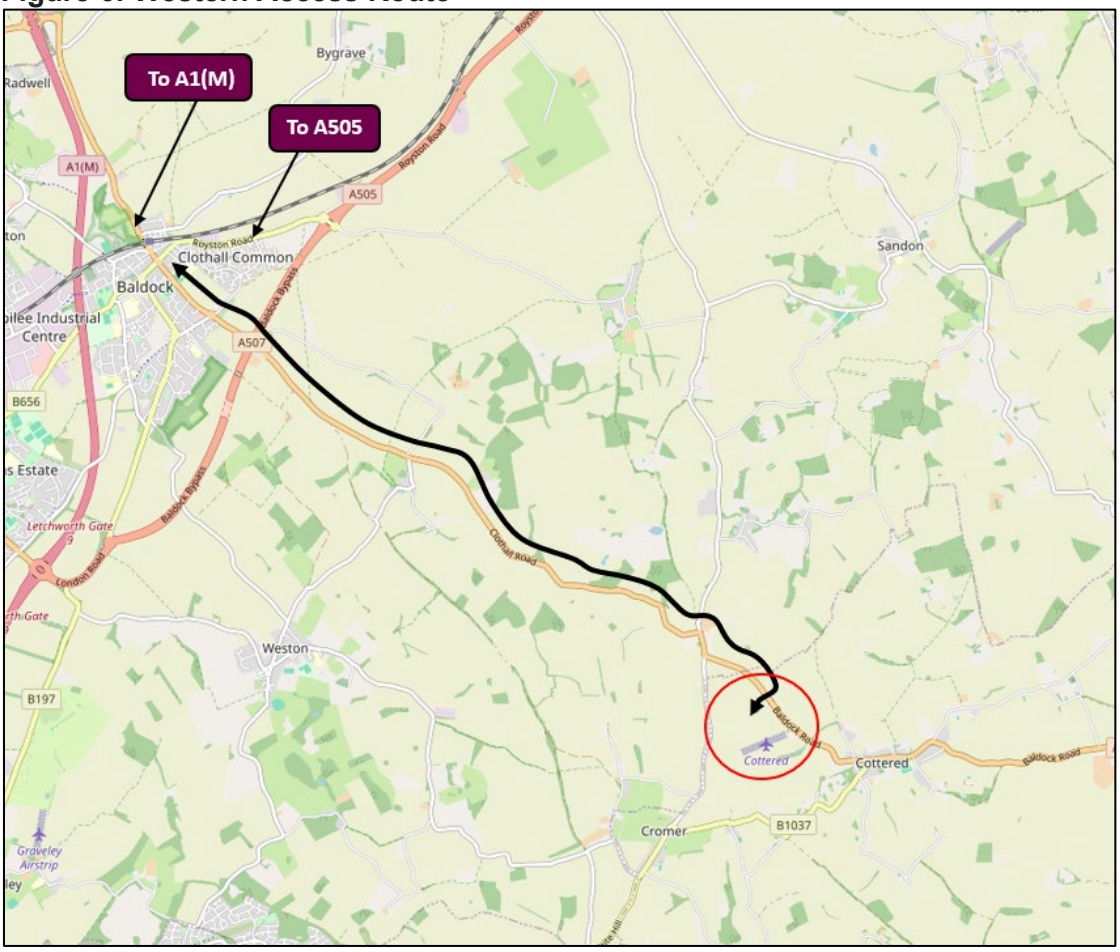
4.6 Construction HGVs travelling from the east will utilise the construction traffic route shown on **Figure 5.**

**Figure 5: Eastern Access Route**




4.7 Construction HGVs travelling from the west via the A507 would utilise the construction access route shown on **Figure 6.**

**Figure 6: Western Access Route**




4.8 Internal access tracks will be required during the construction phase. The tracks will be constructed using permeable aggregate.

4.9 It is considered that the proposed routeing minimises the use of minor roads and maximises the use of the major strategic and principal roads where possible. It is proposed that temporary signage is used to direct construction traffic to the site along the proposed construction traffic route utilising existing street furniture.

4.10 Temporary construction compounds located within the northern parcel will provide areas for loading and unloading of vehicles and will provide a turning area to allow vehicles to exit the site in forward gear. All delivery drivers and construction workers will be advised of the construction routes prior to making their delivery or commencing work.

4.11 It is considered appropriate to avoid routes where scheduled road works and construction vehicles could conflict. The Site Manager will keep up to date on scheduled roadworks in the area using the one.network website. Any major roadworks on the preferred route that result in the deviation of the preferred route will be agreed with officers at HCC in advance.

4.12 Post-construction, the site will not require significant maintenance apart from occasional visits made by 4x4 vehicles or panel vans – typically no more than once per week.

# Construction Access Junctions

## Northern Parcel Access Arrangement

4.13 The construction access will be an improvement and minor relocation to an existing gated field access. A preliminary access design, on Drawing Reference 05003-RES-ACC-DR-PE-002 attached at **Appendix 4**, demonstrates the ability of a 16.5m articulated HGV to manoeuvre into the A507 access junction. 2.4m x 160m visibility splays are achievable in both directions, as shown at **Appendix 5.**

4.14 The construction compounds will be located within the northern parcel. These will be accessed via the A507 access. The A507 access arrangements seek to avoid construction HGVs travelling along constrained sections of the public highway. Construction materials will all enter the site via the A507 access into the northern parcel, and materials designated for the southern parcel will be transhipped onto smaller vehicles (e.g. tractor and trailers, or light goods vehicle) and transferred internally from the construction compound west of the A507, via a second temporary works compound further south, for eventual transit via Cromer Heath to the southern land parcel.

4.15 Construction HGVs will be subject to a booking system with fixed arrival times. A banksperson will be situated at the access to assist HGVs in accessing and egressing the site and will only instruct HGVs to depart the site when the major road is clear of traffic within the vicinity of the site access and it is safe to do so. All arrivals will be known in advance as part of the HGV booking system, and all departing HGV movements will be managed on-site to ensure no departing HGVs meet an arriving HGV through the access junction.

4.16 It is also proposed that temporary signage be located in the vicinity of the site access during the construction period to warn drivers of the site entrance, as shown on **Figure 7.**

**Figure 7: Temporary Signage at Site Access**


4.17 Additional signage on the A507 will advise motorists of HGVs turning through the site access, as shown on **Figure 8.**

**Figure 8: Temporary Signage on Public Highway**

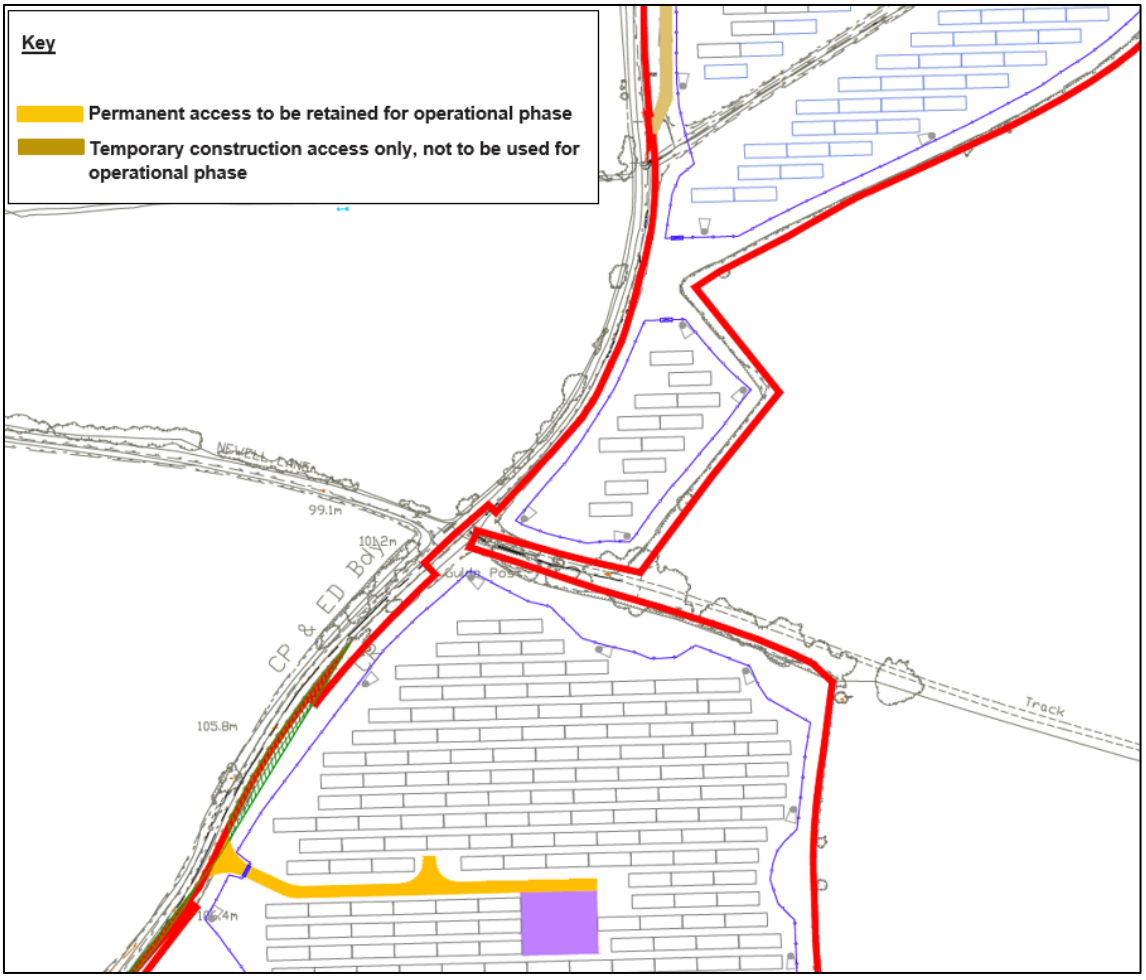

## Southern Parcel Access Arrangement

4.18 All construction staff and HGVs will access the primary compound located within the northern parcel, accessed via the A507. All construction materials for the southern parcel will be deposited within the compound to the west of the A507, and will be shuttled between the northern and southern parcels via a tractor and trailer. Access to the southern parcel will be taken via Cromer Heath, with construction vehicles routeing from the temporary construction access within the northern parcel onto Cromer Heath

4.19 A preliminary access design for the southern parcel is shown on Drawing Reference 05003-RES-ACC-DR-PE-003 at **Appendix 6**, and a preliminary access design for the temporary access into the northern parcel to allow construction vehicles to travel along Cromer Heath is shown on Drawing Reference 05003-RES-ACC-DR-PE-004, attached at **Appendix 7.**

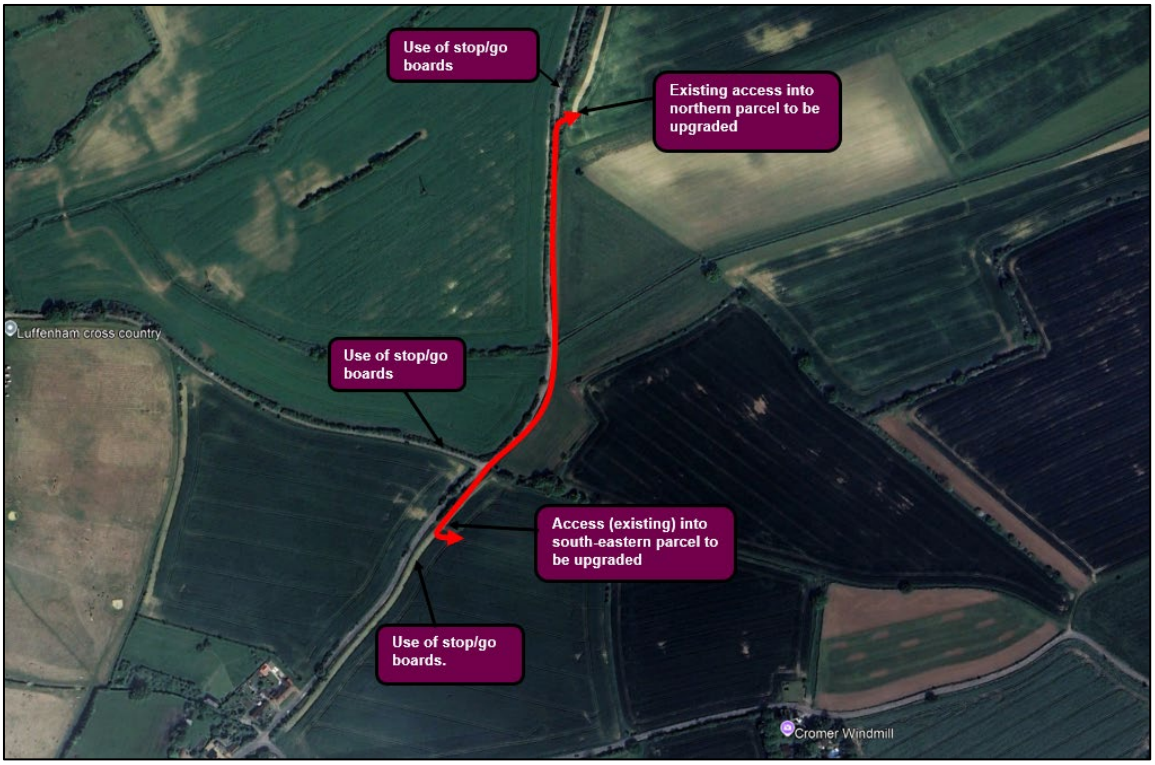
4.20 The access locations between the northern and southern parcels are shown on **Figure 9.**

**Figure 9: Access Locations between Northern and Southern Parcel**




4.21 Stop / go boards will be utilised to hold traffic along Cromer Heath, to enable construction HGVs to travel between the northern and southern parcels. The stop / go boards arrangement is shown on **Figure 10.**

**Figure 10: Traffic Management Between the Northern and Southern Parcels for Construction Vehicles**




# Highway Safety

4.22 An investigation of Personal Injury Accident data on the local network has been undertaken using www.crashmap.co.uk. Personal Injury Accidents for the latest available 5 years (January 2018 to December 2022) have been assessed for the local highway network within the vicinity of the site. This includes the A507 within the extent of the visibility splays, and Cromer Heath between the northern and southern parcels of land.

