Yardley Road Solar Farm **03/06/2025**

Reference number GB01T24A39

TRANSPORT STATEMENT AND OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN

YARDLEY ROAD SOLAR FARM

TRANSPORT STATEMENT

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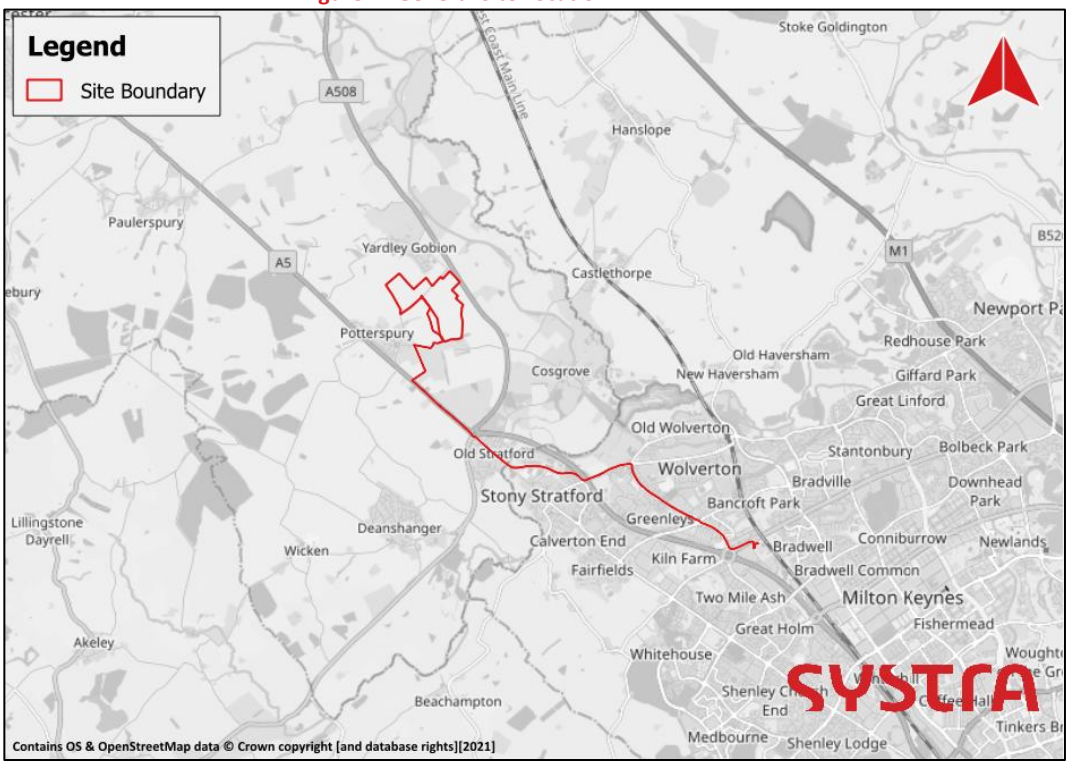
1. INTRODUCTION

1.1.1 SYSTRA LTD (SYSTRA) has been appointed by Atmos Ltd on behalf of Yardley Road Solar Farm Limited to prepare a Transport Statement (TS) in support of an application for planning permission for a Solar Farm at Potterspury in Northamptonshire. The Proposed Development is located northwest of Milton Keynes, on land either side of Yardley Road and the site lies within the South Northamptonshire Council (SNC) administrative area. The general site location in relation to Milton Keynes is indicated by **Figure 1**.

Figure 1. General Site Location



1.1.2 The purpose of this TS is to evaluate the existing transport infrastructure in the vicinity of the site and set out the key transportation impacts that may occur during the construction phase of the development and when the Proposed Development becomes operational.

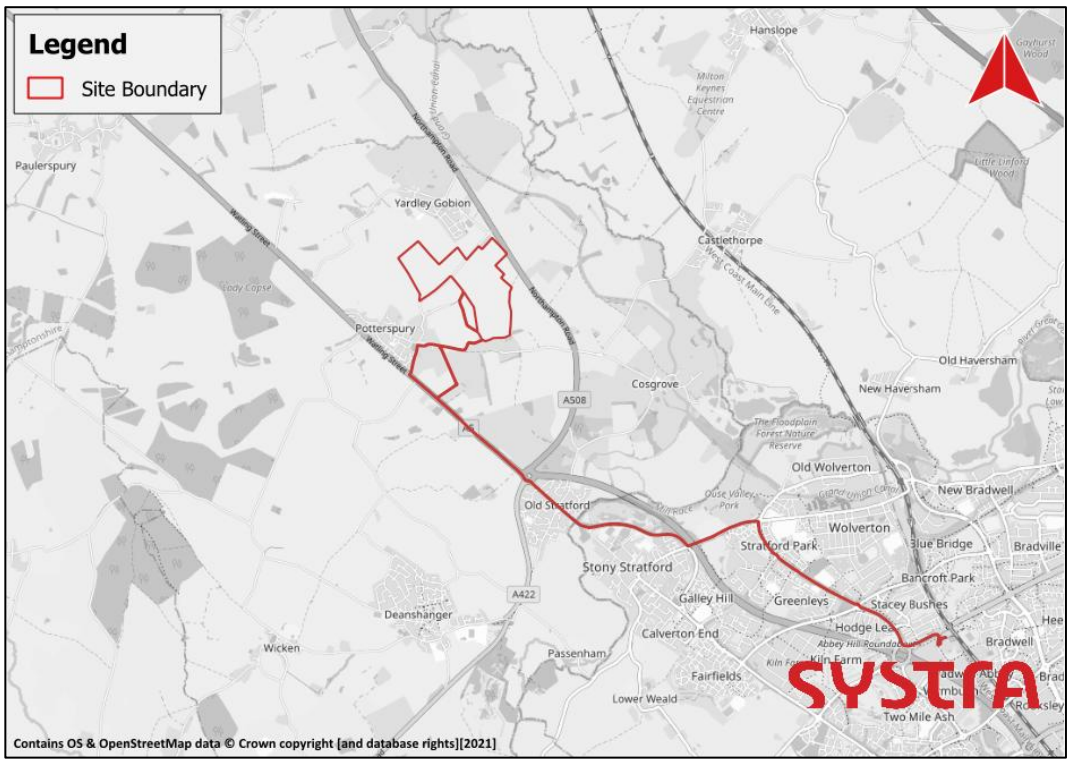
1.1.3 The report seeks to confirm that the Proposed Development at this location can be constructed with an acceptable transport impact and can be integrated into the surrounding network without detriment to existing users and local residents.

