



Technical Report

# Coupar Angus Solar Farm and Battery Storage Farm

## Transport Statement

March 2022



# Contents

1	Introduction	1
1.1	Background	1
1.2	Site Location and Context	1
1.3	Policy and Guidance	2
1.4	Report Structure	2
2	Existing Transport Conditions	3
2.1	Introduction	3
2.2	Transport Context	3
2.3	Existing Sustainable Travel Infrastructure	6
2.4	Surrounding Road Network	7
2.5	Accident Statistics	9
2.6	Accessibility Summary	10
3	Proposed Development and Travel Characteristics	11
3.1	Introduction	11
3.2	Construction Phase Vehicle Trip Generation	11
3.3	Operation of the Proposed Development	12
4	Measures to Support the Development	13
4.1	General	13
4.2	Walking and Cycling	13
4.3	Access Strategy and Road Network	13
4.4	Framework Construction Traffic Management Plan (CTMP)	15
4.4.1	Measures to Minimise and Mitigate Construction Traffic Impacts	15
5	Summary and Conclusion	20
	Appendix A – Access Junction Designs. Visibility Splays and Passing Place Details	21

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# 1 Introduction

## 1.1 Background

This Transport Statement (TS) has been prepared on behalf of AE Associates (AE) in support of an application for a proposed Solar and Battery Facility (the 'Proposed Development') on Keithick Estate approximately 1.7km west of Coupar Angus (the Site).

The site location is illustrated on Figure 1.

The Proposed Development comprises the installation and operation of a 32MW solar farm and a 16MW battery storage development along with associated infrastructure.

The Proposed Development would see the creation of solar panel arrays spread across several existing field boundaries as well as a battery storage area that would be concentrated in one location.

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 and operational phases of the Proposed Development.

## 1.2 Site Location and Context

The Site is located in a rural setting, approximately 1.7km south-west of Coupar Angus and is currently used as agricultural land.

The Site lies within the administrative boundaries of Perth and Kinross Council.

The A94 lies to the south and east of the Site and provides the main road link to Perth (south) and to Forfar (north-east). At Coupar Angus, the A923 can also be accessed which provides a good quality route east to Dundee.

Figure 1.1 below indicates the Application Site in the local context of Coupar Angus and the local road network.

Access to the Proposed Development will be taken via an existing private access road which connects to the A94. The private road currently serves the Mains of Keithick Farm and its associated Biogas facility.

The existing access road to the Site is a single-track rural road with informal passing opportunities whilst and the connection to the A94 is via a simple priority junction arrangement. The access road also connects to an existing public Unclassified Road which runs in a south-west direction from Coupar Angus. Direct access to the various parts of the Site will be taken from this Unclassified Road via three existing field access junctions which will be upgraded to serve the Proposed Development.

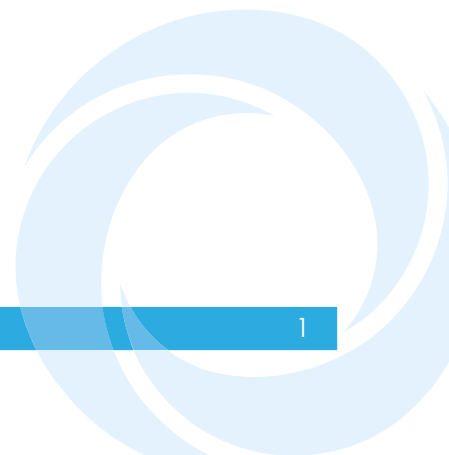
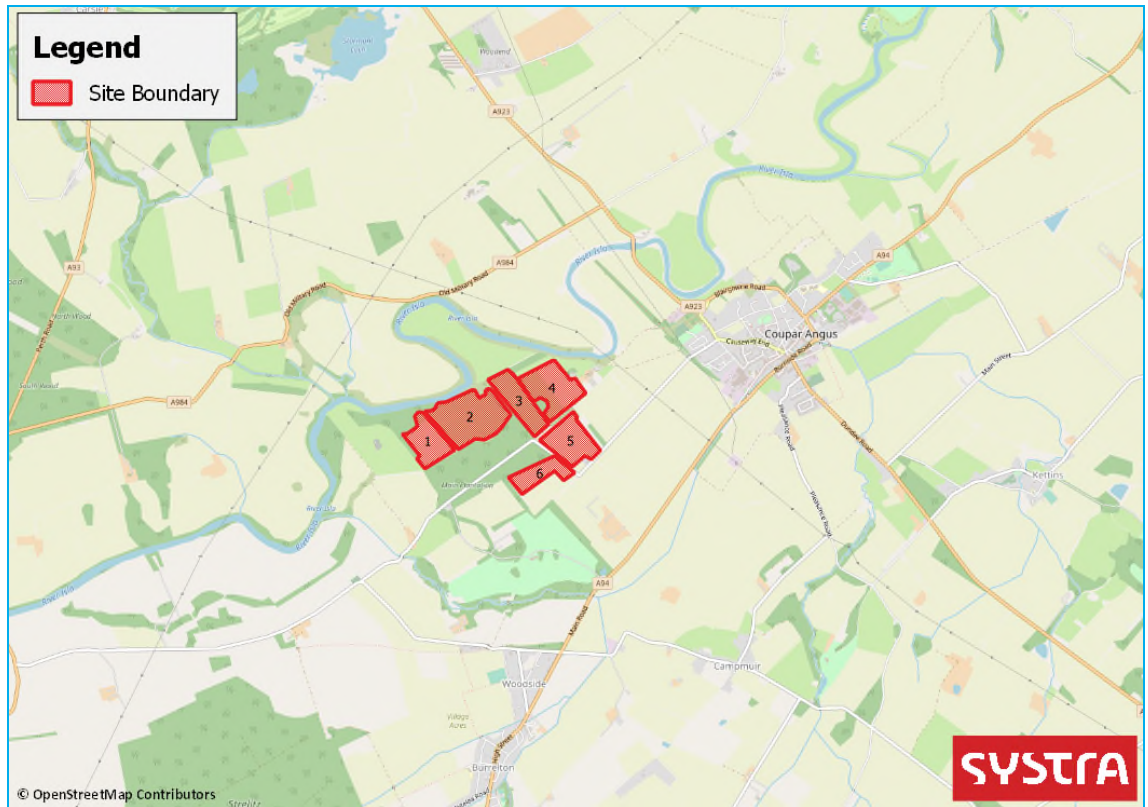


Figure 1.1 Site Location



## 1.3 Policy and Guidance

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

- Scottish Planning Policy (SPP);
- Planning Advice Note (PAN) 75 – “Planning for Transport”;
- Design Manual for Roads and Bridges (DMRB);
- The Scottish Government’s Transport Assessment Guidance (TAG) document;
- Institute of Highways and Transportation – Guidelines for Traffic Impact Assessment; and
- Perth & Kinross Local Development Plan (LDP).

All new or improved infrastructure will be designed in accordance with the standards provided in the Design Manual for Roads and Bridges (DMRB) and to the agreement of Perth & Kinross Council

## 1.4 Report Structure

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

- Chapter 2 – Existing Transport Conditions;
- Chapter 3 – Proposed Development Travel Characteristics;
- Chapter 5 – Measures to Support the Development;
- Chapter 6 – Summary and Conclusions.

## 2 Existing Transport Conditions

### 2.1 Introduction

This section of the TS considers the accessibility of the Application Site and the local area.

The Proposed Development will be largely autonomous once constructed, with the exception of very infrequent servicing / maintenance trips which will likely be facilitated using light goods vehicles (LGVs) in order to transport the relevant technical equipment.

As such, trips to the Proposed Development via alternative methods of travel, including walking and cycling, will likely be negligible during the operational phase. This is due to its relatively rural location of the Proposed Development.

Staff will instead only be on site during the construction of the development and infrequently during the operation of the facility for maintenance and servicing purposes only.

### 2.2 Transport Context

The Proposed Development is split across several fields and is bound predominantly by farmland to the east, west and south whilst the River Tay lies to the north of the site running in a west to east direction.

A private access road (Mains of Keithick Farm Road) runs north-west from the A94 and passes between the first two fields that make up the Proposed Development before it joins an existing public Unclassified Road to the north-east of Keithick Farm.

The Unclassified Road runs south-west from Coupar Angus and where it meets the Mains of Keithick Farm Access Road it turns in a north-west direction before turning to the south-west passing to the south of the remaining two portions of the Proposed Development area. Three existing access junctions from the Unclassified Road will require upgrading to provide access into the site.

The location of these junctions is included on the plan contained within Appendix A.

The existing Keithick Farm Road is a single-track road with a width of approximately 3m although it widens at points especially adjacent to Mains of Keithick Farm and some passing opportunities (mainly informal facilities such as field access bellmouths) are provided along the route along with some longer sections of over-run area adjacent to the farm itself.

