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SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

For and on behalf of

Taiyo Power & Storage Ltd

Transport Statement

Proposed Solar & Green Infrastructure Facility at Ford Oaks, Marsh Green, Exeter, Devon

Prepared by
Sustainable Development and Delivery
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May 2022

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CONTENTS PAGE

1.0 INTRODUCTION 4
Structure Report 5
2.0 EXISTING CONDITIONS 6
Site Location 6
Local Highway Network 7
Personal Injury Accident Information 13
3.0 PROPOSED DEVELOPMENT 15
Development Overview 15
Operational Access 16
Construction Strategy 16
Construction Access 16
Construction Compound Internal Layout 17
Reception Compound 17
4.0 CONSTRUCTION AND OPERATION TRAFFIC 19
Construction Period 19
Construction Traffic Volume 20
Operational Traffic 20
Overall Vehicle Trip Generation and Potential Impact 21
5.0 CONSTRUCTION VEHICLE ROUTING 22
Construction Route Strategy 22
Construction Route Options 22
Recommended Construction Vehicle Routing 24
6.0 CONSTRUCTION MANAGEMENT 25
Construction Traffic Management Plan 25
7.0 CONCLUSIONS 26

APPENDICES

Appendix A Devon Highways Pre-Application Advice
Appendix B National Highways Pre-Application Advice
Appendix C Site Masterplan
Appendix D SDD Drawings

1.0 INTRODUCTION

1.1 This Transport Statement has been prepared by the Sustainable Development and Delivery Team (SDD) of DLP Planning, on behalf of Taiyo Power & Storage Ltd (the applicant), to support a planning application for the construction and operation of a 30-Megawatt (MW) capacity solar and green infrastructure facility in the vicinity of Marsh Green, Devon.

1.2 By way of background, pre-application discussions have taken place with Devon County Council (DCC), acting as the Local Highway Authority, in relation to the development proposals. An initial Scoping Note was issued to DCC on 10th November 2021, with subsequent comments received from DCC on 18th November 2021 (see **Appendix A**). As part of these comments, the LHA raised the following key issues:

- Agree with the general consensus that Route A option, would be the best route due to it being the most direct and passing the potential reception compound, in addition to utilising the widening and improvements that Long Lane is currently undergoing.

- The traffic management and temporary works to make any of the potential three routes acceptable, seem reasonable and minimise the impact upon the carriageway. The acceptance in avoiding through-route traffic in the village of Marsh Green has been established.

- Should the application come forward for permission, it would be likely that the LHA would recommend the provision of a Construction and Environment Management Plan to further mitigate construction disruption.

1.3 Subsequent to the above positive high-level feedback from the LHA, further works were undertaken in relation to development of the scheme, with more information submitted to the LHA on 2nd February 2022. This further pre-application submission provided further detail in relation to the construction routing strategy and also detail in relation to an off-site reception compound to support the construction period. A response was received from DCC on 17th March 2022 confirming that the minor changes to the construction route and temporary traffic management was still deemed acceptable in principle. This correspondence is also contained at **Appendix A** for reference.

1.4 In addition to the above, pre-application advice has also been provided by National Highways (NH) in relation to the development impact on the A30, located immediately north of the site. A copy of their response is contained at **Appendix B**, with a summary of the highways related comments provided below:

- An assessment of the predicted transport impact of the proposal on the Strategic Road Network during the construction and operational phases should be undertaken. This should provide the number of predicted daily vehicular movements (and vehicle types) including during the AM (0800-0900) and PM (1700-1800) weekday network peaks.

- A Construction Management Plan detailing type and number of vehicles and duration

of construction period, construction vehicle routing, hours of operation and signage strategy should be provided.

1.5 The objective of this Transport Statement is therefore to address the comments raised by both DCC and NH, as well as demonstrate that from a highways and transportation perspective, a safe and suitable access strategy can be provided to serve the site, and that operation of the site would not result in a detrimental impact on the surrounding highway network. As such, this report has prepared in accordance with national policy contained within the National Planning Policy Frame [NPPF] (July 2021).

1.6 To inform this assessment, a site visit was undertaken on 8th July 2021, whereby a review of the existing highway network and potential access arrangements was undertaken. Key photos taken from the site visit have been included within this report for reference.

1.7 It must be noted that a Construction Traffic Management Plan has also been prepared in support of this application, and should be read alongside the Transport Statement.

Structure Report

1.8 The structure of this report is summarised below:

- **Section 2:** provides an overview of the existing conditions, including a review of the existing road network and accident data;
- **Section 3:** describes the proposals and includes a summary of the internal site layout and site access strategy;
- **Section 4:** assesses the potential impact of the solar and green infrastructure facility on the local highway network, estimating trips that could be associated with both the construction and operational periods of the solar and green infrastructure facility;
- **Section 5:** reviews the potential construction route, confirming the most suitable route to and from the site;
- **Section 6:** summarises a strategy for a Construction Traffic Management Plan to mitigate the impact and ensure safe construction and operation of the site; and
- **Section 7:** provides a conclusion to the Transport Statement.

2.0 EXISTING CONDITIONS

Site Location

2.1 The application site comprises 74 hectares of land located to the immediate west and south of the village of Marsh Green in Exeter, Devon, as shown in **Figure 1**. There is no previous planning history associated with the site, and the land is primarily laid out as open fields used for agricultural purposes with a few agricultural barns. **Figure 1** also shows the indicative location of the existing agricultural accesses which currently serve the site.

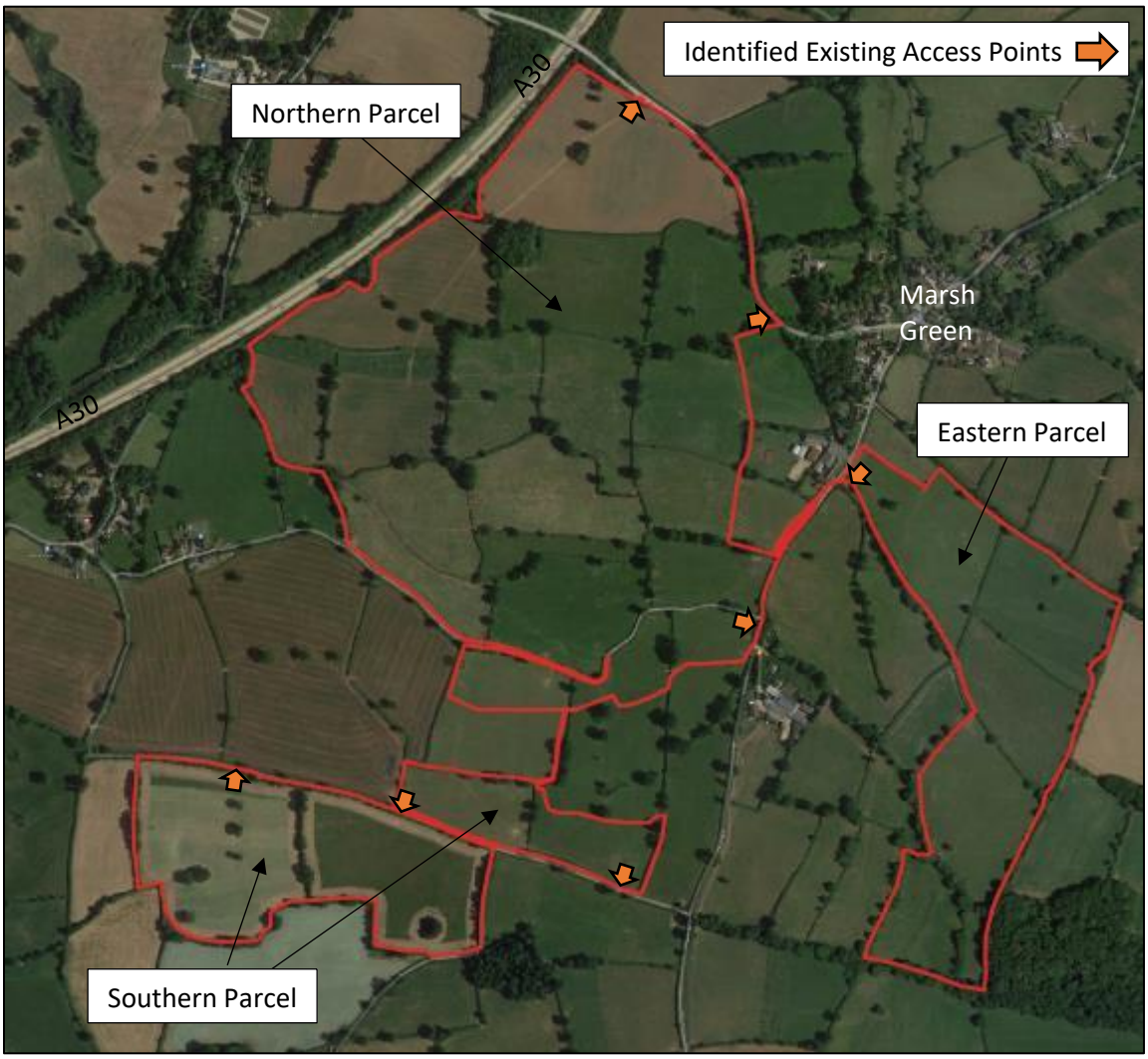

Figure 1. Site Location

2.2 The site comprises of various developable areas, which for the purpose of this report will be referred to as the 'northern', 'eastern', and 'southern' parcels of land, as referenced in **Figure 1**, with a brief description or each parcel provided below:

- The northern parcel is located immediately southwest of the A30, with a small section located to the south of Westcott Lane. The land is currently accessed via two existing agricultural access points located off Gribble Lane and one located off the western

edge of the Quarter Mile Lane.

- The eastern parcel is located to the east of Quarter Mile Lane and features an existing field access off the northern edge of Drovers Road.
- The southern parcel is located to the north and south of Withybed Lane and features three existing agricultural accesses located off both edges of the carriageway.

2.3 The off-site reception compound will be located off Bishop's Court Lane to the southwest of the A30 / B3184 grade separated junction, approximately 4.5km west of the site, noting that the A30 forms part of the Strategic Road Network. **Figure 2** shows the location of it in context to its surroundings.

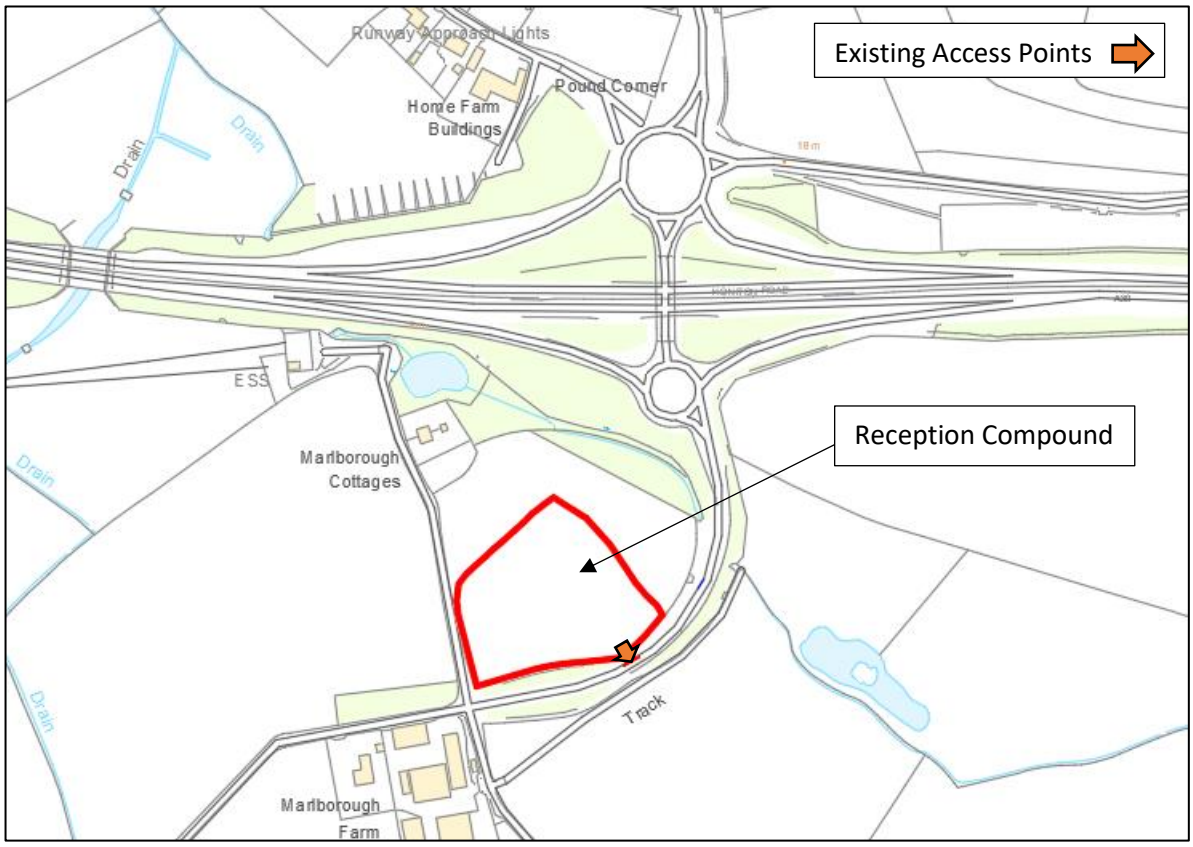

Figure 2. Reception Compound Location

Local Highway Network

2.4 A review of the local highway network has been undertaken and considers the link between the site, the off-site reception compound, and the wider strategic road network.

