



# Frodsham Solar

## Outline Construction Traffic Management Plan

**December 2025**



PINS Ref: EN010153

Document Ref: EN010153/DR/7.4

Planning Act 2008; and Infrastructure Planning (Applications:  
Prescribed Forms and Procedure) Regulations Regulation 5(2)(g)

Revision P03

# Document Control

Revision	Date	Prepared By	Reviewed / Approved By
P01	May 2025	D Carter	A Russell
P02	November 2025	D Carter	A Russell
P03	December 2025	D Carter	A Russell

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## 1.0 INTRODUCTION

### 1.1 Purpose of this Report

- 1.1.1 This document provides the outline Construction Traffic Management Plan (oCTMP) for the construction, operation and decommissioning of the Frodsham Solar project ('the Proposed Development'). This document has been prepared on behalf of Frodsham Solar Limited ('the Applicant') as part of the information that accompanies the Development Consent Order (DCO) for the Proposed Development. It demonstrates how the mitigation measures identified in the Environmental Impact Assessment (EIA) process will be implemented.
- 1.1.2 Post-consent, this outline plan will be developed into a detailed plan which must be in substantial accordance with the outline, and the Proposed Development must be constructed in accordance with that detailed plan. This is secured via a Requirement in Schedule 2 of the draft DCO.
- 1.1.3 This oCTMP sets out the overall approach to how the movement of construction traffic, including Site personnel movements, will be safely managed and controlled by the Applicant and any sub-contractors working on their behalf.

### 1.2 Other Relevant Documents

- 1.2.1 The DCO Application is accompanied by a series of complementary management plans, documents and strategies that set out how the Applicant will ensure that the Proposed Development will be constructed, operated and decommissioned in accordance with the overall design vision and project design principles set out within the **Design Approach Document [EN010153/DR/5.8]**. This outline CTMP should be read in conjunction with this suite of management plans, which are listed in **Table 1.1**.

**Table 1.1 – Site-Specific Management Plans to support the DCO Application**

Document	Purpose	Document Reference
Outline Construction Traffic Management Plan (oCTMP)	Sets out how construction traffic and staff vehicles will be managed during construction	Document Reference EN010153/DR/7.4
Outline Construction Environmental Management Plan (oCEMP)	Sets out how negative environmental impacts will be minimised during construction	Document Reference EN010153/DR/7.5
Outline Operational Environmental Management Plan (oOEMP)	Sets out how negative environmental impacts will be minimised during operation	Document Reference EN010153/DR/7.6
Outline Decommissioning Environmental Management Plan (oDEMP)	Sets out how negative environmental impacts will be minimised during decommissioning	Document Reference EN010153/DR/7.7
Outline Battery Safety Management Plan	Sets out management processes and emergency procedures for safe operation of the BESS facility	Document Reference EN010153/DR/7.8
Outline Public Rights of Way (PRoW) Management Plan	This document. Sets out how PRoWs would be managed to ensure they remain safe to use, and disruption to users of the PRoW is minimised.	Document Reference EN010153/DR/7.9
Outline Soils Management Plan	Sets out the overall approach to managing soil resources affected by the Proposed Development	Document Reference EN010153/DR/7.10
Outline Landscape and Ecology Management Plan (oLEMP)	Sets out the management of the landscape and ecological features of the Proposed Development	Document Reference EN010153/DR/7.13

## 1.3 Structure of the Construction Traffic Management Plan

### 1.3.1 The remainder of this outline CTMP comprises:

- i) Section 2.0 provides a summary of the Proposed Development, the construction period, and the project team Roles and Responsibilities with regard to construction traffic management.
- ii) Section 3.0 sets out the proposed construction programme and phasing, as well as the forecast construction staff numbers and construction compound details.
- iii) Section 4.0 describes the proposed access route for construction traffic, sets out the forecast construction traffic generation and describes the proposed staff parking and sustainable travel provisions.

- iv) Section 5.0 sets out the procedures to be implemented to manage vehicular access to and from, and circulation within, the Proposed Development Site.
- v) Section 6.0 sets out the procedures to be implemented to mitigate the environmental impacts of construction traffic.
- vi) Section 7.0 sets out the proposed methodology for mitigating the cumulative impact of construction traffic resulting from other proposed major infrastructure schemes.
- vii) Section 8.0 provides details of the proposed procedures for the monitoring and review of the CTMP.