4.23 There was only one injury accident within the study area during the most recent five-year period. One fatal injury accident occurred on Cromer Heath in February 2022, there a motorcyclist lost control of the vehicle, resulting in a collision.

4.24 Whilst all injury accidents are unfortunate, from the analysis undertaken, there are a low number of injury accidents which suggests there no aspects with the local highway network that contributes to a road safety issue.

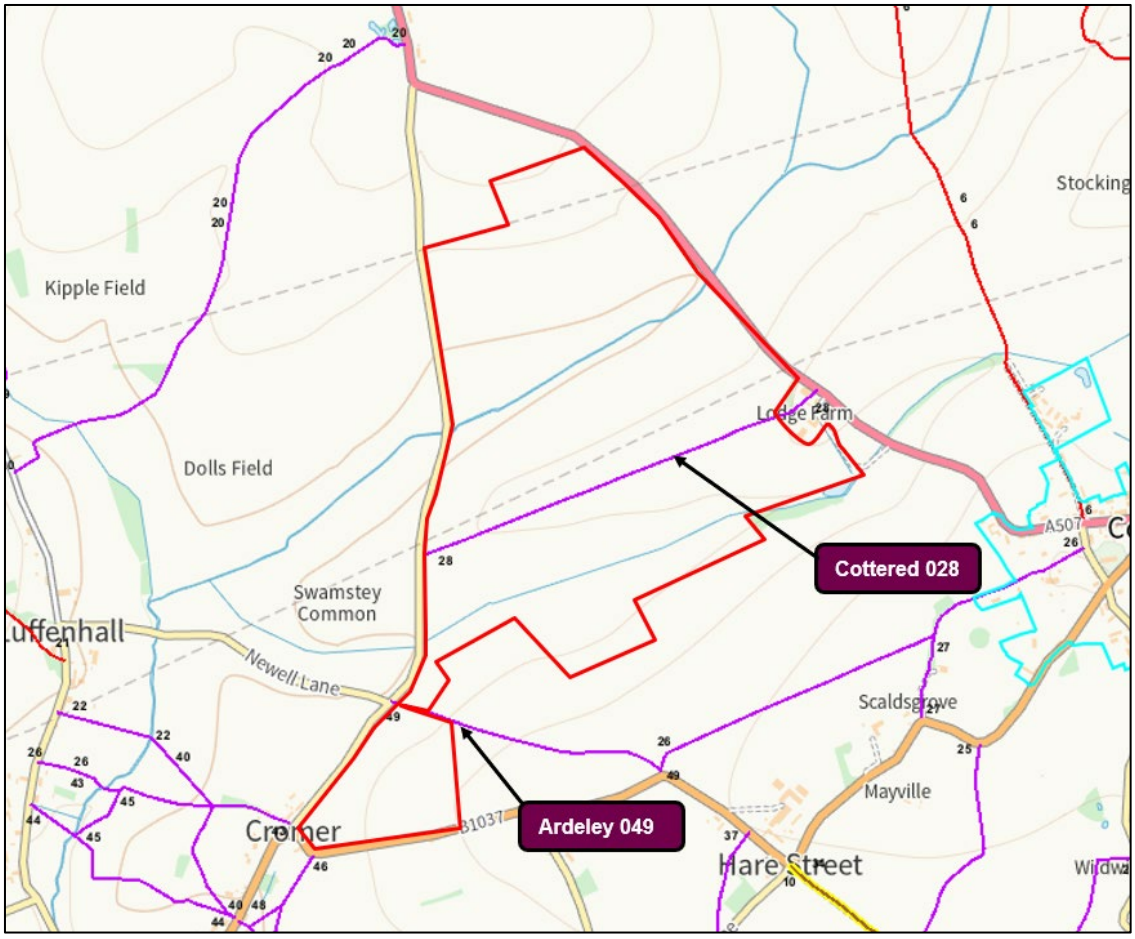
# 5 MEASURES, MANAGEMENT AND CONTROL PROCESSES

5.1 This section sets out the measures, management structure and control processes that will be put in place to implement, monitor and manage the CTMP. The Site Manager will be responsible for the site works which will ensure that the control processes are efficiently communicated and implemented.

## Public Rights of Way

5.2 As per the HCC Definitive Map, there are several Public Rights of Way (PRoW) within the vicinity of the site, including PRoW Cottered 028 which runs broadly east-west through the middle of the site, between the A507 and Cromer Heath. PRoW Ardley 049, located between the northern and southern parcel, routes between Cromer Heath and the B1037. The PRoWs within the vicinity of the site are shown on **Figure 11.**

**Figure 11: Public Rights of Way**



5.3 It should be noted that the Hertfordshire County Council Public Rights of Way Improvement Plan details several proposed PRoW throughout the site:

- A proposed PRoW that routes broadly northeast to southwest, routeing parallel to the River Beane;
- A proposed PRoW along the north-eastern boundary of the site, running parallel to the A507; and
- A proposed PRoW along the south-western boundary of the site, running parallel to Cromer Heath.

5.4 It should be noted that these are proposed potential improvements and have not yet been implemented; however, fencing will be erected around the construction site to segregate users of the PRoWs from the construction area (both existing and proposed should they be implemented prior to construction).

5.5 A banksperson will be situated at each PRoW where a construction track crosses a PRoW. The banksperson will hold back HGVs whilst there are users of the PRoW within the vicinity of the construction site. Users of a PRoW will have priority where construction HGVs have to route across the path of a PRoW.

## Ongoing Review of Access Routes

5.6 It is considered appropriate to avoid routes where scheduled road works and construction vehicles could conflict. Any major roadworks on the access routes that result in the deviation of the route will be agreed with officers at HCC in advance where feasible.

## Transport Co-ordination

5.7 A Site Manager will be appointed for the project, and the details will be provided to HCC once confirmed. The Site Manager for the project will undertake the transport co-ordination role for the site. In this respect, their main responsibilities will include:

- Managing implementation of the CTMP;
- Vehicle scheduling;
- Checking for scheduled road works on one.network;
- Checking for scheduled refuse collections to avoid conflict with HGV deliveries within built up areas;
- Handling any complaints; and
- Acting as a point of contact for employees, contractors and the general public.

5.8 The Site Manager will ensure that there is adequate liaison between the following key stakeholders throughout the construction period:

- The Contractor;
- The Developer;
- Site neighbours;

- Other local stakeholders such as emergency services or local transport providers; and
- HCC.

5.9 Regular review meetings and telecommunication will be held between the Site Manager and HCC if requested. It is envisaged that update meetings / telecommunication will be held on an ad-hoc basis as required. Furthermore, the Site Manager will provide any monitoring data, delivery schedules, complaints or breaches of agreements to HCC if requested.

## Booking System

5.10 On a daily basis, the Site Manager will evaluate details of the daily profile of deliveries proposed for the upcoming week. Through discussions with hauliers the Site Manager will, as far as practicable, ensure that the deliveries are spread out across the week and across the day to minimise any potential disruption.

5.11 The proposed deliveries will be checked against the weekly and daily delivery schedules. This will be overseen by the Site Manager to ensure that construction deliveries are managed in an efficient manner with minimal disruption and delays.

5.12 The proposed construction compound could provide an area for waiting for an additional vehicle if required. Hauliers will be required to contact the Site Manager to give an indicative delivery time to ensure that the delivery space and banksmen (if required) are ready for their arrival onsite.

5.13 Where possible, sufficient time will be given between deliveries to allow for any delays as a result of the delivery vehicle getting stuck in traffic or the loading / unloading taking longer than expected and to avoid any vehicles waiting.

5.14 The Developer will provide banksmen to assist with the manoeuvring of delivery vehicles throughout the site. The construction compound will be located off the public highway within the site, accessed via the internal access road.

## A507 Construction Access Junction Management

5.15 The booking system will ensure that the timing of all construction vehicles is known. This will enable the banksmen to act as traffic marshals on the access road and utilise stop / go boards as required to ensure the safe movement of construction vehicles arriving and departing through the construction access, and users of the public bridleway.

5.16 All arriving HGVs will be known in advance as part of the HGV booking system, and all departing HGV movements will be managed on-site to ensure no departing HGVs meet an arriving HGV through the access junction.

## Route Compliance

5.17 Use of the agreed vehicle routes shall be included as a contractual requirement of the Contractor and will be communicated to all drivers. This will include information on the times of operation, delivery routes and the vehicle booking system.

## Construction Compound

5.18 Two temporary storage compounds will facilitate the construction process. One will be located adjacent to the main entrance track and a short distance west of the A507. The second is proposed in the southwest of the main parcel. The locations of the proposed temporary compounds are illustrated in the Drawing Pack that forms part of the Planning Application - Drawing Reference 05003-RES-LAY-DR-PT-004 attached at **Appendix 1**. A copy of the construction compound layout is attached at **Appendix 3.**

5.19 The compounds will be surrounded by a temporary fence to secure the contents and will typically enclose:

- A site office;
- Containers and areas of storage for panels, tools, components and other construction materials;
- Areas of parking and HGV turning;
- Temporary site facilities including kitchen and welfare facilities;
- Segregated and covered waste skips; and
- Refuel Area

5.20 Foul waste and waste from skips will be disposed of off-site, by appropriate contractors and to appropriate licenced facilities.

5.21 Any onsite fuel storage will be containerised and located within a bunded area wall to protect against spillages and contamination. Ground level will be finished in a proposed 300mm Type 3 stone or equivalent. The compound area will measure approximately 50m x 60m maximum.

5.22 The construction compound provides a turning area to allow vehicles to exit the site in forward gear. All delivery drivers and construction workers will be advised of the construction routes prior to making their delivery or commencing work.

5.23 The construction compounds will be large enough to provide for all storage, welfare and parking. No vehicles will be allowed to wait on the highway or park on highway verges. The compound will have enough room to allow vehicles to leave and enter in a forward gear.

5.24 The primary construction compound will be located within the northern parcel. Materials will be set down within the compound and delivered by small tractor-trailer around the site for installation. This will avoid heavy or otherwise intensive vehicle traffic across the wider site that could cause compaction and increase risks to boundary features in proximity to access tracks.

5.25 As stated previously, all construction materials for the southern parcel will be delivered directly to the primary compound in the northern parcel and transferred internally via a secondary temporary construction compound further south, for eventual transit via Cromer Heath to the southern land parcel via tractor and trailer.

5.26 Upon completion of construction works, compound areas will be reinstated and all hardcore will be removed off site and disposed of appropriately or utilised within tracks. Solar panels will then be placed where compounds had previously been located.