1.2 The Proposed Development

1.2.1 The Applicant is proposing to construct and operate a Solar PV Farm with associated infrastructure, with a generation capacity of up to 40MW. The Proposed Development would comprise: ground mounted solar panels and associated infrastructure, inverters, DNO Building, customer station, perimeter fencing, CCTV, grid connection infrastructure and access infrastructure. The grid connection route also forms part of the application.

1.2.2 The site location and red line boundary for the development proposals is indicated by **Figure 2.**

Figure 2. Site Location and Red Line Boundary



1.2.3 The proposed development is situated on land currently used for agricultural purposes, either side of Yardley Road between Potterspury and Northampton Road.

1.3 Policy and Guidance

1.3.1 The TS has been undertaken in accordance with the following local and national transportation policy documents:

- National Planning Policy Framework (NPPF), February 2025;
- West Northamptonshire Local Plan;
- South Northamptonshire Local Plan Part 2 2011-2029;
- Guidelines for Traffic Impact Assessment (1994) Institution of Highways and Transportation (IHT); and
- Guidelines for the Environmental Assessment of Traffic and Movement (2023), Institute of Environmental Management and Assessment (IEMA)

1.3.2 All new or improved transport infrastructure for the development will be designed in accordance with the standards provided in the Design Manual for Roads and Bridges (DMRB), local development design guidelines and to the agreement of SNC.

1.4 Report Structure

1.4.1 Following this introductory chapter, the TS report structure is as follows;

- Chapter 2 – Existing Transport Conditions;
- Chapter 3 – Proposed Development and Associated Travel Characteristics; and
- Chapter 4 – Framework Construction Stage Traffic Management Plan.
- Chapter 5 – Summary and Conclusions

2. EXISTING TRANSPORT CONDITIONS

2.1 Introduction

2.1.1 Due to the nature and location of the proposed development it is likely that the majority of trips to the site during the construction phase will be by vehicle. However, in line with policy, a review of accessibility for all travel modes – including walking, cycling, and public transport – has been undertaken as follows.

2.2 Sustainable Modes of Transport

Walking

2.2.1 Yardley Road, where the site takes its access from has no footway provision on either side of the carriageway. Additionally, there is no footway provision on the A508 Northampton Road (to the north of the site) or on Beech House Drive (to the south) so walking trips to the Proposed Development are not expected.

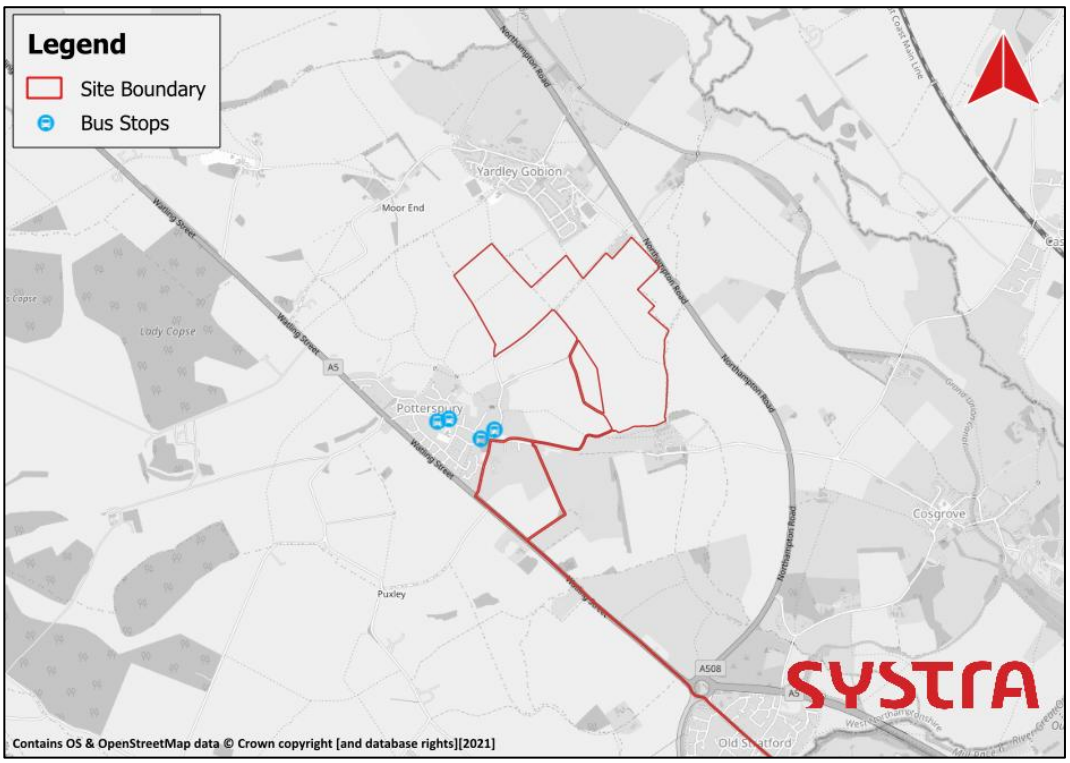
Cycling

2.2.2 There are no dedicated cycle routes/ cycle lanes within the vicinity of the site. All trips by bicycle would have to use the local road network, though it is noted that the nature of Yardley Road generally makes it conducive to cycling.

