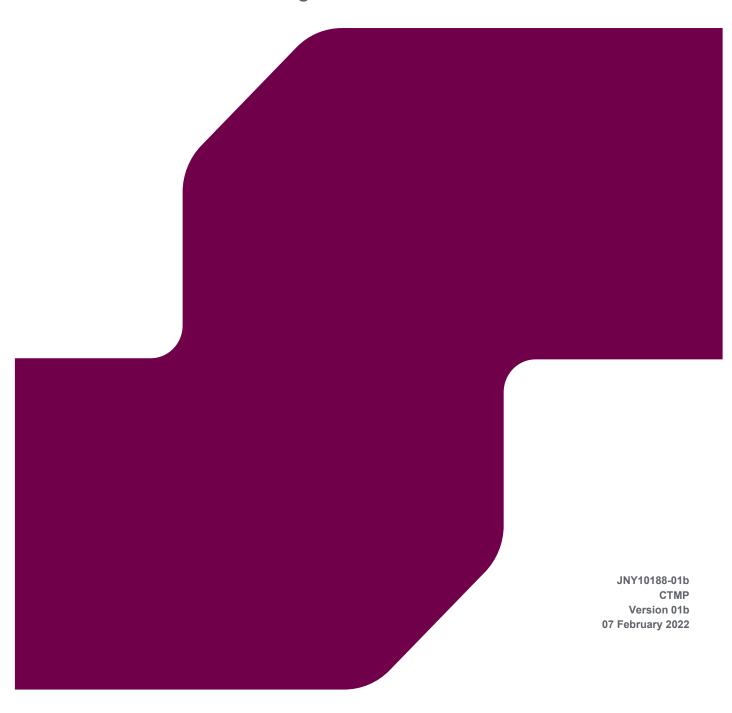


STANSTED SOLAR PROJECT

Construction Traffic Management Plan





Document Status											
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Contents

1	INTRODUCTION	1
2	CONTEXT, COSIDERATIONS AND CHALLENGES	2
3	PROPOSED DEVELOPMENT AND CONSTRUCTION PROGRAMME	6
4	VEHICLE ROUTEING AND ACCESS	7
5	MEASURES, MANAGEMENT AND CONTROL PROCESS	11
6	ESTIMATE CONSTRUCTION VEHICLE MOVEMENTS	16
7	IMPLEMENTING. MONITORING AND UPDATING	18

Appendices

APPENDIX 1 – PROPOSED DEVELOPMENT PLAN

APPENDIX 2 – CONSTRUCTION TRAFFIC ROUTE

APPENDIX 3 – ATC SURVEY

APPENDIX 4 - PROPOSED ACCESS AND VISIBILITY SPLAY

APPENDIX 5 – SWEPT PATH ANALYSIS

APPENDIX 6 – COLLISION DATA



1 INTRODUCTION

- 1.1 RPS has been appointed by Manchester Airports Group (MAG) and Stansted Airport Limited (STAL) to prepare a Construction Traffic Management Plan (CTMP) for the proposed solar farm development at land east of Stansted Airport, near Takeley, Bishops Stortford, CM22 6PL.
- MAG and STAL will maintain overall responsibility of the CTMP throughout the planning, design, and construction process. This Outline CTMP has been prepared for planning permission purposes and will form the basis for subsequent detailed CTMP to be developed once the appointment of the principal contractor for the project has been confirmed.

Context and Scope

1.3 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 construction site. The scope of the CTMP was agreed with Essex County Council as part of the pre-application discussions.

Report Structure

- **Section 2** provides the local context and issues that need to be considered and addressed during construction;
- Section 3 provides details of the development proposal and the construction programme;
- Section 4 details the construction traffic route and vehicle access arrangement;
- Section 5 details the measures, management structure and control processes that will be
 put in place to implement and manage the CTMP;
- **Section 6** provides an estimate of the vehicles accessing the site based on the construction programme; and
- Section 7 addresses implementing, monitoring, and updating.



2 CONTEXT, COSIDERATIONS AND CHALLENGES

2.1 This section describes the local context and issues that need to be considered and addressed during construction.

Policy Context

2.2 This section of the CTMP references policies and guidance that have been considered in the preparation of the document.

National Policy

Traffic Management Act (2004)

2.3 The Traffic Management Act makes 'provision in relation to the management of road works; to make new provision for regulating the carrying out of works and other activities in the street'. It acknowledges that highways may be occupied due to construction activities and identifies appropriate changes levied for any extended occupation.

Designing for Deliveries, Freight Transport Association (2006)

2.4 Published in 2006, Designing for Deliveries, provides specifications for the size of delivery vehicles, turning radii and clearance requirements and should be used to ensure that delivery vehicles can safely and efficiently access the construction site.

Site Context

- 2.5 The solar installation will be contained within the redline boundary shown in **Figure 1** below, totalling approximately 22.5 ha of land lying to the immediate south-east of Stansted Airport and east of Parsonage Road. The site comprises open fields that are currently used for arable farming purposes together with some hedgerows and trees.
- The northern site boundary is formed by a road (Hall Road), with a children's nursery and external play area (High House Nursery) and industrial unit and yard. To the north of Hall Road is a small area of green space and a car park. Further north lies Terminal Road South and short stay airport parking and Terminal Road North.
- 2.7 The site is bound to the east by a drainage ditch and hedgerow line, with two areas of woodland copse and agricultural land beyond.
- 2.8 The site is bound to the southeast by a further drainage ditch or stream, and a hedgerow line, with agricultural land immediately beyond. Further south is the A120 (Thremhall Avenue) which adjoins the M11 to the west.
- 2.9 The site is bound to the west predominately by Parsonage Road which joins Coopers End Roundabout to the immediate northwest of the site and provides connections to Takeley village to the south.
- 2.10 **Figure 1** below details the site location and context with the local area.



Page 3



Figure 1: Site Location and Context

Local Access Including Highway, Public Transport, Cycling and Walking

Highways Carriageways and Footways

- 2.11 The construction access will via an improved simple priority junction with Parsonage Road, located approximately 600m south of the Coopers End Roundabout in the position of the existing gated field access. The existing field entrance will be suitably improved to allow for all HGV movements safely to/from the site.
- 2.12 Parsonage Road runs on a broadly north / south alignment to the west of the development site between Coopers End Roundabout to the north and the B1256 Dunmow Road to the south. The northern most section of Parsonage Road to the south of Coppers End Roundabout is provided with footways on both sides of the carriageway, thereafter and footway is provided on the eastern side of the carriageway adjacent to the development site.
- 2.13 Parsonage Road is a single two-way carriageway, subject to the national speed limit at the western site boundary.



- 2.14 In the wider vicinity, Parsonage Lane connects to Thremhall Avenue that provides access to Bassingbourn Roundabout and the A120 to the south of the site and the M11 to the west of the site.
- 2.15 Pedestrian access to the site is provided via the footway on the western side Parsonage Road. The footway connects to the village of Takeley located approximately 1km to the south of the site. There is no pedestrian connection to connect the site to Stansted Airport to the north of the site and associated public transport facilities.
- 2.16 There are no footways provided on Hall Road that forms the northern site boundary.