## 2.0 PROPOSED DEVELOPMENT

### 2.1 Scheme Description

- 2.1.1 The Proposed Development comprises a new solar energy generating station and an associated on-site BESS, including the associated development for connection to the local electricity distribution network, as well as a private wire electricity connection that would enable local businesses to utilise the renewable energy generated by the Proposed Development.
- 2.1.2 A full description of the Proposed Development and a detailed description of the design and environmental mitigation is provided in **ES Volume 1 Chapter 2 The Proposed Development [EN010153/DR/6.1]**.

### 2.2 Order Limits

- 2.2.1 The Order Limits cover approximately 331 hectares of land within Frodsham Marshes, as illustrated on the **Site Location plan [EN010153/DR/2.1]**. The Order Limits comprise a series of distinct sub-areas, as follows:
- i) Solar Array Development Area ('SADA')
  - ii) Main Site Access
  - iii) Non-Breeding Bird Mitigation Area ('NBBMA')
  - iv) SPEN Substation Connection
  - v) SPEN Substation Access.
- 2.2.2 The SADA is the principal component of the Proposed Development. It would be located at the eastern end of Frodsham Marshes, between the Mersey Estuary and the M56. The northern boundary of the SADA is formed by the River Weaver, and the north-western boundary by the Manchester Ship Canal, with the Mersey Estuary lying beyond. The western boundary of the SADA is formed by two of the former Manchester Ship Canal Dredging Deposit Cells (Cell 3 and Cell 6). The southern boundary of the SADA is formed by agricultural fields and the M56 motorway.



- 2.2.3 The Main Site Access runs from the west, leaving the public highway via Pool Lane roundabout and turning onto Grinsome Road (a private road). Vehicles would travel east for approximately 1.5km, turning north at Grinsome Road Roundabout, onto Road 1 of Protos. Vehicles would then turn east along Marsh Lane which leads to Frodsham Wind Farm. The Frodsham Wind Farm access tracks provide access to the SADA.
- 2.2.4 The NBBMA is located on Cell 3 of the Manchester Ship Canal Dredging Deposit Cells and adjacent areas of ponds and grassland. It is immediately west of the SADA.
- 2.2.5 The SPEN Substation Connection would run from the SADA to the existing Frodsham National Grid Substation. The connection would cross over the River Weaver.
- 2.2.6 The SPEN Substation Access follows an existing dedicated private access road running north from the A56 to the substation complex.

## 2.3 Project Team Roles and Responsibilities

- 2.3.1 **Table 2.1** outlines the project team roles which will have key responsibilities in supporting the implementation of this outline CTMP and progressing a more detailed plan prior to the construction phase of the Proposed Development.
- 2.3.2 The roles outline below should also be involved in the development of future iterations of this Management Plan.

**Table 2.2 – Roles and Responsibilities**

Role	Responsibility
The Applicant	Overall compliance with the DCO
Construction Project Manager	Overall responsibility for ensuring all elements of the DCO, CTMP and all environmental and other requirements are implemented and appropriately resourced, managed, reviewed and reported.
Site Manager	Overall responsibility for activity on site with a presence on site full time. Also responsible for the safety of site staff and local communities
Environmental Manager	Responsible for the overall management of environmental aspects on site, ensuring that environmental legislation and best practices are complied with, and that any environmental mitigation and monitoring measures are implemented.
Community Liaison Officer	Appointed to lead discussions with local communities, and also act as the primary point of contact for any queries or complaints

## **3.0 CONSTRUCTION OVERVIEW**

### **3.1 Construction Programme**

3.1.1 The construction of the Proposed Development is anticipated to commence in early 2028. It is anticipated that it would take approximately 30 months to complete construction. It is therefore expected that the Proposed Development would not be fully operational until mid-2029, with construction of the private wire connections being completed in mid-2030.

3.1.2 Construction activities would take place 5.5 days per week (Monday – Saturday), during the following hours:

- i) Monday to Friday 08:00-18:00;
- ii) Saturday 08:00-13:00; and
- iii) No construction would occur on Sundays and Bank Holidays.

3.1.3 Whilst no local highway capacity concerns are anticipated, to minimise disruption construction traffic will be sought to occur outside of standard highway peak hours of 07:30-08:30 and 16:30-17:30 Monday to Friday. There may be instances where operations are required outside the above times e.g. delivery of abnormal loads, fit out of internal equipment within the substations, other quiet non-intrusive works such as electrical testing, commissioning and inspection. However, no HGV movements would occur outside the above hours unless such work is associated with an emergency or with prior written consent of Local Highway Authority (LHA), Cheshire West and Chester Council (CWaCC).