Public Transport

2.2.3 The nearest bus stops to the site are located on the High Street in Potterspury, a distance of approximately 800m away, and can be reached with an 11 minute walk from the site. **Figure 3** indicates the location of these bus stops in relation to the site. It is important to note that there are no footways between the site and the bus stops, so any walking trips would occur along Yardley Road, which is a wide, single track road.

Figure 3. Bus Stops in Vicinity of Site



2.2.4 Bus services operating from the closest stops are indicated by **Table 1.**

Table 1. Local Bus Services

SERVICE	ROUTE	KEY DESTINATIONS	FREQUENCY		
			Mon -Fri	Sat	Sun
X91	Silverstone – Milton Keynes	Silverstone – Towcester – Potterspury – Milton Keynes	120 mins	120 mins	No service

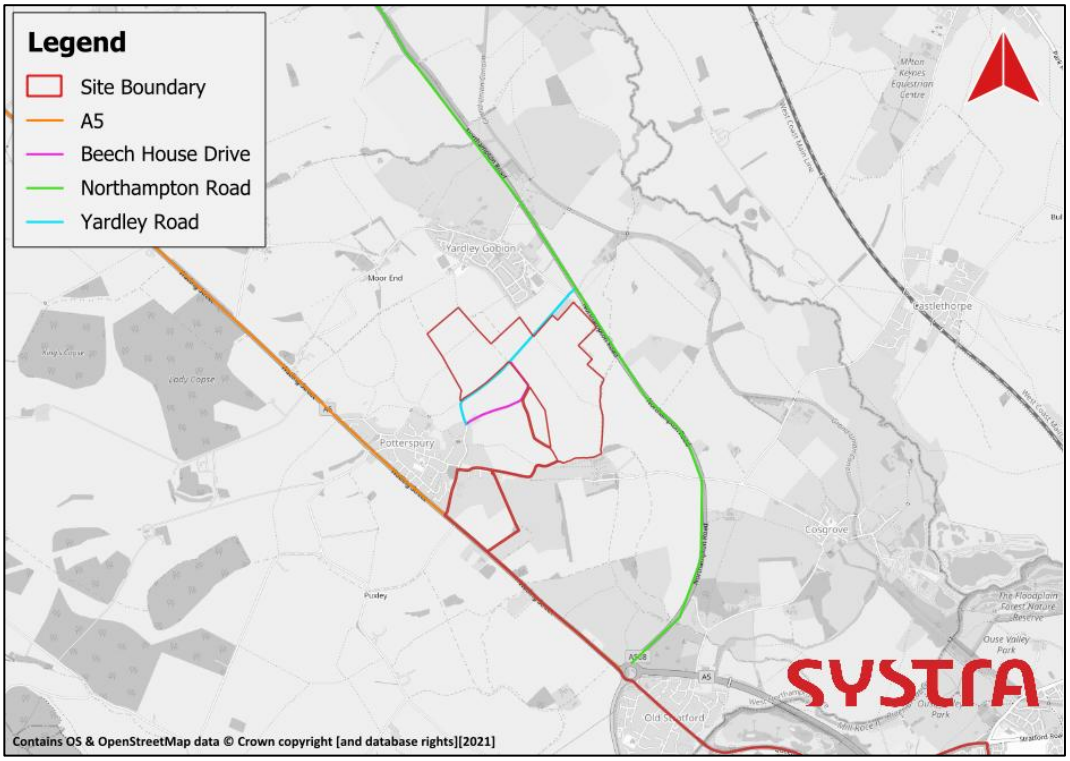
2.2.5 Bus service X91 is the only one that services the site. It provides a bi-hourly service from Monday to Saturday between Silverstone and Milton Keynes.

2.2.6 While the development site is potentially accessible by public transport, the nature and location of the proposed development make it likely that the majority of trips to the site during the construction phase will be made by vehicle

2.3 Surrounding Road Network

2.3.1 The Application Site is located to the north west of Milton Keynes and has excellent connections to the local road network. The key road links in the area are indicated by **Figure 4.**

Figure 4. Local Road Network



Yardley Road

2.3.2 Yardley Road runs through the centre of the site with sections of the solar farm on both the north and south sides of the carriageway. It runs between the A508 Northampton Road at its northern end to the A5 Watling Street at its southern end.

2.3.3 Yardley Road is a wide single track road with an approximate width of 5m and is subject to the national speed limit. The road provides a local distributor road function and is suitable for HGVs and two-way operation. There is no footway provision or streetlighting on either side of the carriageway, but there are grass verges on both sides of the road.

2.3.4 The general characteristics of Yardley Road are demonstrated by **Figure 5** below.

Figure 5. General Characteristics of Yardley Road

Source: Google Earth

2.3.5 Yardley Road connects to the A508 Northampton Road by means of a priority junction, which includes a ghost island right turning facility from the main road and a flared approach to the junction on Yardley Road to allow left and right-turning vehicles to sit side by side at the give-way line. The junction is suitable for accommodating HGV movements. The existing junction layout is indicated by **Figure 6** below.

Figure 6. Yardley Road / A508 Junction

2.3.6 At the southern end of Yardley Road, the road becomes Church End and then Poundfield Road, extending through the village of Potterspury to meet the A5. This section of the road serves a local residential area, with Poundfield Road featuring some on-street parking and a footway on one side. This part of the route is less conducive to HGV movements, with more receptors present compared to the northern end. Poundfield Road and Church End are subject to a 30 mph speed limit, while Yardley Road has a 60 mph limit. The junction with the A5 is a priority junction, featuring a ghost island arrangement with a right-turning refuge on the A5. The general characteristics of the junction are shown in **Figure 7** below

Figure 7. A5 / Poundfield Road Junction

Beech House Drive

2.3.7 Beech House Drive lies to the southwest of the proposed development site and provides a road link in an east / west axis. Beech House Drive intersects with Yardley Road at two points and acts as a loop to get back to Potterspury town centre.