Railway

- 2.17 The nearest rail facilities to the development site comprise the Stansted Airport National Rail Station located to the north of the Terminal Road North.
- 2.18 The proposed construction of the solar farm and construction traffic will not impact on the operation of the railway.

Bus Routes

2.19 The nearest bus stops are located at the northern boundary on Hall Road and the western boundary on Parsonage Road. These stops provided access to the following bus services associated with Stansted Airport:

Hall Road - High House Bus Stops

- 6 Stansted Airport Saffron Walden
- 7 / 7a Stansted Airport Bishops Stortford

Parsonage Road - Takeley Coopers Villas Bus Stops

- 5 Stansted Airport Bishops Stortford
- 42a Galleywood Stansted Airport
- 133 Stansted Airport Colchester
- 508 Stansted Airport Harlow
- 2.20 It is not envisaged that local bus routes will be disrupted during the construction programme and local bus operators will be consulted to ensure minimal disruption to the bus services.

Cycle

2.21 There are no formal cycle facilities within the vicinity of the development site. It is therefore not envisaged that cycle movements will be disrupted during the construction programme.

Considerations and Challenges

2.22 The site comprises open fields that are currently used for arable purposes and is in a semi-rural setting with limited development in the vicinity. On this basis the construction traffic is unlikely to



- present many challenges in terms of impact on sensitive locations such as; schools, care homes and hospitals.
- 2.23 Notwithstanding, the potential challenges are considered below.

Schools / Education

- 2.24 High House Children's Nursery and outdoor play area is located at the northern site boundary. There, is no pedestrian footways on Hall Road and it is envisaged that children will be dropped and picked up by car with parking provided on-site.
- 2.25 The nearest school is the Roseacres Primary School located in Takeley to the south of the site. The school is not in the immediate vicinity of the site or the construction traffic vehicle route. However, the Community Engagement Officer will contact the nursery and school to share information regarding construction and discuss any potential issues.

Elderly Care Homes and Hospitals

2.26 There are no elderly care homes or hospitals near the site or the local construction route.

Neighbouring Construction Sites

2.27 The principal contractor will liaise as far as possible with applicants undertaking other approved developments in the local area to minimise the impact upon amenity and safety.

Public Relations

A Community Liaison Officer will be appointed to mitigate and resolve any issues difficulties in the local community. A key aspect of the successful management of this project will be establishing and maintaining a good relationship with all surrounding neighbours. This CTMP has prepared a strategy for preventing potential issues, however, any issues encountered during construction will be reported / recorded in a full log and resolved using a 24 hour-manned telephone line. The site manager and site foreman will address any complaints from residents and businesses.



3 PROPOSED DEVELOPMENT AND CONSTRUCTION PROGRAMME

Proposed Development

- 3.1 A full description of the proposed development is contained in the planning application's supporting Planning Statement and accompanying plans. The following description is pertinent in transport terms.
- Once fully built out, the solar farm would have a total rated capacity of approximately 14.3MW (Megawatt Peak). The facility will provide renewable energy solely to the airport itself and will not export surplus electricity for sale to the National Grid. Rather, on-site battery units will retain surplus energy for use outside of the peak production hours, including at night.
- 3.3 The proposed development would comprise an array of solar panels set out in rows, with a fixed orientation and having a maximum height of 3.2 metres. The associated infrastructure includes inverters connecting the photo-voltaic (PV) panels, a centrally located electricity substation building, on site trackways, security fencing around the site boundary, CCTV, and motion activated security lighting.
- 3.4 The development will require the delivery and storage of construction materials, plant machinery and office / welfare accommodation. A temporary construction compound will therefore be required. The compound has been carefully located to minimise environmental amenity impact.
- 3.5 The construction vehicular access to the site will be via a simple priority access arrangement with Parsonage Road located at the western site boundary.
- 3.6 A plan detailing the development proposal is provided at **Appendix 1**.

Construction Programme

- The proposed solar farm has a maximum theoretical capacity of approximately 14.3 megawatts (MW) of electrical output. The typical build programme will be between 30 to 40 weeks.
- 3.8 The full details of the construction programme and methodology will be developed once the principal contractor has been appointed. The full details will be set out in the detailed CTMP to be developed upon appointment of a contractor and agreed with the Local Planning and Highways Authority prior to any construction starting on site.



4 VEHICLE ROUTEING AND ACCESS

Construction Traffic Route

- 4.1 It is proposed that construction traffic will access the site via the following route:
 - A120 junctions east and westbound junctions for Stansted Airport that provide access to the Bassingbourn Roundabout, Thremhall Avenue, Coopers End Roundabout and Parsonage Lane that provides access to the site and vice versa.
- 4.2 The above construction traffic route is detailed on a plan provided at **Appendix 2**.
- 4.3 The proposed construction traffic route will ensure that delivery vehicles arrive at the site from the north via the strategic road network (A120 and M11) and use the route to Stansted Airport to access the site. The route avoids vehicles accessing the site from the south via the village of Takeley or the B1256 Dunmow Road. In addition, the routing plan will avoid the villages of Elsenham and Stansted Mountfitchet.
- The hours of delivery, during construction, will be between 08:00-18:00 Monday to Friday and 08:00-13:00 Saturday and therefore no work will be undertaken at unsociable hours when the impacts of noise on neighbours would be greatest.
- 4.5 Re-timing out of peak time will aid the operational efficiency of the construction site and the neighbouring area. The developer commits to attempting to re-time as many deliveries as possible out of the morning peak (07:00-09:00) and evening peak (17:00-18:00). This will also avoid the main drop off and pick up time at High House Children's Nursery.
- 4.6 A Delivery Management System will be used to plan deliveries entering the site, the site management will manage the system along with its contractors and a delivery schedule provided for the banksman to control.

Construction Access

- 4.7 The construction access will via an improved simple priority junction with Parsonage Road, located approximately 600m south of the Coopers End Roundabout in the position of the existing gated field access.
- The existing field entrance will be suitably improved to allow for all HGV movements safely to/from the site. In addition, internal access tracks will be required during the construction phase. The access tracks around the solar farm will be constructed using crushed rock / aggregate based laid over clear ground with a finer 'type 2' stone and gravel material surface. These tracks will be fully permeable and will not affect on-site drainage.
- 4.9 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 Given the low number of construction vehicle movements, and to reduce unnecessary land requirements, articulated and rigid HGVs will utilise the width of the access tracks and management measures will be implemented, as set out in Section 5.
- 4.11 Post construction, the solar farm will not require significant maintenance apart from occasional visits made my smaller light goods vehicles.



Construction Access Visibility

- 4.12 Visibility at the proposed construction access ensures there is adequate inter visibility between vehicles on the major and minor arms. The visibility at the private access has been based on the following guidance provided in MfS.
- 4.13 The original Manual for Streets (MfS1) document was published in 2007 and introduced new guidance based on evidence and research and represented a move away from a prescriptive and rigid interpretation of design standards. It was stated in MfS1 that the guidance focussed on lightly traffic residential streets, but the principles could be applied to wider circumstances. However, this was often interpreted as MfS1 only being applicate to lightly trafficked and residential streets.
- 4.14 MfS2, published in September 2010, expands on the guidance in MfS1 to cover busy streets and non-trunk roads thus filling the gap between DMRB (standards developed for Trunk Roads) and the original MfS1. Regarding its status and application MfS2 states:

"The strict application of DMRB to non-trunk routes is rarely appropriate for highway design in built up areas, regardless of traffic volume."