## Dust and Dirt Control

5.27 Mud and debris on the road are regarded as one of the main environmental nuisances and safety problems arising from construction sites. Wheel washing facility will be provided for the duration of the construction works to ensure levels of soil on roadways near the construction site is minimised. The wheel wash facility will be in the form of a hose down point located adjacent to the construction compound. All vehicle wheels will be cleaned whenever a vehicle leaves the site.

5.28 The contractor will ensure that the area around the construction site, including the public highway, are regularly and adequately swept to prevent any accumulation of dust and dirt.

## Site Fencing

5.29 A security fence will be constructed around the site prior to any significant construction works taking place. The security fence will be erected on the inside of any hedgerows, so that it will be screened by any such hedgerow in views from the surrounding area, further mitigating any visual impact.

## Communication Strategy

5.30 As identified above, the Site Manager will be responsible for ensuring that there is adequate liaison between all stakeholders throughout the construction period.

5.31 Prior to any works starting the contractor shall inform neighbours which may be affected by noise, dust or vehicular movements arising from the construction work of the nature of the works, proposed hours of work and their expected duration. In addition to this a notice will be placed at the main entrance to the site informing site neighbours of the hours of work.

## Complaints Procedure

5.32 Whilst the Site Manager will use reasonable endeavours to ensure that site neighbours are informed of the construction programme and associated impacts it is possible that complaints may be raised by site neighbours about the programme of works. The Site Manager will therefore be available to meet and explore issues with concerned neighbours directly via appointment.

5.33 Complaints shall be taken seriously and addressed immediately by the construction team. All complaints that are received will be reviewed in weekly site meetings to ensure that any required actions are communicated to all employees.

5.34 The Site Managers contact details will be provided to HCC prior to work commencing on site. Contact details for the Site Manager will also be displayed at the site entrance.

# 6 CONSTRUCTION TRAVEL PLAN

6.1 A Travel Plan is a package of measures aimed at promoting greener, cleaner travel choices and reducing reliance on the private car. It enables employers to reduce the impact of travel on the environment, whilst also bringing a number of other benefits to the organisation as an employer and to staff.

6.2 This Travel Plan seeks to address activities related to the construction of the site which includes commuter journeys for construction workers, material supplies and deliveries. By successfully addressing these different types of travel by promoting travel via sustainable modes and sourcing labour and goods locally, the Travel Plan objectives can be achieved.

## Trip Generation

6.3 The proposed development requires a total of 146 staff across the site. Construction staff will typically arrive in teams of up to 10 persons in working 10-person minivans, as per most construction sites.

6.4 Whilst the number of construction staff will vary across the construction phase, in accordance with a worst-case scenario approach, this assessment considers the above referenced Month 3 (associated with peak HGV deliveries) as well as anticipated peaks in construction staff in Months 9 and 16. During Month 3 there will be 19 vehicles carrying construction staff arriving on site per day and in months 9 and 16 there will be 37 and 16 vehicles arriving per day respectively.

6.5 Appropriate car parking provision for site workers and visitors will be provided within the construction compound. No parking by contractors, visitors or delivery vehicles will be permitted on the local highway network or the site access road at any time during the construction phase, and visitors will be advised of the parking arrangements in advance of travelling to the site.

6.6 All staff are anticipated to arrive at the site during the 30-minute period preceding the start of the operating day (i.e. 07:30 to 08:00 Monday to Saturday) and depart during the 30 minute period that follows the end of the operating day (i.e. 18:00 to 18:30 Monday to Friday and 13:00 to 13:30 on Saturdays). Staff trips are likely to travel to / from different origins / destinations and hence spread their movement across the highway network.

6.7 Based on Applicant project experience, it is anticipated that the construction phase is proposed to occur over a period of 18 months. Overall, the delivery of materials to site will generally occur within the first 5 months of the project's construction period, with a peak at Month 3 (primarily associated with piles and mounting frame delivery and civil works and material delivery with combined 20 HGV deliveries per day, equating to 40 HGV movements).

6.8 A total of approximately 1,500 deliveries are expected over the construction phase, of which, approximately 1,300 deliveries will be within the first five months of the construction period, with the remaining approximately 200 deliveries spread out across the following 13 months. This equates to a total of 2600 HGV movements within the first five months of construction, equating to an average of 23 HGV movements per day.

## Staff Infrastructure

6.9 The contractor, where feasible, will seek to recruit construction workers from the local area. This will help maximise the potential for construction workers to walk and cycle to the site.

6.10 Car sharing represents a relatively convenient form of travel offering a significant potential to reduce overall private mileage of construction workers. It is this mode of transport which often forms one of the most convenient methods of sustainable travel for construction workers.

6.11 The Site Manager would promote a car-sharing scheme throughout the construction program. The Site Manager would also make construction workers aware of existing car sharing schemes such as liftshare.com/uk.

6.12 The construction site will provide facilities in accordance with requirements set out in Health and Safety Executive guidelines. Consequently, the site compounds will provide a drying room, storage facilities, toilets and offices within the welfare area. This will encourage people to travel to the site by sustainable modes whilst having the added benefit of reducing the number of trips made off site during lunch breaks.

## Aims and Targets

6.13 The site is a construction site and sustainable transport measures will be adopted.

6.14 The proposed development requires a total of 146 staff across the site. Construction staff will typically arrive in teams of up to 10 persons in working 10-person minivans, as per most construction sites.

6.15 The car parking area will be able to accommodate up to 14 vehicles within marked parking bays shown on Drawing Reference 05003-RES-CTN-DR-PT-001 at **Appendix 3**, with additional parking to be made available during the peak construction period. Construction worker parking at the site will be monitored, controlled and recorded by the Site Manager to ensure that single occupancy car use is minimised. The Site Manager will ensure there is space made available for any overspill parking during the early periods of construction.

6.16 This CTMP and Travel Plan will be communicated to all construction workers as part of their induction / training process. An up-to-date copy of the Travel Plan will always be available for consultation.

## Measures

6.17 As indicated above there is potential to for construction workers to car share. It is therefore deemed appropriate to promote the following measures to promote sustainable travel by construction staff.

- Providing changing and storage facilities for construction staff;
- Assist in matching car sharers; and
- Minimise, where possible, the number of contractors on site at any one time to reduce trips generated and promote car sharing.

6.18 Further to this the following measures are to be promoted to minimise the environmental impacts of HGV trips generated:

- Initiate a weekly booking system for the delivery of plant and materials to the site;
- The Developer will strive to procure local contractors for the project, thereby minimising transport costs and impact on the local environment;
- All delivery vehicles will be required to switch off their engines as they are waiting at the site, thereby preventing unnecessarily idling vehicles;
- Use of the agreed vehicle routes shall be included as a contractual requirement of the Contractor and will be communicated to all individuals associated with the works; and
- Provision of wheel washing facilities at the site entrances / egresses.

6.19 The Department for Transport (DfT) has published guidance relating to the efficient use of freight on the network. “Review of Low Carbon Technologies for Heavy Goods Vehicles” (2009) sets out a number of HGV technologies with the potential for reducing carbon emissions. The report assesses a number of vehicle technologies and driver behavioural styles for reducing the environmental impact of HGVs. Some of these measures could be incorporated into the vehicle fleet in order to reduce the environmental impact of generated traffic. Such measures would include:

- Aerodynamic improvement to Trailers – Reduce the aerodynamic drag of the vehicle;
- Spray Reduction Mud Flaps – Reduces Spray and Provides Aerodynamic Benefits;
- Low Rolling Resistance Tyres – Can reduce $CO^2$ emissions by up to 5%;
- Automatic Tyre Pressure Adjustment – Automatically monitors and adjusts tyre pressures which could provide $CO^2$ reductions of around 7-8%;
- Predictive Cruise Control – Improves fuel efficiency of vehicles; and
- SAFED Driver Training Scheme – Aims at improving accident prevention and reduction and improved fuel consumption.

## Residual Impacts

6.20 A booking system will be initiated to ensure that construction deliveries are managed efficiently with minimal disruption and delay. Local residents will be informed of the commencement of the construction process. The initiation of the Travel Plan measures alongside the targets will therefore minimise impacts upon the operation of the local highway network as well as reduce environmental impact.

# Appendices

# Appendix 1 – Site Layout Plan (Drawing Reference: 05003-RES-LAY-DR-PT-004)

SHEET 2

SHEET 3

SHEET 4

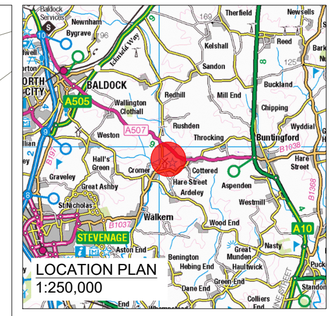
SHEET 5

SHEET 6

SHEET 7

SHEET 8

SHEET 9




KEY:

- SITE BOUNDARY (*OUTSIDE OF LINE DENOTES BOUNDARY*)
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- CCTV
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OVERVIEW
SHEET 1 OF 9

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PROJECT TITLE
BEANE SOLAR

DRAWING TITLE
FIGURE 5
INFRASTRUCTURE LAYOUT ENLARGMENT

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-LAY-DR-PT-004 | 6 |



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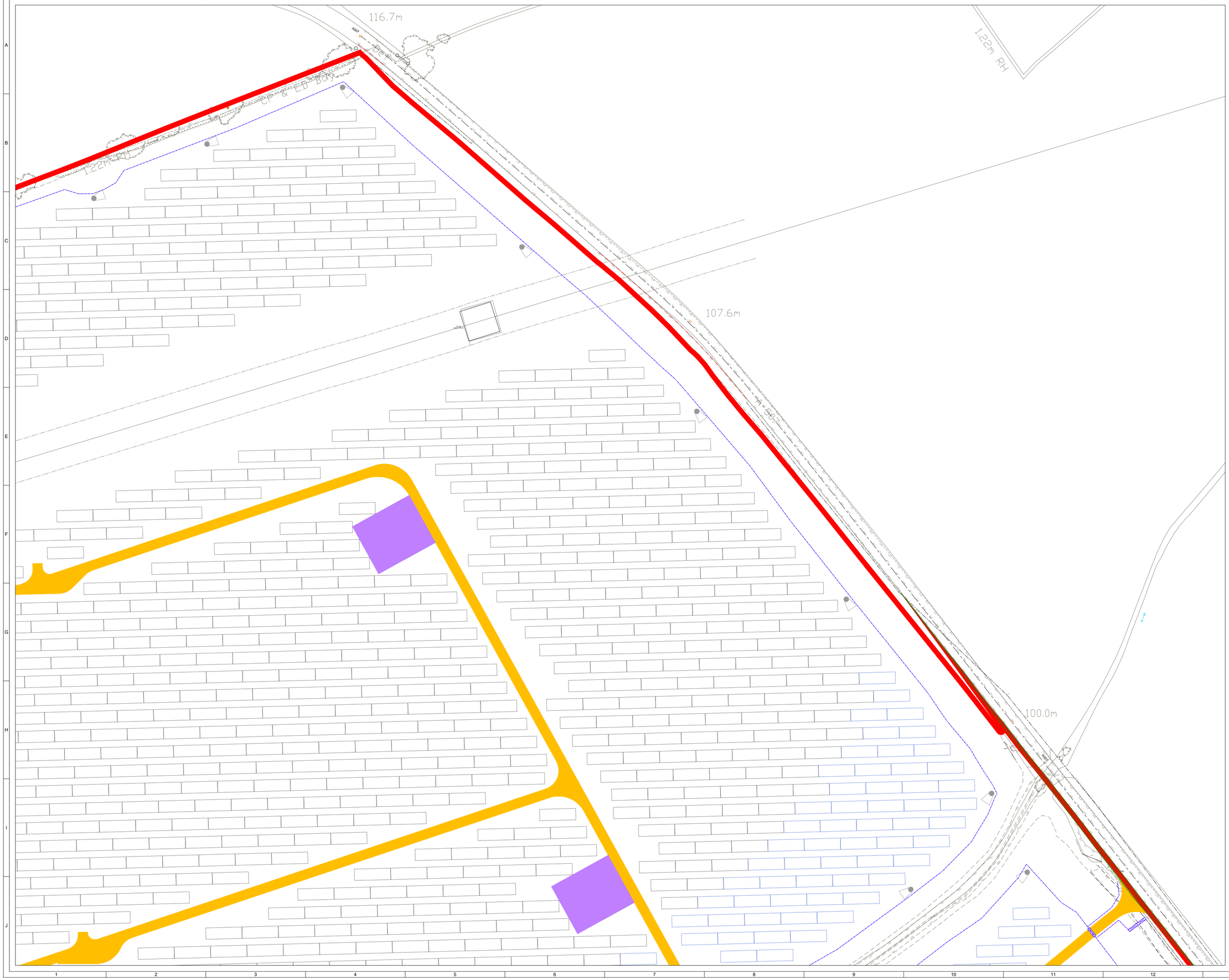