### **3.2 Construction Phasing**

3.2.1 The construction of the Proposed Development is likely to be split into different work packages to enable the development to be delivered in the most efficient manner. The solar PV array is likely to be split into two main sub-projects – the western array (west of Brook Furlong) and the eastern array (east of Brook Furlong). There are also likely to be separate work packages

for the Frodsham Solar Substation and BESS, the 132kV connection to the SPEN Frodsham Substation and the 132kV Private Wire Connection, and the creation of Skylark Mitigation Plots and a Non Breeding Bird Mitigation Area. It is assumed construction would proceed in line with the indicative resourcing schedule included in **Appendix B** of the **Transport Assessment (TA) [EN010153/DR/7.3]**. The peak period for construction traffic is forecast to occur between months 2 and 19 of the construction programme, peaking in month 12.

3.2.2 The principal work packages would comprise the following:

- i) Enabling Works
- ii) Construction of Western Array
- iii) Construction of Eastern Array
- iv) Construction of the BESS and Frodsham Solar Substation
- v) Construction of the 132kV SPEN Substation Grid Connection
- vi) Construction of the 132kV Private Wire Grid Connection

3.2.3 A full description of the development proposals is contained in **ES Vol 1 Chapter 2: Proposed Development [EN010153/DR/6.1]**.

### 3.3 Construction Staff

3.3.1 It is anticipated that the average number of workers on Site across the Construction Phase would be 110 per day, with a peak workforce of approximately 243 staff per weekday in month 12. The workforce would be distributed across the Site with work happening in parallel across the sub-projects / packages described above.

### 3.4 Construction Compounds

3.4.1 There would be two main construction compounds and four smaller secondary compounds to facilitate the construction works. Two additional compounds would be provided to the north of the River Weaver for the purposes of the 132kV Frodsham SPEN Substation works. The indicative

compound locations are illustrated in the Indicative Construction Site Layout plan included as **Volume 3 Figure 2-1 of the ES [EN010153/DR/6.3]**.

- 3.4.2 The main compounds would include the main site offices, site security, employee parking and the main site welfare, together with a fenced laydown area for storing plant, material, equipment and components. Dedicated waste storage, fuel and oil chemical stores, concrete washout areas and refuelling stations would be provided within the main compounds.
- 3.4.3 CDM Regulations 2015 also require suitable and sufficient welfare facilities, with arrangements for maintaining them in a functional, clean, and tidy condition. Temporary buildings, potentially double stacked to reduce footprint, would therefore be installed to provide:
- i) Site office space
  - ii) Toilets and showers
  - iii) Canteen facilities
  - iv) Drying room
  - v) Storage and security offices
- 3.4.4 The smaller satellite construction compounds would include areas for storing plant, material, equipment and components. Additionally, it is expected that there would be multiple mobile welfare units (toilets, drying rooms and canteen units) that would move around the Site as work progresses.
- 3.4.5 The site boundary will be kept secure by means of temporary fencing to minimise the risk of unauthorised persons from gaining access to the site during the works.

## **4.0 SITE ACCESS ARRANGEMENTS**

### **4.1 Proposed Access Routes to Construction Site**

- 4.1.1 During both the construction and operation of the Proposed Development, vehicular access to the Site would be via Marsh Lane, utilising the existing network of access tracks which were created as part of the Frodsham Wind Farm development. Access to the Site from the adopted highway network would be from Pool Lane via a series of private access roads which lead to the Site, specifically Grinsome Road and Marsh Lane. Pool Lane provides access via the A5117 to Junction 14 of the M56 and Junction 10 of the M53.
- 4.1.2 As far as Marsh Lane, the proposed access route for construction traffic is comprised of roads with a carriageway width of at least 6m, capable of facilitating two-way movement of HGVs. The roads leading to the Site are all designed to a standard to accommodate HGV and currently provide access to the east side of Stanlow Refinery, Protos and Encirc.
- 4.1.3 No HGVs would be routed though the villages of Frodsham, Ince or Elton.
- 4.1.4 The access to the SPEN Frodsham Substation would be via the A56 Chester Road, where a dedicated private access road leads to the substation complex. All construction traffic would be directed east along the A56, where onwards connections to the strategic highway network, including Junction 12 of the M56, can be made. No construction traffic would be permitted to route through Frodsham. The Applicant will liaise with the Canal and River Trust pre and during construction to confirm vehicle numbers and any traffic measurement requirements on the access road to SPEN Frodsham Substation, ensuring that at all times access is able to be made to Marsh Lock.
- 4.1.5 The two proposed access points described above are of a high standard and are regularly used by HGVs, with the main access into the Site designed for the construction and maintenance of the Frodsham Solar Farm. As such there

is no requirement for any works to be undertaken to the public highway to facilitate access to the Site.