The section of Keithick Farm Road that would serve the development extends to a length of approximately 1km from the junction with the A94. The nature of the existing mains of Keithick Farm Access Road is indicated by Figure 2.1 below.



**Figure 2.1 Mains of Keithick Farm Access Road**



The access road connects with the A94 by means of a simple priority junction. It is noted that there is a footpath present on the west side of the A94 in the vicinity of the junction which provides a link north-east to Coupar Angus.

The A94 runs in a south-west to north-east direction from Perth to Forfar passing through Coupar Angus. The A94 road is a two-way single carriageway of approximately 7.3m in width. The general characteristics of the access junction with the Mains of Keithick Farm Access Road is indicated by Figure 2.2 whilst the general characteristics of the A94 at this location are indicated by Figure 2.3.

**Figure 2.2 Existing A94 / Mains of Keithick Farm Access Road Junction**

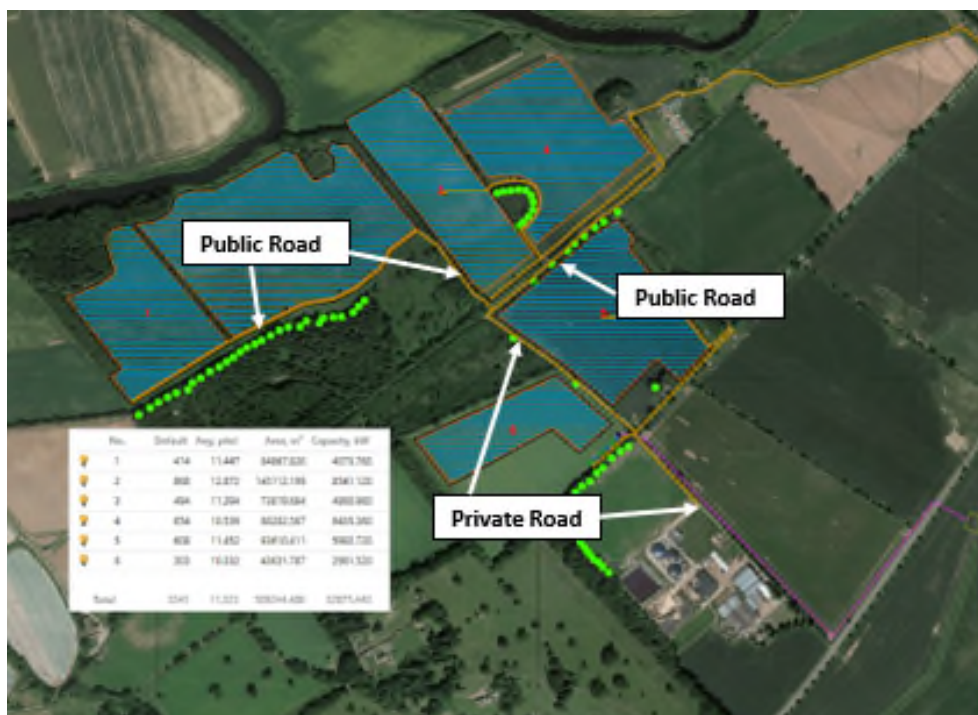


Figure 2.3 General Characteristics of A94



The site footprint and relationship with the A94 and local road network is indicated by Figure 2.4 below. The plan also shows the access routes to the various portions of the site which involves a route via the private access route from the A94 through Keithick Farm which then joins an existing unclassified public road to the north-west portions of the site. The public and private sections of road are also indicated by the figure.

Figure 2.4 Proposed Development Footprint and Road Network



The Unclassified Road that will be used to access the north-west portions of the site is a single-track rural road. The private road through Mains of Keithick Farm joins the Unclassified Road by means of a simple priority junction with traffic on the access road giving way to traffic on the public road. The general characteristics of the Unclassified Road and the junction with the Mains of Keithick Farm Access Road are indicated by Figures 2.5 and 2.6 respectively.



**Figure 2.5 General Characteristics of Unclassified Road**



**Figure 2.6 Junction of Farm Access Road with Unclassified Road**



## 2.3 Existing Sustainable Travel Infrastructure

Given the Application Site's rural location, opportunities for walking and cycling to and from the Proposed Development are limited. The nearest residential settlement is at Coupar Angus to the north-east of the Proposed Development.

The area is connected to the Proposed Development site by means of the Unclassified Road that runs south-west from Couper Angus which will be used to access portions of the site. The route is a single track road with no footways or footpaths but its nature is conducive to walking and cycling movements as traffic flows are low.

A footpath does exist from Coupar Angus along the west side of the A94 connecting the village to the A94 / Mains of Keithick Farm Access Road junction. The farm access road from the A94 to the site does not feature a dedicated footway, however this road is considered to be lightly trafficked and has wide verge areas meaning that it is generally suitable for walking activity.

Public transport has limited accessibility from the Proposed Development site, due to its rural location. The nature of the Proposed Development means that there will be no staff resident on site on a regular basis.

The use of the bus therefore is unlikely to be a chosen mode for accessing the Proposed Development as staff will only visit for maintenance and deliveries or during construction of the development. These trips are likely to be made by company vehicles so that tools and supplies can be carried.

## 2.4 Surrounding Road Network

Figure 2.7 indicates the local road network in the vicinity of the Application Site.

**Figure 2.7 Local Road Network**



### A94

The A94 is the main strategic route that will be used to access the Proposed Development and it provides a link between Perth and Forfar. This road is a single carriageway which is approximately 7.3m in width. DfT data for a survey site south-west of the A94 junction with the Keithick Farm Access Road from 2019 indicates that the road carries some 4,972 vehicles per day.

**A923 Dundee Road**

The A923 provides a good quality link between Coupar Angus and Dundee to the east. At Dundee, the A923 links with the A90 which in turn provides a link north to Aberdeen. The road predominantly takes the form of a single carriageway with a lane in each direction.

The road has a width of approximately 7.3m and is generally rural in nature with a varying speed limit. The DFT database indicates that the A923 carries approximately 4,375 vehicles per day.

Both the A94 and A923 are likely to provide key strategic access routes to the Application Site and would be used for the importation of key construction materials along with the Solar PV panels and battery storage containers themselves.

**Figure 2.8 General Characteristics of A923**



**Mains of Keithick Farm Access Road**

The Mains of Keithick Farm Access Road is a single-track rural road that provides access to Mains of Keithick Farm and provides a link between the A94 and the Unclassified Road that provides access to the north-west areas of the site. The general characteristics of the Mains of Keithick Farm Access Road are indicated by Figure 2.1.

**Unclassified Road Adjacent to Site**

The Unclassified Road that will be used to access the site is a single-track rural road which runs south-west from Coupar Angus. The road meets the Mains of Keithick Farm Access Road via a priority junction.

The general characteristics of the Unclassified Road are indicated by Figure 2.5. There are three existing field access junctions with the Unclassified Road that will provide access to the Proposed Development. These will require to be upgraded in terms of geometry to accommodate the construction vehicles.



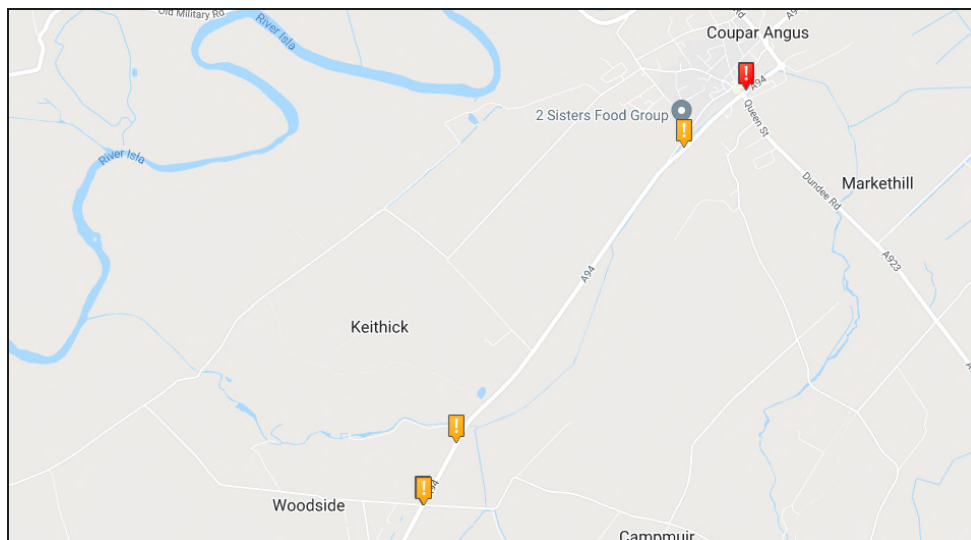
## 2.5 Accident Statistics

The CrashMap ([www.crashmap.co.uk](http://www.crashmap.co.uk)) website has been utilised to determine the number of recorded accidents that have occurred in the previous five years (2017 to 2021) in the vicinity of the Proposed Development site. The results of this investigation are indicated in Table 2.1 below and the location of the recorded accidents is indicated by Figure 2.9.