2.5 The below provides a review of the local road network which could potentially be utilised by vehicles during the construction period of the development. **Figure 3** shows the site in context to the off-site reception compound and Strategic Road Network for context. Details regarding the construction routing is contained at **Section 6** of this report.

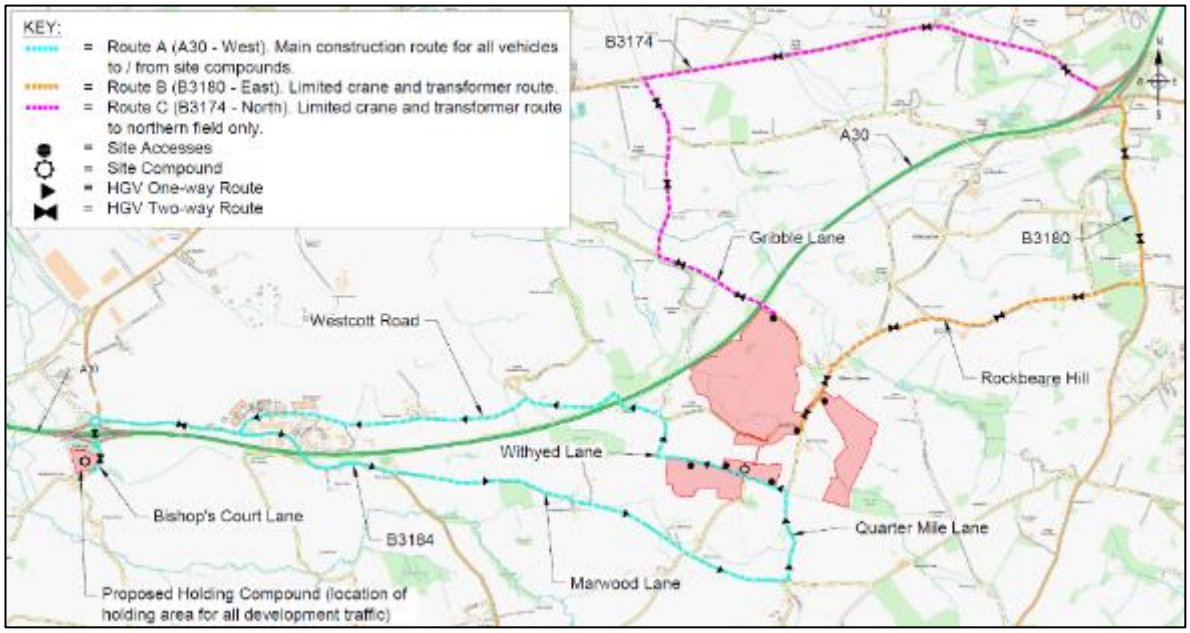

Figure 3. Local Highway Network

Local Roads

2.6 The local roads in the vicinity of the site generally comprise a rural single-track width (circa 3m wide) and are bound by a verge at both edges followed by a formal boundary such as a hedge, wall, or fence, with frequent agricultural accesses present along the roads. Passing points are generally located within the vicinity of the field access to adjacent land and are provided on a sporadic basis, allowing for agricultural vehicles passing oncoming cars.

2.7 The roads in the vicinity of the site frontages are subject to the national speed limit (60mph), with no streetlighting or centre-line road markings provided. On-site observations noted that the local roads were generally lightly trafficked, and vehicle speeds were slow (less than 30mph) due to the narrow carriageway widths and limited sections of forward visibility.

2.8 Beyond the local roads there are four potential routes which provide direct access to the A30 and therefore have been reviewed in context of the existing conditions below. It should be noted that all routes provide access to agricultural land uses and therefore a precedent is already set for large slowing moving agricultural vehicles utilising the local road network.

Route A1 - West via Westcott Road and B3184

2.9 To the west there is a 3.8km route from the site to the B3184 which passes through Westcott and past Exeter Airport. This route has been split into section as the highway conditions change along the route (see **Figure 4** for reference):

- From the site to the small industrial estate on Westcott Road (2.4km distance), the route is subject to the national speed limit and is of a single-track width of 3.5m with passing points. Along this section is bridge over the A30 which is a single lane give-way (priority to vehicles travelling into Westcott) with areas either side to allow two

vehicles to pass. There is currently no signage present indicating any weight limit restrictions associated with the bridge.

- In the vicinity of the small industrial estate, the carriageway widens to 5.5m wide over a short section (allowing for two HGVs to pass), noting that this narrows back down to a single-track width to the west for 0.4km to the junction with the Hampton by Hilton Hotel.
- From the Hampton by Hilton hotel junction to the B3184 (1km), the carriageway widens to between 4.8 and 5.5m and is subject to a 30mph speed limit.
- The B3184 is a single lane two-way carriageway that extends 1km to the west and forms a 4-arm grade separated roundabout junction with the A30.

2.10 The above confirms that Route A1 generally comprises a rural single lane carriageway and therefore cannot accommodate two HGVs passing. As such, should construction vehicles be routed in this direction, it is acknowledged that either a one-way system or a call-up procedure with escorted vehicles should be put in place to ensure that two opposing HGVs do not meet and are unable to pass each other.

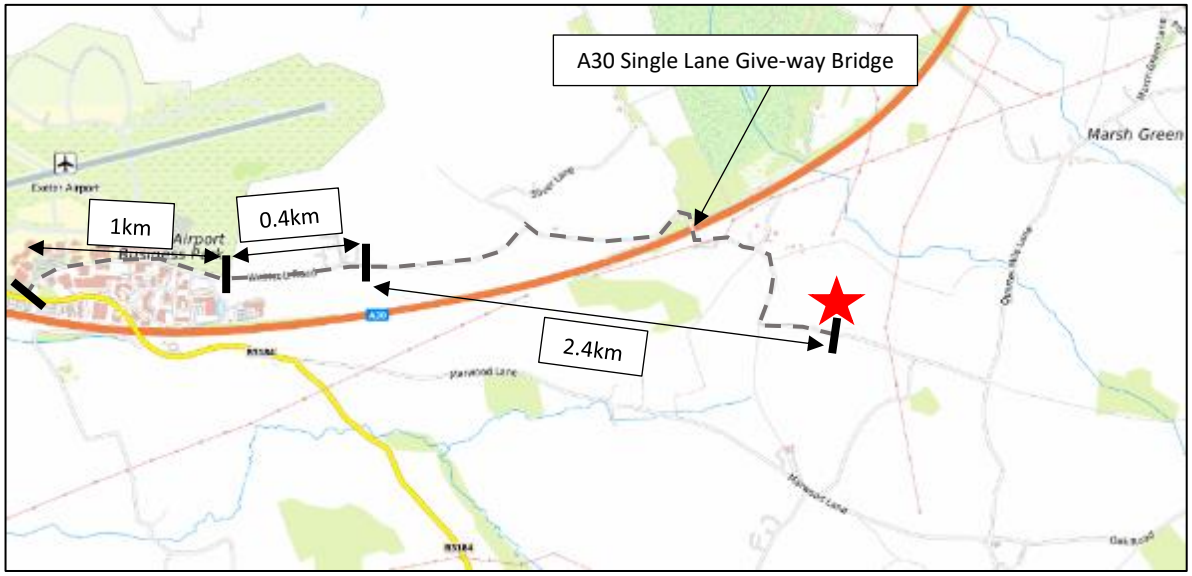

Figure 4. Route A1 - West to the B3184

Route A2 - South then West via Marwood Lane and B3184

2.11 There is an alternative route to the B3184 which bears south initially and then west. This route is also 3.8km in length, passes through Aylesbeare, with a description of the route provided below (see **Figure 5** for reference):

- From the site to the junction of Withybed Lane / Quarter Mile Lane to the east (0.4km), the road is subject to the national speed limit and is of a single-track width of circa 3m. The junction itself is constrained by hedges abutting the carriageway, with on-site observations noting there were two substantial trees located within the hedges at

the junction.

- From the junction with Withybed Lane to the north and Marwood Lane to the south (0.6km), Quarter Mile Lane is a single-track width and is bound by hedges abutting the carriageway. Forward visibility along this section is limited due to its alignment and there are no passing points which would allow a car to pass a HGV.
- From the junction with Quarter Mile Lane to the east and the B3184 to the west (2.4km), Marwood Lane is subject to a 30mph speed limit and comprises a rural single-track lane with frequent passing points provided along the route. On-site observations noted that whilst the most part of Marwood Lane had good forward visibility, however in the vicinity of the Shutebridge Farm this was severely constrained due to the S bend nature of the road.
- The B3184 is a single two-way carriageway that extends 2km to the west and forms a 4-arm grade separated roundabout junction with the A30.

2.12 The above confirms that Route A2 generally comprises a rural single lane carriageway and cannot accommodate two HGVs passing. Therefore as per with Route A, should construction vehicles be routed in this direction, it is acknowledged that either a one-way system or a call-up procedure with escorted vehicles should be put in place to ensure that two HGVs are not required to pass one another simultaneously.

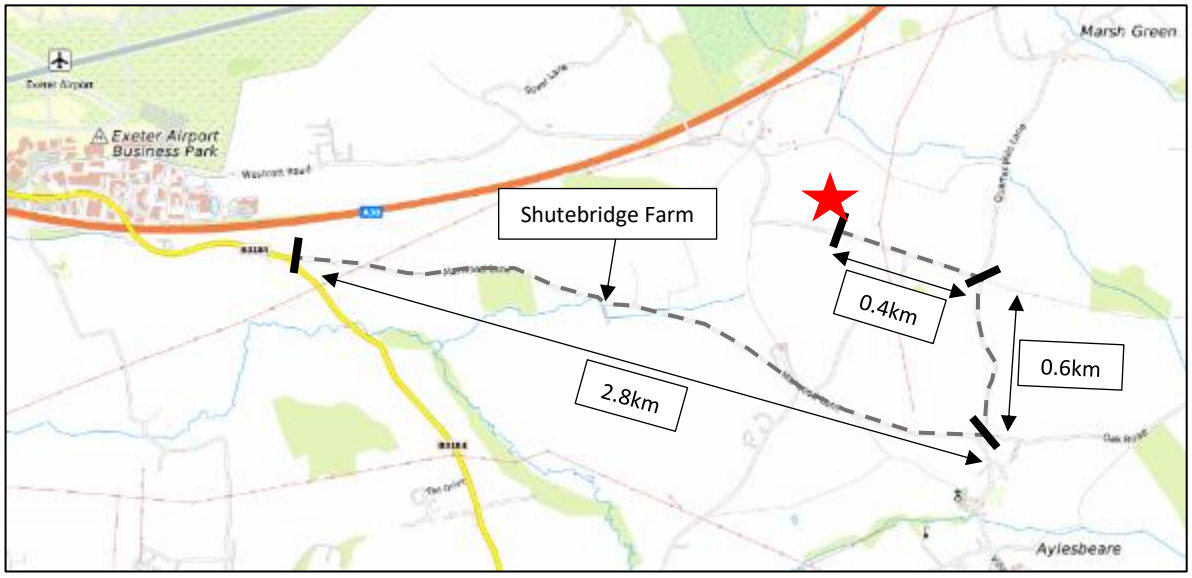

Figure 5. Route A2 - South then West to the B3184

<u>Route B - East via Rockbeare Hill and B3180</u>

2.13 To the east there is a 2.3km route from the site to the B3180 which passes through Marsh Green village. This route has once again been split into section as the conditions of the road change along its length (see **Figure 6** for reference):

- From the site to Marsh Green village (0.5km), the road is subject to the national speed

limit and is of a single-track width of circa 3m.

- In the vicinity of Marsh Green (0.5km), the carriageway widens to 4.8m allowing two vehicles to pass and is subject to a 30mph speed limit, with on-site observations noting that there were sections of on-street parking which restricted the carriageway back down to single lane width.
- From Marsh Green village to the B3180 (1.3km), the carriageway narrows down measuring between 3.5m and 4.1m wide, with frequent passing points widening the carriageway to 5.5m wide. The road is subject to the national speed limit along this section.
- The B3180 is a single two-way carriageway that extends 1.2km to the north and forms a 4-arm grade separate junction with the A30.

2.14 Based on the above information, Route B generally comprises a rural single lane carriageway, with sections to allow a HGV and a car to pass. Should construction vehicles be routed in this direction, it is acknowledged that either a one-way system or a call-up procedure with escorted vehicles should be put in place to ensure that two HGVs are not required to pass one another simultaneously.