2.3.8 Beech House Drive is a single track road with appropriate passing places throughout the course of its length. The width of the carriageway is around 3 to 3.5m and parts of the road are private.

2.3.9 The general characteristics of Beech House Road are demonstrated by **Figure 8** below.

Figure 8. General Characteristics of the Beech House Drive

Source: Google Earth

A508 Northampton Road

2.3.10 The A508 Northampton Road runs in a north-south direction, extending from Northampton in the north to the Old Stratford Roundabout just outside Milton Keynes in the south. It is a two-way single carriageway road with a speed limit of 60 mph

2.3.11 The general characteristics of Northampton Road are demonstrated by **Figure 9** below.

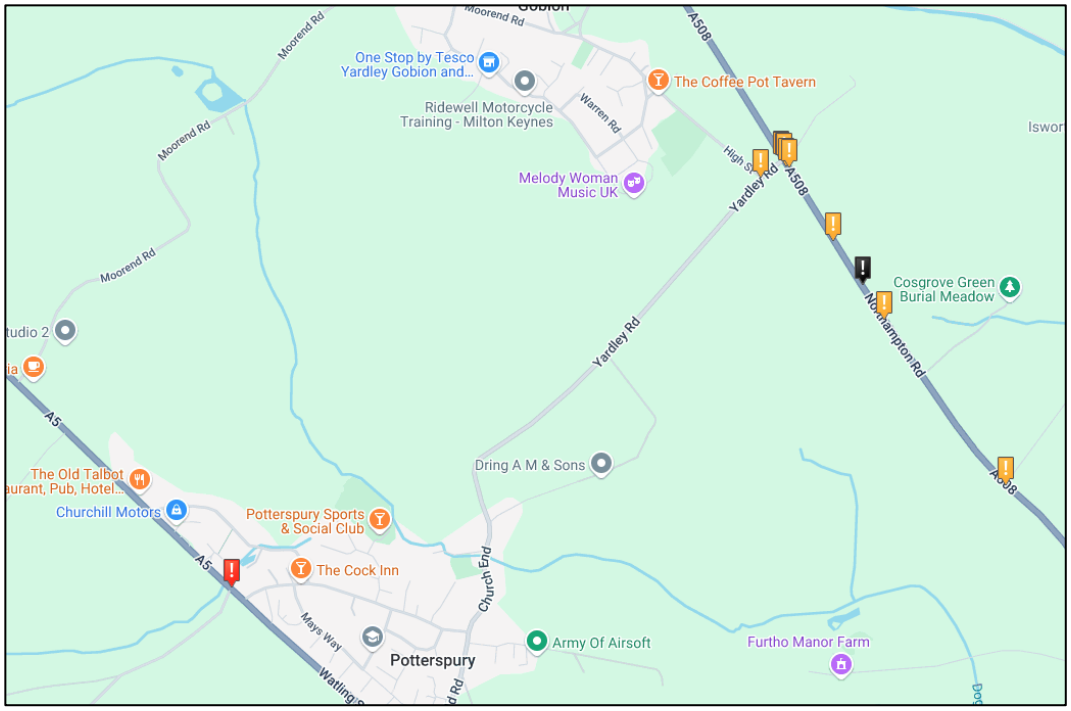
Figure 9. General Characteristics of Northampton Road

Source: Google Earth

2.4 Accident Statistics

2.4.1 The most recent available data from the CrashMap (www.crashmap.co.uk) website has been used to establish the number of road traffic accidents that have occurred in the past five years (2019-2023) in the vicinity of the site. These are indicated by **Figure 10**.

Figure 10. Road Accident Locations



Source: www.crashmap.co.uk

2.4.2 There have been 11 accidents on the A5, Yardley Road and Northampton Road surrounding the site. These are summarised in **Table 2**.

Table 2. Summary of Accident Statistics

LOCATION	SLIGHT	SERIOUS	FATAL	COMMENT
A5	-	1	-	There has been one serious accident on the A5 within the study area.
A508 Northampton Road	6	2	1	There have been two serious accidents and one fatal accident on Northampton Road in the last five years. There has also been six accidents at the Northampton Road/ Yardley Road priority junction.
Yardley Road	1	-	-	One slight accident on Yardley Road in 2023.

2.4.3 Based on the summary above, there has been only one serious accident on the A5, and no reported accidents on Yardley Road, so there are no specific concerns for these routes. There have been several (mostly minor) accidents on Northampton Road, which is typical for busy 'A' roads of this nature. However, there have been multiple accidents at the Yardley Road junction. Therefore, it is proposed that the Construction Traffic Management Plan (CTMP) addresses this issue by including measures to manage construction traffic effectively and ensure safety at the junction during the construction phase

2.5 Accessibility and Baseline Summary

2.5.1 Due to the nature of the proposed development, it is likely that the majority of trips to the site will be by vehicle over the temporary construction period. No permanent staff will be based at the site once operational so these trips are concerned with the construction period only.