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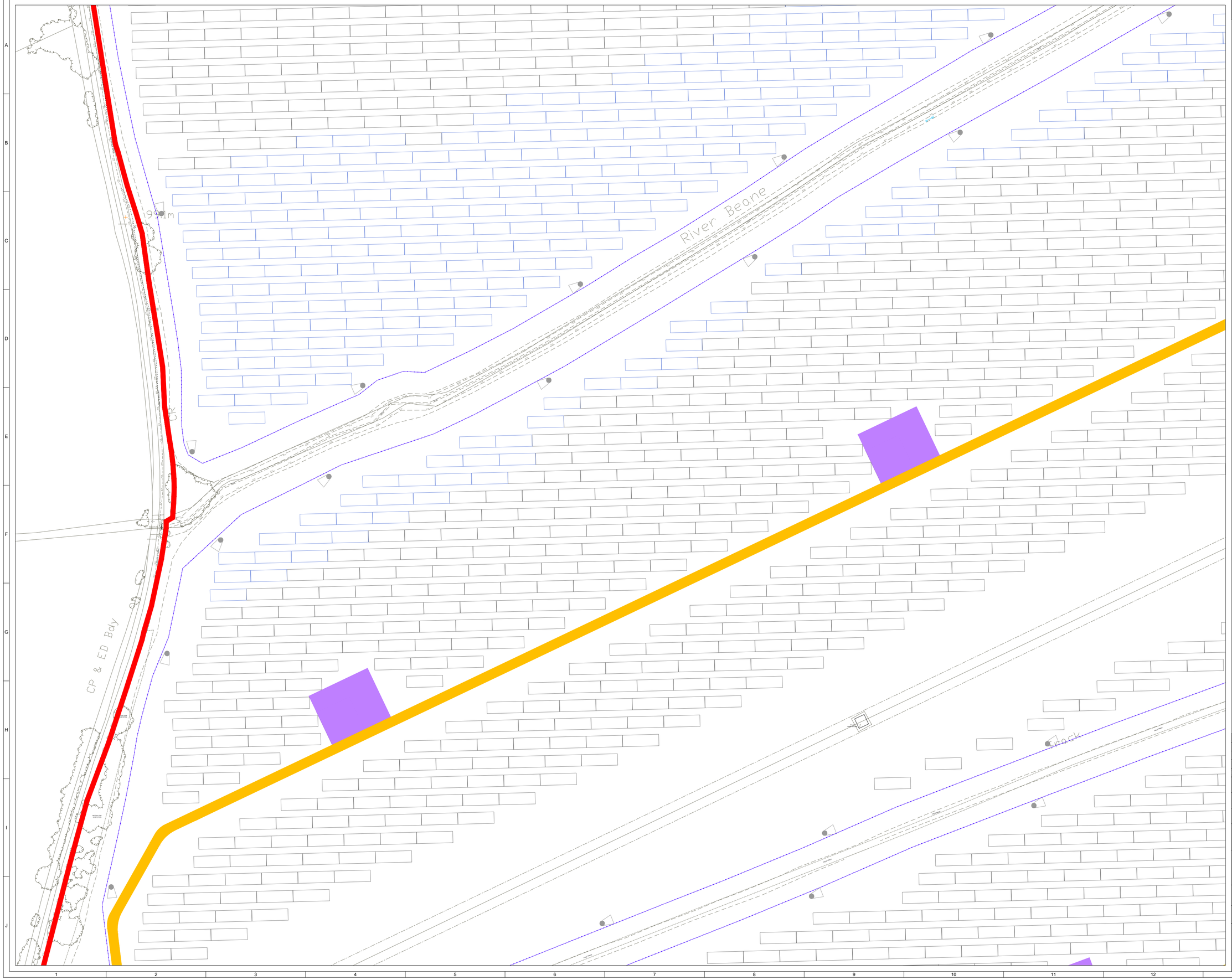




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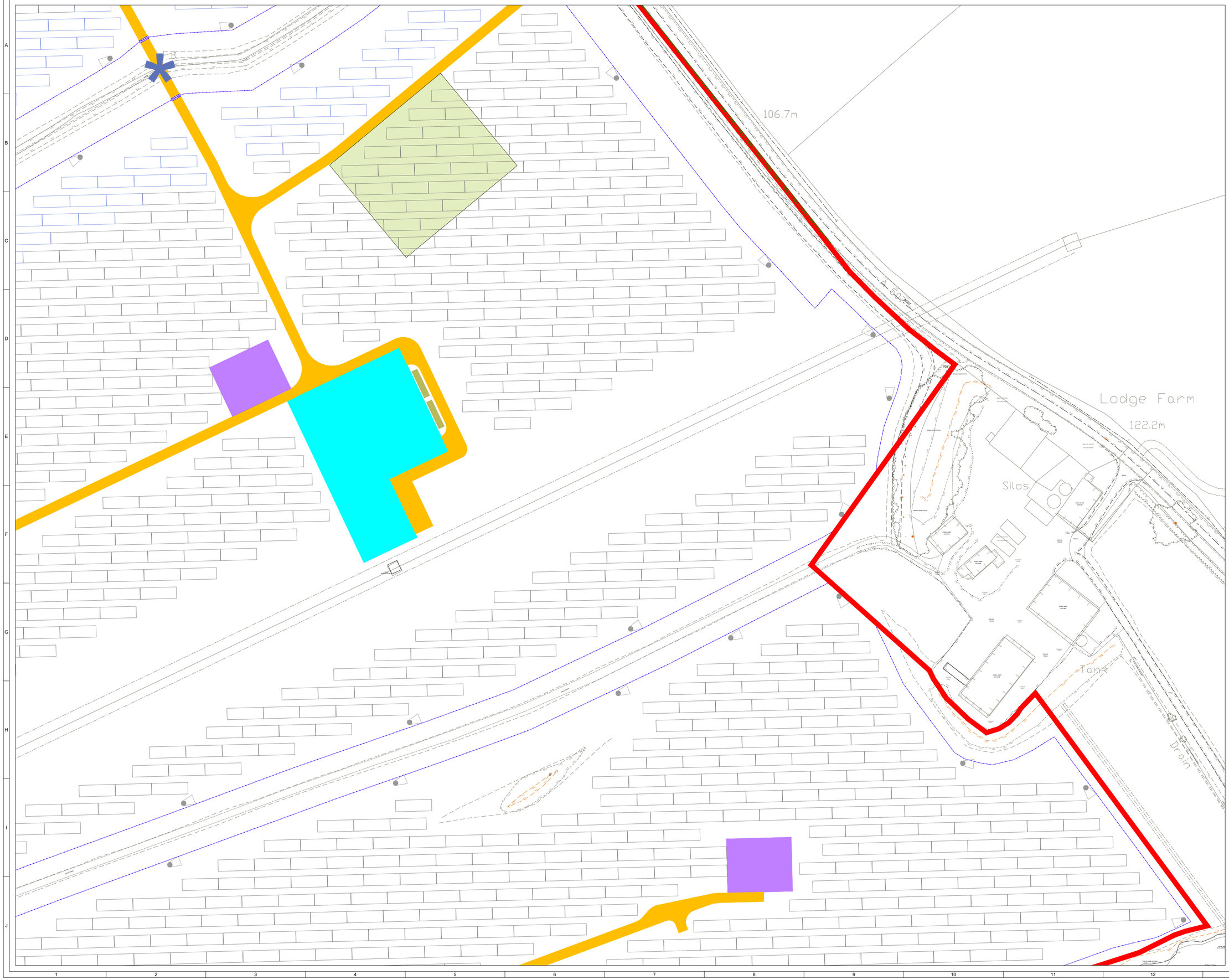




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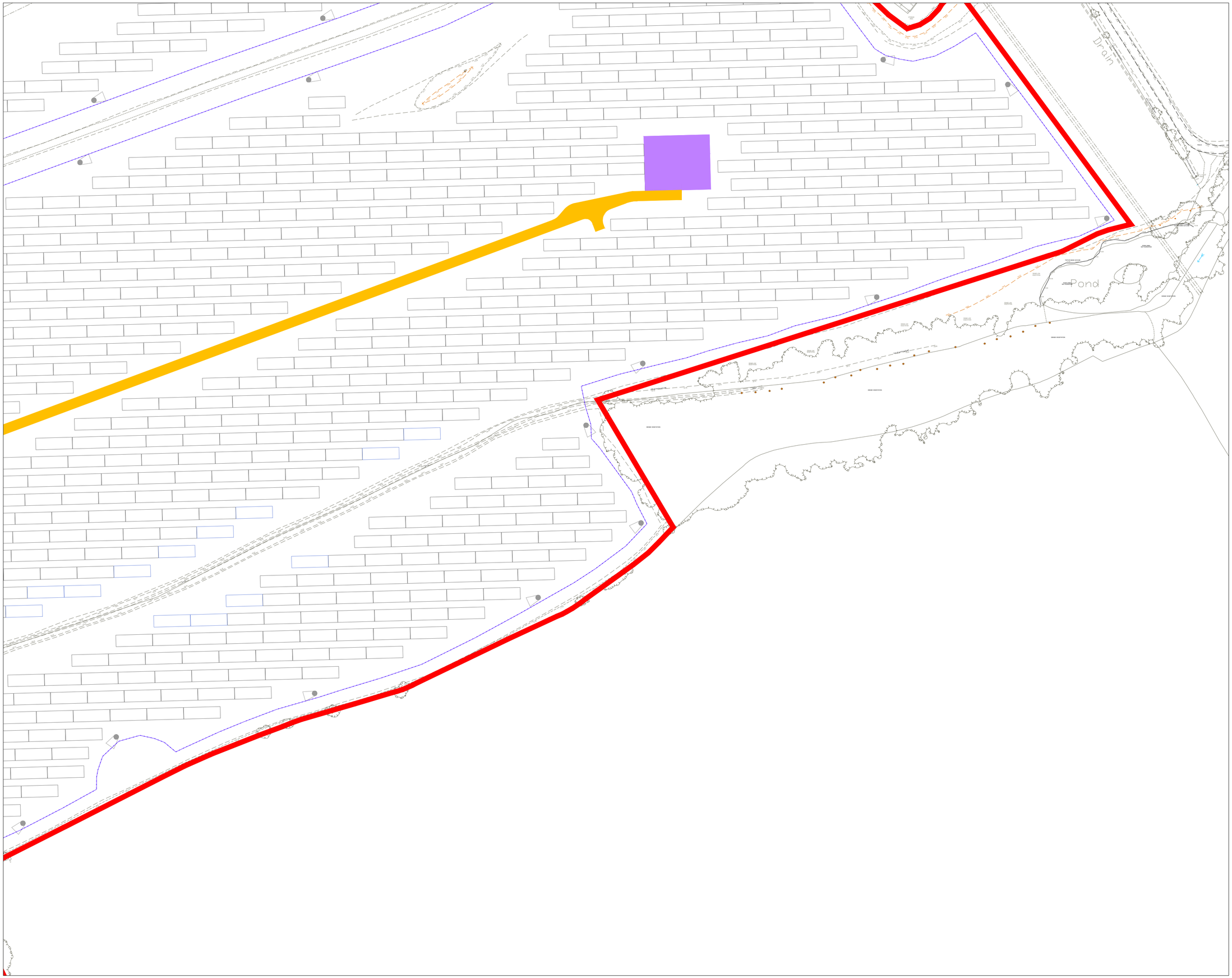




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SHEET 8 OF 9

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PROJECT TITLE: BEANE SOLAR

DRAWING TITLE: FIGURE 5 INFRASTRUCTURE LAYOUT ENLARGMENT

RES DRAWING NUMBER: 05003-RES-LAY-DR-PT-004 | REV: 6



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# Appendix 2 – HCC Pre-application Advice

**Environment and Infrastructure**

**Development Management**
**Hertfordshire County Council**

**Farnham House**
**Six Hills Way,**
**Stevenage,**
**Hertfordshire, SG1 2ST**
**www.hertfordshire.gov.uk**

**Tel:** 07812 322764
**Email:** George.Fermer@hertfordshire.gov.uk
**My ref:** EH/20313/2024
**Your ref:**
**Date:** 11/07/2024

**North-west Of Cottered And South-west Of The A507,**
**Cottered,**
**Hertfordshire.**
**Nearest post code SG9 9PU**

Dear J. Gunn,

Thank you for your pre-application enquiry on behalf of your client. I am pleased to provide the following advice.