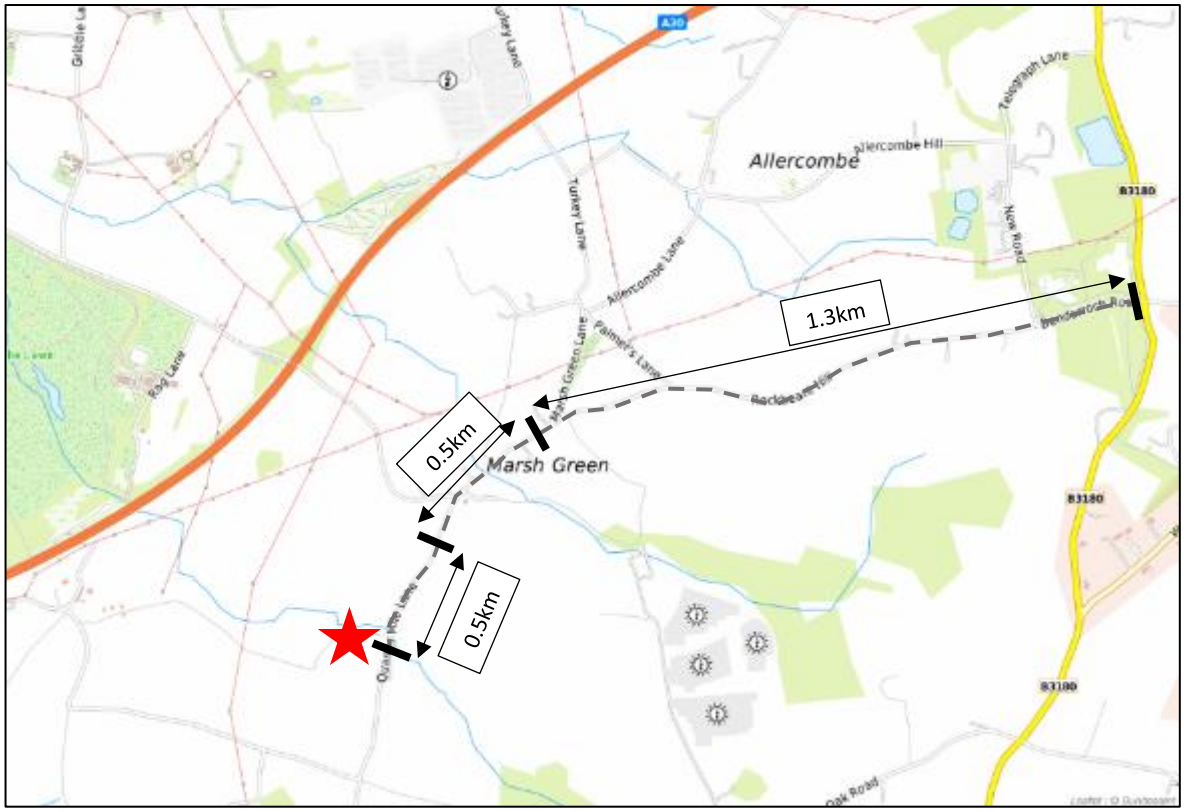

Figure 6. Route B - East to the B3180

<u>Route C - North via Gribble Lane and B3174</u>

2.15 To the north there is a 2.2km route from the site to the B3174 which extends along Gribble

Lane. This route has been split into section as the conditions of the road change along its length (see **Figure 7** for reference):

- For the first 0.4km north from the site along Gribble Lane, the carriageway comprises a single two-way carriageway that measures 5.5m wide and is bound by verges at both edges. Along this section Gribble Lane passes over the A30 and the road is subject to the national speed limit.
- From the above point, Gribble Lane narrows down to a single-track lane with a width of approximately 3.5m wide with passing points provided to allow two vehicles to pass to the junction with the B3174 (1.8km).
- The B3184 is a single two-way carriageway that extends 3km to the east and forms a 4-arm grade separated roundabout junction with the A30.

2.16 The above confirms that Route C has a short two-way section near the site, however the remaining extent of the route comprises a rural single lane carriageway and cannot accommodate two HGVs passing. Therefore should construction vehicles be routed in this direction; it is acknowledged that either a one-way system or a call-up procedure with escorted vehicles should be put in place to ensure that two HGVs are not required to pass one another simultaneously.

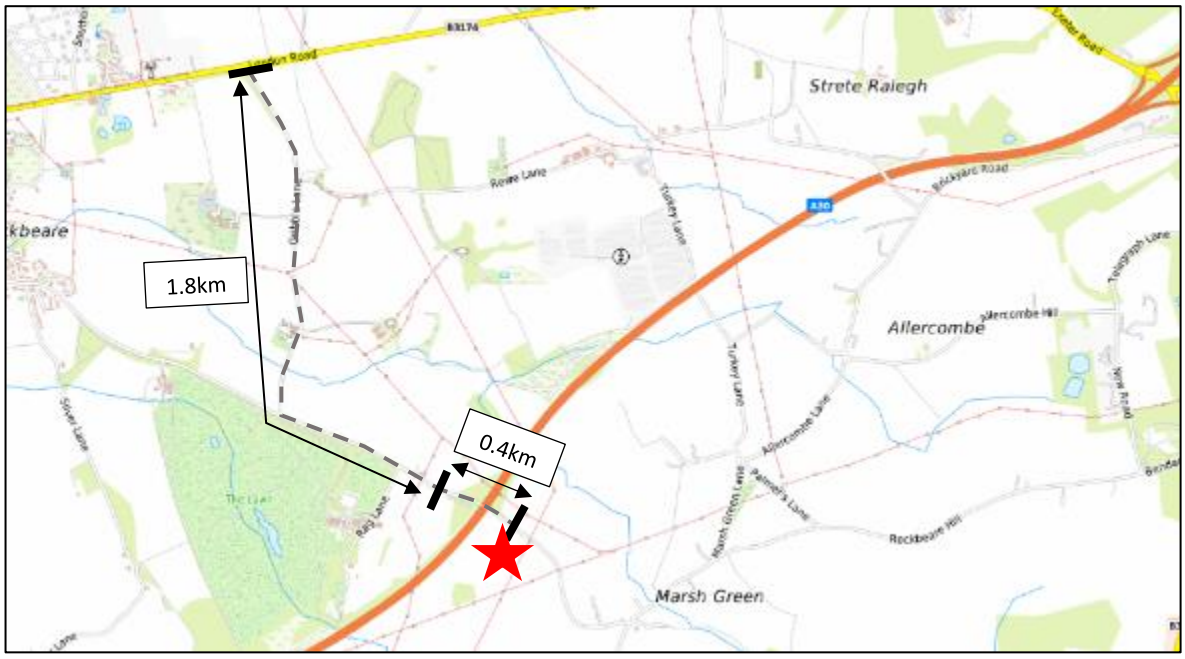

Figure 7. Route C - North to the B3174

A30

2.17 The A30 is a major A road which extends in an east / west direction from London to Land's End respectively, over a distance of 457km. More locally, the A30 provides a direct connection to Junction 29 of the M5 which is located 7km to the west of the site.

2.18 In the vicinity of the site, the A30 is a dualled two-lane carriageway which features grade separated junctions with the local highway network. The carriageway is subject to the national speed limit and measures 8m in width in each direction. The A30 is a well-used road, with an annual average daily traffic flow in 2019 of 34,267 vehicles, of which 6% comprise HGVs (data taken from DfT traffic count website).

2.19 It is likely that both the construction and operational phases of the development will pass through the A30 / B3184 grade separated 4-arm roundabout, which is located 4.3km west of the site.

Personal Injury Accident Information

2.20 The Planning Practice Guidance [PPG] includes the online document 'Travel Plans, Transport Assessments and Statements in decision-taking' (updated March 2014), which provides general advice on the scope of Transport Assessments. This document states that consideration should be given to:

> *"an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area."*

2.21 In light of the above, the 'Crashmap' website (www.crashmap.co.uk) has been reviewed in relation to the Personal Injury Accident (PIA) records of the highway network as described above, between 2016 and 2020 inclusive (to ensure a robust assessment). A map which shows the PIA records for the five-year review period is contained at **Figure 8**.

Figure 8. Extract from Crashmap (2016 – 2020)

2.22 The above confirms that along the routes between the site and Strategic Road Network, there has been a total of 8 accidents recorded, of which all were classified as 'slight'. A summary has been provided below in context to Route A1, A2, B and C.

- Along the 3.8km extent of Route A1, there have been two recorded incidents; the first

occurred in the vicinity of Exeter Airport in September 2016, whilst the second occurred at the junction with the B3184 in July 2016.

- Along Route A2 (3.8km), there have been three recorded incidents; two occurred on Quarter Mile Lane between the junction with Withybed Lane and Marwood Lane in March 2016 and September 2017, whilst the remaining incident occurred on the B3184 in November 2017.
- Along Route B (2.3km), there have been two recorded incidents; the first occurred on Gribble Lane near the junction with Rag Lane in September 2016, whilst the second also occurred on Gribble Lane near The Grange Court Hotel in December 2016.
- Along Route C (2.2km) there has been one recorded incident which occurred on Rockbeare Hill in December 2020 and involved one vehicle only.

2.23 The above information highlights that just 8 recorded accidents have occurred over a 12.1km stretch of highway over a 5-year period. This demonstrates that whilst the local roads are generally single lane with passing points with sections of limited forward visibility, these conditions have not resulted in an existing highway safety issue, noting that there is an existing presence of slow-moving agricultural vehicles already on the network.

2.24 It can be therefore considered that there is no existing safety problem with the existing highway network that could be exacerbated by the limited number of vehicles movements that could be associated with the proposals during the short term / temporary construction period.

3.0 PROPOSED DEVELOPMENT

Development Overview

3.1 The development proposal is for the erection of a 30-Megawatt capacity solar and green infrastructure facility on agricultural land located in the vicinity of Marsh Green, Exeter. An extract of the indicative layout of the solar and green infrastructure facility is shown below in **Figure 9**, and is also contained at **Appendix C**.

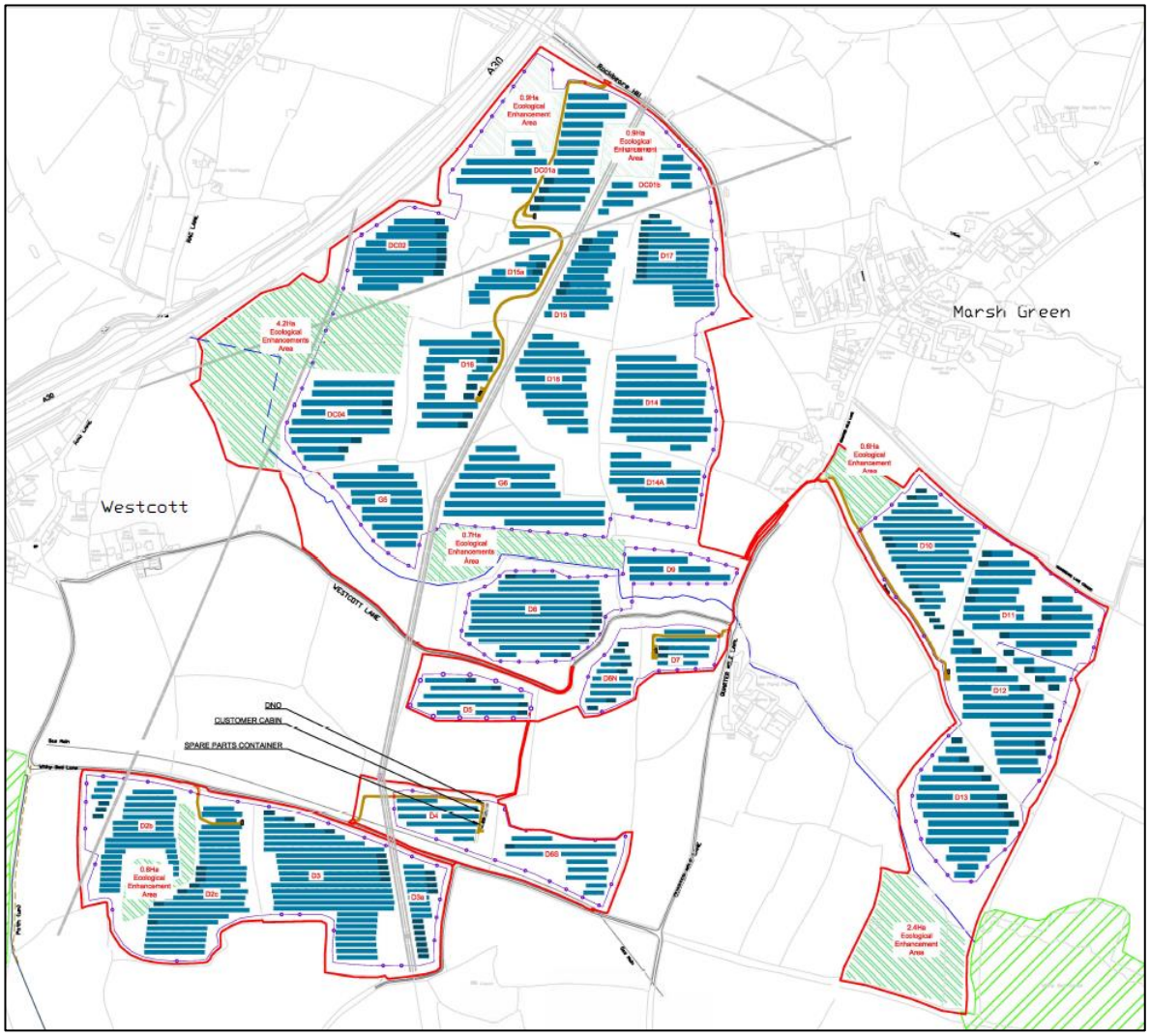

Figure 9. Proposed Site Layout

3.2 Modules generate power which is inverted from DC to AC power on the arrays and, by underground cable, power is transmitted to the six transformers around the site and then on to the substations. Ground protection matting/plates and/or gravel tracks will be laid to access the transformers and substations from the public highway. The key components of the solar and green infrastructure facility include:

- Solar arrays – Solar PV panels, mounted on metal frames to be set into the ground by

direct or screw piling. The panels are non-reflective and are generally orientated to the south or southwest.