- 4.1.6 The detailed CTMP will include an illustrative plan or map showing the construction traffic access route to the Site. The plan shall specify roads that are not to be used for access, for example, routes through Frodsham, Ince and Elton shall be clearly marked as not suitable for construction HGVs.

## 4.2 Proposed Vehicle Numbers and Types

- 4.2.1 As described above, it is currently estimated that the scheme will take up to 30 months to complete and would be split into a series of work packages. The construction deliveries required for the various construction activities within each work package would predominantly require the use of the following vehicle types:

- i) 26-tonne 16.5m articulated HGV;
- ii) 30-tonne 6- or 8-wheel tipper; and
- iii) 6m<sup>3</sup> concrete mixer truck.

- 4.2.2 **Table 3.1** summarises the forecast total numbers of each vehicle type that are anticipated to be required for each work package during the 30-month construction period.

**Table 5.1 – Estimated Construction Traffic Generation (for duration of Construction Phase)**

Work Package	Number of Loads
Construction of Western Array	
- 16.5m Artic	604
- 30t Tipper	1,300
- Concrete Truck	20
<i>Total</i>	<i>1,924</i>
Construction of Eastern Array	
16.5m Artic	320
30t Tipper	922
Concrete Truck	15
<i>Total</i>	<i>1,257</i>
Construction of BESS / Substation	
16.5m Artic	233

30t Tipper	510
Concrete Truck	321
<b>Total</b>	<b>1,064</b>
Grid Connection to SPEN Substation	
16.5m Artic	14
30t Tipper	0
Concrete Truck	0
<b>Total</b>	<b>14</b>
Private Wire Grid Connection	
16.5m Artic	8
30t Tipper	0
Concrete Truck	0
<b>Total</b>	<b>8</b>
Misc. Deliveries (Welfare, Fuel, Water, Refuse)	1,089
<b>TOTAL (one-way deliveries)</b>	<b>5,355</b>
<b>TOTAL (two-way vehicle movements)</b>	<b>10,710</b>

4.2.3 There would also be some vehicle trip generation associated with the construction of a Non-Breeding Bird Mitigation Area (NBBMA). This would primarily involve movement of soils within, and adjacent to Cell 3 of the Manchester Ship Canal Dredging Grounds. Construction traffic associated with this phase would primarily comprise approximately 20 staff trips per day. It would also require approximately 2 HGV deliveries per day (50 deliveries per month), comprising miscellaneous delivery trips for consumables, fuel and other items needed for the works.

4.2.4 The construction of the NBBMA would need to be completed prior to commencing construction of the western array. As such, this phase is expected to be undertaken as preliminary works ahead of the main construction period. On this basis this phase is not presented separately in the above table. However, for robustness, for the purpose of this assessment it has been assumed that construction of the NBBMA would occur within months 3 to 8 of the construction programme. The anticipated HGV trips associated with this phase have therefore been included within the total miscellaneous delivery trips in both **Table 3.1** and the indicative resourcing schedule in **Appendix B** of the TA [EN010153/DR/7.3].



- 4.2.5 During the peak phase of construction (months 2 – 19) there is expected to be a total of approximately 26 two-way delivery-related movements per day on weekdays and 13 on Saturdays, on average. This is expected to peak during month 13, when there is expected to be up to 46 two-way delivery-related movements per day on weekdays and 22 on Saturdays, on average.

### 4.3 Construction Staff Parking Arrangements

- 4.3.1 In addition to the above HGV movements associated with deliveries of materials, around 110 construction-related staff would require access to the Site per day, on average.
- 4.3.2 The indicative resourcing schedule in **Appendix B** of the **TA [EN010153/DR/7.3]** indicates that during the period of peak construction activity, between months 2 and 19, there would be approximately 165 staff on-site on weekdays, on average, and 83 staff on Saturdays.
- 4.3.3 The indicative resourcing schedule also indicates that the period of activity requiring the maximum number of staff on site would occur between month 12, when there would be a maximum of approximately 243 staff per weekday, and 122 staff at weekends.
- 4.3.4 A car parking area for construction staff would be provided adjacent to the main site compound in both the Western Array and the Eastern Array. Both of these parking areas would provide parking spaces for up to 104 vehicles each. Additional parking areas for construction staff and plant will also be provided within each of the smaller satellite compounds.
- 4.3.5 The only vehicles that will be parked within the confines of the main construction areas are construction vehicles. Construction staff are expected to park within the temporary car parking areas. A safe Pedestrian Access / Egress Route would be provided to connect the designated parking area to the Site Welfare Area.

