Dupplin Solar PV Development

Transport Statement

Trio Dupplin Solar LLP

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Prepared by:

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SLR Project No.: 405.065787.00001

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Revision: 01

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	1 December 2025	IL	GK	GK
02	23 January 2026	IL	GK	GK
	Click to enter a date.			
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Basis of Report

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Table of Contents

Tables in Text

Figures in Text

Photos in Text

Appendices

1 Introduction

Background

1.1 TRIO Dupplin Solar LLP (hereafter referred to as 'the Applicant'), is applying for permission to construct and operate a solar photovoltaic (PV) array on land north of the A9 at Dupplin Estate within the administrative boundary of Perth and Kinross Council ('P&KC'). The location of the Proposed Development is shown in **Figure 1.1**.

1.2 SLR Consulting Limited have been commissioned to advise the Applicant on various aspects of the Proposed Development, including transport matters. P&KC provided pre-application advice (reference 25/00016/PREAPM) and the key points of their advice regarding transport were:

"A full transport assessment is required, detailing the transport issues relating to the proposed development site, baseline transport data, and how predicted trip generation will be distributed on the surrounding transport network. Proposed measures to mitigate adverse impacts on the transport network, and measures to encourage sustainable mode choice shall also be outlined."

[…]

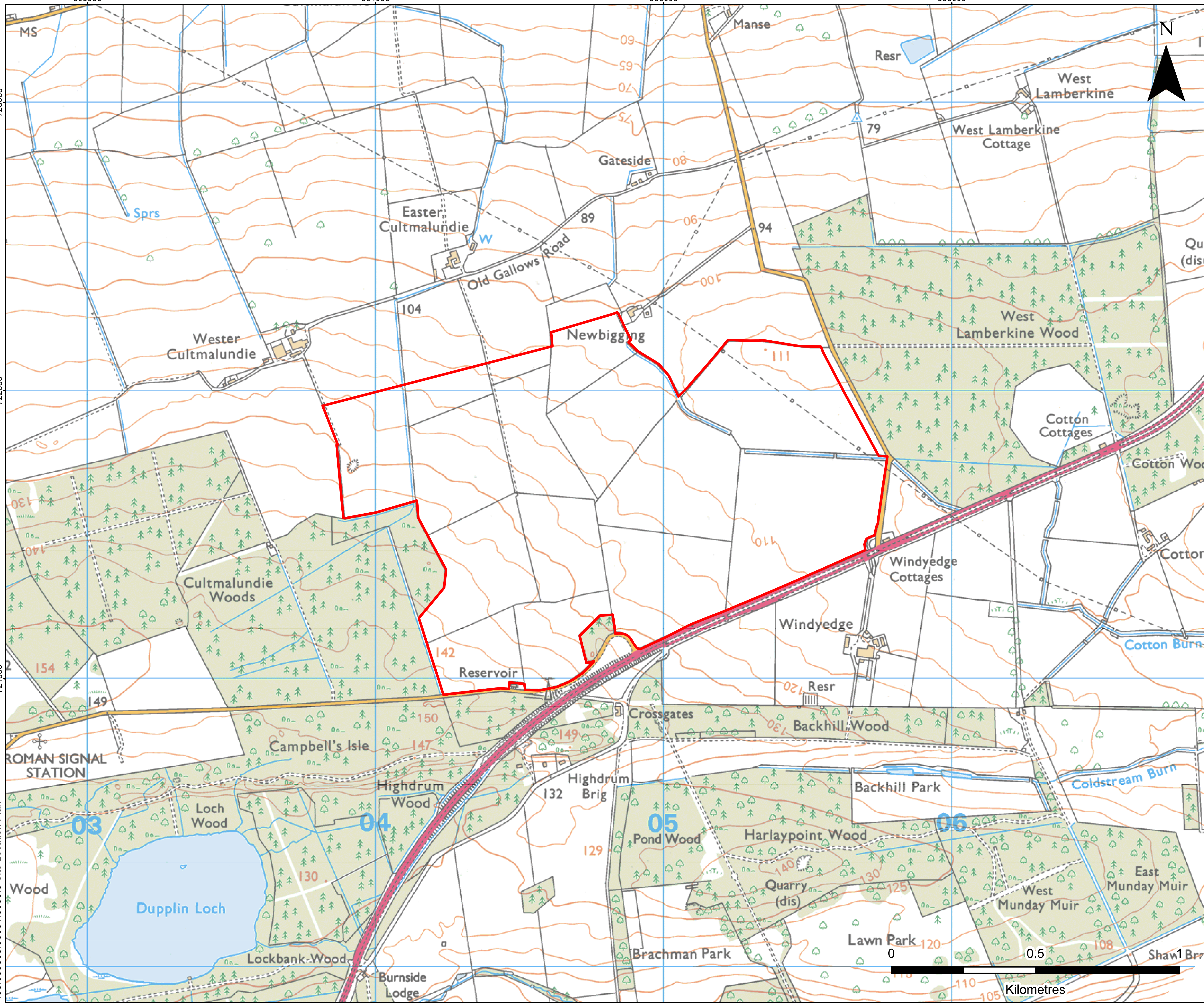
"The developers need to prove that cars and trucks can safely enter and exit the site from the C411 and U47. They must show that drivers have a clear view of oncoming traffic when pulling out of the access road. This means calculating and drawing visibility splays to the left and right of the access point which measured from a point 2.4 meters back from the road's edge and 1.05 meters above the road and must meet standards set by the government (specifically, the Design Manual for Roads and Bridges - CD 109).