- Inverters / Transformers - The PV panels will feed into transformers which contain DC-AC inverters, associated switchgear that raises the AC voltage. A gravel track is provided to these for access and maintenance.
- DNO Substation – A DNO substation and switch room would be located within a secure compound. The secure compound would be located to the north of Withybed Lane in Parcel D4. A gravel track would be provided around and through the site for access and maintenance.
- Fencing – A deer fence up to 2m high would be provided around the perimeter of the development and along the existing public rights of way and where new permissive rights are proposed. A weld mesh security fence will be provided for the secure compound.
- Lighting – No permanent lighting would be proposed. Passive infrared sensor lights will be attached to the substation and transformer and/or inverter cabinets in the event of an emergency maintenance visit being required in the hours of darkness.

Operational Access

3.3 Operational traffic is expected to be minimal and consist of maintenance only, at a frequency of one to two visits per month. This would not materially change how the existing highway network will operate.

3.4 Furthermore, due to the low level of vehicle movements associated with the site once operational, each of the access points would be downgraded back to a simple field access once construction is completed.

Construction Strategy

3.5 All construction vehicles will be routed to the reception compound located immediately off Bishop's Court Lane to the southwest of the A30 / B3184 grade separated junction. From this location, construction vehicles will be escorted to the construction compound, located at Parcel D6 to the north of Withybed Lane in a convoy. At this location, construction vehicles will enter via Parcel D6 access, park, unload, exit via Parcel D4 access and be escorted back to the A30 / B3184 grade separated junction via an alternative route, creating a one-way clockwise routing strategy. The routing strategy is discussed in detail at **Section 5**.

Construction Access

3.6 The construction strategy for the site is shown at **Drawing Number DV5045-1PD-001** (contained at **Appendix D**), confirming that there will be a centralised construction compound located within Parcel D6. This also confirms the location of the construction access points (6 proposed), turning areas, existing utilities and any temporary widening required.

3.7 The strategy for the site would be all delivery routes would arrive at the eastern access on Withybed Lane, unload within the construction compound, then depart via the western access on Withybed Lane. Equipment and components would then be transported to smaller construction compounds via quads and tractors, which can traverse across the constrained highway network more easily. The only exception for this strategy would be the delivery of the transformer and substation shipping containers, which would be taken to their proposed location via alternative / dedicated routes (as discussed further in **Section 5**).

3.8 A full review of the existing highway network has been undertaken to confirm its suitability and any potential extent of widening works required. The review is contained at **Drawing Number DV5045-1PD-001** (contained at **Appendix D**) and has been carried out utilising a topographical survey base. The drawing confirms that a 16.5m maximum articulated lorry, which is the largest anticipated vehicle to access the site, could suitably manoeuvre into and out of each respective access as required.

Construction Compound Internal Layout

3.9 At the construction compound, construction vehicles will be provided with satisfactory space to turn, un-load and exit the site in forward gear. This will include a delivery turning area / unload area and vehicular parking area will be located to the north of Withybed Lane in Parcel D6. This would comprise some temporary portacabin-type buildings in addition to an area for material storage.

3.10 A separate staff and visitor parking, welfare and site office will be in Parcel D3. This will include portacabins for offices, toilets, canteen and storage.

3.11 The internal layout will comprise a network of access tracks which will extend from the construction compound to all areas of the site. **Drawing Number DV5045-1PD-010** (contained at **Appendix D**) shows the location of the construction compound, welfare facilities area and all accesses and tracks that will be utilised throughout construction.

3.12 The details of the construction compound and internal layout will be confirmed in the initial Construction Traffic Management Plan (CTMP) submitted as part of this planning application. However this would need to be updated once a contractor is appointed and be submitted to the Local Planning Authority for approval no less than 12 weeks prior to anticipated commencement of work.

Reception Compound

3.13 The off-site reception compound is located off Bishop's Court Lane to the southwest of the A30 / B3184 grade separated junction, approximately 4.5km west of the site. It will consist of a construction convoy compound / parking area, a welfare cabin and reception office.

3.14 As part of the proposals, it is envisaged the reception compound will generate up to 12 HGVs deliveries per day over a temporary 7-month period only. All development traffic would then be escorted in convoys of 4 vehicles to the construction compound. It would be ensured that

all convoys would take place out of the network peak periods to minimise any distribution on the local network.

3.15 The reception compound is served via a gated access located off the northern edge of Bishop's Court Lane, which would require minor widening modifications to allow an HGV to turn right in / left out. **Drawing Number DV5045-1PD-004** (contained at **Appendix D**) shows the extent of these works, which shall comprise temporary widening with metal road sheets installed that can be removed following construction, such that the access can return to its former state post-construction.

3.16 Achievable exit visibility at the reception compound access is restricted to circa 50m in both directions due to being located on the inside of the bend. Given the short temporary operation of the reception compound (to be returned to a field post construction), it is proposed that temporary traffic management would be put in place at the access to manage how vehicles exit the site. This would be in the form of stop / go boards, signage and traffic marshals to control the movement of construction vehicles turning out of the reception compound. This option would mitigate the short-term construction impact and could be undertaken and agreed with the DCC as part of a Section 50 licence post application.

3.17 Initial pre-application discussions with DCC did not raise any immediate concerns with this strategy.

4.0 CONSTRUCTION AND OPERATION TRAFFIC

Construction Period

4.1 The total construction period for a solar and green infrastructure facility of this size, including the preparation of the site, fencing, assembly and erection of the photovoltaic arrays, installation of the inverters / transformers and grid connection would be approximately 34 – 42 weeks (8-10 months).

4.2 Traffic associated with the development will principally derive from the import of construction materials, equipment and construction personnel. This will consist of heavy goods vehicles (HGVs), vans and other small vehicles. Operational traffic is expected to be minimal and consist of small maintenance 4x4 vehicles only, at a frequency of circa one visit per month.

4.3 The workforce over the construction period will fluctuate, however the median staff per week will be 30 on-site at any one time. Whilst it is not yet known where the site staff will travel from, it is likely that those from further afield will be staying at local accommodation and will likely get a minibus to the site. The majority of construction personnel will arrive before 08:00 and depart after 18:00.

4.4 An outline of the on-site parking facilities for those working at the site will be provided by the contractor as part of a detailed CTMP, however, it is recommended that the site provides temporary on-site parking within the construction compound for up to 20 vehicles.

4.5 All deliveries to the site will be directed to the off-site reception compound located off the A30 / B3184 grade separate junction. From this location, all deliveries would be escorted to the construction compound using the construction routes set out in **Section 5** of this report.

4.6 The PV panels and frames will be shipped in 40ft containers and will be carried to the site by articulated vehicles. The crushed stone material required for the onsite access tracks and hard standings is likely to be sourced locally and will typically be delivered in 10 tonne lorry loads. The portacabins will be transported to the site by appropriately sized commercial vehicles (maximum 12m in length). Finally, cranes will be required to move equipment around the site. It should be noted that the exact type of vehicles is subject to detailed design and confirmation from the final contractor and machinery supplier and will be set out in detail as part of the post consent detailed CTMP.

4.7 The following table summarises the number and type of construction vehicles that are anticipated to be made to the site during the construction period (see **Table 1** below):

Transported Item	Type of Construction Vehicle	Number of Construction Deliveries
Mounting Frames	16.5m Articulated	104
PV Panels	16.5m Articulated	70
Portacabins	12m Flatbed	25

Fencing	12m Flatbed	25
Cables	12m Flatbed	30
Transformer / Invertor / Sub Station	12m Flatbed	10
Gravel / Hardcore	10 tonnes Tipper	330
Crane	12.3m Crane	2
Total		**596**

Table 1. Approximate Number of Construction Vehicles

Construction Traffic Volume

4.8 The development is anticipated to be constructed over a 34 – 42 weeks (8-10 months) period, generating approximately 596 construction vehicles, or 1,192 two-way (to and from the site) movements as outlined in **Table 1** above. This is expected to occur during this period to deliver construction materials and components.

4.9 The main bulk of construction deliveries will occur over a short 8-week period with lesser deliveries intervening to minimise disruption on the local highway network. It is envisaged that all construction traffic would arrive at the off-site reception compound and would be escorted in a 4-vehicle convoy to the construction compound at Parcel D6. This convoy would occur 3 times a day outside of network peak times.

4.10 With regard to staff movements, based on the average workforce figures and on a 2 person per car occupancy rate, there could be on average, 15 staff movements, or 30 two-way movements per day. Staff would typically arrive before 0800 and depart after 1800 and therefore occur outside of network peak times.

4.11 In summary, during the busiest 8-week period, the site could generate up to 54 two-way movements, of which 24 would be construction vehicles (via HGVs) and 30 would be staff (via cars, vans). This therefore represents a worst-case scenario in terms of construction traffic, given that the remaining 26-week construction period would only generate a limited number of deliveries.

Operational Traffic

4.12 After commissioning there is anticipated to be around one visit every month for monitoring and maintenance if required. These visits will be made by van or 4x4 type vehicles, noting that the inverters and transformers would be monitored remotely using broadband / 4G technology.

4.13 In comparison to the existing agricultural vehicles required to cultivate the land, the operational traffic associated with the solar and green infrastructure facility would result in a net reduction in vehicle movements on the local highway network.

Overall Vehicle Trip Generation and Potential Impact

4.14 As set out, the proposals could lead to a maximum of 54 (24 HGV / 30 Staff) two-way daily vehicle movements during a short 8-week period with lesser deliveries intervening, whilst the remaining 26-week period there would be considerably less movements due to their being limited deliveries needed. This is not deemed to be material and would not have a negative impact on the operation of the immediate or surrounding road network.

4.15 In terms of trips in the peak periods, the majority of staff would arrive before the morning network peak and depart after the evening peak and therefore have a negligible impact on the surrounding highway network. Furthermore, HGV construction deliveries would be held and controlled / staggered over three short 'pulses' (early morning, midday, afternoon) outside of the network peak periods, therefore the impact would also be negligible.

4.16 Subsequent operational traffic would be minimal and would likely be circa one two-way vehicle movement every month for the duration of the plants operational period. This would have no impact on the operation of the immediate or surrounding road network.

4.17 **Section 5** of this report considers the suitability of the route between the site and the Strategic Road Network, advising the most appropriate route to accommodate the increases in construction traffic.

5.0 CONSTRUCTION VEHICLE ROUTING

Construction Route Strategy

5.1 The proposed construction traffic routing strategy to the site in its entirety has evolved from internal discussions with the wider Project Team, a site visit and pre-application discussions with DCC.

5.2 The route selected would need to be suitable to accommodate 16.5m articulated lorries (for frames, panels and inverter stations), 12m articulated flatbeds (for cabinets, plant equipment and cables), 12.3m cranes and 10 tonnes tipper trucks (for gravel and hardcore).

5.3 The routing strategy is based on the following key principles:

- Provide safe and efficient construction access for the Proposed Development;
- Minimise and mitigate the levels of disruption to the public and nearby residential properties;
- Reduce as far as possible the requirement for hedgerow and / or tree removal;
- Where practical use the shortest route between the site access points and the A30;
- Avoid passing through Marsh Green village as far as reasonably practicable;
- Use of temporary internal access tracks and access points to provide the opportunity for construction traffic to avoid unsuitable sections of the local road network.

5.4 The strategy also considers a suitable route to the construction compound (at Land Parcel D6) which will be the main source of component deliveries, and also the access points to inverters / substations at isolated locations across the site. The likely activity associated with each of these elements of the construction phase are as follows:

- Deliveries to construction compound: This will generate 16.5m articulated lorries, 12m articulated flatbeds and 10 tonnes tipper trucks. These vehicles would be used for delivering equipment / materials (frames, panels, cabinets, cables, hardcore etc) to the construction compound only.
- Deliveries to isolated inverters / substations. Use of 16.5m articulated lorries and 12.3m cranes and would be limited movements.