4.15 Furthermore, in para 1.3.2 MfS2 states:

"It is therefore recommended that as a starting point for any scheme affecting non-trunk roads, designers should start with MfS."

4.16 To ensure that visibility at the proposed access accords to the relevant design standard an ATC traffic survey has been placed on Parsonage Road in the vicinity of the proposed access arrangements, to establish the 85th percentile speeds. A copy of the speed survey is provided at **Appendix 3**. The speed survey has been undertaken in accordance with the advice contained in the DMRB CA 185 'Vehicle Speed Measurement'. The ATC survey commenced on the 25 January 2022 and the weather conditions were predominantly dry for the 7 days the survey was undertaken. The results of the speed survey are as follows:

North bound = 45.6 mph; and

• South bound = 46.4 mph.

- 4.17 The recorded vehicle speeds are above 60kph (37mph). Therefore, the visibility splay has been calculated using the best practice contained within the Department for Transports MfS2 at paragraph 10.1.12 this provides a formula for calculating visibility splays. The formula incorporates the Design Manual for Roads and Bridges based perception time and deceleration rates values to calculate the required visibility splay.
- 4.18 The visibility requirements are 2.4m x 102.4m to the right and 2.4m x 99.6m to the left. In addition, road users waiting to turn right into the proposed access from Parsonage Road, can also see beyond the required stopping sight distance.
- 4.19 The Y-distance represents the distance that a driver who is about to exit from the minor arm can see to the left and right of the main alignment. For simplicity it is has previously been measured along the nearside kerb line of the main arm, although vehicles will normally be travelling at a distance from the edge of the kerb line. Therefore, a more accurate assessment of a visibility splay is made by measuring to the nearside edge of the vehicle track. To allow for the vehicle track the Y-distance has been measured to a point 1m from the nearside edge of carriageway.



- The measurement is taken from the point where this line intersects the centre line of the minor arm.
- 4.20 The visibility splays at the proposed construction access are indicated on the drawing provided at **Appendix 4**. The proposed visibility splay accords with the advice contained within MfS2. The visibility splay can be achieved within land in the control of the client or the highway boundary.
- 4.21 It should be noted that the existing vegetation will be removed and maintained below 600mm for the extent of the proposed visibility splay.

Swept Path Analysis

- 4.22 The PV panels will be delivered in shipping containers via HGVs. Therefore, proposed construction access with Parsonage Road has been subject to swept path analysis for the following likely largest constriction vehicle:
 - 16.5 Max Legal Length (UK) Articulated Vehicle (16.5m).
- 4.23 At the request of Essex County Council Highways additional vehicle tracking for the construction access route via Coopers End Roundabout and the Parsonage Road / Hall Road mini roundabout junction to the south has also been subject to swept path analysis.
- 4.24 The preliminary construction access arrangement and Parsonage Road / Hall Road mini roundabout swept path analysis is provided at **Appendix 5**. The swept path analysis demonstrates that the Parsonage Road mini roundabout junction and construction access can accommodate the largest design vehicle.

Access Management Measures

- 4.25 Management measures will be implemented to ensure that construction HGVs can access and exit the site safely.
- 4.26 Construction HGVs will be subject to a booking system with fixed arrival times. A banksman will be utilised and situated at the site access to assist HGVs in accessing and egressing the site and will only instruct HGVs to depart the site when Parsonage Road is clear of traffic in the vicinity of the site access, and it is safe to do so.
- 4.27 Temporary signage will be located in the vicinity of the site access during the construction period to warn drivers of the site access, as shown in **Figure 2**.
- 4.28 Full details of the construction route, including detailed swept path drawings for the access and site compound will be set out int the full version of the CTMP which will be a condition of this planning application.



Figure 2: Temporary Signage at Site Access



4.29 Additional signage will advise motorists of HGVs turning through the site access, as shown on **Figure 3**.

Figure 3: Temporary Signage on Parsonage Road



Collision Analysis

- 4.30 Personal Injury Accident (PIA) data has been obtained from Essex County Council for the most recent five-year period (November 2016 November 2021). The study area runs between the site and Coopers End Roundabout to the north. A copy of the collision data is provided at **Appendix 6**.
- 4.31 During the five-year period, a total of 2 slight accidents were recorded, with no serious or fatal accidents recorded. The first accident was recorded on Coopers End Roundabout at its junction with Parsonage Road, with the second accident occurring on Parsonage Road near the junction with Thremhall Avenue. Both accidents involved cars and the causation factors were both attributed to driver errors. No other incidents were recorded in the study area.
- 4.32 The PIA review has concluded that the accidents recorded on the local highway network are attributable to factors unrelated to the design of the highway network.



5 MEASURES, MANAGEMENT AND CONTROL PROCESS

5.1 This section details the measures, management structure and control processes that will be put in place to implement 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.

Transport Co-ordination

- 5.2 The applicant will appoint a Site Manager for the project and the details will be provided to ECC 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 the implementation of the CTMP;
 - Vehicle scheduling;
 - Checking for scheduled road works on the local highway network;
 - Dealing with any complaints; and
 - Acting as a point of contact for employees, contractors, highway authority, planning authority and the general public.

Measures Influencing Construction Vehicles and Deliveries

Adherence to Designated Routes

- Details of routes to be used for journeys to and from site for road operators are provided in Section 4. The route to / from the A120 and M11 are specified.
- The construction vehicle access strategy will be agreed with both Essex County Council (ECC) (Highway Authority) and Uttlesford District Council (UDC) (Planning Authority) before any construction takes place on-site.
- Full details of construction, including detailed swept path drawings and assessment of impacts will be set out within the full version of the CTMP which will be a condition of this planning application. The detailed CTMP will also address monitoring and enforcement for the delivery routing.
- A copy of the route plan will be given to all suppliers when orders are placed to ensure drivers are fully briefed on the required route to take. The suppliers will be made aware that these routes are always required to be followed unless agreed or alternate diversions are in place.
- 5.7 It is also considered appropriate to avoid routes where scheduled road works and construction vehicles could conflict. Any major road works on the access routes that result in the deviation of the route will be agreed with ECC in advance where feasible.



Delivery Scheduling

- 5.8 The Site Manager once appointed will co-ordinate all constriction vehicles to / from the site.
- A pre-booking system will be implemented for the site and construction traffic will be scheduled and timed to ensure that only one HGV is on site at any time. These measures will ensure that it will not be necessary for vehicles to wait on the public highway as they can enter the site direct from Parsonage Road to access the site compound.
- 5.10 Where possible, enough time will be given between deliveries to allow for any delays because of the delivery vehicle getting stuck in traffic or the loading / loading taking longer than expected and to avoid any vehicles waiting.
- 5.11 The contractor will provide a banksman to assist with the manoeuvring of delivery vehicles throughout the construction site. The construction compound will be located off the public highway within the site, access via the internal access road.
- 5.12 The preparation of a full CTMP is expected to be conditioned as part of this planning application and will need to be agreed before any works on the site can commence.