**Table 2.1 Summary of Accident Statistics**

Location	Slight	Serious	Fatal	Comment
A94	4	2	0	There have been two slight and one serious accident on the A94 south some distance south of the Keithick Farm Access Road. One serious accident involving a single vehicle on A94 within Coupar Angus.

**Figure 2.9 Accident History for Surrounding Road Network**



A total of 4 'Slight' and 2 'Serious' accidents occurred in the vicinity of the Site over the previous five-year period all on the A94 road.

In the wider context, accidents are considered to be isolated incidents as they are sporadic across the local road network with no 'accident hotspots' identifiable. It is also noted that there have been no recorded accidents at the Mains of Keithick Farm access road junction with the A94 which will be the designated point of access from the A94.

There are no recorded accidents on the Unclassified Road that will be used to access the site.

With the above considered, there are no particular road safety concerns in this area that would need to be considered in further detail as part of the application for the Proposed Development.

## 2.6 Accessibility Summary

The Application Site sits within a reasonably well-developed transport network, given its rural location. The Proposed Development will be largely autonomous, with the exception of very infrequent servicing / maintenance trips which will likely be facilitated by LGVs in order to transport the relevant technical equipment.

A Pedestrian route exists along the west side of the A94, however the walking distance to parts of the site are considerable. There are opportunities for walking and cycling to the Application Site from Coupar Angus via the Unclassified Road that runs south-west from the village to the north-east parts of the site however, the demand for such travel modes is considered to be minimal.



### 3 Proposed Development and Travel Characteristics

#### 3.1 Introduction

Due to the nature of the Proposed Development, it is not possible to obtain appropriate data regarding trip generation from the TRICS database. In lieu of this, a first principles approach has been applied using forecasted data provided by the Applicant to quantify the level of vehicle trip generation for the Proposed Development.

#### 3.2 Construction Phase Vehicle Trip Generation

Subject to the necessary approvals, it is the intention of the applicant to commence construction in 2023. The construction will take approximately 12 months with completion expected in 2024.

Work hours are expected to be between 07:00 to 19:00 on weekdays and until 14:00 on Saturdays.

HGVs will arrive and depart from the site at regular intervals during working hours whilst staff trips to and from the site will generally take place just in advance of the site working hours and following the site close in the evening.

##### Vehicle Trips

The construction phase of the Proposed Development is anticipated to last 12 months. During this time, there are expected to be approximately 4,485 vehicle trips associated with the construction phase, including staff trips. Table 3.1 below provides a summary of the anticipated number of vehicle trips across the whole construction period.

**Table 3.1 Anticipated Vehicle Trips During Construction Phase**

Deliveries of materials and equipment:	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Plant Machinery	6	20			1							
Site Office & Welfare Units		4										
Roadbase and Track Surfacing	10	40	40	40								
Fencing			4	4								
Mounting Posts and Drames		5	5									
Solar PV Modules			80	100	80							
LV & HV Cables				20	20	20						
Pre-fab Transformer / Inverter Plant & Housings					4	4						
Sub-station Pre-fab Units						2						
Sub-station Electrical Plant						2	2					
Battery Storage Containers												4
Skip / Recycled Waste Containers	2		4		4		4		2			
Removal of Temporary Surfacing											6	6
	<b>18</b>	<b>69</b>	<b>133</b>	<b>164</b>	<b>109</b>	<b>28</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>10</b>
Site operatives commuting/ visitors vehicles	200	300	400	600	600	600	400	200	200	200	120	120
	218	369	533	764	709	628	406	200	202	200	126	130

Accordingly, there is anticipated to be an average of c.374 vehicle trips per month in each direction across the construction period. Assuming a 6-day working week (24 days per month), this equates to 32 two-way vehicle trips per day.

### Types of Vehicles

The following vehicles are anticipated to be accessing the Site on a regular basis:

- Small Articulated Heavy Goods Vehicles (HGV);
- Small / medium delivery vans (LGV); and
- Cars / small works vans.

The larger HGVs will be carrying plant and machinery to the site along with the Solar PV panels and batteries for the storage element of the development. It is noted that no abnormal loads will be required to serve the development.

The small and medium delivery vans will be delivering small construction materials as well as site consumables.

The cars and small work vans will be carrying site staff and their tools to site.

### Distribution of Vehicle Trips

Vehicle trips to the Proposed Development will likely route to and from the South (Perth) on the A94 or to and from the east (Dundee) via the A923. From Perth and Dundee, vehicles have access to the A9 and A90 trunk roads respectively.

From this, it can be concluded that traffic associated with the Proposed Development will be routed via Road links that have a high carrying capacity and are of a good standard to accommodate HGV movements.

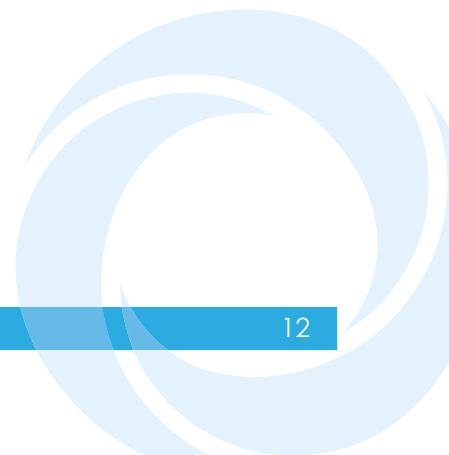
It is noted that in addition to trips onto the external network, there will be a number of trips made between the different parts of the site during the construction works. The volume of these trips is not expected to be high and a proportion of these trips can be made without accessing the public road network. Those internal trips that do utilise the public road network will only do so over a short distance between the identified access points.

### Traffic Impact

It is concluded that the construction phase of the Proposed Development will not give rise to a significant number of additional vehicle trips. As such, the impact of traffic levels on the road network surrounding the Proposed Development will be negligible and the impact on existing road users will also be minimal and insignificant.

## 3.3 Operation of the Proposed Development

The Proposed Development is split across 6 separate areas which are grouped around the Unclassified Road that runs south-west from Coupar Angus (Figure 1).



## 4 Measures to Support the Development

### 4.1 General

The following section considers the integration of the Proposed Development into the surrounding transport network along with consideration of the measures that are likely to be needed to support the Proposed Development during the construction and operational phases.

### 4.2 Walking and Cycling

#### Walking

It is not anticipated that the Proposed Development will generate a significant number of pedestrian trips in terms of trips to and from the development, given the site's nature and operational requirements.

There will likely be a level of walking associated with the operation of the facility, but such activity would all be within the Application Site boundary. To maintain pedestrian safety, new infrastructure in the form of footpaths or line-marked footways in yard areas will be provided within the Proposed Development.

As there will be no resident staff on site, it is not proposed to provide any pedestrian infrastructure improvements external to the site.

#### Cycling

The low number of staff (and infrequent nature of staff visits) associated with the Proposed Development is unlikely to generate a notable cycling demand.

There are opportunities to cycle between the site and Coupar Angus on unclassified roads that are conducive to cycling movements. As there will be no permanent staff on Site at the operational phase, it is considered that there is no requirement to provide dedicated cycling infrastructure as part of the development proposals.

Care will however be needed during the construction stage to ensure the safety of cyclists on the access route to the site is maintained. This would be covered by the construction stage traffic management plan, and it is likely that additional signing may be required to raise awareness of cycle activity and reduce the nature of any conflict points.

### 4.3 Access Strategy and Road Network

Access to the Proposed Development will be taken from the Mains of Keithick Farm Access Road and then the existing unclassified road that runs south-west from Coupar Angus and dissects the solar farm site boundary.

A total of 3 access points would be established into the site from the Unclassified Road. Two of these are existing field access junctions that would be upgraded in terms of geometry to accommodate the construction vehicles whilst the third would be a new access junction to serve the development.

No modifications are proposed for the A94 / Mains of Keithick Farm Access Road junction itself as it currently accommodates heavy goods vehicles associated with Keithick Mains Farm and the associated biogas facility.