If the visibility splays don't meet the required standards, the developers will have to conduct a speed survey to figure out how fast cars typically drive on the C411 and U47, especially when it's wet. This will help determine if changes to the road or access point are necessary."

This Report

1.3 We consider that a Transport Statement (rather than a Transport Assessment) is appropriate to consider the transport aspects of the Proposed Development. This report forms the Transport Statement and, following this introduction, comprises the following chapters:

- Chapter 2: describes the surrounding existing transport network.
- Chapter 3: describes the transport aspects of the Proposed Development.
- Chapter 4: summarises measures that could be included in a Construction Traffic Management Plan (CTMP); and.
- Chapter 5: presents our conclusions.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Gateside
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Easter Cultmalundie
W
89
Old Gallows Road
94
104
Wester Cultmalundie
Newbigging
111
West Lamberkine Wood
Cotton Cottages
Cotton Wood
110
Windyedge Cottages
Cultmalundie Woods
Windyedge
Cotton Burn
142
Reservoir
Resr
154
149
150
Crossgates
Backhill Wood
ROMAN SIGNAL STATION
Campbell's Isle
147
Highdrum Brig
132
Coldstream Burn
Highdrum Wood
Backhill Park
Loch Wood
03
04
05
06
Pond Wood
Harlaypoint Wood
129
130
Quarry (dis)
East Munday Muir
West Munday Muir
Wood
Dupplin Loch
Lockbank Wood
Lawn Park
120
108
Brachman Park
Burnside Lodge
0
0.5
1
Kilometres
N

LEGEND

Application Boundary

Note: An Offset Buffer of 30 m has been Applied to protect all Woodland Stands and Individual Trees within and in Proximity of the Application Boundary during Construction Works.

Application Boundary has been derived from OS Mastermap, there may appear to be a Discrepancy with the shown Basemap.

trio

SLR

DUPPLIN SOLAR EIAR

INTRODUCTION

SITE LOCATION

FIGURE 1.1

Scale 1:12,500 @ A3

Date JANUARY 2026

405.065863.00001.0009.0 Site Location Plan

2 Existing Transport Network

Introduction

2.1 This Chapter describes the location of the Proposed Development and the surrounding existing transport network. The transport network has been described following the hierarchy in National Planning Framework (NPF) 4, namely: walking, wheeling, cycling, public transport, taxis and shared transport, and private car.

Site Location

2.2 The Site of the Proposed Development is currently undeveloped farmland. The Site is bordered to the south by the C411 and A9 roads (the latter a Trunk Road and therefore managed by Transport Scotland (TS)) and to the east by the U47 road.

2.3 There have been no planning applications covering the Site, and there are an no site-specific designations covering the Site in P&KC's Local Development Plan (LDP2).

Walking, Wheeling and Cycling

2.4 There are no footways on the A9, C411 and U47 roads as they pass the Proposed Development. There are no Core Paths near to or crossing the Site, nor are there any crossing the A9, C411 or U47 roads nearby. There are no specific cycling facilities in the vicinity and no sections of the National Cycle Network are nearby.

