Sirius Planning Ltd.

Proposed Solar Farm and BESS Main Road, Kelham, Newark-on-Trent

Transport Statement

sanderson associates
consulting engineers

Control Sheet

CLIENT:	Sirius Planning Ltd.
PROJECT TITLE:	Proposed Solar Farm and BESS
	Main Road, Kelham, Newark-on-Trent
REPORT TITLE:	Transport Statement
PROJECT REFERENCE:	153626
DOCUMENT NUMBER:	001
ISSUE NUMBER:	02
DATE:	October 2023

Issue & Approval Schedule

Issue 01 Draft	Name	Signature	Date
Prepared by	Luke Young	[redacted]	30/062023
Checked by	Karen Smith	[redacted]	30/06.2023
Approved by	Karen Smith	[redacted]	30/06/2023

Issue Record

Issue	Date	Status	Description		Signature
02	12/10/2023	Final	Amended following client review	Prepared	[redacted]
				Checked	
				Approved	
03				Prepared	
				Checked	
				Approved	

This document has been prepared in accordance with procedure OP/P02 of the Sanderson Associates Consulting Engineers Quality and Environmental Management System.

This document has been prepared in accordance with the instructions of the client, Sirius Planning Ltd., for the client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

Any information provided by third parties and referred to herein has not been checked or verified by Sanderson Associates Consulting Engineers unless otherwise expressly stated within this report.

Acknowledgements

GoogleMyMaps, Google Maps and OpenRouteService have been used to generate figures included in this report for illustrative purposes only.

The Crashmap database has been utilised to carry out a road traffic incident review.

Traffic count data has been provided by Road Data Services

Extracts of 'Providing for Journeys on Foots,' and the Nottinghamshire County Council Definitive Map for Highway Adoption have been included in this report

Extracts of CIHT documents, 'Planning for Walking' (2015), and 'Planning for Cycling' (2014) have been included in this report.

Contents

List of Tables

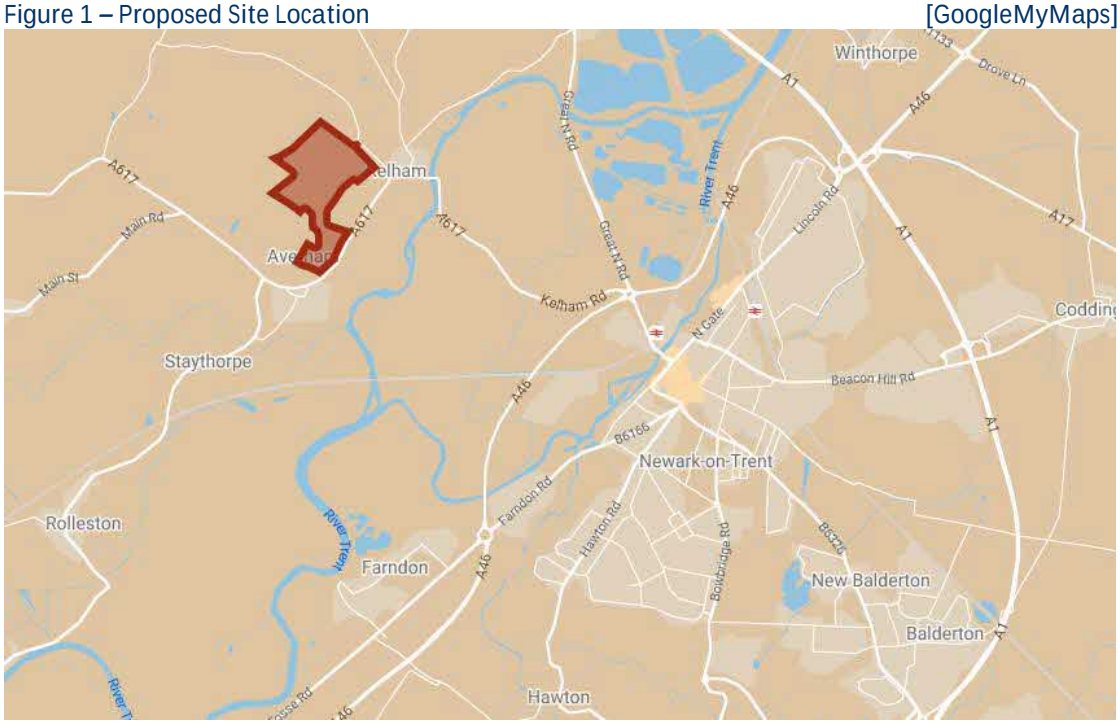
List of Figures

List of Appendices

1. Introduction

1.1 Sanderson Associates Consulting Engineers has been appointed by Sirius Planning Ltd. to provide highway consultancy services in relation to proposals to develop a solar farm and Battery Energy Storage System (BESS) on land off Main Street, Kelham, Newark-on-Trent. The proposed location of the site is shown in Figure 1.