2.5.2 The site will generally be accessed via the A508 Northampton Road from the north, turning onto Yardley Road. Both routes are of good standard, with a 60 mph speed limit, and the A508 offers good access to the wider strategic road network

2.5.3 Access to the site will be taken from Yardley Road via new and existing accesses including Beech House Drive.

3. PROPOSED DEVELOPMENT AND TRAVEL CHARACTERISTICS

3.1 Proposed Development

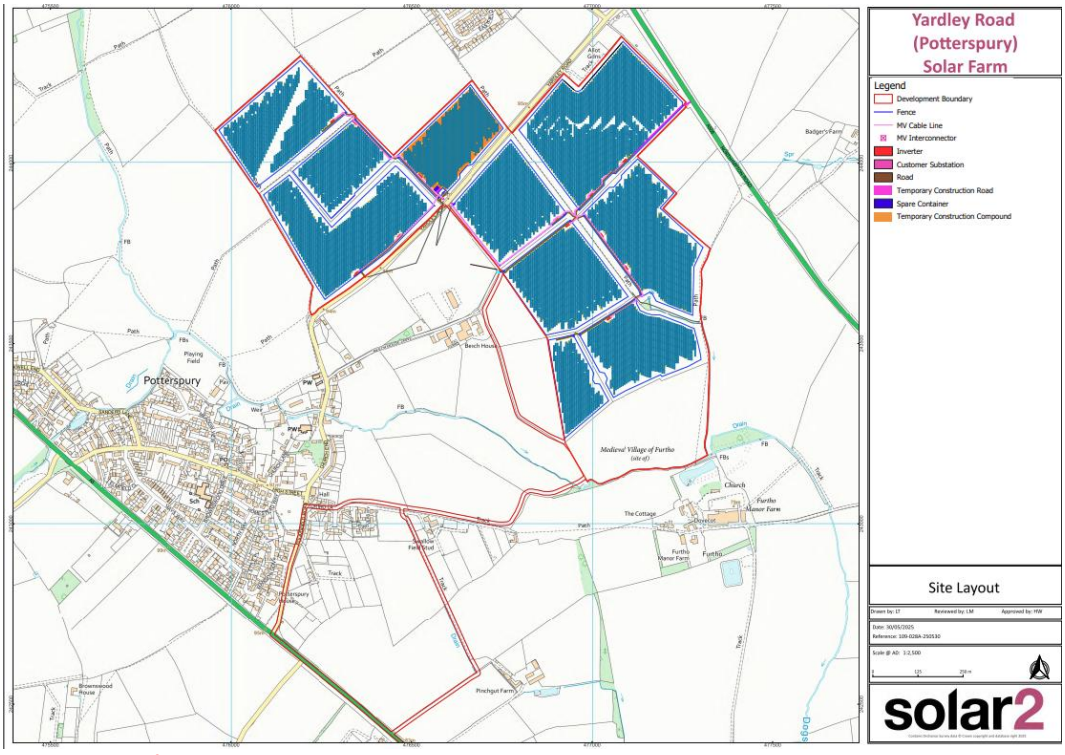
3.1.1 The proposed development contains the following elements:

- Solar array ground mounted single-axis tracker solar panels
- Customer station
- Inverters
- DNO building
- Security fence
- Transmission infrastructure
- CCTV
- Access tracks
- Grid Connection Route and associated works

3.2 Site Layout

3.2.1 The layout for the proposed development is indicated by **Figure 11** below, with the full drawing included at a larger scale within **Appendix A.**

Figure 11. Site Layout



Source: Atmos/ Solar2

3.3 Site Access

3.3.1 Access to the site will be taken from three locations with two new priority junctions on Yardley Road and one priority junction from Beech House Drive. The location of the access junctions is indicated by **Figure 12** below. There will also be "construction only" access from the Northampton Road which is indicated by **Figure 13**.

3.3.2 The proposed junctions have been carefully located in order to maximise visibility splay requirements. Preliminary designs for the access junctions are contained within **Appendix B**. The junctions have been designed to accommodate HGV movements and visibility splays of 2.4m by 215m are indicated for the Yardley Road junctions (commensurate with a 60mph design speed) and 2.4m by 70m for the access on Beech House Drive to reflect a 30mph design speed on the minor road in keeping with the characteristics experienced at this location.

Figure 12. Site Access Strategy (Permanent Junctions)