5.5 The strategy also considers a suitable route to the construction compound which will be the main source of component deliveries, and also the access points to inverters / substations at isolated locations across the site. The likely activity associated with each of these elements of the construction phase are as follows:

Construction Route Options

5.6 In considering the strategy above, three routes have been identified from the Strategic Road Network (A30) to the site. The routes are shown in **Figure 10** (also contained at **Drawing Number DV5045PD-003** within **Appendix D**) and are referred to as Routes A, B and C.

5.7 Pre-application discussions have taken place with DCC who have confirmed they are content

with these routes subject to appropriate widening and temporary traffic management being proposed and agreed with DCC Highway Coordination team 12 weeks prior to construction taking place.

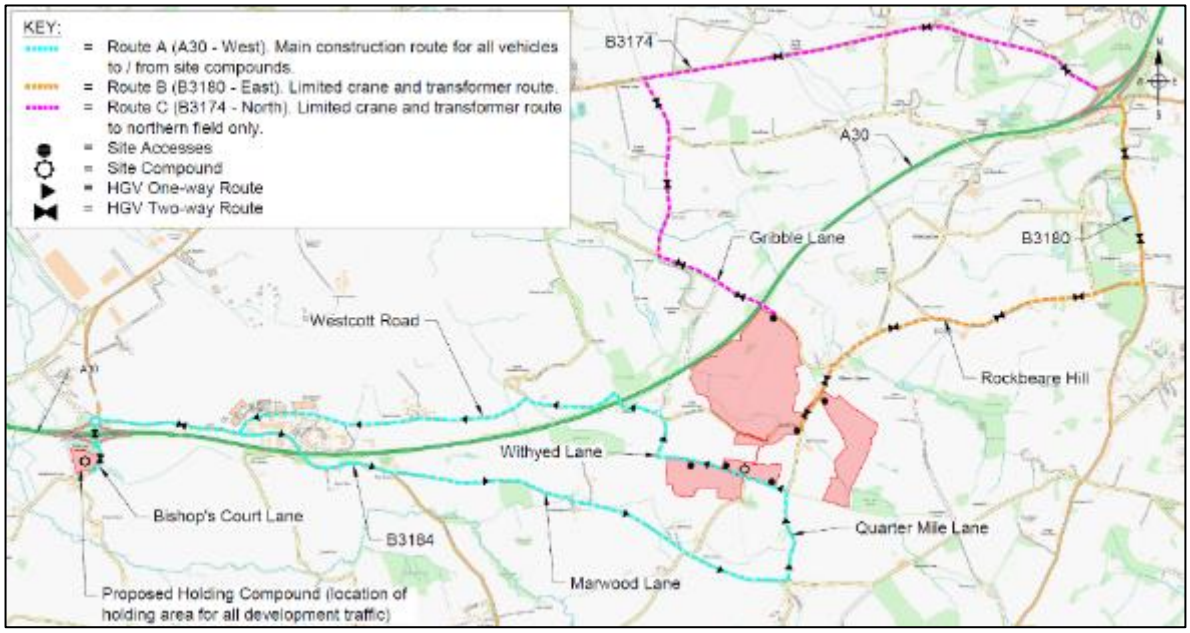

Figure 10. Routing Strategy Options

Route A – Primary Construction Route

5.8 Route A approaches the site from the A30 / B3184 grade separate junction to the west, passing Exeter Airport on approach to the site. This is the recommended construction routing strategy between the reception compound and construction compound would be a one-way system, to avoid two HGVs ever meeting on the narrow lanes. The revised strategy is shown at **Drawing Number DV5045PD-002** and **Drawing Number DV5045PD-003** contained at **Appendix D**, confirming that all vehicles would be routed in via the B3184, Marwood Lane, Quarter Mile Lane to the construction compound, then out via Westcott, Exeter Airport onto the B3184.

5.9 Detailed swept path analysis has been undertaken at key junctions which confirm that this route is viable, and would require areas of temporary traffic management and widening (could be accommodated within existing verges). The temporary widening is shown at **Drawing Number DV5045PD-001** and would comprise metal road sheets.

Route B & C – Limited Construction Route

5.10 Whilst nearly all deliveries will be along Route A to the construction compound, the development will also generate a very limited amount of transformer and crane trips to additional locations around the site. In order to cater for this, two additional routes (Route B and Route C) are required and have been reviewed.

5.11 As shown at **Drawing Number DV5045PD-002** and **Drawing Number DV5045PD-003**,

Route B would enter and exit via the B3180 to the east, whilst Route C would enter and exit via the B3174 to the north. Both routes would only be needed to accommodate the transformer deliveries and a crane associated with the movement of these, which would be a very limited amounted of movements.

5.12 Detailed swept path analysis has been undertaken at key junctions which confirms that these routes are viable, and would require some areas of temporary widening (which could be accommodated within existing verges). The temporary widening is shown at **Drawing Number DV5045PD-001**, would comprise metal road sheets and is located within adopted public highway.

Recommended Construction Vehicle Routing

5.13 The CTMP will identify the exact route that all construction vehicles would take on approach to the site. However, based on the information above, it is recommended that the routes shown in **Drawing Number DV5045PD-002 and Drawing Number DV5045PD-003** would be adopted. This shows how the primary construction route for the majority of deliveries would via Route A. The remaining limited locations that will require limited transformer and crane access to be routed via Route B and Route C.

6.0 CONSTRUCTION MANAGEMENT

Construction Traffic Management Plan

6.1 A full detailed CTMP to be submitted to LPA for approval 12 weeks prior to anticipated commencement of works; to allow 4 weeks consultation period and subsequent amendments to be agreed.

6.2 However at this stage, an outline CTMP has been provided and should be read in conjunction with this report. Key principles that will be included within the CTMP are as follows:

- Work programme –anticipated start date and timescales for the project.
- Routing of construction vehicles – including how contractors will be made aware of the route to the reception compound and any restrictions prior to the journey.
- On site operation – details of where plant / materials will be stored on site and include where staff / contractors will park.
- Number of vehicles accessing the site per day – providing a breakdown of vehicle type / size weight.
- Vehicle call-up procedure – process for coordinating arrivals to and from the reception compound. Contractors should be given set times to arrive, with delivery instructions sent to all suppliers and contractors. Trained site staff must assist when delivery vehicles are accessing the site, or parking on the highway adjacent to the site. Banksmen must ensure the safe passage of pedestrians and vehicular traffic when vehicles are being loaded or unloaded.
- Management team - Site Manager or Site Foreman will coordinate and allocate time slots.
- Hours of operation - construction hours of operation will be between 08:00 and 18:00 Monday to Friday and 08:00 and 16:00 on Saturday. Within this period, construction deliveries can be controlled to occur outside peak hours of 08:00- 09:00 and 17:00-18:00 to avoid conflict with peak periods on the local highway network on approach to the site.
- Site controls - to include details of vehicle wheel wash facilities, measures to control dust and other emissions and noise control.

6.3 Furthermore, a temporary signage will be installed during the entire construction period to both direct site-bound traffic and make road users aware of turning vehicles at the site access.

7.0 CONCLUSIONS

7.1 This Transport Statement has been prepared by the Sustainable Development and Delivery Team (SDD) of DLP Planning, on behalf of Taiyo Power & Storage Ltd (the applicant), to support a planning application for the construction and operation of a 30-Megawatt (MW) capacity solar and green infrastructure facility in the vicinity of Marsh Green, Devon.

7.2 A review of Crashmap Personal Injury Accident data indicates that there have been no existing highway safety concerns in the vicinity of the site that could be exacerbated by the scheme or its construction phase.

7.3 The proposals would consist of six separate access locations onto the highway network as shown at **Drawing Number DV5045-1PD-010**. The swept path analysis confirms shown at **Drawing Number DV5045-1PD-001** confirms that each of the accesses can appropriately to accommodate construction traffic as well as the limited number of ongoing operational movements associated with the proposals.

7.4 The construction of the site is anticipated to take circa 34 – 42 weeks (8-10 months). At its peak period, the site will generate up to 54 two-way daily vehicle movements, split 30 two-way movements for staff and 24 two-way movements for HGV deliveries. The HGV deliveries will initially be routed to the reception compound located immediately off the A30, then escorted to the construction compound in a convoy of 4 vehicles, three times a day, outside of peak times. This would only occur for an approximate 8-week period, following which deliveries would be minimal.

7.5 The above increase in construction traffic would not have a perceptible impact on the operation of the immediate or surrounding road network given movements would occur outside of peak periods. A maximum of one two-way vehicle movements every month is anticipated to occur at the site during the subsequent operational phase. This is not material and would have no significant impact on the operation of the immediate or surrounding road network.

7.6 Based on the work undertaken to inform this Transport Statement, it is clear that there are no inherent safety concern along the highway which the site will take access from. In addition, the existing accesses would be suitably modified to accommodate HGV movements associated with the construction period and the limited number of movements associated with the operational phase. The level of impact associated with the construction phase, and ongoing maintenance, is therefore not considered severe in accordance with Paragraph 111 of the NPPF.

7.7 In conclusion, having due regard to the NPPF, this Transport Statement has clearly demonstrated that the scheme would comply with national planning policy and best practice guidance. For these reasons, it is considered that there are no highways or transport related reasons to object to this planning application and that it should continue to be acceptable to both the Local Highway Authority and National Highways.

Appendix A Devon Highways Pre-Application Advice

Kurt Hardy

From: Fiona Baggott <fiona.baggott@devon.gov.uk>
Sent: 17 March 2022 09:50
To: Kurt Hardy
Cc: Brian Hensley
Subject: Marsh Green pre-app

Follow Up Flag: Follow up
Flag Status: Completed

Apologies for the delay in getting back to you, Covid hit me harder than first thought.

I have reviewed the details of the pre-application and the slightly revised, storage area, and approach routes.

I am happy with these measures and the proposed small mitigation works in order to make the route as successful as possible, please bear in mind that any T.M works will require 3 months lead-in notification time with our Highway Coordination team.

Many Thanks,
Fiona Baggott,
Highway Development Management officer – East Devon

Tamar room, Larkbeare House, Topsham Road, Exeter, EX24NG
Office Phone : **01392 381305**
Fax: **01392 382342**,
e-mail: **fiona.harris@devon.gov.uk**

Kurt Hardy

From:	Kurt Hardy
Sent:	02 February 2022 11:54
To:	fiona.harris@devon.gov.uk; jeremy.upfield@devon.gov.uk; helen.selby@devon.gov.uk
Cc:	PGolding@eastdevon.gov.uk; Sharon Queeney; Kevin Parr; Anna Meer; Bristol Filing
Subject:	02.02.KH.JU.DV5045PD.Marsh Green. Revised Highways Pre-app
Attachments:	DV5045PD Marsh Green Solar Farm - Highways Pre-app Note (Final, November 2021).pdf; DV5045PD-002 Rev B - Local Construction Routing.pdf; DV5045PD-003 Rev B - Construction Routing to Principal Road Network.pdf; Wescott Lane at T with QML.jpg

Hi Fiona, Jeremy,

You may recall back in November 2021 we contacted you regarding some pre-application advice in relation to a solar farm development located to the southeast of Exeter airport. This included a Highways Pre-app Note (see attached for ease of reference) which discussed the various construction routes available, recommending our preferred three-route approach. Your response in summary was positive, raising no initial concerns subject to suitable temporary widening, improvements or traffic management being proposed where necessary.

Since November, the preferred construction routes have been revised and therefore we thought it would be worthwhile running these past you again before we finalise our reports to support the upcoming application. The revised routes are shown at **Drawing 002 Revision B** and **Drawing 003 Revision B** (attached for reference), with a brief description of the changes below. A key item to note is the client has now secured an off-site holding area, located to the southwest of the A30 / B3184 grade separate junction, which will allow all construction vehicles to be escorted to and from the on-site compound (within the red line boundary). This will ensure that delivery drivers are all directed to the same location within close proximity to the strategic road network, and avoids drivers unfamiliar with the area from travelling along narrow local roads trying to find the correct entry point.

<u>Route A – Primary Construction Route</u>
Following extensive internal discussions, we believe the best construction routing strategy between the off-site holding area (near A30) and the on-site compound would be a one-way system, to avoid two HGVs ever meeting on the narrow lanes. The revised strategy is shown at **Drawing 002 Revision B** and **Drawing 003 Revision B**, confirming that all vehicles would be routed in via the B3184, Marwood Lane, Quartermile Lane to the site compound, then out via Westcott, Exeter Airport onto the B3184.

Initial swept path analysis has been undertaken at key junction confirms that this route is viable, and would require areas of temporary traffic management and widening (could be accommodated within existing verges).

This route was explored as part of the pre-app, and therefore we would appreciate it if you confirm whether you would have any initial concerns regarding the primary routing strategy as set out above that we should specifically look to address as part of our Transport Statement and Construction Management Plan reports to support the forthcoming planning application.