Re-timing for Out of Peak Deliveries

5.13 Re-timing out of peak time will aid the operation efficiency of the construction site and the neighbouring area. The developer commits to attempting to re-time as many deliveries as possible out of the morning peak (07:00-09:00) and evening peak (17:00-18:00).

Re-timing for Out of Hours Deliveries

5.14 The developer will avoid out of hours deliveries and commit to the sites deliveries times and avoid the morning and evening peak as far as possible.

Use of Holding and Vehicle Call Off Areas

- 5.15 The development will require the delivering and storage of construction materials, plant machinery and office / welfare accommodation. A temporary construction compound will therefore be required. This compound would be carefully located to minimise environmental or amenity impact.
- 5.16 The compound would be of an appropriate size to accommodate the largest delivery vehicles, storage, plant, and accommodation. In addition, the delivery vehicles each day will be minimal as detailed in Section 6. Therefore, the use of a holding and vehicle call off area will not be necessary for the construction of the solar farm.

Construction Compound

- 5.17 The site will provide a construction compound that will include an HGV turning area, staff parking, materials storage, and staff welfare facilities.
- 5.18 The construction compound area will provide a turning area to allow vehicles to exit the site in forward gear. The vehicle compound will be capable of accommodating a turning HGV whilst at least one HGV is parked, to ensure there is no requirement for vehicles to wait on the public



- highway. All materials and plant associated with the development will be stored within the footprint of the construction site.
- 5.19 All staff will park within the construction compound to avoid any obstruction of the local highway,
- 5.20 The details of the construction compound will be provided in the full CTMP.

Measures to Encourage Sustainable Freight

Freight by Water

5.21 Due to the site location, there are no opportunities for freight to be delivered by water.

Freight by Rail

5.22 Stansted Airport rail station is located to the north of the site. However, there are no sidings adjacent to the site to unload and deliveries would disrupt the operation of the rail lines. Therefore, freight by rail is not considered a realistic option for the site.

Material Procurement Measures

Design for Manufacturing and Assembly and Off-Site Manufacture

5.23 Reducing delivery numbers and effective delivery management is a core value of this development. The PV panels will be manufacture off-site and transported to site in shipping containers by articulated HGVs. This will minimise the number of delivery vehicle movements to the site and the need for construction on site.

Re-use of Material on Site

The development is likely to require the removal of surface soils associated with the construction compound, access roads, cable trenching etc. Where such soil stripping occurs, topsoil and subsoil will be stripped, stored on-site, and replaced separately to minimise soil damage and to provide optimal conditions for future site restoration. As the proposed solar farm will be developed on agricultural land, the intention is that this development would be 'reversible' at the end of the life of the facility (assumed to be 25 years) - if this is desired or necessary at that time. Intrusive development, such as trenching and foundations, will therefore be minimised, and the use of mass concrete avoided. It is likely that the PV arrays will be installed either by 'pile' driven or screw foundations, or pre-moulded concrete blocks (shoes), both of which are capable of easy removal.

Smart Procurement

5.25 The contractor will explore the potential to source local contractors to contribute to the local economy and reduce travel distance to site.



Other Measures

Collaboration Amongst Other Sites in the Area

5.26 The developer and appointed Site Manager will consult with UDC and other contractors' developers in the area to minimise disruption.

Implement a Staff Travel Plan

On-site parking will be limited to those construction personnel with essential needs, such as those required to carry heavy or specialist equipment to the site. Construction personnel will be encouraged to use public transport, walk, or cycle to the site where possible. However, given the sites location a more realistic measure will be to encourage contractors to share vehicles to reduce the number of trips to site and to encourage those that drive to travel outside of the peak network times.

Preventing HGV Movements During School Drop Off and Pick Up

5.28 As shown in Section 3 the nearby High House Nursery deserve extra attention and care to increase safety and reduce unnecessary risk. HGV deliveries will be scheduled, where possible, outside of drop off and pick up times. The appointed contractor will contact the nursery and school to share information regarding construction and discuss any potential issues.

Other General Management Measures

- 5.29 Waste removal will be undertaken by an appointed party. The appointed company will remove all material from the site to waste recycling stations and separated for recycling where possible.
- 5.30 The CTMP will be regularly monitored and reviewed and any significant changes to the document will be reported to UDC.
- 5.31 The site manager will address any complaints from residents and businesses.

Control of Dirt and Dust on the Public Highway

- 5.32 Mud and debris on the road are one of the main environmental nuisance and safety problems arising from construction sites. The appointed contractor will make provision to minimise this problem.
- 5.33 In the early stages of the project when ground works are being carried out, all vehicles that leave the construction site will be washed down within the compound.
- 5.34 The wash bay area will be impermeable and isolated from the surrounding area by a raised kerb or roll over bund to contain solids. No debris or concrete will be washed into the drainage system. The contractor will also make provision for cleaning of the road if required, by an approved road sweeper.
- 5.35 The contractor will consider spraying a fine spray to suppress dust on the following:
 - Unpaved areas that are subject to traffic or wind;



- Sand, spoil, and aggregate stockpiles; and
- During loading / unloading of dust generating materials.

Site Fencing

5.36 A security fence will be constructed around the site prior to any significant construction works taking place.

Complaints Procedure

- 5.37 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. The Site Manager will therefore be available to meet and explore issues with concerned neighbours directly via appointment.
- 5.38 Complaints will be taken seriously and addressed immediately by the construction team. Any required actions will be communicated to all staff.
- 5.39 The Site Managers contact details will be provided to UDC prior to work commencing work on site. Contact details for the Site Manager will also be displayed at the site entrance.

Road Condition Survey

5.40 Road conditions surveys will be undertaken on Parsonage Lane at the site access to determine if any abnormal damage has occurred because of the construction activities. A condition survey will be undertaken prior to any construction activities, in liaison and in agreement with the local highway authority and will be repeated post construction in accordance with Section 59 of the Highways Act 1980.



6 ESTIMATE CONSTRUCTION VEHICLE MOVEMENTS

Construction Traffic

- The number of vehicles accessing the site has been estimated according to the construction programme.
- The proposed solar farm has a maximum theoretical capacity of approximately 14.3 MW of electrical output. The typical build programme will be between 30 to 40 weeks.
- The construction impacts from traffic are likely to be limited. The PV panels will be delivered in approximately 140 standard shipping containers by articulated HGVs spread through the 30-to-40-week construction phase. In addition, it has been advised that the metal frames and other plant will arrive in a similar number of HGVs to the PV panels. Therefore, the construction programme will result in circa 280 HGV movements.
- 6.4 Based on the shorter 30-week construction programme (6 working days Monday Saturday) the site would be accessed by 1.6 HGVs per day spread evenly. On this basis it will be easy to schedule HGV deliveries to avoid arriving at the same time and avoid peak or sensitive periods.
- In addition, the site would also need to be accessed by construction workers to install the PV panels. The on-site contractors would typically use light goods vehicles such as small vans or transit vans. It is anticipated that these would account for 3-4 light goods vehicles (LGVs) per day.
- 6.6 The estimated number of trips are summarised in **Table 6.1** below.