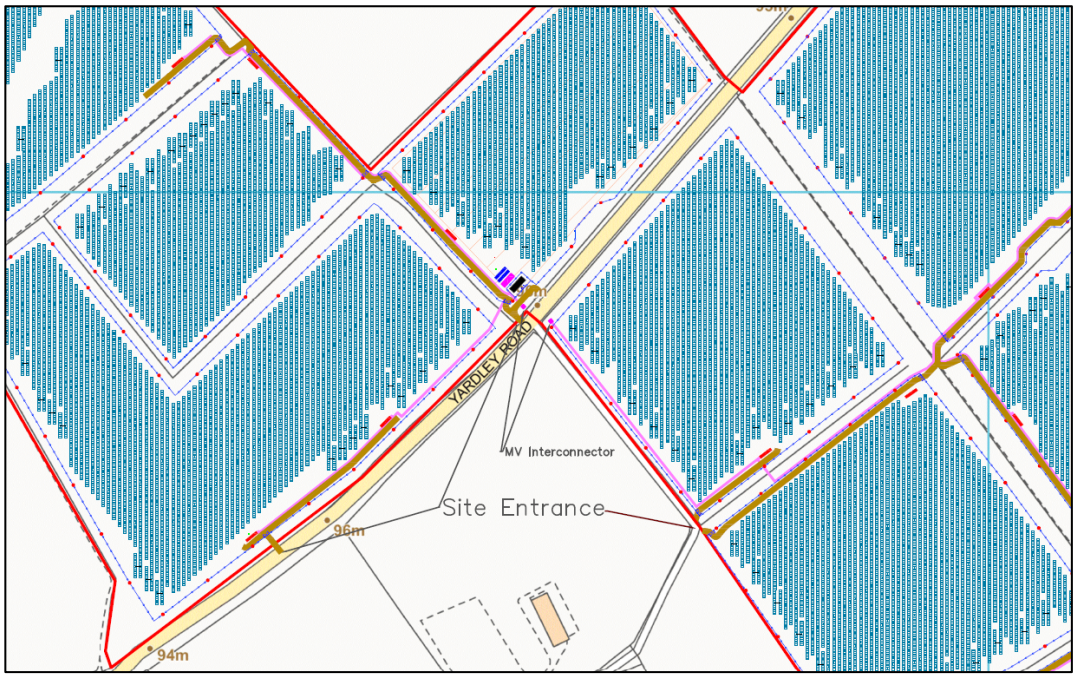
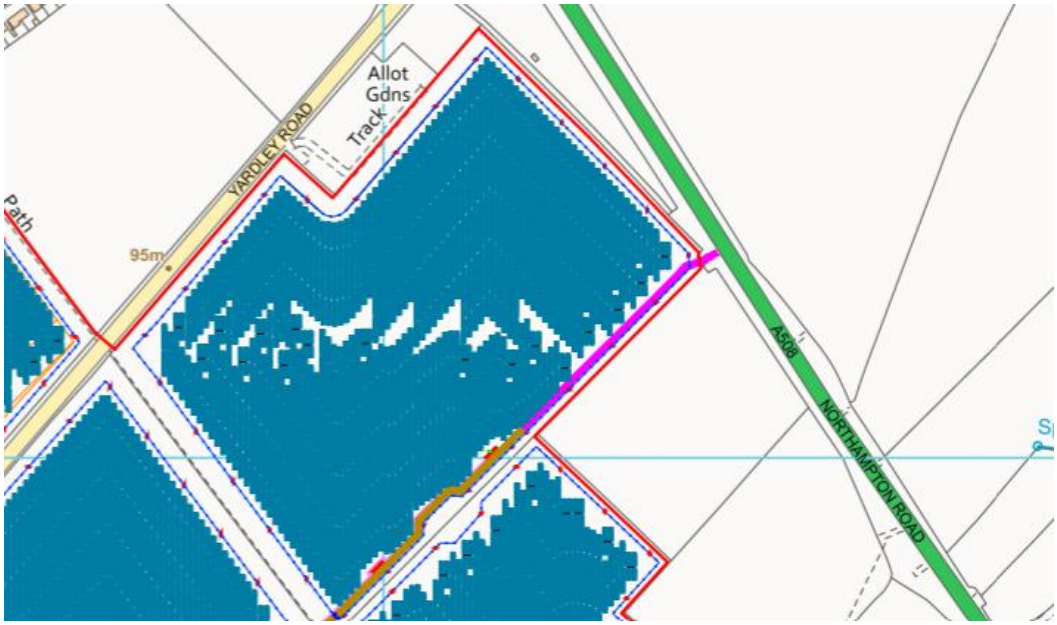


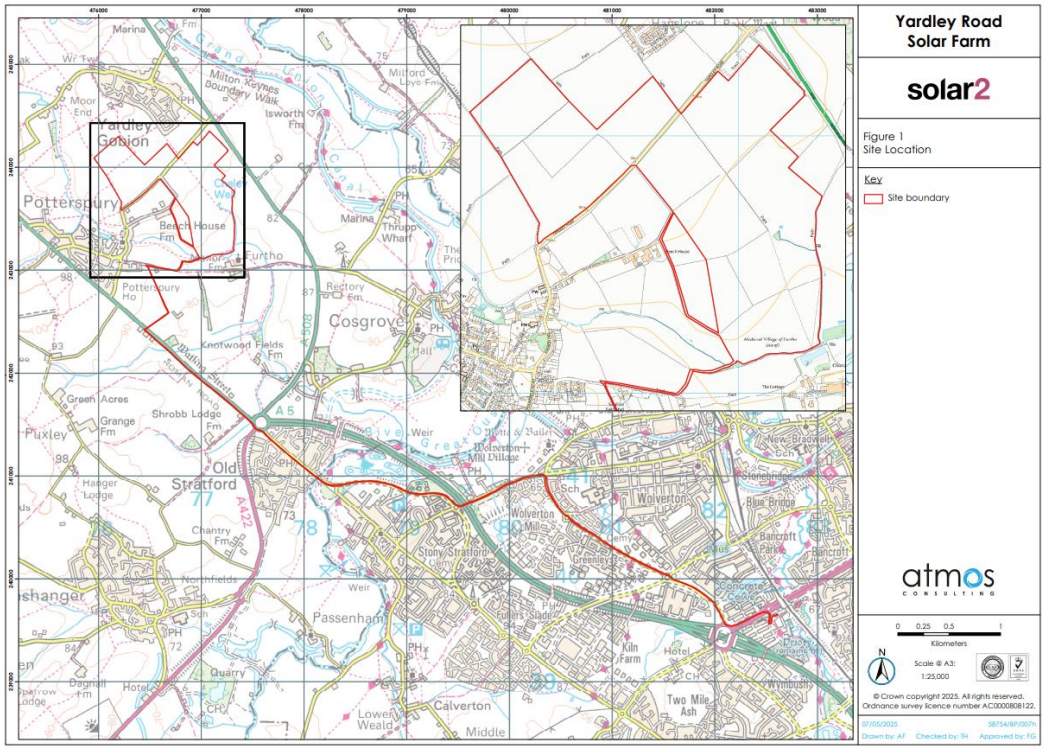
Figure 13. Site Access Strategy (Temporary Construction Access)



3.4 Grid Connection Route

3.4.1 In addition to the onsite works, there is a requirement to connect the proposed solar farm into the electricity grid. The nearest connection point lies to the southeast of the site boundary just to the south of the A422 within Milton Keynes. The route generally follows the public road network although there is an initial off-line section south from the site to connect with the A5 Watling Street. The route to the grid has been identified and is indicated by **Figure 14** below.

Figure 14. Grid Connection Route



3.5 Construction Stage

3.5.1 Due to the nature of the Proposed Development being largely autonomous in nature, the vehicle trip generation is expected to be negligible at the operational stage. Furthermore, it is not possible to obtain appropriate data regarding trip generation from the TRICS database for developments of this type.