- 4.3.6 All construction vehicles and plant are to be parked in a safe and tidy manner when not in use.
- 4.3.7 No construction traffic will be parked outside of these compounds, or indeed outside of the site. Parking will be managed and carefully monitored by the site manager to ensure that parking is provided in an efficient and safe manner, with sufficient separable distance from any plant, materials, or construction activity.
- 4.3.8 Special precautions will be taken when catering for any disabled staff / visitors to ensure that all access/egress to parking and other facilities are safe, practical, and reasonable.

#### **4.4 Construction Staff Sustainable Travel Considerations**

- 4.4.1 In order to reduce the impact of construction staff vehicle movements on the local highway network, staff will be encouraged to consider ways of travelling to the off-site compound by means other than individual private car.
- 4.4.2 The exact nature of the measures that could be employed to encourage sustainable travel would be dependent on the composition of construction staff and the locations from which they would be travelling to the off-site compound. This would be a matter for the main construction contractor, who would not be appointed until after the DCO has been granted.
- 4.4.3 Full details of the measures to encourage sustainable travel will be set out within a Construction Staff Travel Plan, which would form part of the final CTMP that would be prepared by the contractor. However, some of the key measures that could be implemented by the contractor to minimise the number and length of journeys are set out below.

##### ***Lift-Sharing***

- 4.4.4 There is significant potential for construction workers to partake in a car share arrangement, especially as sub-contractors are likely to be travelling from the same origin (their contractor's workplace) to the same destination. The

Construction Site Manager will implement measures to encourage construction staff to car share to the Site, or to pre-arranged collection / drop-off locations.

### ***Collection / Drop-off Service***

- 4.4.5 The Construction Site Manager will be responsible for seeking to implement a collection / drop-off service using minibuses. This service will transfer construction staff to / from pre-arranged collection / drop-off locations, which could include nearby public transport hubs, town centres and/or local accommodation.
- 4.4.6 Assuming the use of 15-seat minibuses, if used to transport 50% of the peak workforce a total of 8 minibuses would be required, if full. This would in turn reduce the overall number of construction staff trips during the peak period of construction activity by approximately 40%, compared to the forecast trip generation based on car sharing alone.
- 4.4.7 As noted above, it is likely that minibus collection / drop-off points would be identified within town centre locations and/or at public transport hubs. Minibus journeys between these locations and the Site would route via the identified construction access routes described in **Section 4.1**.

### ***Walking and Cycling***

- 4.4.8 Measures to encourage construction staff to walk or cycle to the Site would be implemented where appropriate. This would include the provision of information relating to suitable walking and cycling routes from the nearest settlements / public transport hubs, as well as the provision of cycle storage and suitable changing facilities on Site.

## 5.0 SITE ACCESS & SITE MANAGEMENT PLAN

### 5.1 Site Access

- 5.1.1 As described in **Section 4.1**, access to the Site will be from Marsh Lane via the existing Frodsham Wind Farm access track.
- 5.1.2 The construction site will be accessed via a site security checkpoint located at the entrance to the construction site. Unrestricted access is not allowed without undertaking a site-specific induction. In the absence of this training and approval, visitors to the site will be escorted at all times by a site member in possession of this training and authorisation.
- 5.1.3 It will be a requirement of the project that all personnel working or carrying out deliveries to site will require as a minimum Safety Helmet (Hard Hat), Hi-Vis Tabard, Coveralls, Gloves, Light Eye Protection and Safety Boots. For temporary visitors, spare sets of Light Eye Protection and Hard Hats will be provided but it is the expectation that all deliverers / collection persons will have all the necessary equipment with them.
- 5.1.4 It is a requirement that all site personnel and visitors sign in and out of the site on all occasions.
- 5.1.5 The Site Manager or their designated deputy will be responsible for supervising, controlling and monitoring vehicle movements to and from the site as well as whilst the vehicle is on site, and ensuring that there are suitable arrangements for the safe delivery and collection of the vehicle load.
- 5.1.6 The section of Marsh Lane that would be used to reach the Main Site Access is generally around 3 – 4 m in width for the majority of its length, and therefore not wide enough to permit HGVs to safely pass in opposite directions. However, the road is primarily used as an access track for Frodsham Wind Farm, and is otherwise very lightly trafficked, with an average daily two-way flow of approximately 30 vehicles.