Table 6.1: Estimated Construction Vehicles – Weekly and Daily

Construction Programme	Maximum no. of trips weekly	Maximum no. of trips daily
30 weeks	10 HGV trips 24 LGV trips 34 total trips	1-2 HGVs 4 LGV trips 5- 6 total trips

- 6.7 The above table details a worst-case scenario maximum of 6 daily vehicle movements (equivalent to 12 total movements per day). Spread across a working day the worst-case scenario maximum of 12 total vehicle movements equates to a maximum of circa. 1-2 vehicle per hour.
- On this basis the development will not cause a material adverse impact on the local highway network. This estimate will be refined once the contractor is appointed, and the construction programme is finalised.
- 6.9 A Delivery Management System will be used to plan deliveries entering the site, the site management will manage the system along with its contractors.



Operational Traffic

- Once operational, the solar farm will be monitored remotely and will not require any permanent staff to be located on site. Occasional maintenance activities will be required for cleaning of the PV panels and routine checks.
- 6.11 Therefore, the impact of maintenance vehicles will be negligible given the infrequent nature of visits

Traffic Impact

- The above traffic impact analysis undertaken as part of this CTMP calculates the proposed construction traffic and considers the operational traffic. The NPPF states in paragraph 111:
 - "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."
- 6.13 The analysis undertaken has demonstrated that the proposed development will not have a 'severe'; impact on the road network.



7 IMPLEMENTING, MONITORING AND UPDATING

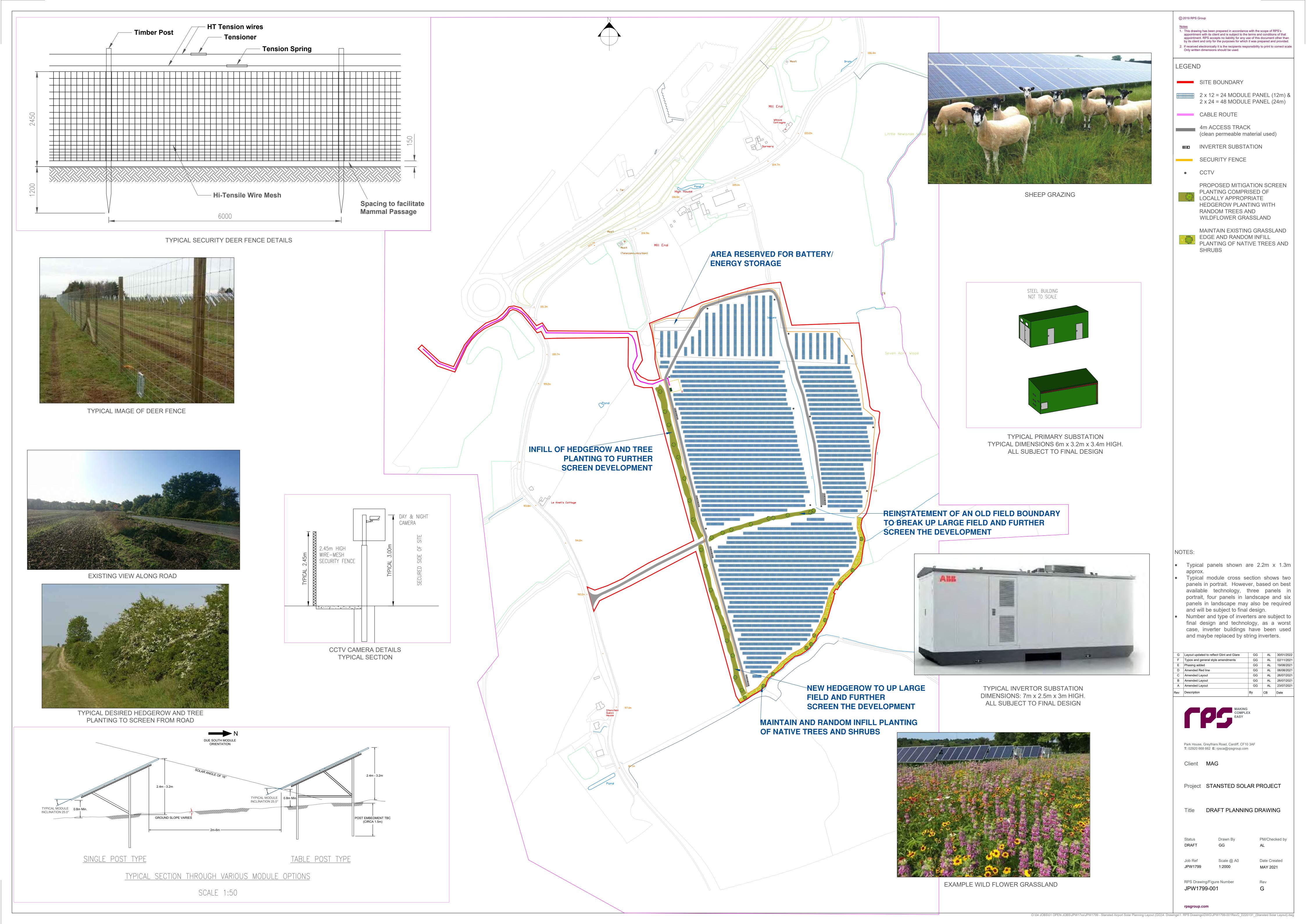
- 7.1 This Outline CTMP cannot include a detailed and defined description of how the CTMP will be implemented, monitored, and updated. However, the following strategy can be confirmed at this stage.
- 7.2 An appointed Construction Logistics Manager will oversee implementing the Detailed CTMP on behalf of the Contractor. Their job description will include collecting data on:
 - Number of vehicle movements to site; collected through a delivery booking-in system:
 - Total;
 - By vehicle type / size / age; and
 - Time spent on site;
 - Breaches and complaints:
 - Vehicle routing; and
 - Suppliers FORS accreditation; and
 - Safety:
 - Record of construction related accidents;
 - Ways staff are travelling to site; and
 - Vehicles and operations not meeting safety requirements.
- 7.3 The data collected will be reported to the developer and UDC.