Public Transport

2.5 There are no scheduled bus services on the sections of the C411 and U47 passing the Proposed Development, but there are bus stops on each direction on the A9 as it passes the Proposed Development. At the time of writing, these are served by the 19 service which links Perth with Blackford and has a typical weekday frequency of one service per hour in each direction.

Road Network

2.6 The C411 in the vicinity of the Proposed Development is a single carriageway road with one lane in each direction, as shown in **Photo 1**, and is subject to a 60mph speed limit (with lower limits applying for some vehicle types)[1].

2.7 An Automatic Traffic Count (ATC) survey was commissioned on the C411 in the vicinity of the Proposed Development. The ATC recorded speeds, vehicle types and number of vehicle movements for one week from Wednesday 10 September 2025.

2.8 Data from the ATC showed that during the period 0700 – 1900 on the average weekday, there were 657 vehicle movements of which 105 were Heavy Goods Vehicles (HGVs). The 657 vehicle movements equate to an average of 52 per hour and an average of over one minute between successive vehicle movements. The 85th percentile speeds recorded by the survey were 54.9mph eastbound and 57.5mph westbound.

[1] Speed limits - GOV.UK

Photo 1: View of C411 along frontage of Proposed Development

Image source: SLR

2.9 TS's National Traffic Data System (NTDS) includes a site (referred to as 'JTC00568 A9 Broxden - SW of M90') on the A9 along the frontage of the Proposed Development. All available data for that site was extracted for 2024 and it showed that during the period 0700 – 1900 on an average weekday there were 24,428 vehicle movements of which 3,654 (15%) were HGVs.

2.10 Data from the Department for Transport's Mapping Application for Visualising Road Injury Casualties (MAVRIC)[2] tool shows no injury-causing accidents have been recorded in the five years to the end of 2024 (the last full year for which data is available at the time of writing) on the C411 in the vicinity of the Proposed Development nor have any been recorded during that period at the junction of the A9 and C411.

[2] MAVRIC

3 Transport Aspects of Proposed Development

Introduction

3.1 This Chapter describes the transport infrastructure that would be provided as part of the Proposed Development and presents an estimate of its likely transport demand.

Transport Infrastructure

3.2 A drawing showing the layout of the Proposed Development is provided in **Appendix A.** The drawing shows that the solar panels would be located to the west of the U47 road and to the north of the C411 and A9 roads. Access during construction and operation would be from a new access formed on the C411 on the southern frontage, at a point to the west of an existing Scottish Water facility. There would be no vehicle access to the Proposed Development from the U47 during construction or operation.

3.3 **Drawing 405.065787.00001-TRA-0001** in **Appendix A** shows an indicative layout of the proposed access and shows that visibility splays of 2.4m by 215m would be provided. The 215m distance is in accordance with the guidance in Table 8 of the National Roads Design Guidance (NRDG). That guidance states that visibility splays of 215m would be appropriate for 85th percentile speeds of between 53mph and 62mph so would be suitable for the maximum 85th percentile speed observed on the C411 of 57.5mph (see **paragraph 2.8**).

3.4 **Drawing 405.065787.00001-TRA-0001** also shows that the access could accommodate the swept path of a 16.5m long articulated vehicle entering and exiting. The swept path drawings show the vehicle entering and exiting the access from both the east and west. It is expected that all construction-related vehicles would enter and exit the access only to and from the east, but the swept paths have been undertaken for vehicles entering and exiting to and from both directions to show that such manoeuvres could be feasibly undertaken should the need arise.

3.5 The layout drawing in **Appendix A** shows that a Temporary Construction Compound (TCC) would be provided towards the southern edge of the Site, to the east of the access. Sufficient temporary vehicle parking would be provided at this compound to cater for likely demand and no parking would occur on the C411.

3.6 Suitable internal temporary turning areas would be provided during construction to allow vehicles to turn around and all vehicles would enter and leave the C411 in forward gear. The layout of the access tracks within the operational layout would allow vehicles to turn internally and enter and leave the C411 in forward gear.

Transport Demand

Construction

3.7 Construction of the Proposed Development would generate vehicle movements as staff travelled to and from, and materials and items such as plant would be delivered to and removed from the development. All construction materials and components are expected to be delivered by HGVs complying with the Road Vehicles (Construction and Use) Regulations 1986 and no Abnormal Indivisible Load Vehicles (AILVs) are expected to be required.