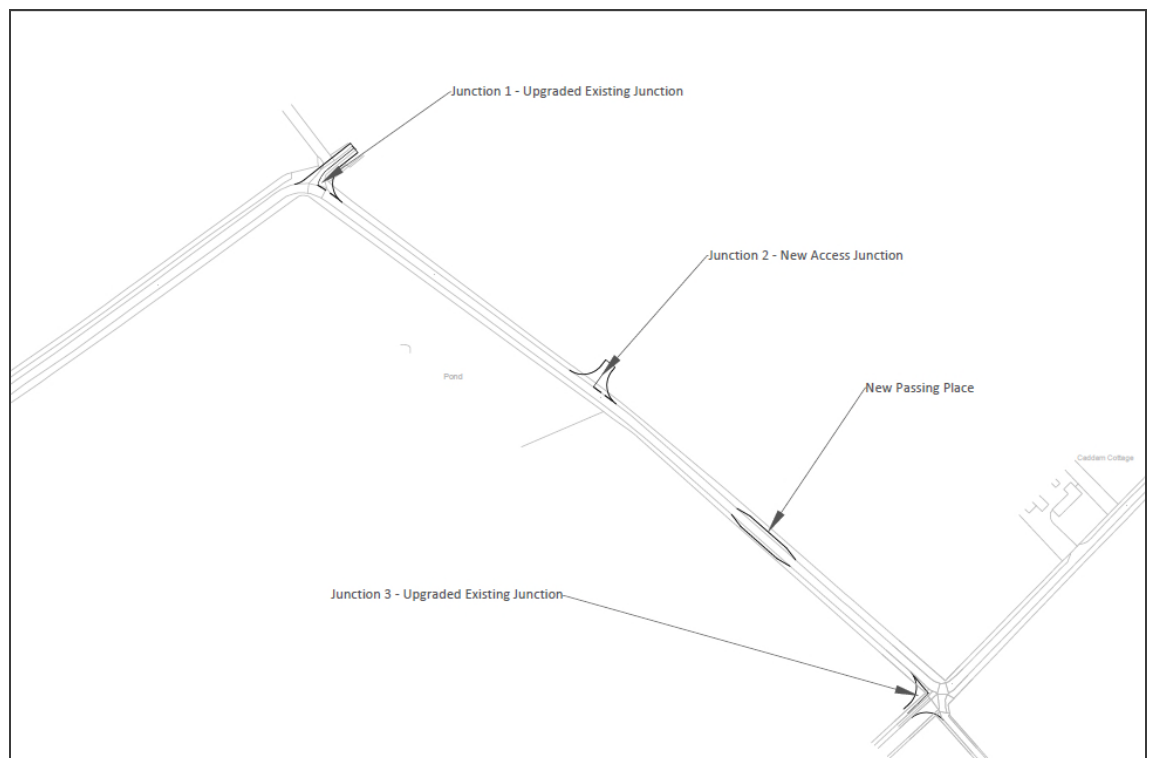
The existing Mains of Keithick Access Road is a single track rural road which is a lightly trafficked road primarily serving Keithick Mains Farm. No modifications to the access road are proposed in order to serve the development.

The three access junctions into the development from the existing Unclassified Road will be constructed to be compliant with DMRB design standards. The Proposed Development will be gated for the purposes of maintaining security and safety at the site.

The existing Unclassified Road that will provide access into the site is a single track road with no formal passing places currently provided on the section of road that will be used to access the Proposed Development.

It is therefore acknowledged that a new passing place will be required to support the development proposals by ensuring that two-way operation can be achieved on the short section of the route that will be used during the construction period. The location of the passing place is indicated by Figure 4.1 below.

**Figure 4.1 – proposed Access Junctions and Passing Place**



The section of Unclassified Road that will be used to access the Site is approximately 410m in length. It is proposed to introduce the new passing place between the first two access junctions along this section along with the new access junction bellmouths which can also be used as passing places.

Preliminary design drawings for each of the access junctions and the passing place are included within Appendix A along with visibility splays.

Operational traffic generation from the Proposed Development is considered to be negligible in comparison to the existing traffic on the network. It is considered that there will be no requirement to provide any other off-site highway improvements.

## 4.4 Framework Construction Traffic Management Plan (CTMP)

The following paragraphs set out a framework for a CTMP that will be put in place to support the construction of the proposed facility. The CTMP will identify measures to reduce the number of construction vehicles as well as identifying measures to mitigate the impact of vehicles during the construction period.

The final CTMP will identify the programme of works, the agreed routes to the Site and details of a Site Liaison Officer who will 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.

### 4.4.1 Measures to Minimise and Mitigate Construction Traffic Impacts

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 Material

In order to minimise the volume of imported material, it is anticipated that a proportion of materials (stone, top soil etc.) would be sourced / re-used from within the boundaries of the Proposed Development site.

#### Delivery Control

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

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

- Delivery of materials will not be within the morning and evening road network peaks, in so far as is possible;
- 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.

#### Sustainability

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 Application Site;
- Promotion of shared transport arrangements for Proposed Development's operatives;



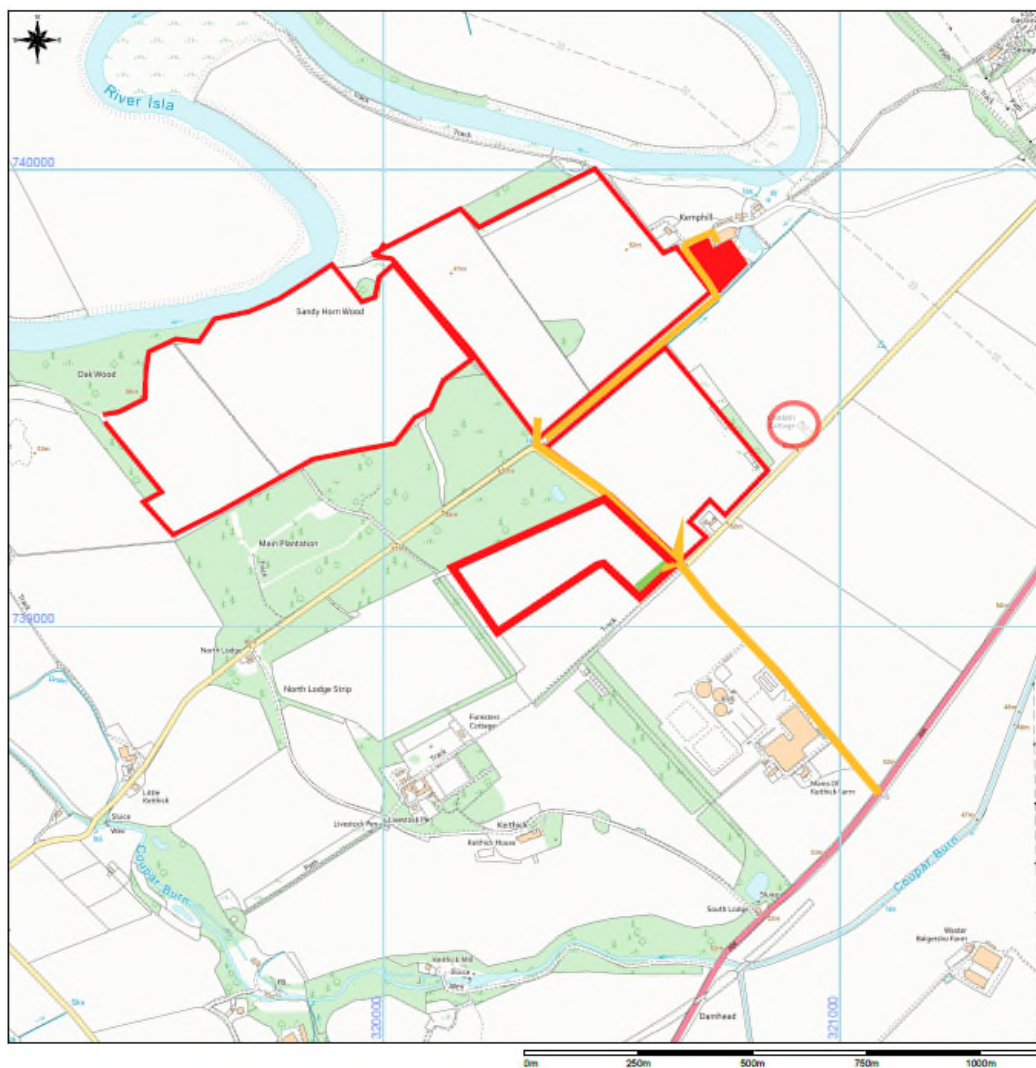
- Thorough pre-planning of operations on-site to optimise the redistribution of earthworks materials together with minimisation of haul distances;
- Reduction in the amount of aggregates used on-site by means of alternative construction techniques;
- Application of a reduce-reuse-recycle philosophy to all waste processing activities; will be restricted to this route, where practical, so that the effects of the construction traffic can be managed and monitored while preventing impacts on other routes.

### Designated Access Route

In order to manage and control HGV movements to and from the site, it is proposed to have a designated access route into the site. Figure 4.2 indicates the proposed designated route to site from the A94.