Appendices

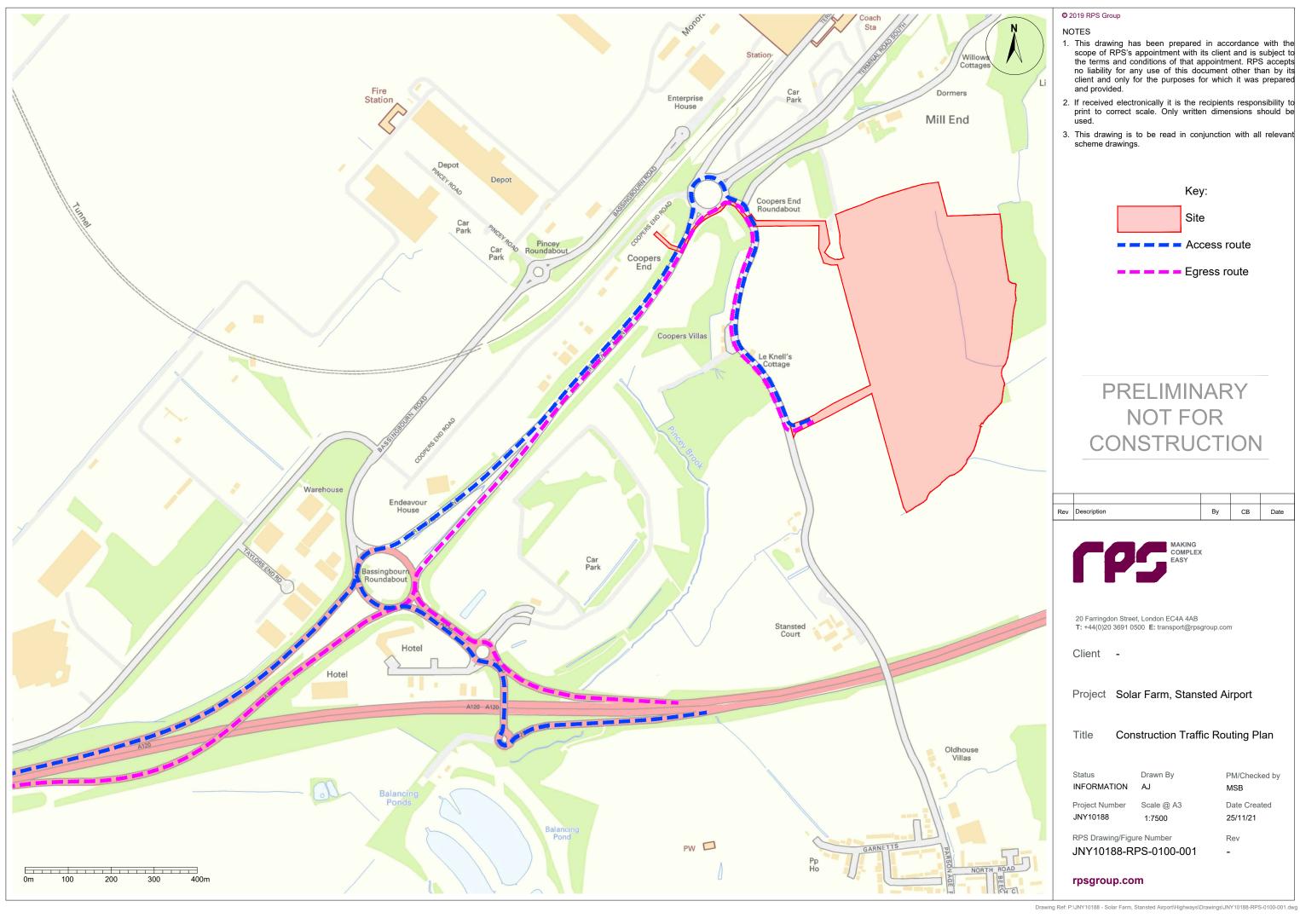


Appendix 1 – Proposed Development Plan





Appendix 2 – Construction Traffic Route





Appendix 3 – ATC Survey

Takeley ATC, Parsonage Road

Direction: Southbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Tue 25 Jan 2022	2071	45.4	38.9	6.3	1	14	13	86	333	794	570	171	67	16	5	1
Wed 26 Jan 2022	2136	46.3	39.6	6.4	1	13	16	66	326	742	626	231	92	16	5	2
Thu 27 Jan 2022	2164	45.3	39.3	5.8	0	11	9	55	354	796	647	214	69	7	1	1
Fri 28 Jan 2022	2162	46.2	40.0	6.1	1	9	7	49	331	690	717	255	83	14	6	0
Sat 29 Jan 2022	1381	47.0	40.2	6.5	2	10	5	30	175	454	468	151	62	16	8	0
Sun 30 Jan 2022	1172	47.9	40.5	7.2	3	11	14	30	148	320	394	174	59	11	5	3
Mon 31 Jan 2022	2089	46.7	40.1	6.4	0	19	10	46	264	702	694	248	74	25	4	3
5 Day Ave.	2124	46.0	39.6	6.2	1	13	11	60	322	745	651	224	77	16	4	1
7 Day Ave.	1882	46.4	39.8	6.4	1	12	11	52	276	643	588	206	72	15	5	1

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Direction: Northbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Tue 25 Jan 2022	2544	44.2	38.7	5.4	2	7	13	80	451	999	746	200	42	4	0	0
Wed 26 Jan 2022	2397	45.7	39.3	6.2	5	8	11	98	406	792	727	261	67	20	2	0
Thu 27 Jan 2022	2440	44.8	39.0	5.6	4	7	8	78	414	902	764	199	55	8	1	0
Fri 28 Jan 2022	2562	44.9	39.1	5.6	2	6	19	79	425	927	800	243	51	9	1	0
Sat 29 Jan 2022	1658	45.9	39.5	6.2	1	6	5	55	278	569	486	187	53	11	7	0
Sun 30 Jan 2022	1190	47.7	40.4	7.1	5	12	4	39	154	329	382	187	60	14	4	0
Mon 31 Jan 2022	2153	46.1	39.8	6.1	5	3	3	54	355	707	677	243	90	11	4	1
5 Day Ave.	2419	45.1	39.2	5.8	4	6	11	78	410	865	743	229	61	10	2	0
7 Day Ave.	2135	45.6	39.4	6.0	3	7	9	69	355	746	655	217	60	11	3	0