- 5.1.7 As such, in order to facilitate safe access to and from the Site it will be necessary to manage the movement of construction traffic along Marsh Lane.
- 5.1.8 Banksmen will be deployed at the Main Site Access and at the western end of the narrow section of Marsh Lane to control the flow of traffic along it. Using radio communication, the two banksmen will hold construction traffic at either end of the narrow section until instructed to proceed when the route is clear. All Banksmen / Traffic Marshals working on the highway will be NRSWA qualified, so that they are qualified to control traffic entering and exiting the site.

## **5.2 Site Access Tracks**

- 5.2.1 Access to the Solar Array Development Area from the Main Site Access on Marsh Lane will be via the existing Frodsham Wind Farm access tracks. A network of new access tracks would also be constructed to permit vehicle movement around the Solar Array Development Area.
- 5.2.2 The tracks would be constructed of permeable compacted aggregate, laid on a geotextile membrane. The tracks would have a width of up to 6.5m and a depth of up to 0.75m. Passing places would be constructed to assist in the flow of construction traffic.
- 5.2.3 All vehicles will observe a 10mph site speed limit at all times. Emergency procedures and location of assembly areas will be made known to all contractors during induction.
- 5.2.4 Areas for the set down of HGVs and materials relating to the construction of the site will be provided within each of the construction compound areas. These will include sufficient space for HGVs to be able to turn around in forward gear.
- 5.2.5 Any reversing manoeuvres by construction traffic within the Site will be controlled by a qualified banksman.

- 5.2.6 Height Restriction Barriers (Goal Posts) will be installed where there is a potential for accidental contact with overhead infrastructure. Similarly restricted access will be identified and barriered.

### **5.3 Delivery Management System**

- 5.3.1 A Delivery Management will be implemented to control bookings of HGV deliveries from the start of the construction period. This will be used to plan all HGV deliveries in accordance with the construction programme.
- 5.3.2 All deliveries and collections of materials and equipment to site would be arranged and agreed in advance, with specific time slots provided in order to regulate the flow of HGV traffic. Where possible deliveries and collections will be restricted to the hours of 09:30 – 15:00 on weekdays.
- 5.3.3 Movement of HGVs to/from the Site would be monitored to ensure compliance with the agreed HGV routes and the timing restrictions. This is likely to be facilitated through the use of GPS data and other technologies such as automatic number plate recognition (ANPR). The precise form of monitoring would be determined following the appointment of a contractor. The details would be set out within the final CTMP, along with the measures to be taken for non-compliance.

### **5.4 Impact on Other Highway Users**

- 5.4.1 It is not envisaged that the construction site will have any impact on other road users caused by delays accessing the site. Arrangements will be made to ensure that lorries avoid (wherever possible) entering and leaving the site during the weekday highway peak hour periods between 08:30 – 09:30 and 16:30 – 17:30 (these peak hour periods will be clarified and confirmed with the LHA and updated as necessary within the final CTMP). These arrangements will be organised locally by the Site Manager who will be responsible for the day to day running of the construction programme.
- 5.4.2 There are a number of Public Rights of Way (PRoW) that cross the Site. Although the construction works would be designed to minimise disruption to PRoW routes within the Site, during the construction phase it would be

necessary to implement mitigation measures in certain areas to maintain public safety.

- 5.4.3 This would include the use of temporary gates and signage to warn, direct and protect PRow users during the construction period, and prevent unauthorised access to construction areas. Managed crossing points would be utilised where internal Site access tracks cross the route of a PRow.
- 5.4.4 It would also be necessary to implement managed PRow closures or temporary stopping up of PRow routes which are required for use as part of the construction vehicle access route.
- 5.4.5 Further details on the proposed mitigation to be implemented to manage the impact on the PRow network is set out within the **Outline Public Right of Way Management Plan [EN010153/DR/7.9]**.

## 5.5 Abnormal Indivisible Loads

- 5.5.1 Abnormal Indivisible Loads (AIL) are considered loads that cannot be delivered using traditional vehicles i.e. 40ft artic truck with road haulage limits of 44T. The exact machinery and equipment required for the construction works would be updated at the detailed design stage. However, it is anticipated there would be a need for AIL deliveries for items such as high voltage transformers, cable drums and cranes.
- 5.5.2 All abnormal load vehicles will travel to and from the site under escort following standard procedures, which will be carefully planned and agreed in advance with the LHA and National Highways, in accordance with the Road Vehicles (Authorisation of Special Types) (General) Order 2003 (STGO).
- 5.5.3 These movements will also be planned in advance to ensure that the route between the A5117 and the Site is kept entirely clear of other construction vehicles whilst the abnormal loads are routing to and from the site.