It is proposed to designate this route as the route that is to be used by HGVs travelling to and from the Site which is the route that almost all construction vehicles will travel to site by. Use of the designated route can be written into Contractor obligations and compliance can be assured through observations and monitoring.

**Figure 4.2 Designated Construction Vehicle Route**



The contractor will be required to put an induction procedure in place with regular updates provided to all drivers to establish and promote an overall culture of safety and awareness of other road users.

There will be no convoy driving of HGV's or site staff vehicles permitted. Drivers will be asked to resolve convoys by spacing out if this arises during routing to site.

### Road Sweeper / Dust Suppression

A road sweeper will be deployed as necessary in order to reduce mud and debris being deposited onto the local road network in the vicinity of the Proposed Development.

The sweeper would operate on the Unclassified road providing access and on the A94 either side of the junction with the unclassified road that provides access. During summer periods when dust can be created, a water sprayer can be deployed to control air borne dust on the access route local to the site.

Where possible, HGVs carrying material to and from the site will be covered during transportation to minimise wind-blowing materials from being deposited onto the public road network.

### Speed Limit

All construction vehicles will be expected to follow the relevant national speed limits for type and size of vehicle being used. Local residents / other road users should be able to report any instances of speeding to the Site Liaison Officer who will take necessary action to prevent a repeat.

On-site operatives will be briefed on the speed limit through induction sessions and through regular staff briefings. Other parties responsible for site deliveries will also be instructed on any additional restrictions put in place.

The speed limit currently in operation along the A94 is 60mph past the junction with the Unclassified Road reducing to 40mph at Coupar Angus.

The unclassified road is derestricted so it is proposed to introduce a 15mph speed limit for construction vehicles between the A94 and the site access points. This would be reinforced by construction traffic speed limit signs along the length of the access route and on approach to the site access points.

### Signage

Temporary construction signage will be erected on the local road network in the vicinity of the Proposed Development to warn people of construction activities and associated construction vehicles.

Additional signage will be provided at the A94 / Unclassified Road junction to raise awareness of the construction site. Signs relating to cycle activity would also be erected on the Unclassified Road to maintain the safety of cyclists on the route.

The purpose of additional signage is to provide driver information and to maintain road safety along the construction vehicle route. The exact nature and location of signage will require to be confirmed with Perth & Kinross Council.

## Car Parking

Car parking for the workforce will be provided entirely within the confines of the site boundary and will not be permitted on the adjacent unclassified road so as to minimise the effect on existing road users. Car sharing will be promoted to construction staff by the contractor during the induction process.

## Staff Induction & Code of Conduct

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

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

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

Drivers should 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.

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.

## Contracts and Emergency Procedures

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, hospitals, local landowners, local businesses, Community Councils and local residents.

The main 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.

## Implementation of the CTMP

The implementation of the CTMP will be the responsibility of the appointed Main Contractor. Further evolution of the CTMP may be required during the construction period itself.

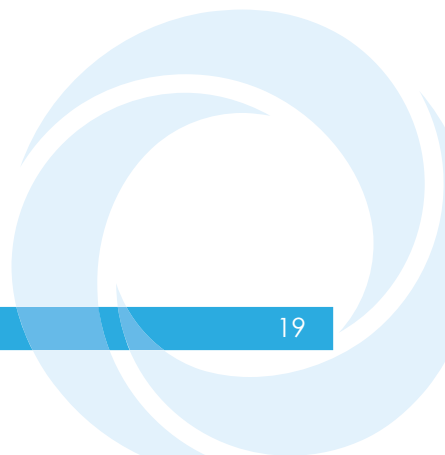
The main contractor may employ a number of sub-contractors on the site and all will fall under the umbrella of the CTMP and will have an obligation to adhere to the CTMP.

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

The Liaison Officer will be responsible for the co-ordination of all elements of traffic and transport during the construction process. This person will liaise with the local community so that the community have a direct point of contact within the Developer's organisation who they may contact for information purposes or to discuss matters pertaining to traffic management or site operation.

### Monitoring of the CTMP

The CTMP will be monitored by the Liaison Officer who in turn will report to The Roads Authority (Perth & Kinross Council) in relation to any required changes to the CTMP.



## 5 Summary and Conclusion

The Proposed Development Site is considered to be well placed to take advantage of the surrounding transport network and good connections to the A94 which will be a key delivery route for materials being delivered to site from the south-west via Perth. The A923 can also be accessed at Coupar Angus providing good quality linkage to Dundee for construction vehicles.

The vehicle trip generation of the Proposed Development will be negligible at the operational stage, and as such, it is considered that it can be accommodated without detriment to the local road network.

The main impacts associated with the development will be at the construction stage which will extend over a 12-month period and will involve the delivery of materials to site and the movement of site staff on a daily basis. The average development traffic levels have been calculated and when spread over the construction period, the daily traffic flows (32 two-way trips) are not considered to be significant.

In order to facilitate the efficient and safe construction of the development, it is proposed to upgrade the Unclassified Road that runs south-west from Coupar Angus (and which is linked to the A94 by the Mains of Keithick Access Road).

The upgrading works would consist of the creation of a passing place / opportunity on the route to enable the efficient two-way operation of the development during the construction period. The passing place can be put in as either temporary or permanent infrastructure.

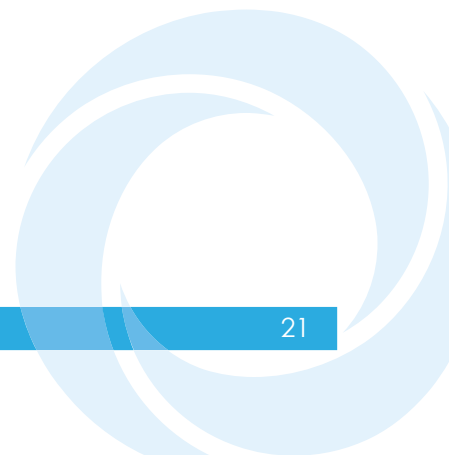
The new / upgraded junction bellmouths providing access to the development will also serve as new passing opportunities along the public Unclassified Road that provides access to the Proposed Development.

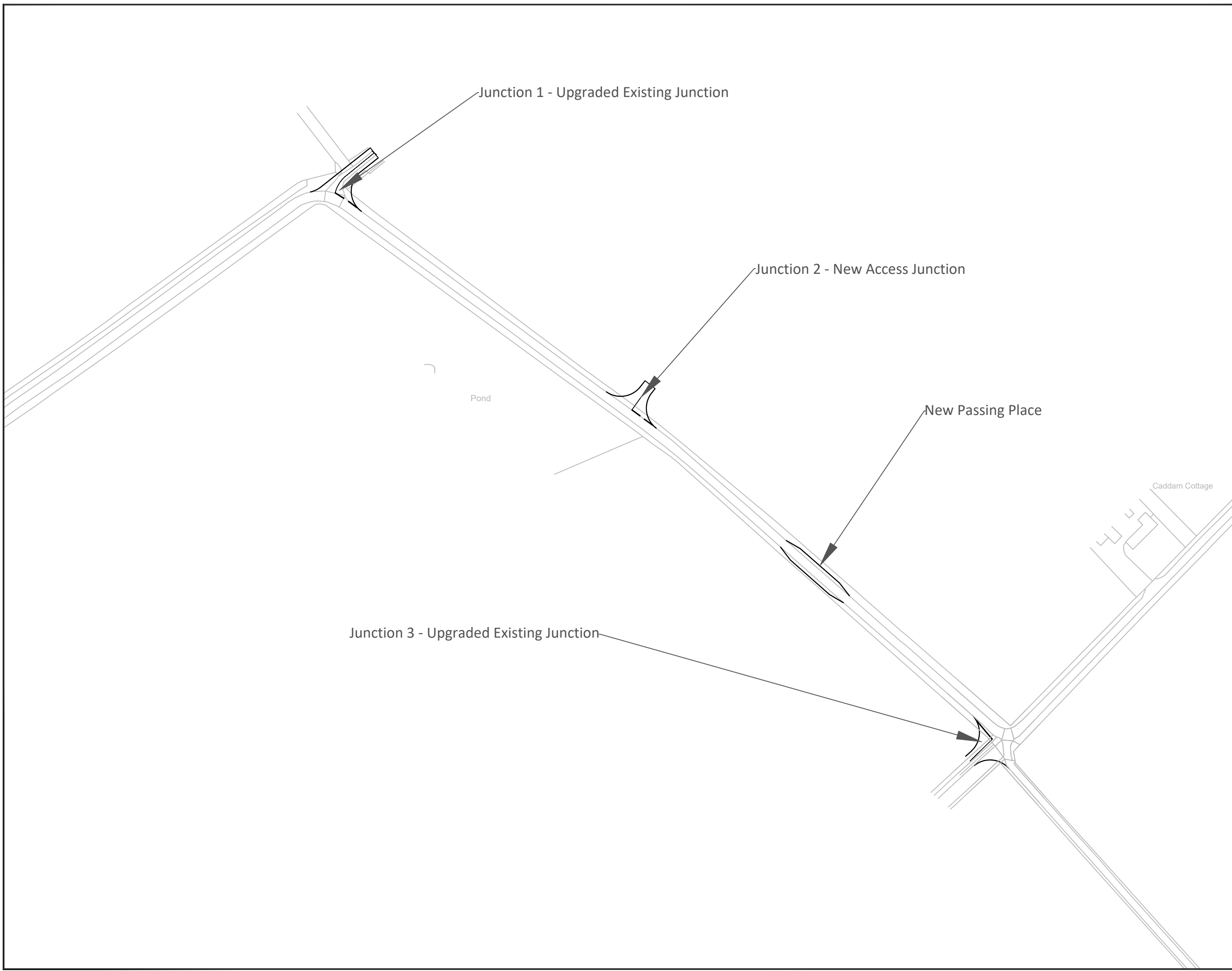
A framework CTMP has been produced and presented within this TS to demonstrate that adequate arrangements can be put in place to minimise and control the construction traffic impacts from the construction phase of the Proposed Development along with any associated environmental impacts.