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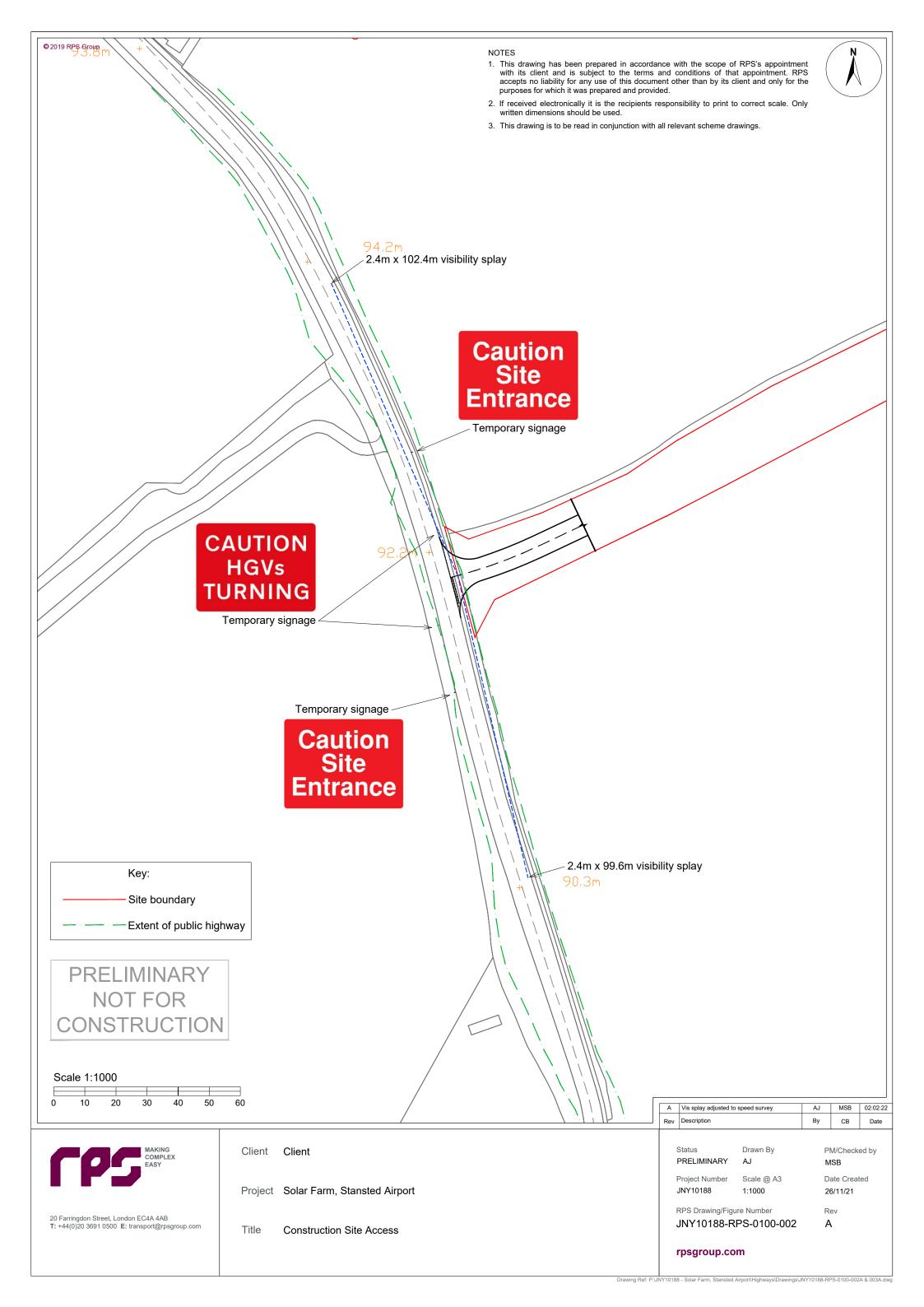
Direction: Total Flow

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Tue 25 Jan 2022	4615	44.8	38.8	5.8	3	21	26	166	784	1793	1316	371	109	20	5	1
Wed 26 Jan 2022	4533	46.0	39.4	6.3	6	21	27	164	732	1534	1353	492	159	36	7	2
Thu 27 Jan 2022	4604	45.0	39.1	5.7	4	18	17	133	768	1698	1411	413	124	15	2	1
Fri 28 Jan 2022	4724	45.5	39.5	5.8	3	15	26	128	756	1617	1517	498	134	23	7	0
Sat 29 Jan 2022	3039	46.4	39.8	6.3	3	16	10	85	453	1023	954	338	115	27	15	0
Sun 30 Jan 2022	2362	47.8	40.4	7.1	8	23	18	69	302	649	776	361	119	25	9	3
Mon 31 Jan 2022	4242	46.4	39.9	6.2	5	22	13	100	619	1409	1371	491	164	36	8	4
5 Day Ave.	4544	45.6	39.4	6.0	4	19	22	138	732	1610	1394	453	138	26	6	2
7 Day Ave.	4017	46.0	39.6	6.2	5	19	20	121	631	1389	1243	423	132	26	8	2

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Appendix 4 – Proposed Access and Visibility Splay