**Proposal**

The views of Hertfordshire County Council (HCC) as Highway Authority (HA) have been sought on pre-application proposals for a Solar Farm - Construction and operation of an electricity generating station with a capacity of 49.9MW with associated ancillary development on Land North-west Of Cottered And South-west Of The A507, Cottered, Hertfordshire.
As attached.

From a highways and transport perspective, particular reference and consideration in any full application would need to be made to the following policy and guidance documents:

- National Planning Policy Framework (NPPF), 2023
- Hertfordshire County Council: Local Transport Plan 4 (LTP4), 2018
- Place and Movement Planning Design Guide (PMPDG), 2024
- Manual for Streets (MfS), 2007 & Manual for Streets 2 (MfS2), 2010

The proposal for the access for the Solar farm includes 3 separate access options along with a total of five potential access points ranging from Access A to Access E in alphabetical order – as presented in the submitted Technical Note dated 8th March 2024. This pre application request was a review in principle on the potential of each access arrangements and their proposed access points for both construction trips and future maintenance of the Solar farm. The area surrounding the site, both the northern and southern parcels is located within a rural area of East Hertfordshire with many of the routes surrounding the site being narrow and

unsuitable for large vehicles. These routes would include Cromer Heath, B1037 West of Cottered and the highway network through Cromer. Having investigated all the access routes along with their associated accesses, and in the absence of detailed on-the-ground assessments from the applicant at this stage, the only potentially acceptable access for large HGV movements during the construction phase would be Access A onto the A507. We do however need additional detailed information to make any informed recommendation. Therefore, this means that out of all the proposed access arrangement only this access (subject to routing) would be appropriate for HGV movements during construction.

Nevertheless, the issue that a new A road access such as this presents is that Policy 5 f of Hertfordshire County Council's Local Transport Plan (adopted 2018) states HCC as the Highway Authority (HA) will; "Only consider new accesses onto primary and main distributor roads where special circumstances can be demonstrated in favour of the proposals". As such, our Strategic Transport Infrastructure Board (STIB) needed to consider the proposal and if it met the 'special circumstances' test. In this case they have agreed in principle to a temporary construction access at this location, subject of course to the usual technical checks.

The access onto the A507 for construction traffic would need to be subject to detailed designs which would include access arrangements, swept paths, visibility splays and a stage 1 safety audit. Along this section of the A507 HCC have identified issues with speeding and therefore, I would expect that a speed survey be conducted on this section of the A507, however, it noted that some information has been provided for a speed survey on this road within the pre app document, but no raw data has been provided which would be required. There is currently in process a weight limit restriction of 7.5 tonnes along the A507 which is likely to come into effect in the near future and likely before this proposal reach any sort of planning stage. The applicant will need to demonstrate their site is covered under any 'except for access' exemption to this TRO.

The associated works are likely to be finished August/September 24. These will be subject to access requirements but something to keep in mind. There would need to be a full construction management plan for construction vehicles that would access the A507 which would need to fully incorporate all aspects of the construction details for the site. I would state that this access as it is an A road should only be used for construction vehicles and that other accesses should be sought for maintenance of the site. Consideration should also be made for the decommission of the site in around 40 years and how the solar panels will be removed from the site and where from.

For the three options of how material will be moved from the northern parcel to the southern parcel, none of the options are favourable in my opinion as crossing Cromer Heath would require the construction of Access D and Access E along with traffic management measures. Alternatively, the crossing of the Public rights of Way route "Ardeley Footpath 049" in principle is deemed acceptable but I would expect either that a temporary closure order be in place if for a short period of time, if not then the crossing will need warning signage for vehicle users and for path users, for vehicles a slow speed limit should be considered. Secondly, that the management of users be coordinated by banks men on site during the time vehicles are in use, a swing gate either stopping vehicle use or, when closed, stopping RoW use should be used to physically stop adverse interaction. This would all need to be detailed at any potential full planning application.

Therefore, any construction movements to the South-western parcels of Land may not be achievable unless there is a very strong case as to why and how construction material can be transported onto this parcel without considerable disruption and safety concerns along the highway network surrounding the southern parcel.

Overall, in principle the access arrangements for this site have been addressed within this response with construction access from the A507 likely to be the only potentially acceptable access for this phase. All the arrangements are subject to detailed design and until such time, I cannot investigate the proposal further in any real detail.

It is necessary for me to conclude with observing that in accordance with Hertfordshire County Councils Highways DM Protocol for pre-application advice (https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning-in-hertfordshire/planning-applications-decisions/pre-application-advice.aspx) any advice given by County Council officers for transport pre-application enquiries does not constitute a formal response or decision of the Council with regards to future planning consents. Any views or opinions expressed are given in good faith, and to the best of ability, without prejudice to the formal consideration of any planning application, which will be subject to public consultation and ultimately decided by the Planning Authority. The County Council cannot guarantee that new issues will not be raised following submission of a planning application and consultation upon it. It should be noted that the weight given to pre-application advice will decline over time.

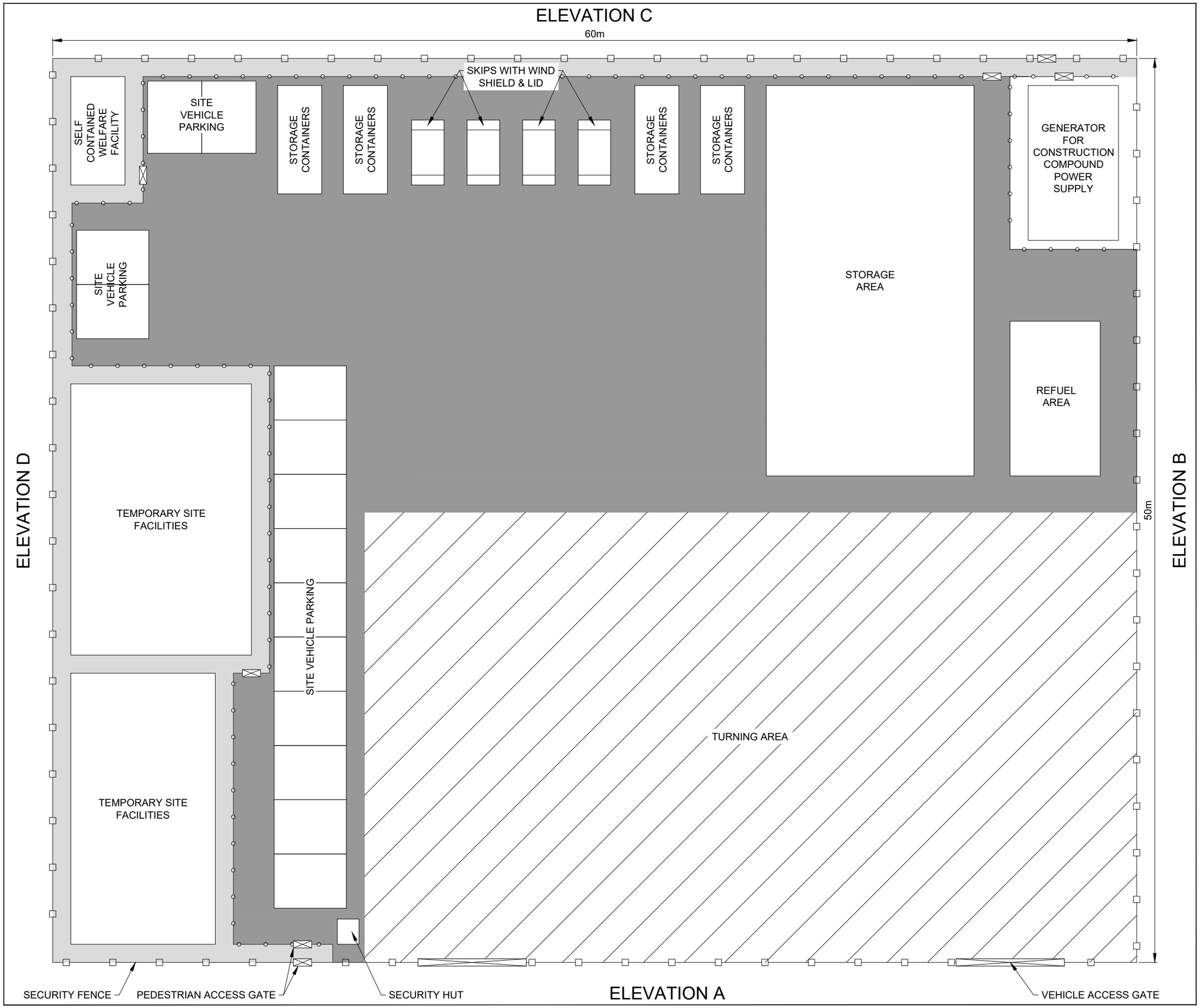
Please be aware that Hertfordshire County Council is subject to requirements under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. Where the County Council receives a request to disclose any information in relation to this discussion, it will notify and consult with you concerning its possible release. However, the County Council reserves the right to disclose any such information it deems appropriate and shall be responsible for determining at its absolute discretion whether the information is exempt from disclosure in accordance with the EIR or FOIA.

Should you wish to discuss any of the matters set out, please do not hesitate to contact me.

Sincerely

George Fermer BSC
*Senior Development Officer (Highways)*
*Hertfordshire County Council*

# Appendix 3 – Temporary Construction Compound Arrangement (Drawing Reference: 05003-RES-CTN-DR-PT-001)



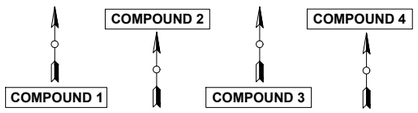

KEY:

- PEDESTRIAN AREA
- VEHICULAR AREA
- CROWD CONTROL BARRIER APPROX 1.2m HIGH WITH GATE

NOTES:

1. COMPOUND LAYOUT AND ELEVATIONS REFER TO BOTH COMPOUND 1 (NORTH) AND COMPOUND 2 (SOUTH).
2. SIZE, NUMBER AND LOCATION OF COMPOUND EQUIPMENT AND FACILITIES ARE INDICATIVE ONLY.
3. STRUCTURE TO BE TEMPORARY AND TO BE REMOVED AFTER CONSTRUCTION.
4. COMPOUND HARDSTANDING CONSISTING OF COMPACTED STONE OVER A LAYER OF GEOTEXTILE TO PROVIDE A CLEAN, FIRM, LEVEL AND FREE DRAINING SURFACE SUITABLE FOR CABINS AND HEAVY TRAFFIC.
5. VEHICULAR ACCESS GATE TO BE 6m WIDE CONSISTING OF 2 x 3m LEAVES.