Overall, it is considered that the Proposed Development is in a good location benefiting from a good quality road network which will assist in the safe and efficient delivery of materials and site staff with minimum impact on existing road users.



## Appendix A – Access Junction Designs. Visibility Splays and Passing Place Details





Junction 1 - Upgraded Existing Junction

Junction 2 - New Access Junction

New Passing Place

Junction 3 - Upgraded Existing Junction

Pond

Caddam Cottage

Notes:

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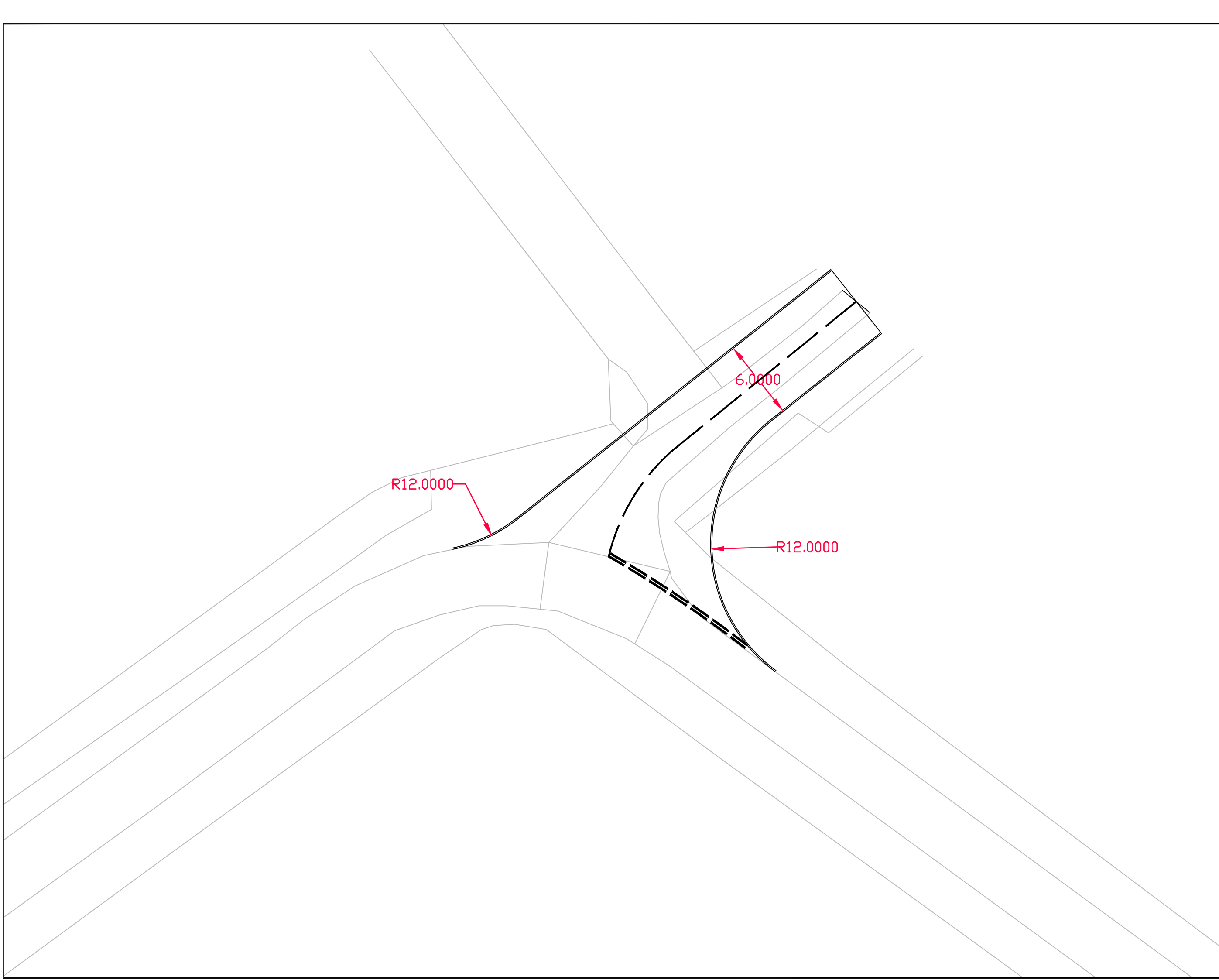
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Project  
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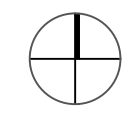
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Drawing Status INFORMATION	Drawing Number 1	Rev. -



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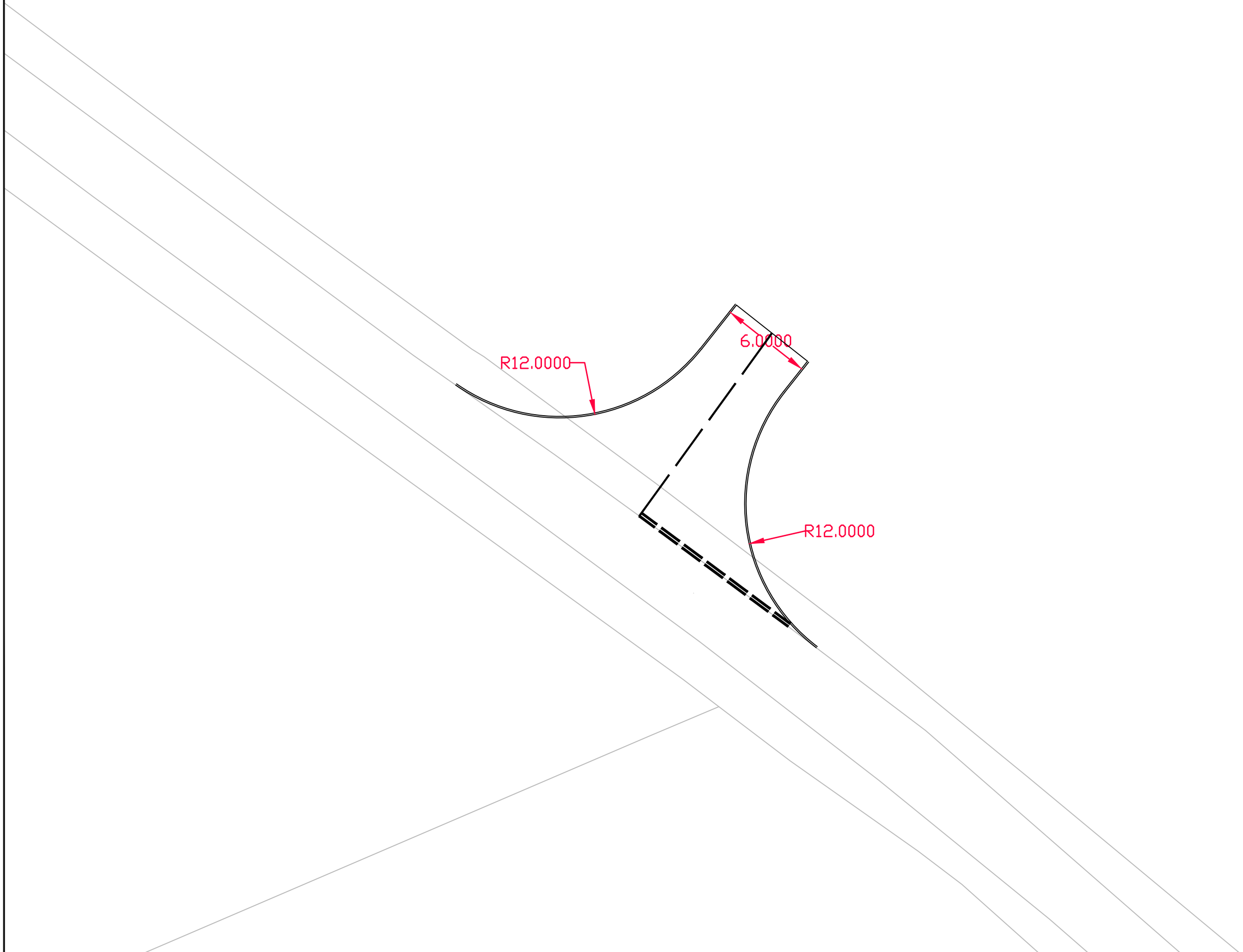
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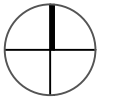
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Junction Two Design