<u>Route B & C – Limited Construction Routes</u>
Whilst nearly all deliveries will be along Route A to the site compound, the development will also generate a very limited amount of transformer and crane trips to additional locations around the site. In order to cater for this, we would like to proposed two additional routes (Route B and Route C), whilst also minimising the impact the impact on existing hedgerows and tree's.

As shown at **Drawing 002 Revision B** and **Drawing 003 Revision B**, Route B would enter and exit via the B3180 to the east, whilst Route C would enter and exit via the B3174 to the north. Both routes would only be needed to

accommodate the transformer deliveries and a crane associated with the movement of these, which would be a very limited amounted of movements.

Initial swept path analysis has been undertaken at key junction confirms that these routes are viable, and would require some areas of temporary widening (could be accommodated within existing verges).

As above, we would appreciate it if you confirm whether you would have any initial concerns regarding this strategy for transformer deliveries as set out above that we should specifically look to address as part of our reports.

Off-site Holding Area

As mentioned above, the off-site holding area would be located to the north of Bishop's Court Lane and southwest of the A30 / B3184 grade separate junction. As part of the proposals, it is envisaged the holding area will generate up to 12 HGVs deliveries per day over a 7-month period only. All development traffic would then be escorted in convoys of 4 vehicles to the site compound using Route A. It would be ensured that all convoys would take place out of the network peak periods to minimise any distribution on the local network.

In relation to access, it is acknowledged that there is an existing field access into the holding compound which would require minor widening modifications to allow an HGV to turn right in / left out. These details will be confirmed as part of the Transport Statement.

However, achievable visibility at the holding compound access is restricted to circa 50m in both directions due to being located on the inside of the bend. This would fall significantly short of the 215m standard requirement based on the national speed limit of Bishop's Court Lane.

Given the short temporary operation of the holding area (to be returned to a field post construction), we would prefer to propose temporary traffic management at the access to address the visibility concern, rather than permanently remove the frontage hedgerow to maximise visibility. This would be in the form of stop / go boards, signage and traffic marshals to control the movement of construction vehicles turning out of the off-site compound. We understand this option has been widely accepted at other solar farms sites, as a way of mitigating the short term construction impact.

Quarter Mile Lane / Westcott Lane Junction

During early pre-app discussions with local planning and highway officers (specifically Helen Selby CC'd in), it has been mentioned that a potential contribution towards improvements works at the existing Quarter Mile Lane / Westcott Lane junction could be secured as part of the development. On-site observations (see attached photo) have noted that Westcott Lane is closed, with the junction being in a poor state, and therefore a wider improvement scheme to resurface the junction and improve drainage at this location could be explored.

Whilst nothing has progressed in detail yet so far as designing an improvement scheme, we just wanted to make you aware that a full detailed topographical survey is being undertaken at this location as a starter.

If you do have any queries then please don't hesitate to get in touch, however in the meantime we look forward to receiving any comments / advice / route preferences you may have in relation to the above.

Best regards
Kurt

Kurt Hardy
Senior Transport Planner
Sustainable Development and Delivery Team

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Email: Kurt.Hardy@dlpconsultants.co.uk
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From: Fiona Harris <fiona.harris@devon.gov.uk>
Sent: 18 November 2021 09:16
To: Anna Meer <anna.meer@dlpconsultants.co.uk>
Cc: Jeremy Upfield <jeremy.upfield@devon.gov.uk>
Subject: RE: 11.10.AM.JU.DV5045PD.pre-application highways note

Thank you for your email, I am Jerrys assistant and we have the following comments to make,

The highways scoping note has taken a fairly detailed review of the three best routes to provide for construction access to the site.

I agree with the general consensus that the Long lane/route A option, would be the best route due to it being the most direct and passing the potential holding compound, in addition to utilising the widening and improvements that Long lane is currently undergoing.

The traffic management and temporary works to make any of the potential three routes acceptable, seem reasonable and minimise the impact upon the carriageway. The acceptance in avoiding through-route traffic in the village of Marsh Green has been established.

Should the application come forward for permission, It would be likely that we would recommend the provision of a Construction and Environment management plan to further mitigate construction disruption.

Cc: Planning West (planningwest@eastdevon.gov.uk) <planningwest@eastdevon.gov.uk>; Bristol Filing <bristolfiling@dlpconsultants.co.uk>; Kurt Hardy <Kurt.Hardy@dlpconsultants.co.uk>; Fiona Harris <fiona.harris@devon.gov.uk>
Subject: RE: 11.10.AM.JU.DV5045PD.pre-application highways note

Hi Jeremy

You may recall that over the summer we got in touch with you regarding the potential solar farm at Marsh Green to the southeast of Exeter airport. You provided some helpful high level thoughts regarding the routing of construction traffic, and we agreed that it may be useful to produce a scoping Note in due course.

I understand the planning consultant has now submitted a formal pre-app submission on behalf of the applicant, which has included our Highways Scoping Note as an appendix. Ive now also forwarded this on to you directly (please see attached) for your comment. This will hopefully help us in progressing with the Transport Statement to support the planning application later this year.

If you do have any queries the please don't hesitate to get in touch, however in the meantime we look forward to receiving any comments / advice / route preferences you may have in relation to the attached.

Kind Regards

Anna

Anna Meer BA (Hons) CMILT
Director
Sustainable Development and Delivery Team

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T: 0114 228 9190
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Email: anna.meer@dlpconsultants.co.uk

From: Jeremy Upfield <jeremy.upfield@devon.gov.uk>
Sent: 15 July 2021 14:33
To: Anna Meer <anna.meer@dlpconsultants.co.uk>; Fiona Harris <fiona.harris@devon.gov.uk>
Cc: Planning West (planningwest@eastdevon.gov.uk) <planningwest@eastdevon.gov.uk>; Bristol Filing <bristolfiling@dlpconsultants.co.uk>; Kurt Hardy <Kurt.Hardy@dlpconsultants.co.uk>
Subject: RE: 07.15.AM.JU.DV5045PD.pre-application highways advice

Hi Anna,

I don't think there are any restrict routes, probably best to exit A30 Trunk at Daisy Mount Junc., take B3180 south to Bendarroch Rd crossroads (signed Rockbeare Hill) turn right (east) and follow the road to Marsh Green and same way back. Unfortunately this route passes through Mash Green Village, but I don't think this can be avoided.

The other route via Exeter Airport would be a lot trickier.

Happy to vet any scoping note prior to an application.

Kind regards

Jerry Upfield

Senior Highway Development Management Officer (East) Devon County Council, Larkbeare House, Tamar Room, Topsham Road, Exeter EX2 4NG

Working Week: Tuesdays, Wednesdays & Thursdays.

T: 01392 383000; Internal Ext: 5269

jeremy.upfield@devon.gov.uk

http://www.devon.gov.uk/email.shtml

General Data Protection Regulations Notice: https://new.devon.gov.uk/privacy/privacy-notices/privacy-notice-for-highways-development-management/

From: Anna Meer <anna.meer@dlpconsultants.co.uk>
Sent: 15 July 2021 13:46
To: Jeremy Upfield <jeremy.upfield@devon.gov.uk>; Fiona Harris <fiona.harris@devon.gov.uk>
Cc: Planning West (planningwest@eastdevon.gov.uk) <planningwest@eastdevon.gov.uk>; Bristol Filing <bristolfiling@dlpconsultants.co.uk>; Kurt Hardy <Kurt.Hardy@dlpconsultants.co.uk>
Subject: RE: 07.15.AM.JU.DV5045PD.pre-application highways advice

Hi Jeremy

Many thanks for this.

Would it be worth issuing you with a brief scoping note to agree the proposed construction route to / from the site from the Strategic Road Network etc, or any roads you would want us to avoid, prior to submitting the formal planning application?

Many thanks

Anna

Anna Meer BA (Hons) CMILT
Associate Director
Sustainable Development and Delivery Team

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From: Jeremy Upfield <jeremy.upfield@devon.gov.uk>
Sent: 15 July 2021 11:25
To: Anna Meer <anna.meer@dlpconsultants.co.uk>; Fiona Harris <fiona.harris@devon.gov.uk>
Cc: Planning West (planningwest@eastdevon.gov.uk) <planningwest@eastdevon.gov.uk>
Subject: RE: pre-application highways advice

Hi Anna,

Thank you for your enquiry.

With regards to pre-app advice and scope, we advise that all existing roads surrounding the proposed site/s (shown above) are DCC roads (Highway Maintainable at Public Expense).

Any new access roads, proposed as part of the development, would not likely be adopted as they would only serve as access to a single entity (namely the solar farm).

As with many solar farm developments, there will be initial increase in the number of traffic movements on the highway due to the construction phase and thereafter traffic generation attracted to the site/s is likely to be minimal. I expect this will be the same for this development.

The roads around these sites are rural (country) roads without any footways and usually with undefined carriageway edges but, roadside verges and/or hedgerows. It is unlikely that there is any formal highway drainage for this type of road and drainage will be in the form of roadside ditches, grips etc. to dissipate surface water.

We would recommend conditions to the LPA in a planning application response requiring a detailed routing plan for construction traffic, full pre-start and post construction photographic and itemised survey of the roads leading to and surround the development and an undertaking that any damage to the highway surface, including verges, hedgerows etc. would be rectified by the developer. We would also require the roads to be kept clean and free from debris during the construction period and require hours of construction working to be agreed.

All vehicular accesses to the sites will be required to be surface consolidated for at least the first 10m to stop any detritus/mud etc being dragged onto the highway.

I have copied the LPA (planning team) in on this pre-app email for their information.

I hope that this is adequate for you at this time, but should require any further information, please do not hesitate to get in touch.

Kind regards

Jerry Upfield

Senior Highway Development Management Officer (East) Devon County Council, Larkbeare House, Tamar Room, Topsham Road, Exeter EX2 4NG

Working Week: Tuesdays, Wednesdays & Thursdays.

Appendix B National Highways Pre-Application Advice

Policy EN5 - Wildlife Habitats and Features of the Local Plan states that wherever possible sites supporting important wildlife habitats or features not otherwise protected by policies will be protected from development proposals which would result in the loss of or damage to their nature conservation value, particularly where these form a link between or buffer to designated wildlife sites. Where potential arises positive opportunities for habitat creation will be encouraged through the development process. Where development is permitted on such sites mitigation will be required to reduce the negative impacts and where this is not possible adequate compensatory habitat enhancement or creation schemes will be required and/or measures required to be taken to ensure that the impacts of the development on valued natural features and wildlife have been mitigated to their fullest practical extent.

It is noted from the pre-application submission and subsequent meeting that a significant amount of ecology work has already been undertaken to inform proposals which enhance biodiversity in the area which includes an area of woodland planting adjacent to a County Wildlife site Ancient Woodland. Ecological enhancements and biodiversity gain would weigh in favour of any forthcoming planning application within the overall planning balance and should come forward in the form of a Landscape and Ecological Management Plan which sets out a detailed landscape and ecological enhancements that would be provided as part of the scheme.

Highways:

Policy TC7 - Adequacy of Road Network and Site Access of the Local Plan states that planning permission for new development will not be granted if the proposed access, or the traffic generated by the development, would be detrimental to the safe and satisfactory operation of the local, or wider, highway network. Where new development requires off-site highway improvements any planning permission granted will be subject to a planning obligation requiring these works to be carried out either by the developer, or through an agreement with the Highway Authority to ensure that:

1. The required highway improvements are included in, and, will be constructed as an integral part of the development or are part of a programmed improvement scheme to be undertaken by the Highway Authority. In the case of programmed schemes the planning

permission will be subject to a condition delaying its implementation until the highway improvements have been carried out, unless otherwise agreed by the Highway Authority.

2. The applicant is in a position to secure the implementation of the required highway improvements.

The northern and western boundaries of the site are located immediately adjacent to the A30 trunk road boundary and therefore the views of National Highways have been sought:

Traffic Impact

An assessment of the predicted transport impact of the proposal on the strategic road network during the construction and operational phases. This should provide the number of predicted daily vehicular movements (and vehicle types) including during the AM (0800-0900) and PM (1700-1800) network peaks.

A Construction Management Plan detailing type and number of vehicles and duration of construction period, construction vehicle routing, hours of operation and signage strategy.

Landscaping and Boundary Treatment

A Visual Impact Assessment undertaken in accordance with 'Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013)' published by the Landscape Institute and Institute of Environmental Assessment.

A Landscaping and Planting Schedule.

Given the proximity to the A30 boundary, a detailed boundary treatment plan should be provided to ensure there will be no adverse impact on our assets, including our soft estate.

Given the proximity to our soft estate an Arboricultural Tree Survey should be prepared and therefrom a Tree Protection Plan submitted to ensure protection of retained trees in accordance with BS 5837: 2012 - Trees in Relation to Design, Demolition and Construction – Recommendations. A Tree Protection Plan must be submitted if any works

11. Poplar (Poplus alba, Poplus hybrid, Poplus lombardii)

12. English Oak (Quercus robur)

Furthermore, the planting of ash (Fraxinus excelsior) and larch (Larix sp) is now prohibited as stated in Statutory Plant Health Notices.