3.8 Construction is expected to take around a year. Working hours would likely be 0700 to 1900 Monday to Friday and 0800 to 1300 on Saturdays.

3.9 The number of vehicle movements during construction has been estimated based on the likely number of staff, volume of materials and items of plant and equipment that would be required and on experience of other projects. The main elements of construction that would generate vehicle movements are:

- Access tracks. Around 6,726 m of access tracks would be required, which equates to around 10,762 m^3 of material based on a typical width of 4 m and depth of 0.4 m. That volume of material equates to 1,346 HGV loads (based on 8 m^3 per vehicle) and hence 2,692 HGV movements.
- Inverters, frames and panels. 189 inverters, 128,688 panels and 137 loads of frames will be required. Four inverters could be accommodated per HGV and 400 panels could be accommodated per HGV. There would therefore be around 47 loads of inverters, 322 loads of panels and 137 loads of frames, equating to 1,012 HGV movements.
- Substation and TCC area. Hardstanding areas of approximately 2,058 m^2 and 3,000 m^2 would be constructed for the substation and TCC respectively. Both would be built to a depth of 0.40 m, which would require approximately 2,023 m^3 of aggregate. That volume of material equates to 253 HGV loads (based on 8 m^3 per vehicle) and hence 506 HGV movements. A further 30 HGV loads has been assumed for materials to be imported to form the foundations of the structure and internal electrical cabling, resulting in an additional 60 HGV movements.

3.10 The number of construction staff will vary through the construction period depending on the operations being undertaken. It is anticipated that 40 staff will be present each working day during the peak period of construction, reducing to 20 staff at other times. Many staff would likely share a vehicle and for the purpose of this report it has been assumed that there would be an average of 1.5 staff per vehicle. There would therefore be around 27 staff vehicles arriving during each working day in the peak months and the same number departing, reducing to 13 arriving and 13 departing outwith the peak months.

3.11 Estimated vehicle movements during each month of the construction period are provided in **Table 3.1**. **Table 3.1** also presents estimated daily vehicle movements for each month of the construction period, based on there being 20 working days per month (i.e. four weeks per month of five working days) There would likely be more than 20 working days in any one month (given activities would take place 0800 – 1300 on Saturdays) so the actual daily vehicle movements during construction would likely be lower than that shown in **Table 3.1.**

Table 3.1: Estimated Vehicle Movements During Construction

Activity	Vehicle Type	Vehicle Movements in Month[3]											
		1	2	3	4	5	6	7	8	9	10	11	12
Site Mobilisation	HGV	40											
Miscellaneous Deliveries	HGV	10	10	10	10	10	10	10	10	10	10	10	10
Fuel	HGV	4	4	4	4	4	4	4	4	4	4	4	4
Access Tracks	HGV		385	385	385	385	385	385	385				
Temporary Construction Compound	HGV		150	150									
Frames, Inverters and Storage Containers	HGV				223	223	223						
Substation	HGV				41	41	41	41	41	41			
Panels	HGV						108	108	108	108	108	108	
Site Demobilisation	HGV												40
Staff Movements	Car and LGVs	534	534	534	534	1,067	1,067	1,067	1,067	1,067	1,067	534	534
Total Vehicle Movements		**588**	**1,082**	**1,082**	**1,195**	**1,729**	**1,836**	**1,614**	**1,614**	**1,229**	**1,188**	**656**	**588**
Total HGV Movements		54	549	549	662	662	770	547	547	162	122	122	54
Total Car and LGV Movements		534	534	534	534	1,067	1,067	1,067	1,067	1,067	1,067	534	534
Average Vehicle Movements per Working Day		**29**	**54**	**54**	**60**	**86**	**92**	**81**	**81**	**61**	**59**	**33**	**29**
Average HGV Movements per Working Day		3	27	27	33	33	38	27	27	8	6	6	3
Average Car and LGV Movements per Working Day		27	27	27	27	53	53	53	53	53	53	27	27

[3] A movement is an arrival or a departure. For example, a vehicle arriving, unloading and departing would represent two movements.

3.12 The data in **Table 3.1** shows that there would be a maximum of around 92 vehicle movements (of which 38 would be HGVs) each working day during the busiest month (month six) of the construction period. There would be an average of 60 vehicle movements (of which 20 would be HGVs) each working day across the entire construction period.