## **6.0 ENVIRONMENTAL MANAGEMENT**

### **6.1 Vehicle Wheel Washing Facilities**

- 6.1.1 Mud and debris will be prevented from being taken onto the adjacent highway network through the use of appropriate wheel wash facilities located within the site. There will be wheel wash facilities located within each construction compound area, and site operatives will direct all traffic to cross the wheel wash facility before exiting the site.
- 6.1.2 The exact nature of the wheel wash units has yet to be determined, and it may be either hand-held jet washes or dry wheel wash rumble strips. This will be dependent upon seasonal conditions in the area at the discretion of the Site Manager. Details of type and location of wheel wash facilities will be set out within the final CTMP.
- 6.1.3 These facilities will remain in place from the start of the construction phase until the works are complete. Where necessary any residual deposits of dust or dirt on public roads will be removed regularly using road brushes and vacuum road sweepers.

### **6.2 Dust and Dirt Control**

- 6.2.1 Dusty emissions generated by the construction may cause nuisance through, for example, surface soiling and loss of visibility due to deposition. Numerous construction activities have the potential to produce dust emissions, e.g. the movement and placing of granular materials.
- 6.2.2 Since it is difficult to suppress dust once it is airborne, where possible measures will be implemented to prevent dust from being generated in the first place.
- 6.2.3 Measures that will be implemented to control dust emissions include:
  - i) Pre-assembly of equipment will be conducted to minimise on site particulates;

- ii) Vehicles transporting materials capable of generating dust to and from site will be suitably sheeted on each journey to prevent release of materials and particulate matter. The sheeting material will be maintained in good order, free from excessive rips and tears; and,
  - iii) Regular monitoring of the road network in close proximity to the site access will be implemented to ensure appropriate additional measures are applied as required to minimise dust generation.
- 6.2.4 In dry weather, it is possible that the ground may dry out and then when site machinery traverses the access road it may create nuisance dust which could drift out of the site. Under these circumstances these areas will be dampened down so that any dust does not become a nuisance to the public.
- 6.2.5 Further details on the proposed measures to be implemented to control and manage dust emissions are set out within the **Outline Construction Environmental Management Plan (oCEMP) [EN010153/DR/7.5]**. These procedures will be set out in further detail within a Dust Management Plan (DMP), which will form part of the detailed CEMP.

### 6.3 Waste Management

- 6.3.1 Given the nature of the Proposed Development, many of the infrastructure elements would be prefabricated offsite i.e. PV modules, racks, inverters and transformers, battery energy storage system (BESS) units, substation components. However, the Principal Contractor will take all reasonable steps to minimise the volume of waste generated by the construction phase of the Proposed Development.
- 6.3.2 All waste transported off site will be delivered to the appropriately licenced receivers of such materials. Operators receiving any waste materials resulting from the Scheme will be subject to their own permitting and regulatory procedures.
- 6.3.3 Further details on the proposed waste management procedures to be implemented at the Site are included within the **Outline Construction**

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**Environmental Management Plan (oCEMP) [EN010153/DR/7.5].** These procedures will be set out in further detail within a Construction Waste Management Plan (CWMP), which will form part of the detailed CEMP.

- 6.3.4 There will be a requirement for some earthworks on Site, in addition to the earthworks proposed as part of the NBBMA. There would also be soil arisings resulting from the construction of underground cable trenches, piling operations or localised excavations for construction of foundations or placement of services. The CL:AIRE Code of Practice (CoP) provides a framework which allows the re-use of excavated materials on-site or their transfer between sites.
- 6.3.5 In the unlikely event that soil arisings are not used on-site then the contractor would look to reuse soils in accordance with the CoP, thereby minimising export of materials to landfill. All soil resources and excavated material will be dealt with in accordance with the framework and principals set out within the **outline Soil Management Plan (oSMP) [EN010153/DR/7.10].**