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Drawing Status INFORMATION	Drawing Number 3	Rev. -

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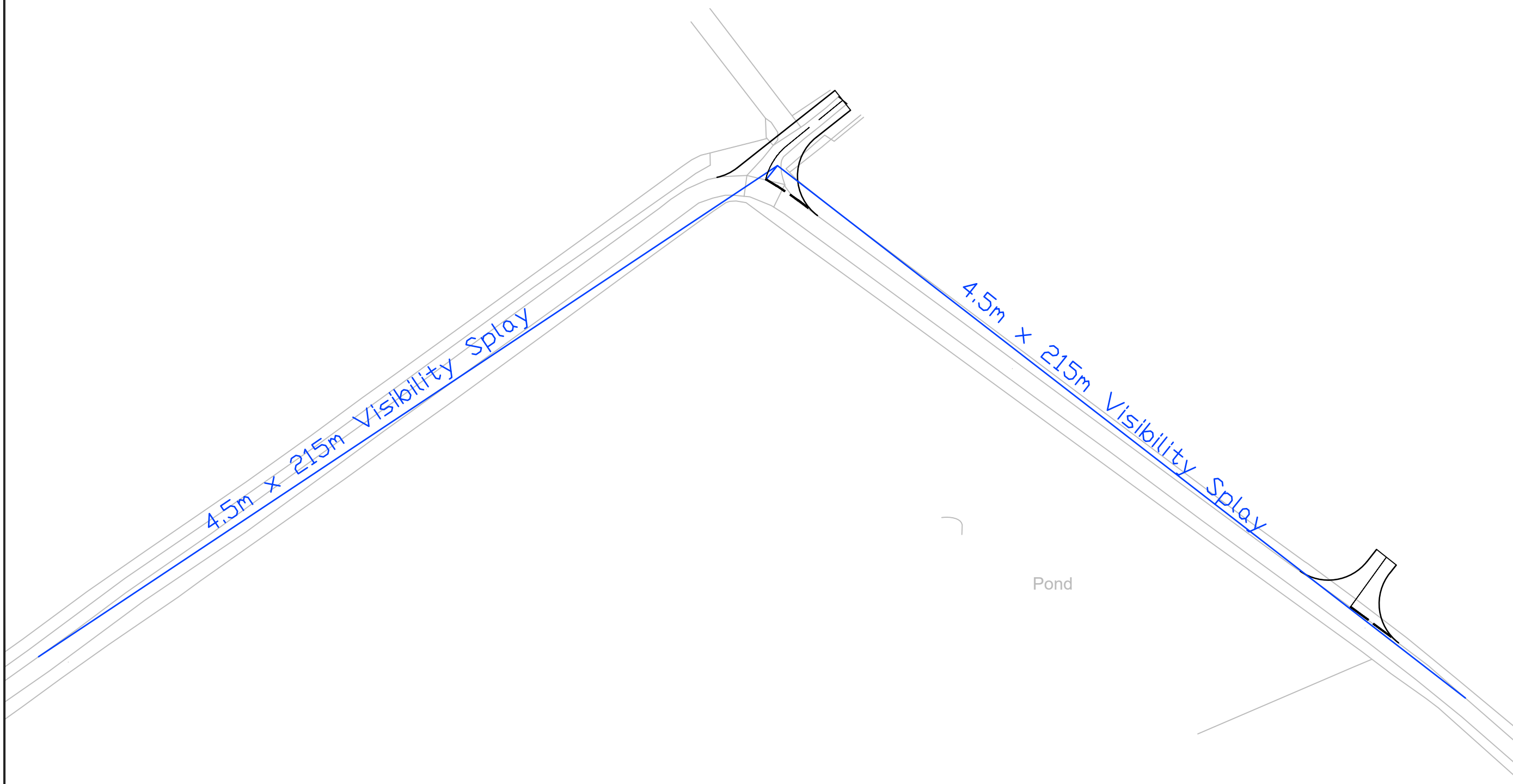
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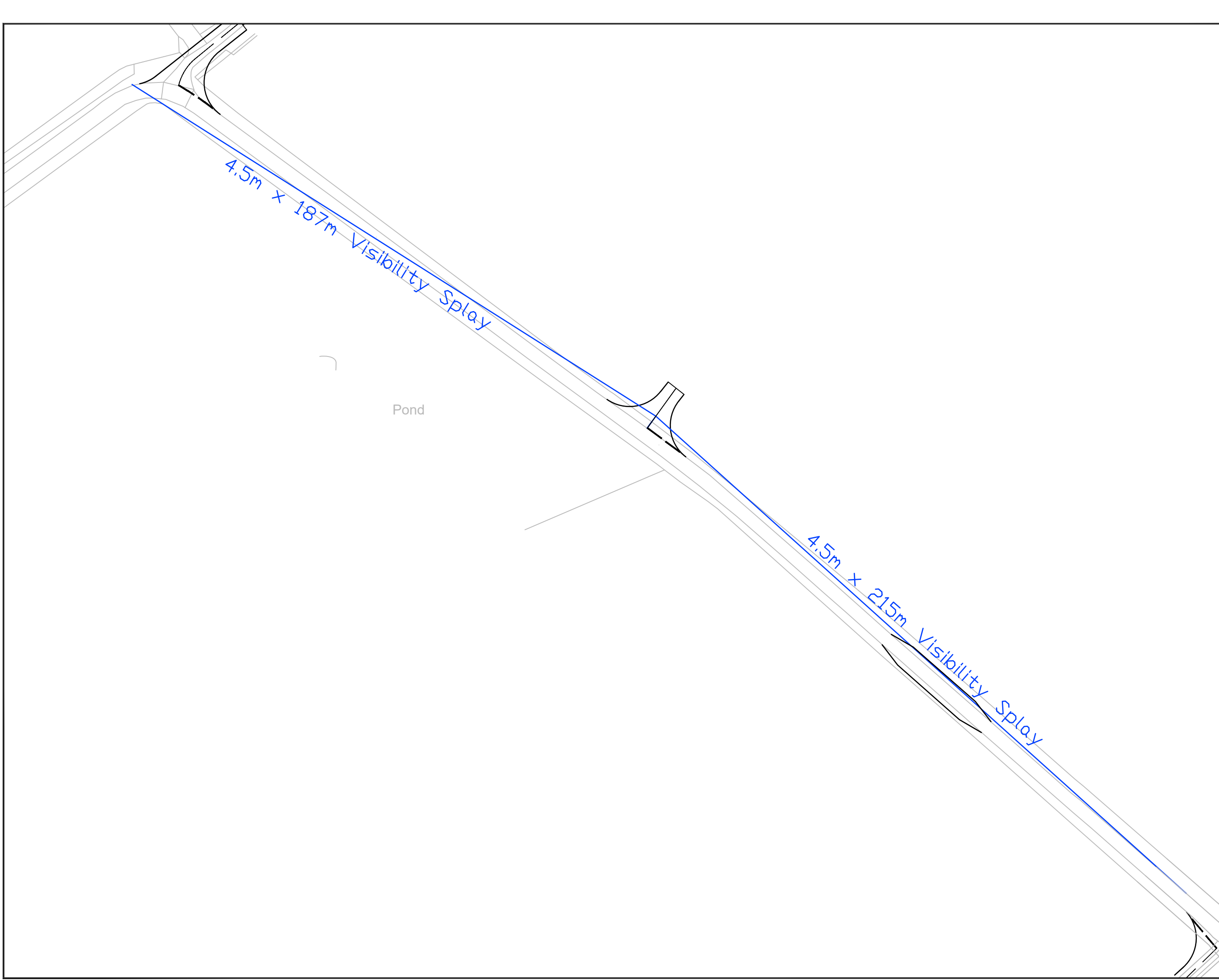
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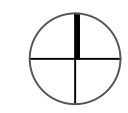
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Junction One 4.5m x 215m  
Visibility Splay