3.13 The additional 92 vehicle movements during each working day during the busiest month of construction would represent an increase of 14% over the observed number of vehicle movements on the C411 (from **paragraph 2.8**). However, in absolute terms, the increase would mean over seven and a half minutes between each additional vehicle (on average over the working day). Such increases are unlikely to cause noticeable effects on other users of the C411 and the increases during the other months of the construction period would be lower.

3.14 All vehicle movements during construction would be expected to use the section of the C411 between the access and the A9. If all the additional 92 vehicle movements used the section of the A9 to the east of the C411 then that would represent an increase of around 0.4% in the number of vehicle movements on that section (and of around 1% in the number of HGVs).

Operation

3.15 There would be fewer vehicle movements during operation than during construction, as once operational there would be only the occasional maintenance or inspection vehicle. There would likely be no more than a handful of such vehicle movements during any typical week and they would typically be Light Goods Vehicles (LGVs) or pick-up trucks. There may be the occasional need for an HGV to visit once operational to, for example, replace a defective item.

Decommissioning

3.16 The Proposed Development would be decommissioned at the end of its operational life. Once decommissioned, the Site would be reinstated and this would involve similar access requirements as the construction phase. The number of vehicle movements during decommissioning would likely be less than that generated during construction as some elements (such as sub-surface infrastructure) may be left in place after decommissioning.

4 Measures to Manage Traffic

Introduction

4.1 This Chapter of the report describes the measures proposed to manage construction-related traffic to and from the Site of the Proposed Development. Full details of the construction would not be known until nearer the time of construction (should consent be granted) and once a Principal Contractor (PC) has been appointed. Submission of a full CTMP by the PC prior to construction could be made a condition of any consent granted.

Parking and Turning

4.2 Suitable parking and turning facilities would be provided as described in **paragraph 3.6**. A banksman would be employed to ensure that any vehicles that must reverse within the Site would do so under supervision. Heavy site traffic would be equipped with audible reversing warning equipment with additional visual aids (e.g. reversing cameras or mirrors) used on all plant. All safety features would be inspected daily with faults immediately reported and repaired.

Control of Mud and Debris

4.3 Wheel washing facilities would be provided during construction to reduce the risk of mud or debris being deposited on the C411. All relevant vehicles would be sheeted to limit the spread of dust.

Site Arrival Procedures

4.4 All non-staff vehicles arriving at the Site would be required to report to Site security where they would obtain clear instructions. The Site speed limit would be 15 mph and speed limit signs would be erected within the Site.

Travel Demand Measures

4.5 The PC would encourage car sharing among staff. When a new member of staff was appointed, the PC would put him or her in touch with others who live nearby to encourage car sharing. The PC would identify the feasibility of running a minibus to transport staff to and from the site.

Induction and Training

4.6 Staff would be made aware of the measures in the CTMP upon their induction. Contractors would be made aware of the measures in the CTMP when appointed and it would be a contractual requirement that they adhere to the CTMP measures. Adherence to the specific measures in this plan would be made a condition of the contract with all contractors and suppliers.

Traffic Signage

4.7 Temporary signage would be provided in the vicinity of the junction of the A9 and the C411 and of the access from the C411 to direct arriving vehicles towards the Site.

Updating and Reviewing the CTMP

4.8 The PC would review this CTMP as the design and construction progresses and update the CTMP as necessary. The PC would nominate a member of staff to act as a liaison officer to be responsible for the co-ordination of all elements of transport during the construction

process. This person would provide their contact details to the local area roads officer in P&KC and the chair of Methven Community Council. This would ensure that the local community has a direct point of contact to discuss matters pertaining to traffic management or site operation.

Dealing with Complaints

4.9 The PC would record all comments, complaints or queries received during the construction period. Any comments, complaints or queries which required a response would be replied to within five working days.

5 Conclusions

5.1 This report has considered the transport aspects of the Proposed Development. The report concludes that:

- A suitable vehicle access can be provided from the C411. There would be no vehicle access to the proposed development from the U47 during construction or operation.
- Construction is expected to last for around 12 months and generate, during the busiest month, around 92 vehicle movements per working day.
- Those additional vehicle movements are unlikely to cause any noticeable effects on users of the C411.
- Only the occasional maintenance and inspection vehicle would be generated once operational.
- Satisfactory submission of a CTMP could be made a condition of any consent granted. Measures that could be included in such a CTMP have been identified in this report.