3.5.2 Taking the above into account, any concentration of vehicle trips to the Proposed Development will be during the construction phase of the development, and as such, a first principles approach has been applied using forecasted data provided by the Applicant to quantify the level of vehicle trip generation during the construction phase.

Site Working Hours

3.5.3 Work hours are expected to be between:

- 07:00 to 19:00 on weekdays;
- 07:00 to 16:00 on Saturdays;
- No work will occur on a Sunday or Bank Holidays.

Construction Programme

3.5.4 The construction phase is anticipated to take place over a 12-month period, with construction anticipated to start in January 2026.

Traffic Generation

3.5.5 The construction phase of the Proposed Development is anticipated to last approximately 12 months. It is anticipated that there will be ~882 one way HGV movements associated with the construction phase over the 12-month period.

3.5.6 A breakdown of the HGV movements throughout the 12-month construction period is shown in **Table 3** below.

Table 3. HGV Movements

HGV type							
	Mega trailer 40T	Rigid Lorry 26T	AIL (Artic) 44T	10 m3 conc. Mixer	28 Tons dump truck	flat bed 16m	Cranes up to 200T
Number of one way delivery	13	342	2	121	387	10	7
Total one-way deliveries	882						
Daily Average one-way deliveries	8						
Daily Peak one-way deliveries	12						
Total two-way deliveries	1764						
Daily Average two-way deliveries	16						
Daily Peak two-way deliveries	24						

3.5.7 Staff will be expected to arrive on site by 07:00, and will typically depart between 15:00 and 18:00. The arrival and departure of workers is unlikely to coincide with 'traditional' network AM and PM peak periods. Given the expected level of traffic generation, it is not anticipated that the development will create additional congestion or delay on the strategic or local road network.

3.5.8 Overall, the traffic volumes associated with the Proposed Development are expected to be modest and are not expected to have any significant impacts on the road links and junctions within the study area.

3.5.9 The key aspect is managing construction traffic, particularly HGVs, to ensure their safe passage along the local road network to the site.

Construction Compound

3.5.10 A temporary construction compound would be located close to the site access point to facilitate the construction of the proposed development. The compound provides sufficient space for:

- Staff welfare facilities;
- Storage of site vehicles and materials;
- The safe loading and unloading of materials; and
- Staff vehicle parking.

Route for Construction Traffic

3.5.11 Given the location of the development, it is expected that construction traffic will use several strategic routes to reach the general area. To access the site, it is proposed that HGVs will follow a designated route via the A508 and then Yardley Road. Access for HGVs from the Potterspury end of Yardley Road will be prohibited to minimize construction traffic impacts in the village

3.6 Traffic Impact

3.6.1 Considering the level of trip generation, the quality of the road links, and the distribution of traffic, it can be concluded that the construction phase of the proposed development will not result in a significant increase in vehicle trips. Therefore, the impact on the surrounding road network is expected to be negligible, and the effect on existing road users will be minimal and insignificant.

3.6.2 There will be some localised delay in relation to the grid connection works along the public road. The vehicle numbers associated with such works are not expected to be significant but the works may require some temporary traffic control measures in order to deliver. It is noted that these works will not be delivered by the applicant but will instead be delivered by a utility provider under statutory powers.

3.7 Operational Phase

3.7.1 During operation, the proposed development will be largely autonomous and does not require on-site employees.

3.7.2 There will be a small number of regular trips to site, comprising of deliveries, regular maintenance visits and associated parts deliveries. There will be no permanent staff on site once operational.

3.7.3 The operational stage of the development will not give rise to a significant number of additional vehicle trips. As such, the impact on traffic levels on the road network surrounding the site will be negligible.

3.8 Decommissioning Phase

3.8.1 Planning permission is being sought for a 40-year operational period, at which point the development would be decommissioned.

3.8.2 In terms of traffic generation and on-site activity, the decommission stage is expected to be similar to the construction stage. It is usual for a decommissioning CTMP to be provided ahead of this operation.

4. FRAMEWORK CONSTRUCTION STAGE TRAFFIC MANAGEMENT PLAN (CTMP)

4.1.1 The following section sets out a framework for the CTMP that would be put in place to support the construction of the proposed Yardley Road Solar development. The final CTMP (normally submitted when the contractor has been appointed and in advance of construction) will identify measures to mitigate the impact of vehicles during the construction period and will build on this framework plan.

4.1.2 The CTMP will confirm the programme of works, the agreed construction routes to Site and details of a Site Liaison Officer who would have responsibilities for managing traffic and transport impacts and associated environmental effects. The CTMP will also identify measures to reduce and manage construction staff travel by private car, particularly single occupancy trips.

4.2 Measures to Minimise and Mitigate Construction Traffic Impacts

4.2.1 There are a number of traffic management measures which can be implemented to reduce the impact of HGVs. These measures are described below.

Minimise the Volume of Imported and Exported Materials

4.2.2 In order to minimise the volume of imported material it is anticipated that a good proportion of materials (topsoil etc) would be sourced/re-used from within the boundaries of the Proposed Development site. It is not anticipated that there will be any significant quantities of material being removed from site.

Delivery Control

4.2.3 The appointed contractor for the Proposed Development will be required to plan and manage deliveries and collections from the site to minimise the impact on the surrounding road network and to minimise the impact on the local community.

4.2.4 The contractor will ensure the following measures during the construction period:

- As far as possible, delivery of materials will not be within the morning and evening road network peaks;
- The number of delivery trips will be minimised through a combination of consolidated ordering, rationalising suppliers and consolidated deliveries; and
- On-site waste will be minimised through recycling and re-use.