## 7.0 MANAGEMENT OF CUMULATIVE DEVELOPMENT IMPACTS

- 7.1.1 As identified within Section 7.0 of the **Transport Assessment [EN010153/DR/7.3]**, there are several infrastructure projects proposed in the vicinity of the Proposed Development which are likely to generate construction traffic along the same extent of local highway network that would be utilised for the Proposed Development.
- 7.1.2 In particular, the HyNet North West project comprises a number of strands, including a proposed Hydrogen Production Plant, Hydrogen Pipeline and CO<sub>2</sub> Pipeline, all of which are forecast to generate significant volumes of construction traffic.
- 7.1.3 The projected construction programmes for various strands of the HyNet North West project are such that the peak periods of construction traffic generation are not scheduled to overlap with the peak construction traffic generation for the Proposed Development. However, the applicant's management team will maintain ongoing communications with the project delivery team for the HyNet scheme to liaise on managing any potential cumulative impacts.
- 7.1.4 In the event that there would be any significant overlap between the schemes with regard to construction traffic movements, a Construction Traffic Management Plan Working Group would be established in order to manage and co-ordinate the delivery of the schemes in order to minimise and mitigate the combined impact of construction traffic. The responsibilities of this group would include the co-ordination of any AIL movements and agreeing a mechanism for identifying and apportioning shared responsibilities for undertaking maintenance / remedial works to any PRow which are damaged during the course of construction works. At this stage it is anticipated that the Applicant would invite to the Working representatives from:
- i) the Applicant;
  - ii) Cadent;

- iii) Eni;
- iv) Cheshire West and Chester Council; and
- v) National Highways.

7.1.5 The above list is not exhaustive, and representatives of other major developments, as deemed necessary by the LHA and National Highways, would also be invited to join the working group as appropriate. It is assumed that other developers would also work pro-actively with Frodsham Solar.

7.1.6 The applicant's management team will also maintain ongoing communications with the management team at Cheshire Oaks in order to minimise any potential cumulative impacts during periods of peak trip generation associated with retail park traffic, particularly at weekends and other busy periods during the year, e.g. Christmas. This will include obtaining a copy of the Cheshire Oaks Peak Traffic Management Plan, to ensure that Proposed Development traffic is routed away from Cheshire Oaks during these peak periods.

## **8.0 MONITORING AND COMPLIANCE**

### **8.1 Monitoring and Review**

- 8.1.1 Compliance with all the control documents, including the final CTMP, will be the responsibility of the Site Manager. The contractor will undertake monitoring as necessary to ensure compliance with the requirements of the final CTMP. This will include the maintenance of records and traffic management measures.
- 8.1.2 The Principal Contractor will be responsible for implementing a system whereby construction HGVs associated with the Proposed Development are identifiable from other traffic on the highway network. This will enable data to be collected regarding vehicle routes, timings and speeds, to aid any compliance investigations.
- 8.1.3 Monitoring activities and responsibilities will be agreed with CWaCC and National Highways and set out within the final CTMP. This will also contain the contact details of the relevant Site contact with responsibility for managing the CTMP, along with a clear schedule of monitoring activities and timescales.
- 8.1.4 The CTMP will be reviewed on a regular basis to ensure proper adherence by construction staff.

### **8.2 Communications Strategy**

- 8.2.1 A communications strategy will be developed by the Applicant and Principal Contractor to ensure that the measures contained within the CTMP are communicated to all construction staff and sub-contractors / suppliers. This will be set out within the final CTMP and would be developed in accordance with the overarching communications strategy which would be provided within the detailed CEMP.
- 8.2.2 The communication strategy is expected to include an information pack setting out the contractual requirements which will be provided to the sub-contractors. Regular meetings would also be held with sub-contractors to

discuss HGV management and to address any issues associated with travel to/from the Site, as well as to relay information including any restrictions and requirements which should be followed.

- 8.2.3 A Community Liaison Officer will be appointed to communicate information to local communities and also act as the primary point of contact should there be any queries or complaints.

### **8.3 Enforcement and Corrective Measures**

- 8.3.1 If the Principal Contractor is made aware of a potential breach of the CTMP (except where otherwise agreed with CWaCC or in the event of an emergency), the Principal Contractor will be required to investigate the circumstances and create a report for the LHA.
- 8.3.2 Should the LHA deem that a material breach has occurred, the following three stage process will be followed:
- i) Stage 1 – the LHA and Principal Contractor would agree the extent of the breach and any remedial action to be taken. This is likely to be a Principal Contractor warning at this stage.
  - ii) Stage 2 – if a further material breach is identified, the Principal Contractor would be given a further warning and will be required to produce a plan to outline how the issue would be rectified and any additional mitigation measures to be implemented.
  - iii) Stage 3 – should further breaches occur; the Principal Contractor would be required to remove the relevant party from Site and the sub-contractor / supplier would receive a formal warning.