Appendix A Drawings

Dupplin Solar PV Development

Transport Statement

Trio Dupplin Solar LLP

SLR Project No.: 405.065787.00001

23 January 2026

N

Notes:

1. Development Area: 165.2 Ha
2. Installed Capacity: 97.8 MWp
3. System TIC: 75 MVA
4. Trina Solar TSM-NEG21C.20 - 760Wp
5. Modules: 128,688
6. Inverters: 189
7. Tx: 12
8. Tilt Angle: 20°
9. Azimuth: 0°
10. Orientation: 2 in Portrait

Legend:

- Site boundary
- PV modules
- Solar fence
- Gate
- CCTV
- Internal tracks
- Transformer station
- DNO Substation
- Welfare unit
- Additional spares container
- Private customer substation
- Aux transformer
- Communications and spares container
- Drainage pipe
- SuDS basin

Car park

Construction Compound

West Lamberkine Wood

Culmalundie Woods

Highdrum Wood

Loch Wood

Duppin Loch

Backhill Wood

Backhill Park

Harlaypoint Wood

0 100 200 300 400 500m

Scale 1:5,000

Rev	Amendments	Date	By	Chk	Auth
P06	SEPA flood areas input	03/11/25	IR	AA	EQ
P05	Access update	28/10/25	IR	AA	EQ
P04	RLB and constraints update	14/10/25	IR	AA	EQ
P03	Additional constraints and SuDS	08/10/25	IR	AA	EQ
P02	Site layout with constraints	30/07/25	IR	AA	EQ
P01	Initial/Preliminary Issue	23/05/25	IR	AA	EQ

SLR

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Client: Trio Power Ltd

Project: Dupplin Solar

Figure Title: Final Site Layout

Scale	SLR Project No.
1:5,000 @ A1	405.065787.00001

Designed	Drawn	Checked	Authorised
AA	IG	AA	EQ
Date: 30/07/25	Date: 20/01/26	Date: 30/07/25	Date: 03/11/25

Figure Number: **2.3** Rev.: **P06**

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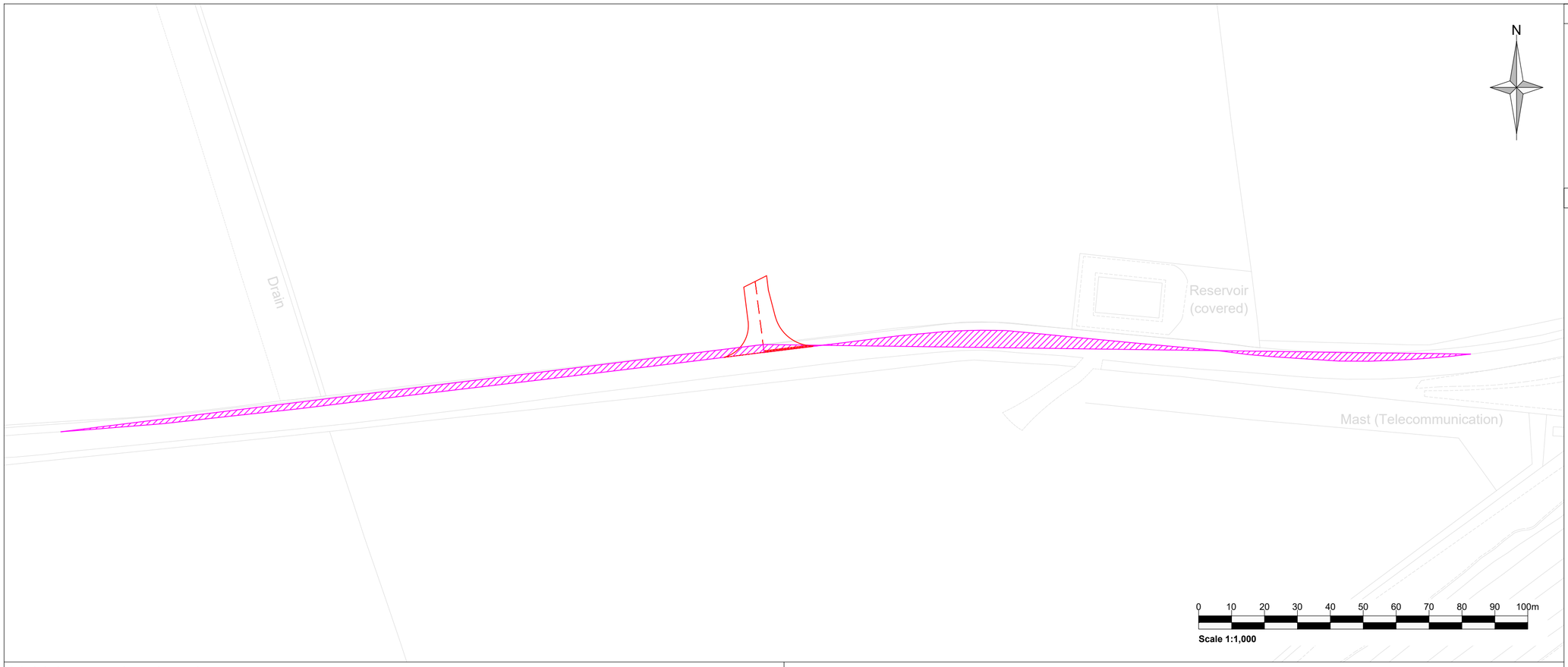
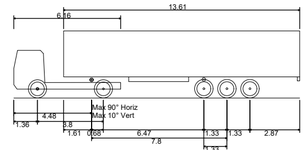