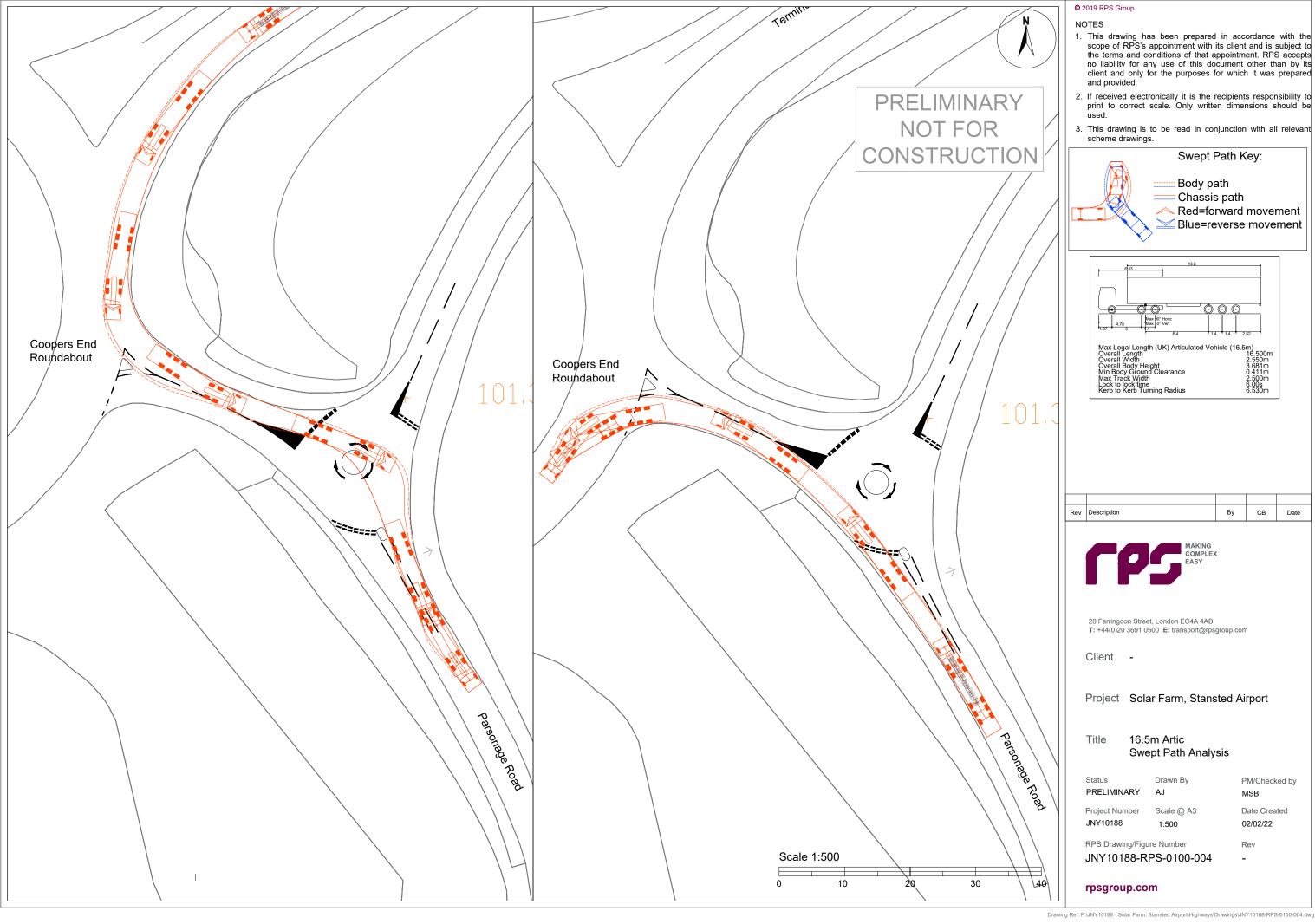
Appendix 5 – Swept Path Analysis



16.500m 2.550m 3.681m 0.411m 2.500m 6.00s 6.530m

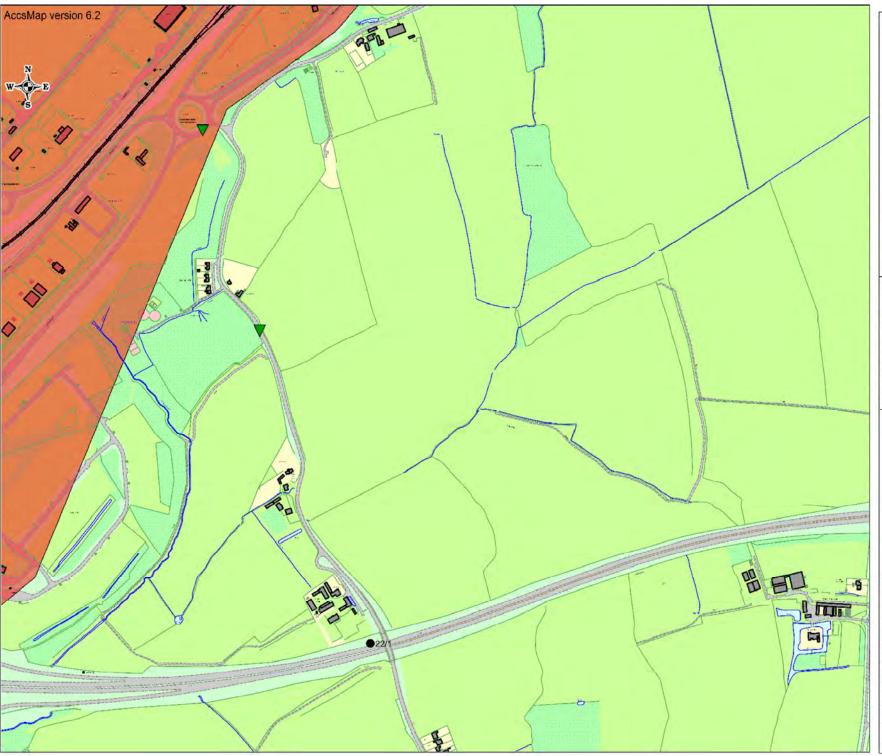
MSB 02:02:22

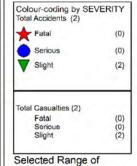
СВ





Appendix 6 – Collision Data





Selected Range of Accidents between dates 01/10/2016 and 30/09/2021 Selected using Manual Selection

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DRAWING TITLE

1953 Andrew Jennings

SCALE	1:5620
DATE	13/01/2022
DRAWING No.	
DRAWN BY	

AccsMap - Accident Analysis System

Accidents between dates 01/10/2016 and 30/09/2021 (60) months Selection: Notes:

Selected using Manual Selection

17230656 11/10/2017 Time 1300 Vehicles 2 Casualties 1 Slight

E: 555668 N: 222740 First Road: U Road Type Single carriageway

Speed limit: 40 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Wet/Damp

Daylight Unknown

Special Conditions at Site None Carriageway Hazards: None

Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 2	Very Likely
2nd:	r p		
3rd:			
4th:			
5th:			
6th:			

VEHICLE 1 WAS TRAVELLING NORTH ON PARSONAGE ROAD TOWARDS STANSTED AIRPORT. VEHICLE 2 WAS EXITING A JUNCTION ONTO PARSONAGE ROAD AND HAS PULLED OUT IN FRONT OF VEHICLE 1. VEHICLE 1 HAS SWERVED TO AVOID, MAKING CONTACT WITH V2 AND THEN SPUN IN THE RO AD, FACING SOUTH. V2 HAS THEN LEFT THE SCENE.

Occurred on PARSONAGE ROAD NEAR JN WITH THREMHALL AVENUE

Vehicle Reference 1 Car Going ahead other

Vehicle movement from S to N No tow / articulation

On main carriageway No skidding, jack-knifing or overturning

Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:

Hit object in road None Off road: None

Did not leave carr Age of Driver 25 Female

Not hit and run

Breath test

Not requested

Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 25 Female Driver/rider Severity: Slight

Postcode Seatbelt

Vehicle Reference 2 Car Turning left

Vehicle movement from W to E No tow / articulation

On main carriageway No skidding, jack-knifing or overturning

Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:

Hit object in road None Off road: None

Did not leave carr Age of Driver Not traced

Hit and run Breath test Driver not contacted

Driver Postcode: VRM:

Registered to: Essex County Council 1

AccsMap - Accident Analysis System

Accidents between dates 01/10/2016 and 30/09/2021 (60) months Selection: Notes:

Selected using Manual Selection

 $20983907 \qquad 18/09/2020 \qquad \text{Time} \qquad 1215 \qquad \text{Vehicles} \qquad 2 \qquad \text{Casualties} \qquad 1 \qquad \qquad \text{Slight}$

E: 555548 N: 223161 First Road: U Road Type Dual carriageway

Speed limit: 60 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Dry

Daylight Fine without high winds

Special Conditions at Site None Carriageway Hazards: None

Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	1 1 7		
3rd:			
4th:			
5th:			
6th:			

I WENT TO AIRPORT TO STOP FOR 10MIN AND HAVE PAID -ú5. AFTER QUICK STOP THE VECHILE LET ME GO, I WAS DRIVING AROUND FIRST ROUNDABOUT AND GOT INTO SECOND ONE, THERE WAS 3 LINES MOTORWAY, I WAS IN THE MIDDLE ONE WAITING FOR MY EXIT, WHILE I WAS WAITING FOR MY EXIT, FROM BEHIND I GOT IN THE BACK OF MY VEHICLE

Occurred on COOPERS END ROUNDABOUT

Vehicle Reference 1 Car Going ahead other

Vehicle movement from N to S No tow / articulation

On main carriageway No skidding, jack-knifing or overturning

Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:

Hit object in road None Off road: None

Did not leave carr Age of Driver 34 Male

Not hit and run Breath test Driver not contacted

Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up

Vehicle movement from N to S No tow / articulation

On main carriageway No skidding, jack-knifing or overturning

Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:

Hit object in road None Off road: None

Did not leave carr Age of Driver 29 Female

Not hit and run

Breath test

Driver not contacted

Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 29 Female Driver/rider Severity: Slight

Postcode Seatbelt

Registered to: Essex County Council 2

AccsMap - Accident Analysis System

Accidents between dates

01/10/2016 and 30/09/2021

Selection:

(60) months

Notes:

Selected using Manual Selection

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	2	2
2-wheeled motor vehicles	0	0	0	0
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	0	2	2

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	2	2
Passenger	0	0	0	0
Motorcycle rider	0	0	0	0
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	0	2	2

Registered to: Essex County Council 3



Contact

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