PLAN
SHEET 1 OF 2




| ISSUE | DRAWN | CHKD | APPD | DATE | REVISION NOTES |
|---|---|---|---|---|---|
| 1 | FG | JM | JW | 2024-07-04 | First Issue |

| | |
|---|---|
| PURPOSE: PERMITTING | COORDINATES: N/A |
| SCALE: 1:200 @A3 | DATUM: N/A |
| LAYOUT DRAWING: N/A | T-LAYOUT NO: N/A |

PROJECT TITLE
BEANE SOLAR
---

DRAWING TITLE
FIGURE 13
TYPICAL TEMPORARY CONSTRUCTION COMPOUND LAYOUT

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-CTN-DR-PT-001 | 1 |



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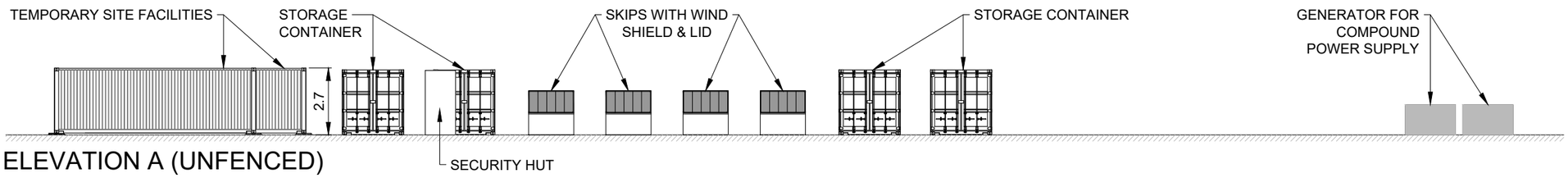
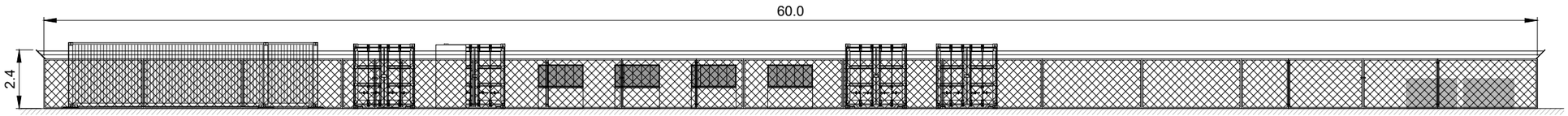
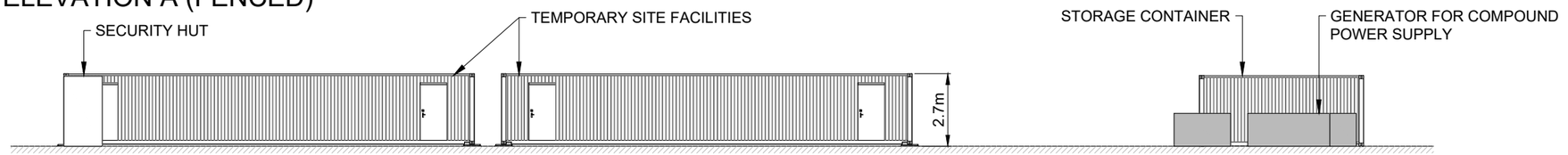


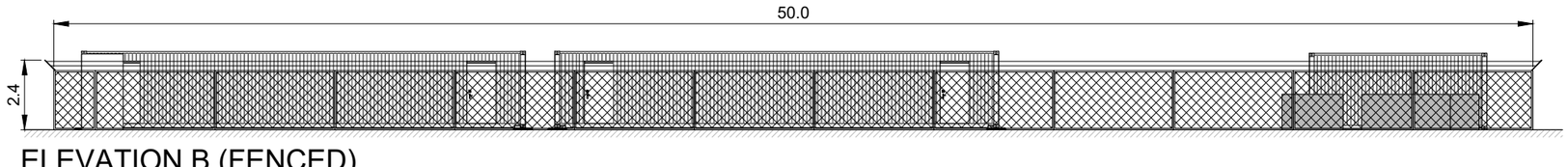

ELEVATION A (UNFENCED)



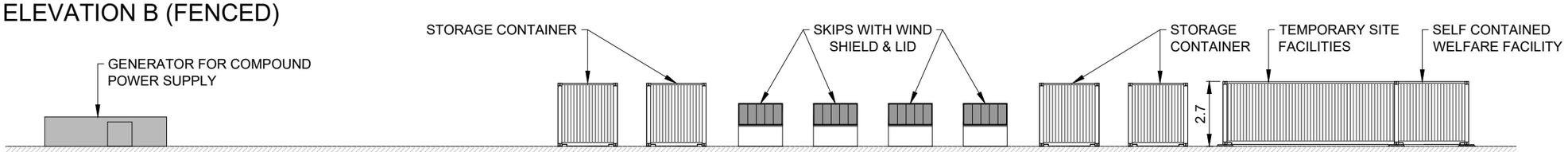

ELEVATION A (FENCED)



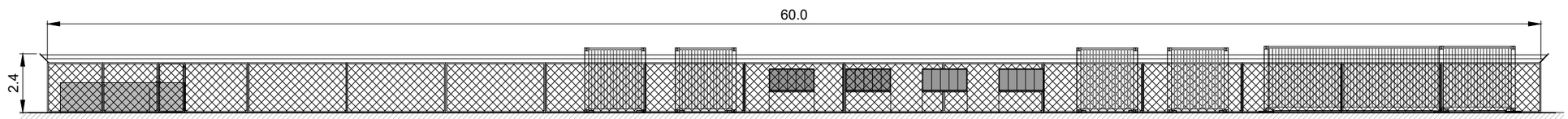

ELEVATION B (UNFENCED)



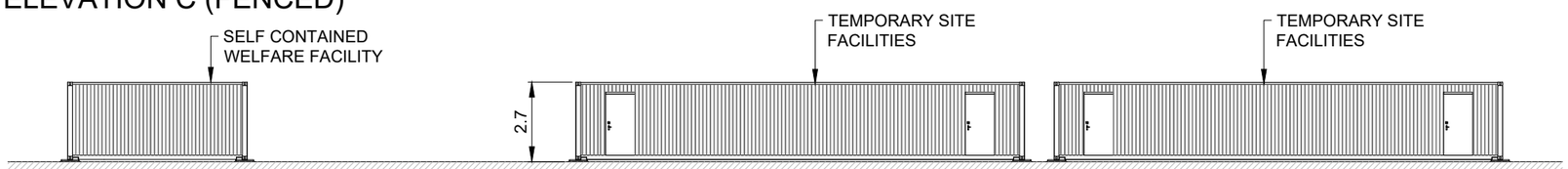

ELEVATION B (FENCED)



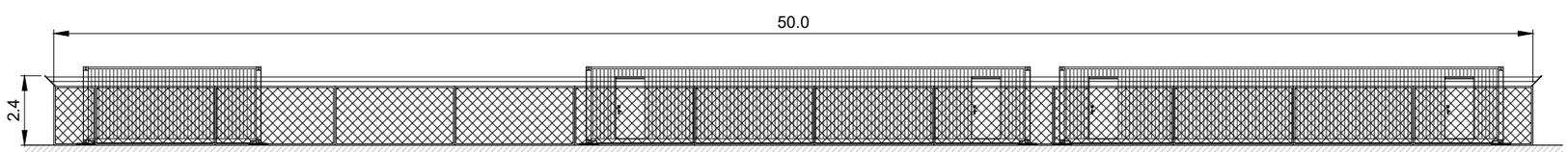

ELEVATION C (UNFENCED)




ELEVATION C (FENCED)




ELEVATION D (UNFENCED)

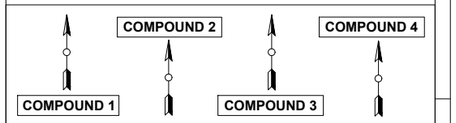



ELEVATION D (FENCED)

NOTES:

1. COMPOUND LAYOUT AND ELEVATIONS REFER TO BOTH COMPOUND 1 (NORTH) AND COMPOUND 2 (SOUTH).
2. SIZE, NUMBER AND LOCATION OF COMPOUND EQUIPMENT AND FACILITIES ARE INDICATIVE ONLY.
3. STRUCTURE TO BE TEMPORARY AND TO BE REMOVED AFTER CONSTRUCTION.
4. COMPOUND HARDSTANDING CONSISTING OF COMPACTED STONE OVER A LAYER OF GEOTEXTILE TO PROVIDE A CLEAN, FIRM, LEVEL AND FREE DRAINING SURFACE SUITABLE FOR CABINS AND HEAVY TRAFFIC.
5. VEHICULAR ACCESS GATE TO BE 6m WIDE CONSISTING OF 2 x 3m LEAVES.

ELEVATIONS
SHEET 2 OF 2




| ISSUE | DRAWN | CHKD | APPD | DATE | REVISION NOTES |
|---|---|---|---|---|---|
| 1 | FG | JM | JW | 2024-07-04 | First Issue |

| | |
|---|---|
| PURPOSE: PERMITTING | COORDINATES: N/A |
| SCALE: 1:200 @A3 | DATUM: N/A |
| LAYOUT DRAWING: N/A | T-LAYOUT NO: N/A |

PROJECT TITLE
BEANE SOLAR
---

DRAWING TITLE
FIGURE 13
TYPICAL TEMPORARY CONSTRUCTION COMPOUND LAYOUT

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-CTN-DR-PT-001 | 1 |



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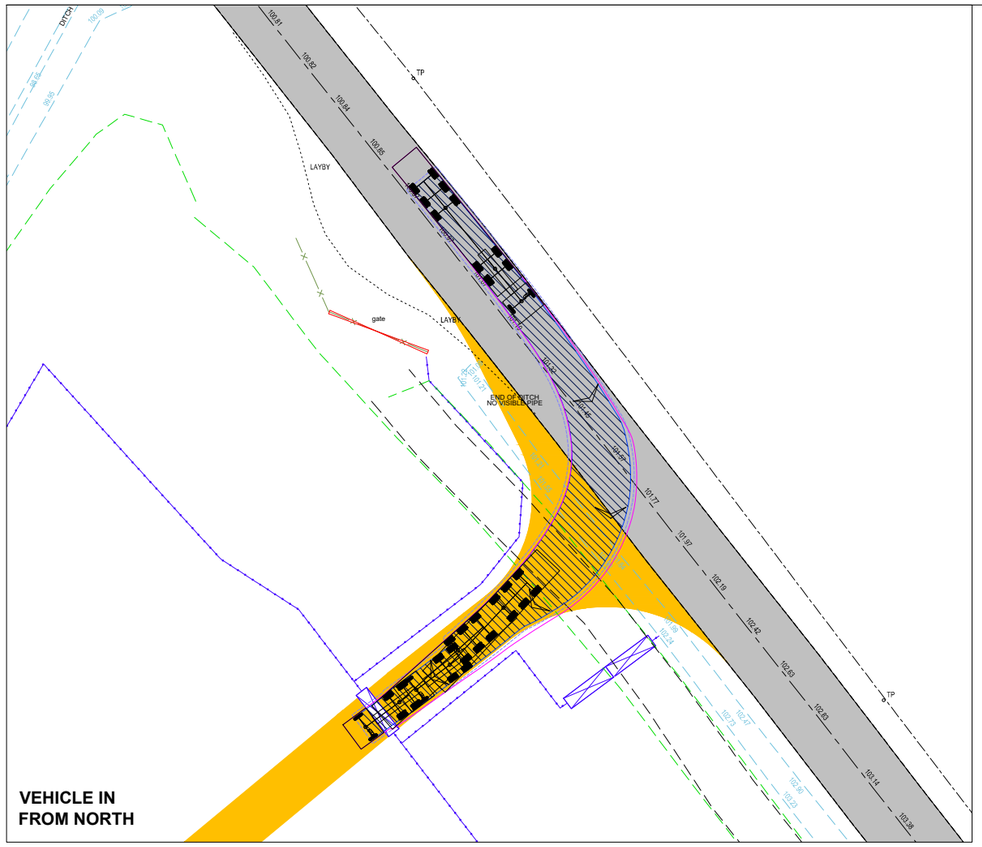
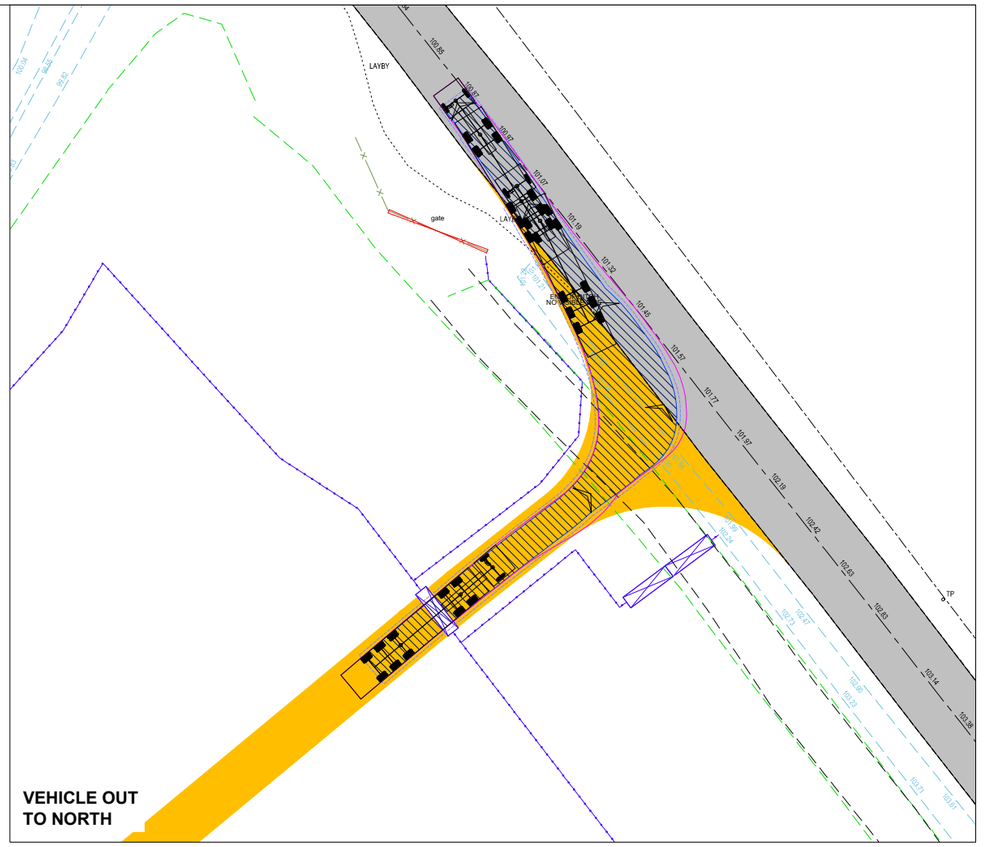
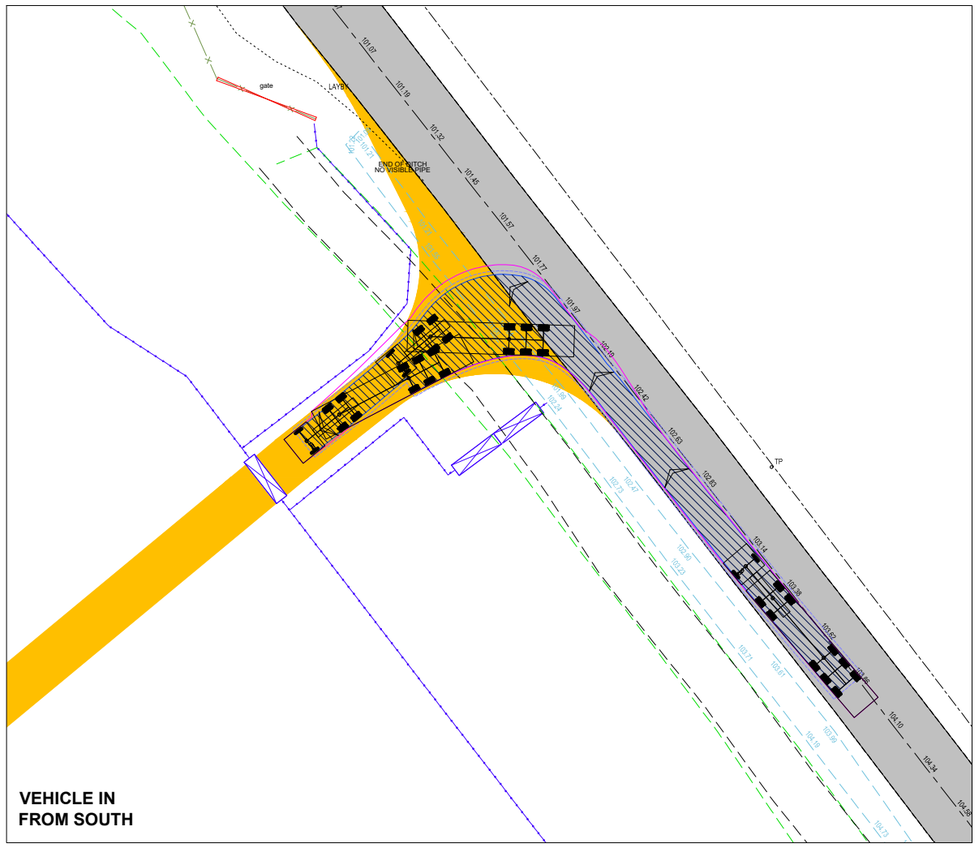
# Appendix 4 – A507 Northern Parcel Preliminary Access Design Swept Paths (Drawing Reference: 05003-RES-ACC-DR-PE-002)