Notes:

Legend:

215m x 2.4m Visibility splay

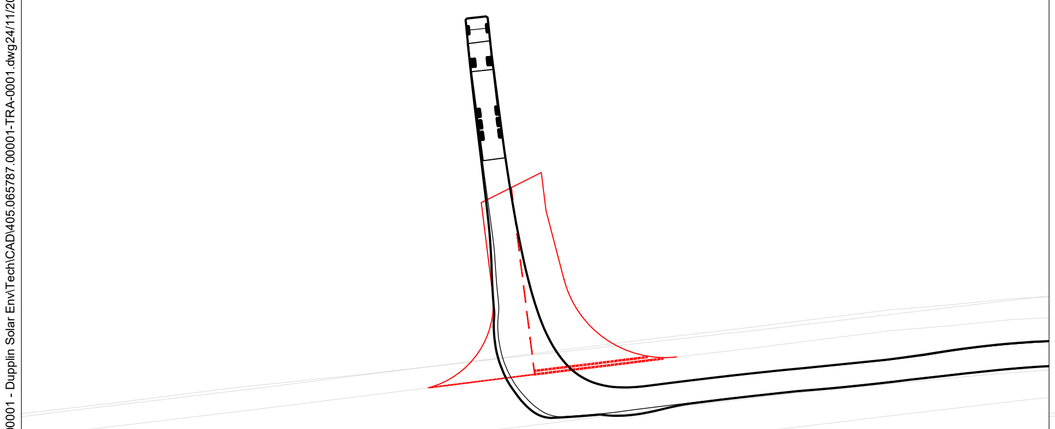
Proposed junction



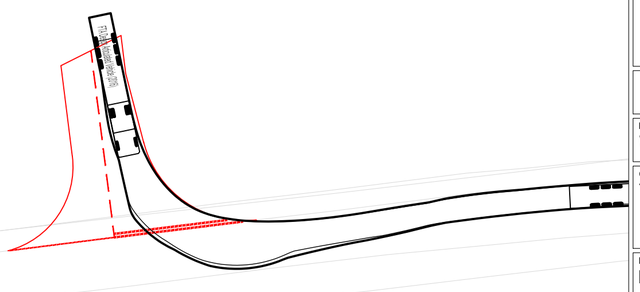
FTA Design Articulated Vehicle (2016)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

Vehicle entry into junction
Scale 1:500



Vehicle exit out of junction
Scale 1:500



Rev	Amendments	Date	By	Chk	Auth
P01	Initial Issue	24/11/25	LB	IL	IL

SLR

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Drawing Purpose: **Work in Progress**