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A3L	23/03/22	1:1000
Drawing Status	Drawing Number	Rev.
INFORMATION	5	-



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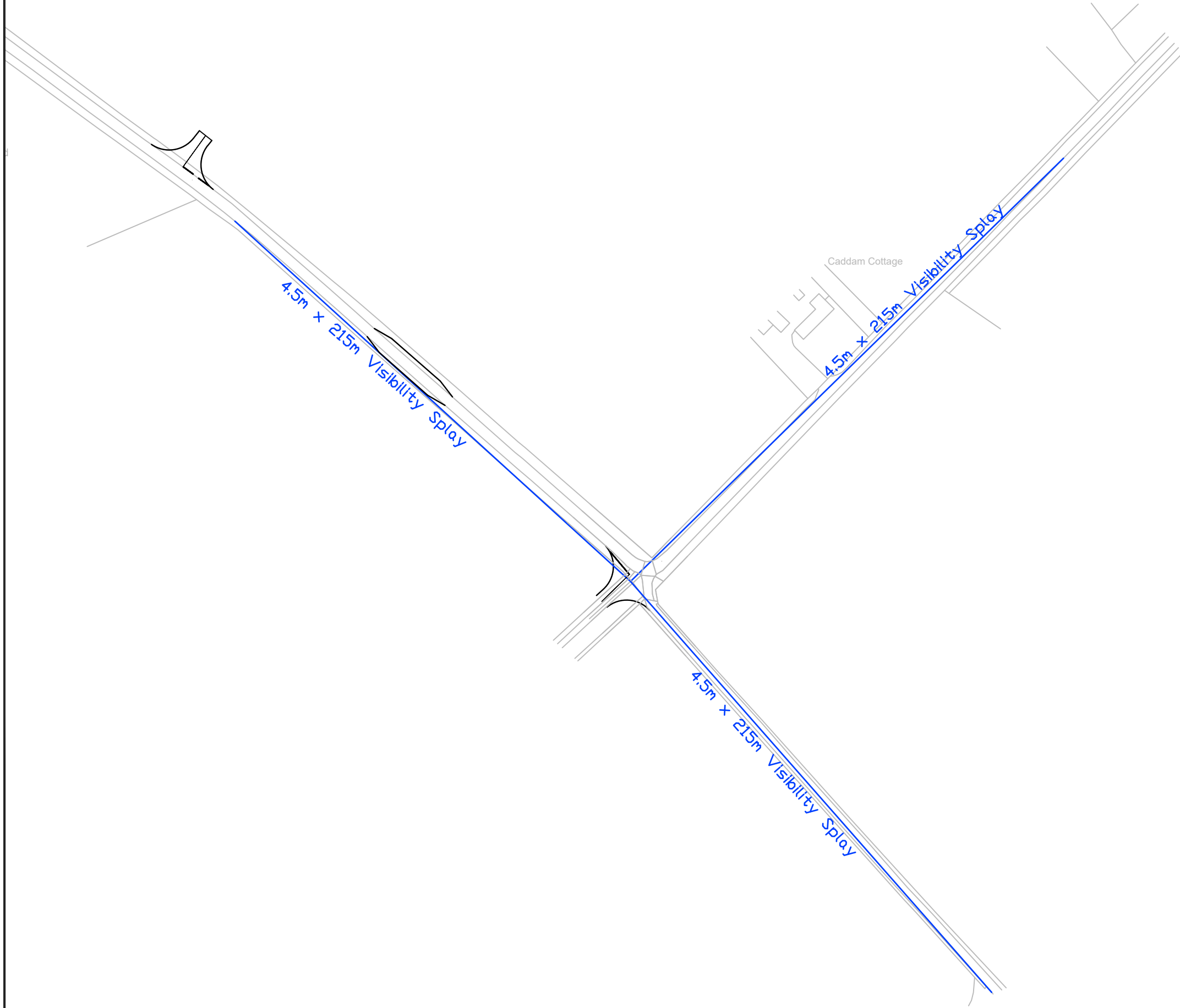
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Client  
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Project  
Keithick Solar Farm

Title  
Junction Two 4.5m x 215m  
Visibility Splay

Drawn	Checked	Approved
AMS	AD	AD
Original dwg. size	Date	Scale
A3L	23/03/22	1:1000
Drawing Status	Drawing Number	Rev.
INFORMATION	6	-



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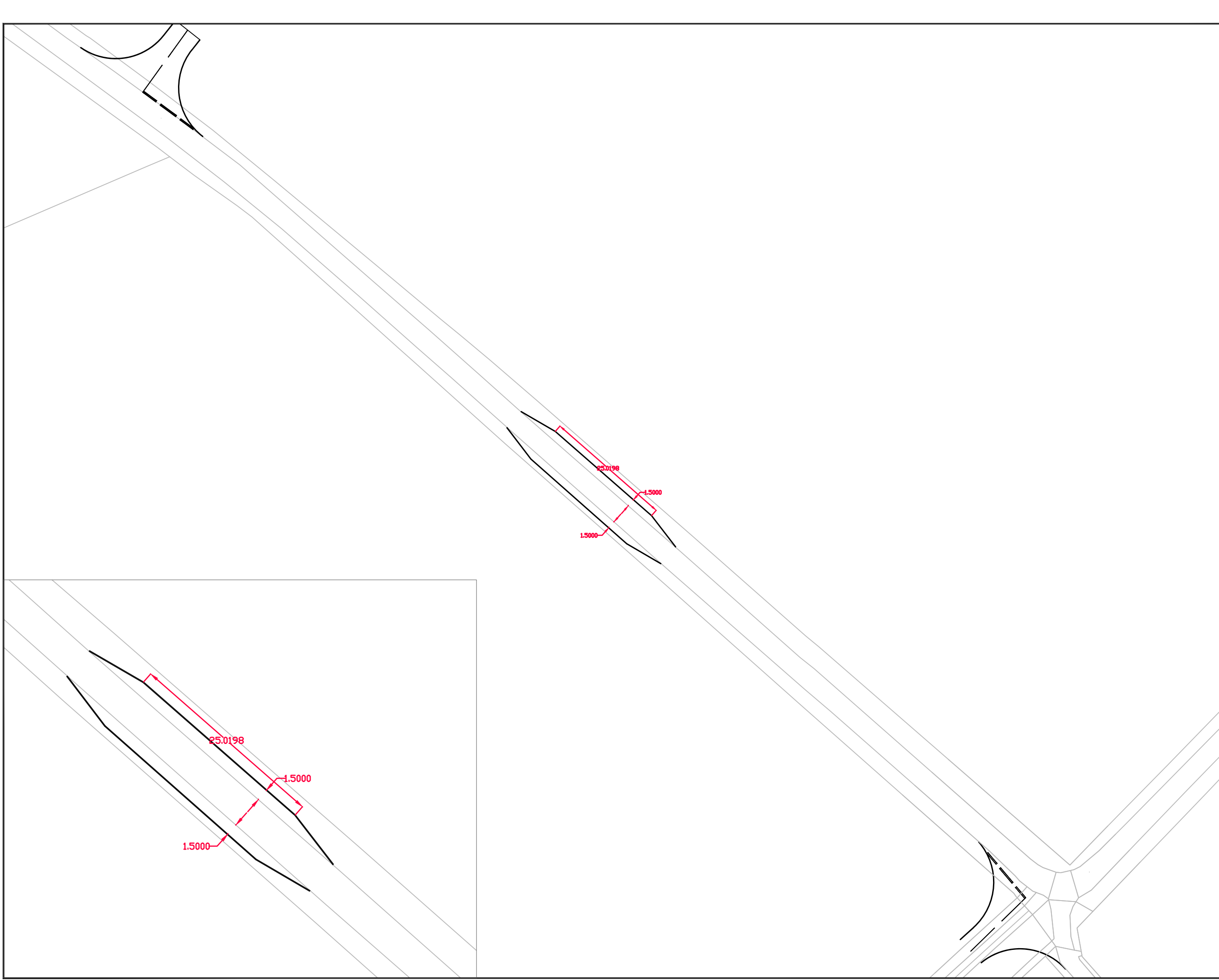
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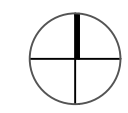
Title  
Junction Three 4.5m x 215m  
Visibility Splay

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Original drg. size A3L	Date 23/03/22	Scale NTS
Drawing Status INFORMATION	Drawing Number 7	Rev. -



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Title  
Passing Place

Drawn AMS	Checked AD	Approved AD
Original drg. size A3L	Date 23/03/22	Scale 1:250
Drawing Status INFORMATION	Drawing Number 8	Rev. -