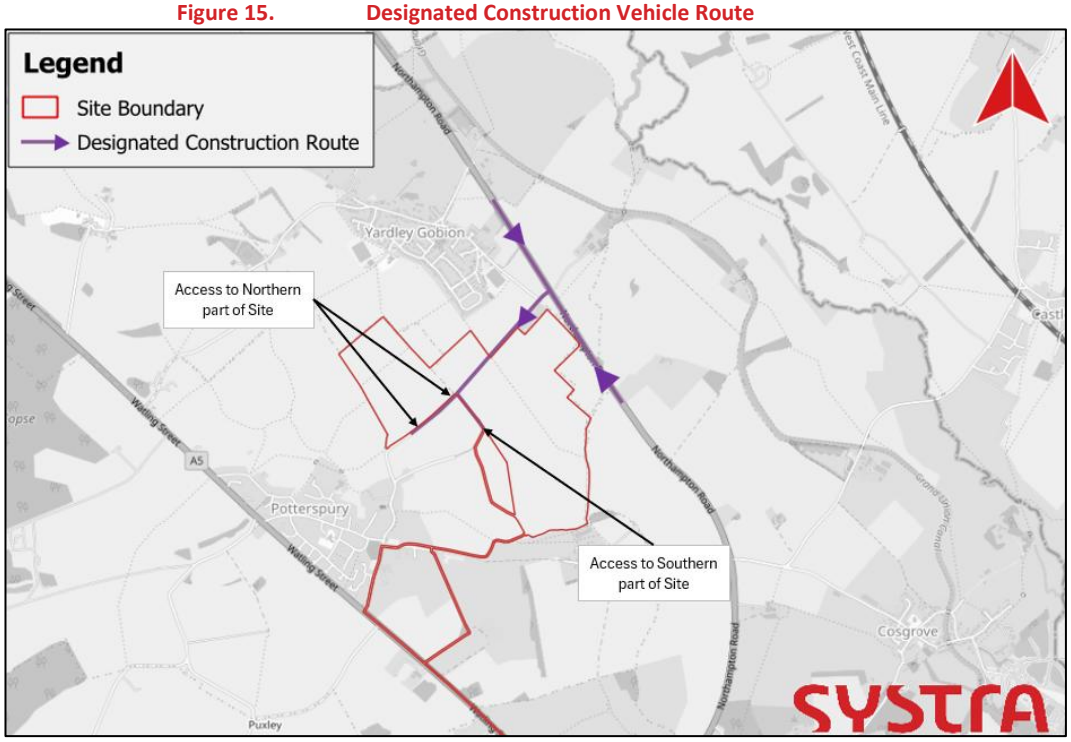
Dust and Debris

4.2.5 In order to reduce dust and debris being deposited onto the local road network in the vicinity of the Proposed Development access point, a wheel cleaning facility will be installed. A road sweeper can also be deployed if needed to ensure that the adjacent public road is kept free of dust and dirt.

4.3 Designated Construction Vehicle Routes To Site

4.3.1 Construction traffic will generally arrive from the A508, from either the north or the south, and turn on to Yardley Road. Access to the site will be taken from either of the two priority junctions on Yardley Road which will cover the northern part of the site. Access to the southern part of the site will be taken from the new priority junction on Beech House Drive. No HGV access will be permitted from the south end of Yardley Road through the village of Potterspury but limited access will be taken directly from the A508 to the north of the site during the construction stage. The designated construction vehicle route is shown in **Figure 15** below.

Figure 15. Designated Construction Vehicle Route



4.4 Staff Induction & Code of Conduct

4.4.1 All site staff will be informed about traffic management arrangements and procedures via site induction packs.

4.4.2 Transportation of materials to and from the site will be conducted by HGV vehicles operated by drivers with an in-date Driver Certificate of Professional Competence (CPC) qualification.

4.4.3 In addition to the Driver CPC qualification, regular 'in-house' coaching will be provided to ensure drivers maintain best practice when operating HGVs.

4.4.4 Drivers will be fully inducted and enrolled into a code of conduct which outlines how driving duties should be undertaken. The driver's code of conduct should include guidance on the following:

- Required license categories;

- General vehicle operation and highway code;
- Drivers working hours / fatigue management;
- Breakdowns / RTC / Emergencies;
- Use of electronic devices;
- Drug and Alcohol policy; and
- Behavioural expectations.

4.4.5 The items listed above are not exhaustive and are only indicative of the elements that should be included in the driver's code of conduct document.

4.5 Sustainability

4.5.1 The appointed contractor will plan and execute the construction of the Proposed Development with a demonstrably high regard to sustainability. In particular the following objectives will be put in place:

- Minimisation of vehicle movements to / from the site;
- Promotion of shared transport arrangements for site operatives;
- Thorough pre-planning of operations on-site to optimise the redistribution of earthworks materials together with minimisation of haul distances;
- Reduction in the amount of aggregates used on-site by means of alternative construction techniques;
- Application of a reduce-reuse-recycle philosophy to all waste producing activities; and
- Conforming to construction / building codes of practice in relation to sustainability objectives and procedures.

4.6 Contracts And Emergency Procedures

4.6.1 The main contractor will be responsible for creating a final list of stakeholder contacts and ensuring this list is kept up to date on an on-going basis. Stakeholder contacts would include the roads authority, emergency services, and local businesses and residents.

4.6.2 The principal contractor will be responsible for preparing an Emergency Plan for the site. The Emergency Plan will contain information and details of procedures in the event of emergencies. Construction staff would be informed of the Plan and information provided in relation to the location of the nearest hospital, fire assembly points and inclement weather procedures.

4.7 Implementation Of The CTMP

4.7.1 The implementation of the CTMP will be the responsibility of the appointed principal contractor. Further evolution of the CTMP may be required during the construction period itself.

4.7.2 The main contractor may employ a number of sub-contractors on the Site, and all will fall under the umbrella of the CTMP and will have an obligation to adhere to the CTMP.

4.7.3 A Site Liaison Officer will require to be identified for the project who will be the key point of contact for the CTMP.