We wish to make clear that any existing National Highways soft estate should not be relied upon in respect of contributing any perceived benefits of visual mitigation as we are required to maintain our soft estate which may result in the removal or amendment of our soft estate at any time. The applicant is therefore required to ensure that appropriate and sufficient visual mitigation is provided as part of the development, and in addition to any National Highways soft estate that may be present. Any fences, screening and other structures must be erected on the developer's land, and far enough within the developer's land to enable maintenance to take place without encroachment onto highway land, as set out in Annex A, paragraph A1, of DfT Circular 02/2013 "The Strategic Road Network and the Delivery of Sustainable Development".

Drainage

A Flood Risk Assessment comprehensive drainage strategy detailing how surface water will be controlled in and around the site. In accordance with paragraph 50 of DfT Circular 02/2013, no water run off that may arise due to any change of use will be accepted into the highway drainage systems, and there shall be no new connections into those systems from third party development and drainage systems.

Road Safety

A 5-year Accident Analysis and Highway Safety Review of the strategic road network adjacent to/surrounding the site.

Given the proximity to the A30 boundary, a glint and glare assessment should be undertaken to ensure the development will not present a risk to road safety. The required contents of the Glint and Glare assessment are set out below.

Outline of the site context, including location, proximity to SRN, topography and height above sea level.

Outline of proposal details, including scale, site boundary, site map, mounting arrangements and orientation.

Overview of sun movements, including time, date, latitude and longitude, as well as the relative reflections.

Identification of potential receptors of concern. For Highways England the primary concern will be the reflection of the sun from the solar panels towards surrounding road users.

Identification of representative locations approximately every 100m along the surrounding road network where the solar development may visible, if only marginally.

Undertake geometric calculations to determine whether a solar reflection may occur for each of the identified road based receptors from the proposed development. A height of approximately 1.5m is typically added to the overall ground height at a particular location to reflect the estimated eye level of a road user.

Where it has been calculated that a reflection may occur for road receptors, consideration should be made of the location of the solar reflection with respect to the location of the sun in the sky, its angle above the horizontal and the time of day at which a reflection could occur.

Provide a breakdown of the significance of the impacts and determine whether the solar reflection is likely to be a significant nuisance or a hazard to safety.

Consider the influence of appropriate measures such as screening, revised use of materials and orientation to mitigate the potential impact on road users.

<u>Considerations</u>

1) Does the panel elevation angle provided by the developer represent the elevation angle for all of the panels within the development?

2) Does the assessment consider not only the reflection from panel faces, but also from the frame or reverse of the panel, as these can often be comprised of materials with reflective capability?

3) Does the assessment consider an appropriate number of receptors, rather than a singular location?

4) Is street view imagery and satellite mapping used for the purpose of desk-based studies up to date?

The above list is not exhaustive and we reserve the right to request additional information based on the information provided as part of any future application.

We acknowledge that once operational, the solar farm is unlikely to generate significant volumes of traffic but that during construction there will be a significant amount of construction traffic which will have a degree of impact on the locality and local residents owing to the narrowness of some of the rural roads on approach to the site. The County Highway Authority have assessed the proposal and have advised:

The highways scoping note has taken a fairly detailed review of the three best routes to provide for construction access to the site. I agree with the general consensus that the Long lane/route A option, would be the best route due to it being the most direct and passing the potential holding compound, in addition to utilising the widening and improvements that Long lane is currently undergoing.

The traffic management and temporary works to make any of the potential three routes acceptable, seem reasonable and minimise the impact upon the carriageway. The acceptance in avoiding through-route traffic in the village of Marsh Green has been established.

Should the application come forward for permission, It would be likely that we would recommend the provision of a Construction and Environment management plan to further mitigate construction disruption.

Residential Amenity

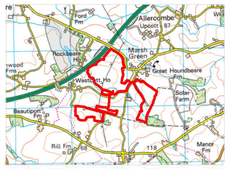
Appendix C Site Masterplan

Legend:

- Planning application boundary
- Perimeter fence
- Solar PV Modules
- Maintenance track (3.5m width)
- Customer cabin
- DNO equipment
- Transformer Station 6MW
- Transformer Station 3MW
- Spare parts container
- Field Gate
- Security Gates
- County Wildlife Site
- Ecological Enhancement Area
- High pressure gas main
- Public footpath
- Over-head line (OHL)
- River / drain
- Culverted Stream Route

Fence area:	~55.1 5 ha
Fence length:	~8093·4 m
Total area:	~ 74.77 ha

Proposed location:



Revisions:

Rev	Date	Comments	Drawn
A	02/09/21	DNO and substation location changed	MG
B	04/01/22	Re-design of the site	TS
C	28/01/22	Changed structure type	TS
D	17/03/22	Swales added, restriction changed	UZ
E	28/03/22	Compounds added and position changed Site road added, fenceline changed	MSTP

Project: Ford Oaks Solar &Green Infrastructure Facility

Location: Land South and West Of Marsh Green

Title: Proposed Development Plan Complete Site

Client: Taiyo Power & Storage Limited

Drawn: MSTP Checked: PC LCA

Scale: 1:5000@A2 Date:04.05.2022

Drawing No: TPS FO 001 001 Rev: E

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www.lowcarbonalliance.co.uk
Tel: +44 (0)207 434 8790

Appendix D SDD Drawings

REV:-

DRAWING NUMBER

N
W E
S

0.8Ha Ecological Enhancement Area

0.6Ha Ecological Enhancement Area

LOCATION 10

DC01a

DC01b

LOCATION 11

DC02

D17

D15a

D15

3.75Ha Ecological Enhancements

D16

D18

D14

DC04

LOCATION 9

LOCATION 1

G6

D14A

G5

1Ha Ecological Enhancements

D9

D8

D7

LOCATION 8

D6N

D5

LOCATION 3

LOCATION 5

LOCATION 2

D2b

D4

D6S

0.6Ha Ecological Enhancement Area

D3

D2c

LOCATION 4

D3a

LOCATION 6

LOCATION 7 (SOUTH ON QUARTER MILE LANE TO MARWOOD LANE)

OVERVIEW
SCALE - 1:2500

TEMPORARY ROAD PLATE WIDENING INTO VERGE

LOCATION 7A
SCALE - 1:1000

LOCATION 7B
SCALE - 1:1000

DC01a

START 1:12 MAX GRADING

EXISTING OPENING IN HEDGE (TO BE INCREASED TO 6M)

D15a

FINISH 1:12 MAX GRADING

EXISTING FIELD GATE OPENING (TO BE INCREASED TO 5M WIDE)

5

LOCATION 11
SCALE - 1:1000

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

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	4.300m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Large Mobile Crane

Overall Length	12.300m
Overall Width	2.430m
Overall Body Height	3.386m
Min Body Ground Clearance	0.800m
Track Width	2.430m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	10.000m

WIDENING OF EXISTING GATED ACCESS TO CREATE 8.3M OPENING (ENTRANCE ONLY)

8.3m

TEMPORARY ROAD PLATE WIDENING INTO VERGE

LOCATION 6
SCALE - 1:1000

WIDENING OF EXISTING GATED ACCESS TO CREATE 6.8M OPENING

6.8m

LOCATION 10
SCALE - 1:1000

HEDGE TO BE TRIMMED BACK TO CREATE 4M OPENING

LOCATION 5
SCALE - 1:1000

TEMPORARY ROAD PLATE WIDENING INTO VERGE

WIDENING OF EXISTING GATED ACCESS TO CREATE 8.5M OPENING

8.5m

LOCATION 9
SCALE - 1:1000

TEMPORARY ROAD PLATE WIDENING INTO VERGE

LOCATION 1
SCALE - 1:1000

TEMPORARY ROAD PLATE WIDENING INTO VERGE

LOCATION 2
SCALE - 1:1000

TEMPORARY ROAD PLATE WIDENING INTO VERGE

8.6m

WIDENING OF EXISTING GATED ACCESS TO CREATE 8.6M OPENING

1M BUFFER FROM EXISTING BARN

LOCATION 3
SCALE - 1:1000

WIDENING OF EXISTING GATED ACCESS TO CREATE 5.5M OPENING (EGRESS ONLY)

5.5m

TEMPORARY ROAD PLATE WIDENING INTO VERGE

LOCATION 4
SCALE - 1:1000

4.4m

WIDENING OF EXISTING GATED ACCESS TO CREATE 4.4M OPENING

LOCATION 8
SCALE - 1:1000

REV		DR	CH	PA
DRAWN BY	CHECKED BY	PASSED BY	DATE	
KH	AN	AM	MAY 2022	
SCALES @ A1 SIZE		ISSUE STATUS		
AS SHOWN		PRELIMINARY		

FORD OAKS SOLAR AND GREEN INFRASTRUCTURE FACILITY

REVIEW OF EXISTING LOCAL HIGHWAY NETWORK FOR CONSTRUCTION VEHICLES

TAIYO POWER & STORAGE LTD

dlp planning

sdd NATIONAL DEVELOPMENT AND DESIGN

DRAWING NUMBER: DV5045PD-001

REV.: E

A30 Two-Way Overbridge

A30 Single Lane Give-way Overbridge

Access Road Adjacent to Drovers Road

Construction Awareness Signs (along all routes)

Construction Access Signs (at all accesses)

Caution Site entrance

CAUTION CONSTRUCTION TRAFFIC

Construction Awareness & Directional Signs with Temporary Widening (to be confirmed)

REV		DR	CH	AP	DATE

KEY:

- = Route A (A30 - West). Main construction route for all vehicles to / from site compounds.
- = Route B (B3180 - East). Limited crane and transformer route.
- Route C (B3174 - North). Limited crane and transformer route to northern field only.
- = Site Accesses
- = Site Compound
- = HGV One-way Route
- = HGV Two-way Route

PROJECT
FORD OAKS SOLAR AND GREEN INFRASTRUCTURE FACILITY

CLIENT
TAIYO POWER & STORAGE LTD

DRAWING TITLE
PROPOSED CONSTRUCTION ROUTING ON LOCAL ROADS

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd.
DLP PLANNING LIMITED
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DRAWN BY	CHECKED BY	APPROVED BY	DATE	SCALES @ A3 SIZE	ISSUE STATUS	DRAWING NUMBER	REV.
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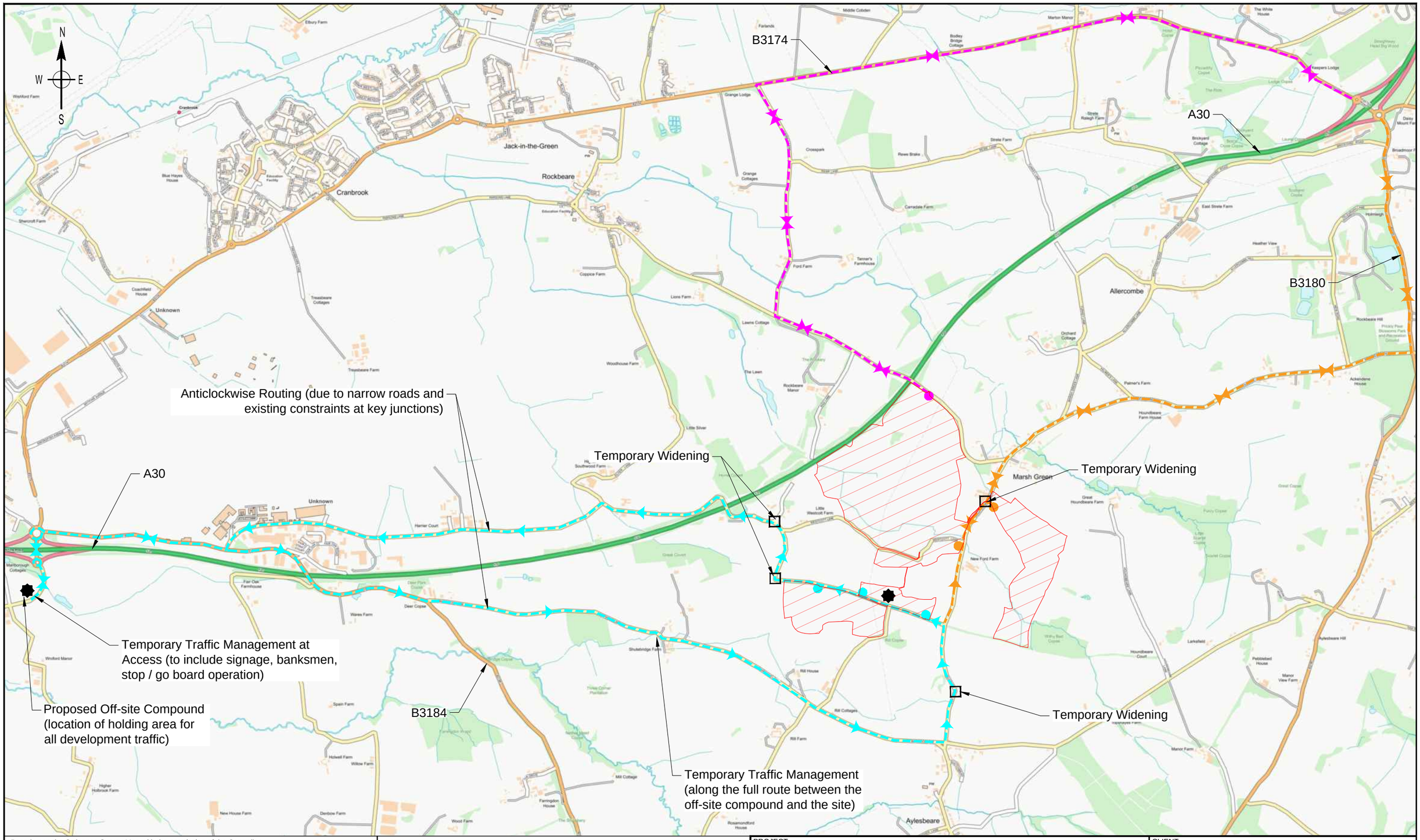