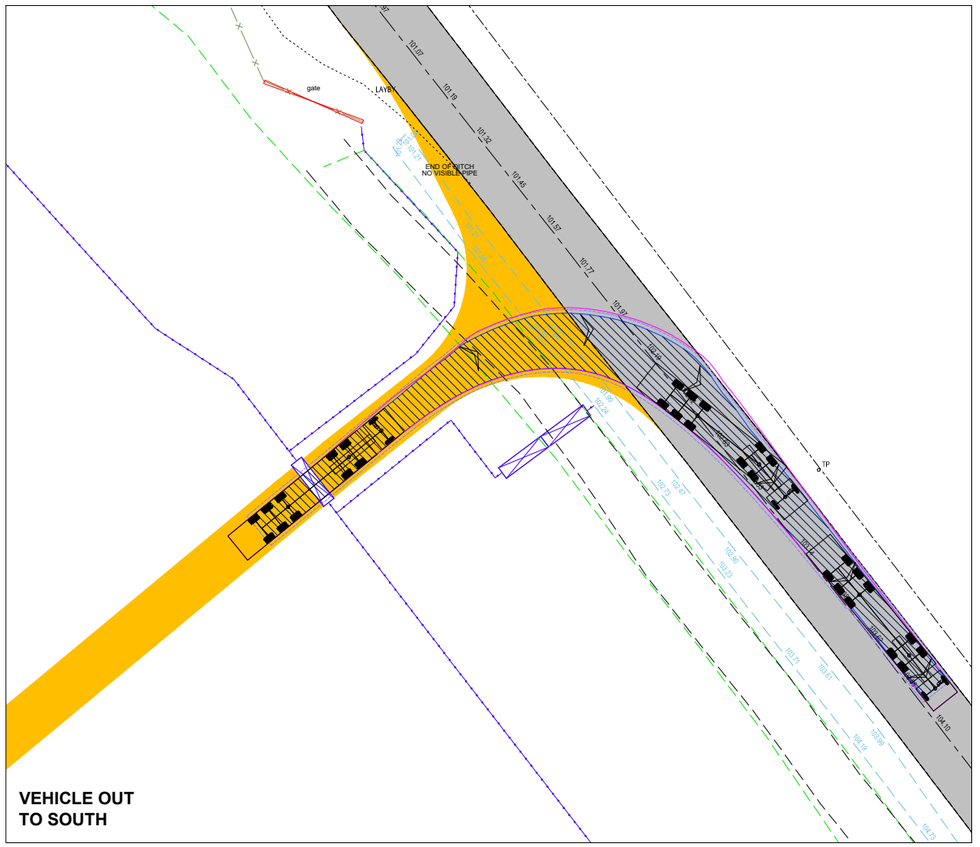

VEHICLE IN
FROM NORTH




VEHICLE OUT
TO NORTH




VEHICLE IN
FROM SOUTH




VEHICLE OUT
TO SOUTH

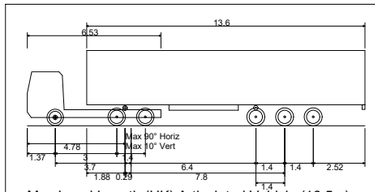


KEY:

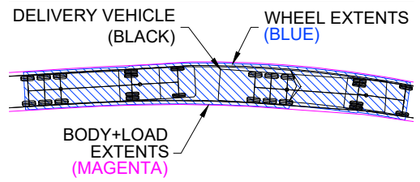
EXISTING ROAD - A507

PROPOSED INTERNAL TRACK

VEHICLE TRACKING:




| Max Legal Length (UK) Articulated Vehicle (16.5m) | |
|---|---|
| Overall Length | 16.500m |
| Overall Width | 2.550m |
| Overall Body Height | 3.681m |
| Min Body Ground Clearance | 0.411m |
| Max Track Width | 2.500m |
| Lock to lock time | 6.00s |
| Kerb to Kerb Turning Radius | 6.530m |




| ISSUE | DRAWN | CHKD | APPD | DATE | REVISION NOTES |
|---|---|---|---|---|---|
| 2 | FG | JM | JW | 2024-10-10 | SPA updated |
| 1 | FG | JM | JW | 2024-09-19 | First Issue |

| | |
|---|---|
| PURPOSE: OTHER | COORDINATES: OSGB 1936 |
| SCALE: 1:500 @A3 | DATUM: N/A |
| LAYOUT DRAWING: N/A | T-LAYOUT NO: N/A |

PROJECT TITLE

BEANE SOLAR

---

DRAWING TITLE

PRIMARY SITE ENTRANCE
SWEPT PATH ANALYSIS
(A507)

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-ACC-DR-PE-002 | 2 |



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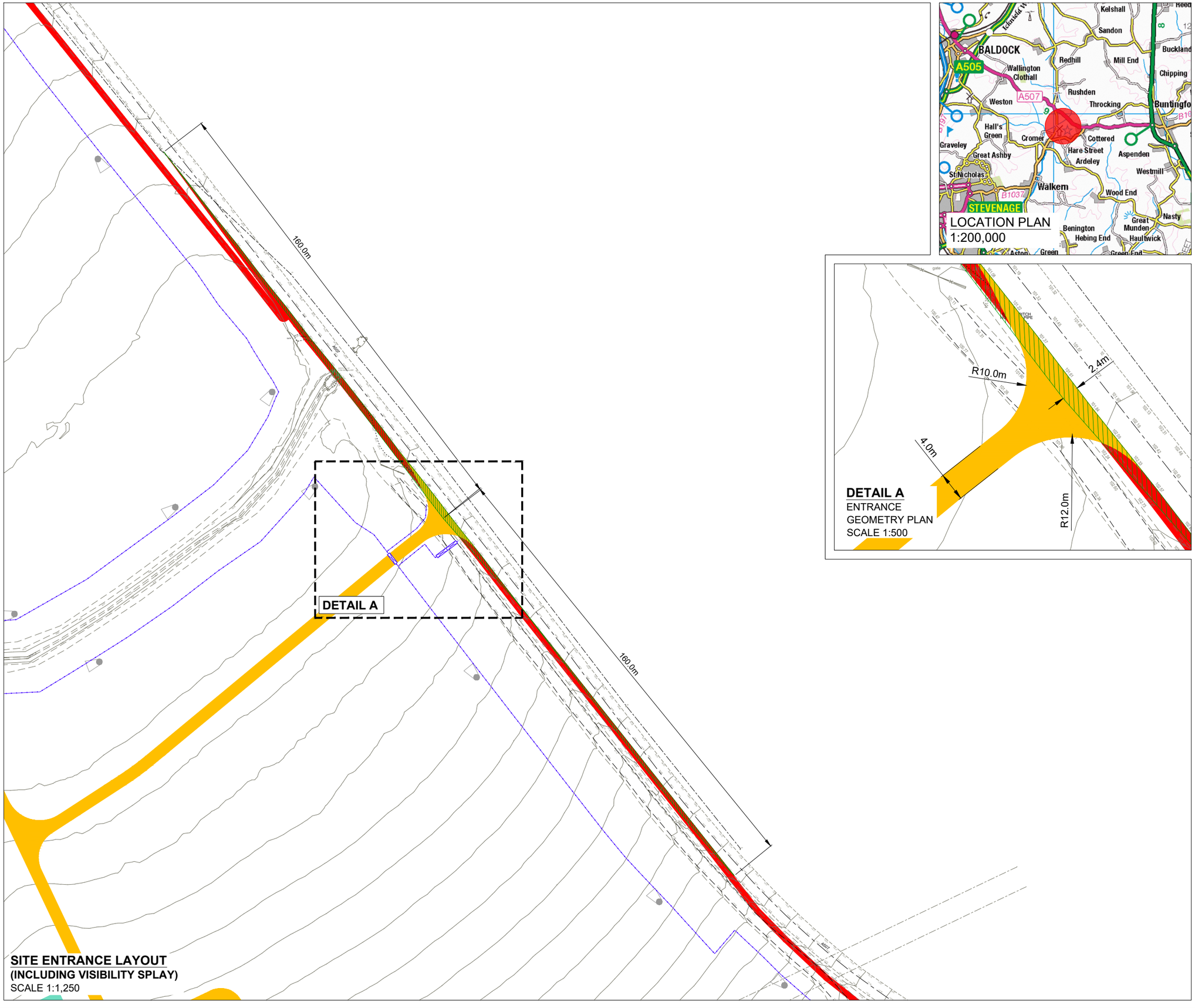
# Appendix 5 – A507 Northern Parcel Preliminary Access Design Visibility Splays (Drawing Reference: 05003-RES-ACC-DR-PE-001)












KEY:

- DEVELOPMENT BOUNDARY
- PROPOSED ACCESS TRACK
- VISIBILITY SPLAY SIGHTLINE

NOTES:

1. VISIBILITY SPLAY BASED ON SPEEDS IDENTIFIED BY ATC SURVEY

| ISSUE | DRAWN | CHKD | APPD | DATE | REVISION NOTES |
|---|---|---|---|---|---|
| 3 | FG | JM | JW | 2024-10-21 | Visibility splay length updated |
| 2 | FG | JM | JW | 2024-09-19 | Entrance north side updated |
| 1 | FG | JM | JW | 2024-09-06 | First Issue |

| | |
|---|---|
| PURPOSE: PERMITTING | COORDINATES: OSGB 1936 |
| SCALE: AS SHOWN @A3 | DATUM: N/A |
| LAYOUT DRAWING: N/A | T-LAYOUT NO: N/A |

PROJECT TITLE
BEANE SOLAR
---

DRAWING TITLE
FIGURE 17
SITE ENTRANCE LAYOUT
(A507)

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-ACC-DR-PT-001 | 3 |



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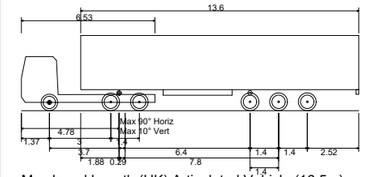
# Appendix 6 – Cromer Heath Southern Parcel Preliminary Access Design (Drawing Reference: 05003-RES-ACC-DR-PE-003)

KEY:

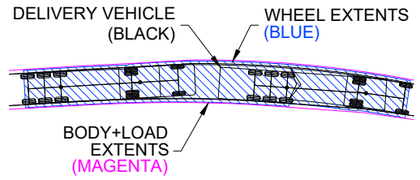
EXISTING ROAD - CROMER HEATH

PROPOSED INTERNAL TRACK

VEHICLE TRACKING:




| Max Legal Length (UK) Articulated Vehicle (16.5m) | |
|---|---|
| Overall Length | 16.500m |
| Overall Width | 2.550m |
| Overall Body Height | 3.681m |
| Min Body Ground Clearance | 0.411m |
| Max Track Width | 2.500m |
| Lock to lock time | 6.00s |
| Kerb to Kerb Turning Radius | 6.530m |




VEHICLE IN FROM NORTH

VEHICLE OUT TO NORTH

VEHICLE IN FROM SOUTH

VEHICLE OUT TO SOUTH

| ISSUE | DRAWN | CHKD | APPD | DATE | REVISION NOTES |
|---|---|---|---|---|---|
| 1 | FG | JM | JW | 2024-10-16 | First Issue |

| | |
|---|---|
| PURPOSE: OTHER | COORDINATES: OSGB 1936 |
| SCALE: 1:500 @A3 | DATUM: N/A |
| LAYOUT DRAWING: N/A | T-LAYOUT NO: N/A |

PROJECT TITLE

BEANE SOLAR

---

DRAWING TITLE

SITE ENTRANCE
CROMER HEATH
SWEPT PATH ANALYSIS

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-ACC-DR-PE-003 | 1 |



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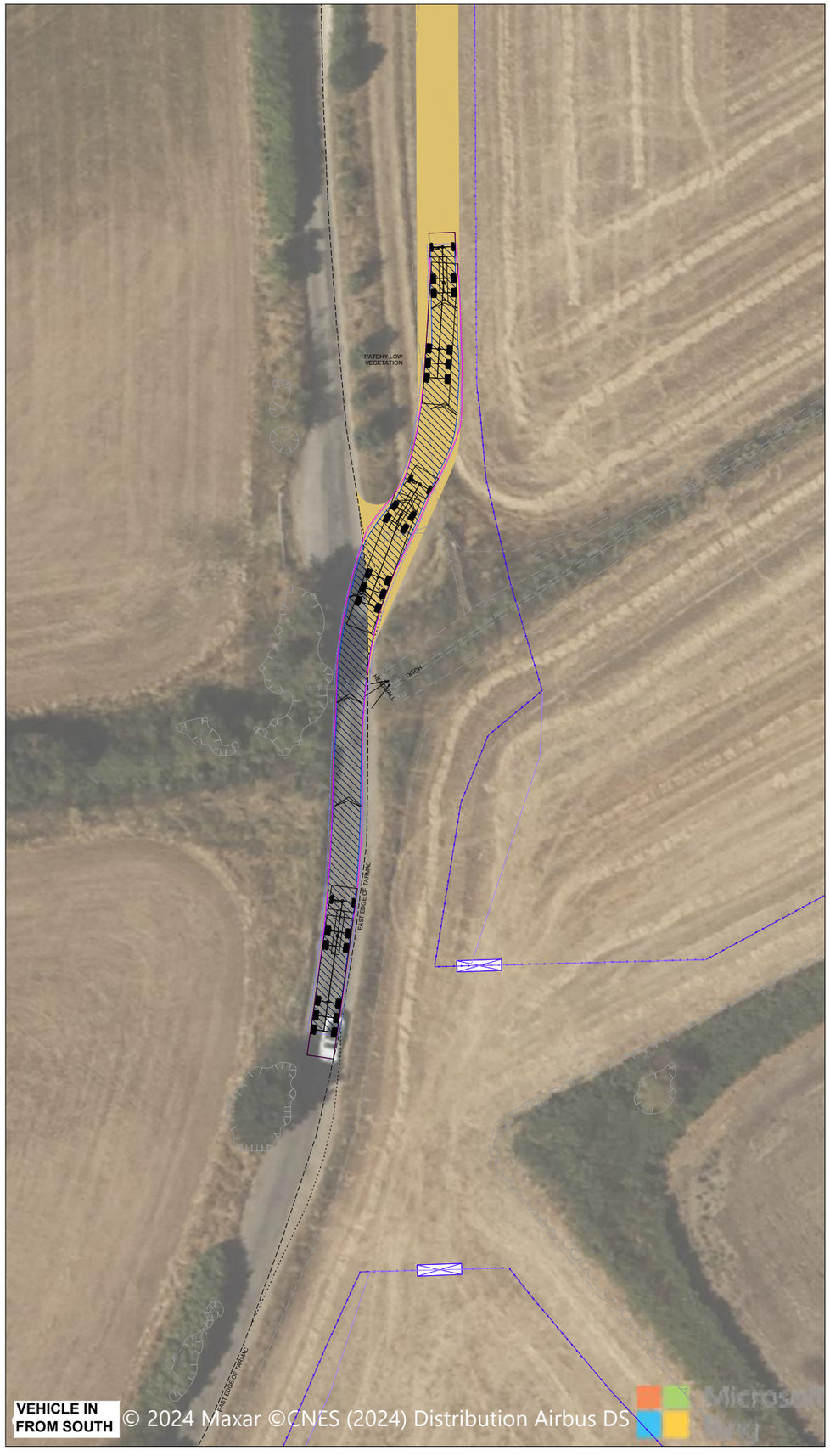
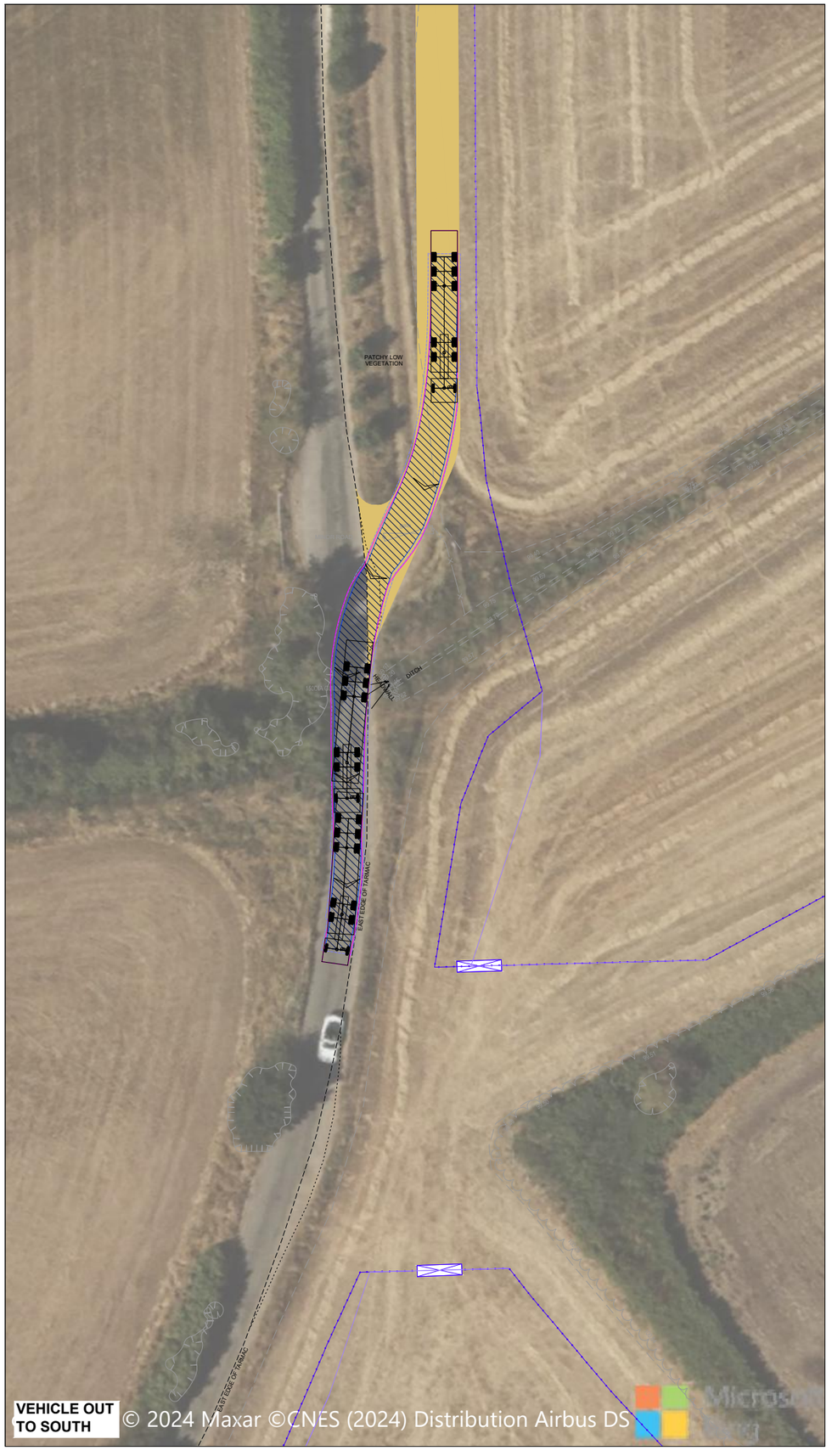
# Appendix 7 – Cromer Heath Temporary Agricultural Access Swept Path Analysis (Drawing Reference: 05003-RES-ACC-DR-PE-004)



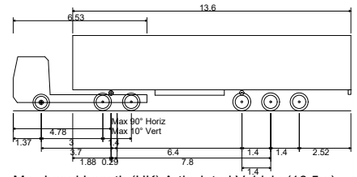



KEY:

EXISTING ROAD - CROMER HEATH

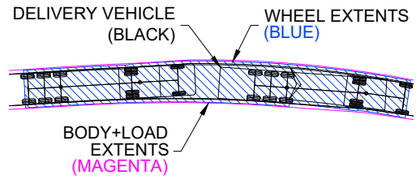
PROPOSED INTERNAL TRACK

VEHICLE TRACKING:




Max Legal Length (UK) Articulated Vehicle (16.5m)

| | |
|---|---|
| Overall Length | 16.500m |
| Overall Width | 2.550m |
| Overall Body Height | 3.681m |
| Min Body Ground Clearance | 0.411m |
| Max Track Width | 2.500m |
| Lock to lock time | 6.00s |
| Kerb to Kerb Turning Radius | 6.530m |




| ISSUE | DRAWN | CHKD | APPD | DATE | REVISION NOTES |
|---|---|---|---|---|---|
| 1 | FG | JM | JW | 2024-10-16 | First Issue |

| | |
|---|---|
| PURPOSE: OTHER | COORDINATES: OSGB 1936 |
| SCALE: 1:500 @A3 | DATUM: N/A |
| LAYOUT DRAWING: N/A | T-LAYOUT NO: N/A |

PROJECT TITLE

BEANE SOLAR

---

DRAWING TITLE

TEMPORARY SITE ENTRANCE
CROMER HEATH

| RES DRAWING NUMBER | REV |
|---|---|
| 05003-RES-ACC-DR-PE-004 | 1 |



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