Suitability Code: **S0**

Client: Trio Power Limited

Project: Dupplin Solar PV and BESS Development

Drawing Title: Indicative Layout of Access From C411

Scale	SLR Project No.
As shown @ A2	405.065787.00001

Designed	Drawn	Checked	Authorised
N/A	LB	IL	IL
Date: N/A	Date: 24/11/2025	Date: 24/11/2025	Date: 24/11/2025

Drawing Number: **405.065787.00001-TRA-0001**

Rev.: **P01**

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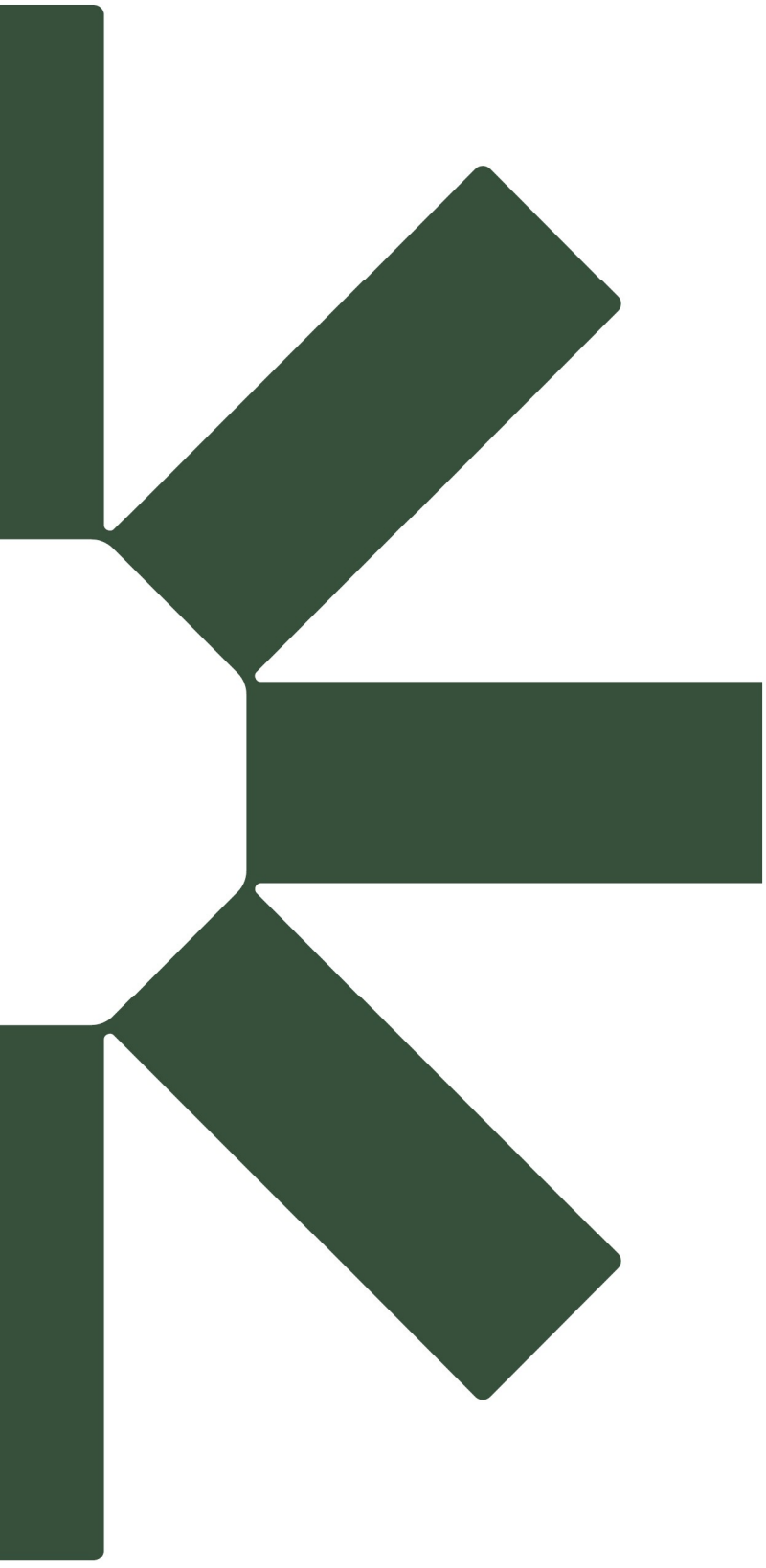

Making Sustainability Happen