REV		DR	CH	AP	DATE

KEY:

- = Route A (A30 - West). Main construction route for all vehicles to / from site compounds.
- = Route B (B3180 - East). Limited crane and transformer route.
- Route C (B3174 - North). Limited crane and transformer route to northern field only.
- = Site Accesses
- = Site Compound
- = HGV One-way Route
- = HGV Two-way Route

PROJECT
FORD OAKS SOLAR AND GREEN INFRASTRUCTURE FACILITY

CLIENT
TAIYO POWER & STORAGE LTD

DRAWING TITLE
PROPOSED CONSTRUCTION ROUTING TO PRINCIPAL ROAD NETWORK

SUSTAINABLE DEVELOPMENT AND DELIVERY
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DRAWN BY	CHECKED BY	APPROVED BY	DATE	SCALES @ A3 SIZE	ISSUE STATUS	DRAWING NUMBER	REV.
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CAD FILE NAME : DV5045PD-003

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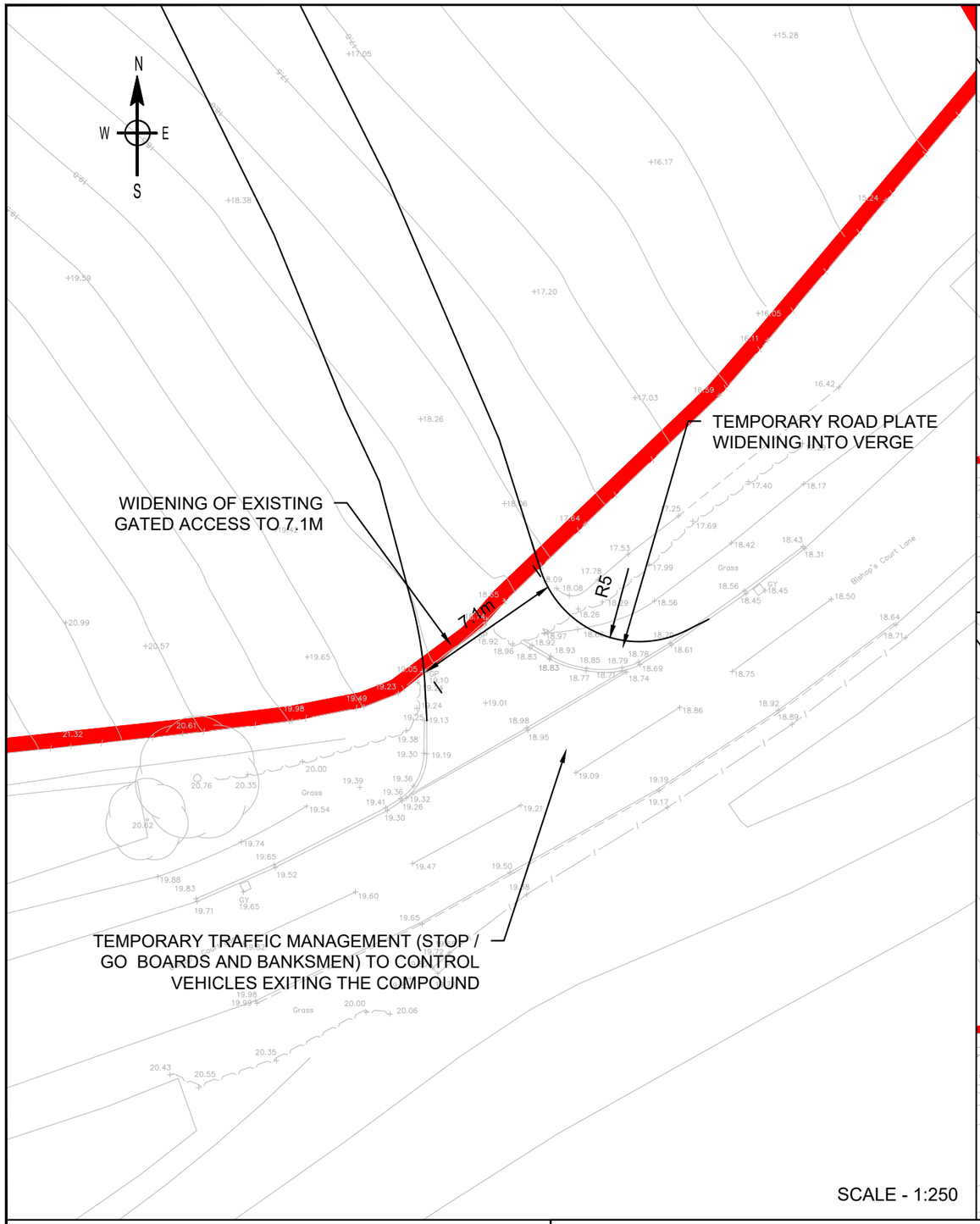

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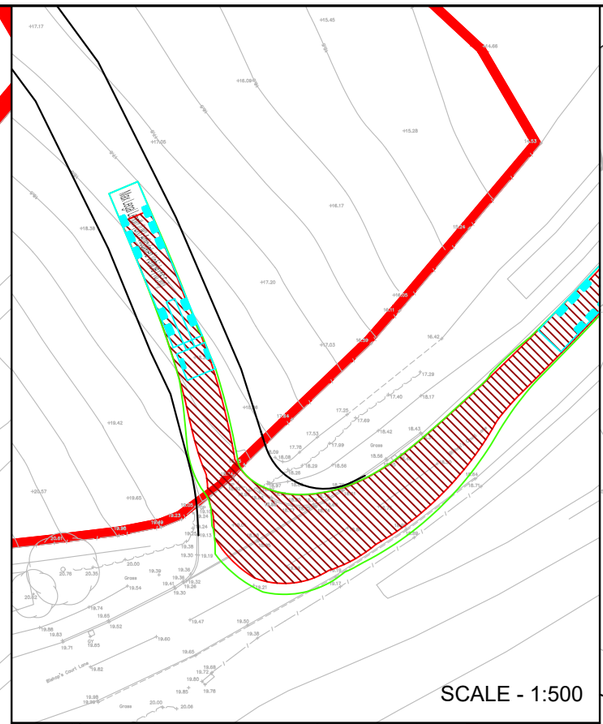

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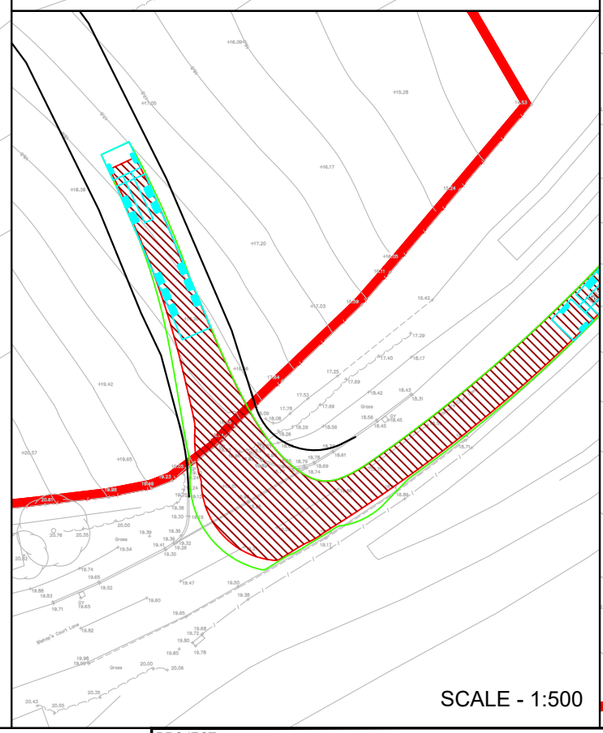
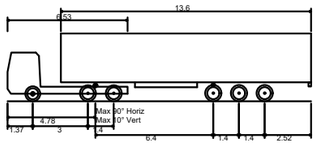


SCALE - 1:500

SCALE - 1:500

REV		DR	CH	AP	DATE



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

PROJECT
FORD OAKS SOLAR AND GREEN INFRASTRUCTURE FACILITY

CLIENT
TAIYO POWER & STORAGE LTD

DRAWING TITLE
PROPOSED OFF-SITE RECEPTION COMPOUND

SUSTAINABLE DEVELOPMENT AND DELIVERY
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DRAWN BY	CHECKED BY	APPROVED BY	DATE	SCALES @ A3 SIZE	ISSUE STATUS	DRAWING NUMBER	REV.
KH	AM	AM	MAY 2022	AS SHOWN	PLANNING	DV5045PD-004	B

CAD FILE NAME : DV5045PD-004

-10mm 0 10mm

REV:

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WIDENING OF EXISTING GATED ACCESS TO CREATE 6.8M OPENING

6.6m

CONSTRUCTION ACCESS TO DC01a

0.8Ha Ecological Enhancement Area

0.6Ha Ecological Enhancement Area

DC01a

DC01b

DC02

D17

D15a

OVERHEAD ELECTRIC CABLES

TEMPORARY TURNING AREAS

D15

3.75Ha Ecological Enhancements

D16

D18

D14

DC04

G6

D14A

G5

1Ha Ecological Enhancements

D9

D10

D8

D11

D7

D6N

D12

D5

D13

D4

D2b

D6S

0.6Ha Ecological Enhancement Area

D3

D2c

D3a

2.2Ha Ecological Enhancement Area

TEMPORARY ROAD PLATE WIDENING INTO VERGE

WIDENING OF EXISTING GATED ACCESS TO CREATE 8.5M OPENING

8.5m

CONSTRUCTION ENTRANCE TO D10

TEMPORARY ROAD PLATE WIDENING INTO VERGE

TEMPORARY OFF-SITE WIDENING AT RAG LANE JUNCTION

TEMPORARY ROAD PLATE WIDENING INTO VERGE

TEMPORARY OFF-SITE WIDENING AT WITHYBED LANE BEND

DIRECTIONAL DRILL UNDER WESTCOTT LANE BETWEEN PARCELS D7 & D9

TEMPORARY TURNING AREAS

TEMPORARY TURNING AREAS

HIGH PRESSURE GAS MAIN

WIDENING OF EXISTING GATED ACCESS TO CREATE 4.4M OPENING

4.4m

CONSTRUCTION ENTRANCE TO D7

CONSTRUCTION COMPOUND

STAFF WELFARE AND PARKING COMPOUND

TEMPORARY ROAD PLATE WIDENING INTO VERGE

8.6m

1m

WIDENING OF EXISTING GATED ACCESS TO CREATE 8.6M OPENING

1M BUFFER FROM EXISTING BARN

TEMPORARY TURNING AREA

CONSTRUCTION ACCESS TO D2

WIDENING OF EXISTING GATED ACCESS TO CREATE 5.5M OPENING (EGRESS ONLY)

5.5m

TEMPORARY ROAD PLATE WIDENING INTO VERGE

CONSTRUCTION EGRESS TO D4

WIDENING OF EXISTING GATED ACCESS TO CREATE 8.3M OPENING (ENTRANCE ONLY)

8.3m

CONSTRUCTION ENTRANCE TO D4

TEMPORARY ROAD PLATE WIDENING INTO VERGE

TEMPORARY OFF-SITE WIDENING AT QUARTER MILE LANE / WITHYBED LANE JUNCTION

TEMPORARY ROAD PLATE WIDENING INTO VERGE

TEMPORARY OFF-SITE WIDENING AT QUARTER MILE LANE - 350M SOUTH OF WITHYBED LANE

REV		DR	CH	PA
DRAWN BY	CHECKED BY	PASSED BY	DATE	
KH	AN	AM	MAY 2022	
SCALES @ A1 SIZE		ISSUE STATUS		
1:2500 1:500		PRELIMINARY		

FORD OAKS SOLAR AND GREEN INFRASTRUCTURE FACILITY

PROPOSED CONSTRUCTION PHASE - ACCESS AND INTERNAL ROADS

TAIYO POWER & STORAGE LTD

dp drawing

sdd SUSTAINABLE DEVELOPMENT AND DELIVERY

DRAWING NUMBER

DV5045PD-010

REV.

A

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