Figure 1 – Proposed Site Location [GoogleMyMaps]



1.2 It is proposed to construct a 49.9MW solar farm and a 50MW battery energy storage system (BESS), on land to the West of Main Road, Kelham, with the proposed access being from the A617.

1.3 This Transport Statement has been prepared to satisfy the highways officer's pre-application comments that:
"sufficient and suitable mitigation measures will be required to ensure that the volume of traffic can be adequately accommodated without, causing undue delay and disruption to the operation of the A617."

1.4 A site visit was undertaken on 15th March, 2023 in order to obtain accurate measurements of the achievable visibility from the proposed site access and to take photos of the A617, to ensure that construction vehicles will be able to manoeuvre to the site.

1.5 In March 2014 Planning Practice Guidance relating to 'Travel Plans, Transport Assessments and Statements,' was published. This supports the National Planning Policy framework (NPPF) Transport Statement and as outlined in that guidance this report will include:

- → Details of the existing use of the land in question and its means of access
- → Set out existing site information which we will provide in the form of a description of the surrounding highway network and the area it serves;

- A review of recorded personal injury accident data in the vicinity of the site;
- A review of the baseline traffic data obtained from ATCs and commentary on the transport implications of construction traffic;
- Set out proposed land use and scale of the development including reference to the number of vehicles to be generated;
- Provide details of the proposed parking and servicing strategy (to be in accordance with the Nottinghamshire County Council, or other applicable local authority, parking standards) including swept path analysis of the proposed setting down and turning facilities for large vehicles;
- Prepare a preliminary access arrangement drawing on to the A617, and including sight lines based on the results of the ATC surveys and informed by further swept path analysis;
- Commentary on the transport implications of construction traffic;
- A brief audit on the accessibility of the site by sustainable modes; and,
- A summary and conclusion of the findings.

2. The Development in Planning Policy Context

2.1 Planning Policy Overview

2.1.1 This section sets out the national and local planning policies, as well as material considerations which are relevant, both to the application site, and the type of development proposed.

2.2 National Planning Policy

2.2.1 The National Planning Policy Framework (NPPF), first published on 27 March 2012 and most recently updated on 5 September 2023 provides the most up-to-date national guidance on transport and its role within the planning system.

2.2.2 In considering development proposals, NPPF paragraph 110 states that;

*"*In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*"*

2.2.3 NPPF paragraph 111 states:

*"*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*"*

2.3 Amended Core Strategy Newark & Sherwood District Council (Adopted March 2019)

2.3.1 This is the key document as part of the Local Development Framework and is backed up by various other documents, including Development Plan Documents (DPDs), the Policies Map, and Supplementary Planning Documents (SPDs). The plan, adopted in 2019 sets out the big issues that Newark and Sherwood District Council need to address over the next twenty years.

2.3.2 Relevant policies included within the Local Plan are: Spatial Policy 7: Sustainable Transport, Core Policy 9: Sustainable Design, and Core Policy 10: Climate Change.

2.4 Nottinghamshire Transport Plan 2011-2026

2.4.1 The Transport Plan has set out the transport objectives, policies and priorities for the County for the period 2011 to 2026.

3. Existing Situation

3.1 Site and Surrounding Area

3.1.1 The application site is currently maintained agricultural land within the open countryside, between the villages of Kelham (to the east) and Averham (to the south). The site is located the west of the principal road A617, which links Newark-on-Trent to Chesterfield.

3.1.2 The site is bounded by:

- → North: Agricultural fields and Broadgate Lane and broadleaved woodland
- → East Main Road, The Renaissance at Kelham Hall, St. Wilfred's Church and the River Trent
- → South: Agricultural fields and Averham
- → West Agricultural fields

3.2 Local Highway Network

3.2.1 The A617 is subjected to a 50mph speed limit across the site frontage. A footway is present on the site side of the carriageway, measuring approximately 1.5m in width. There is also street lighting present along the A617.

3.2.2 The carriageway is approximately 7.0m in width and connects the site to Kelham in the north east and Averham to the south.

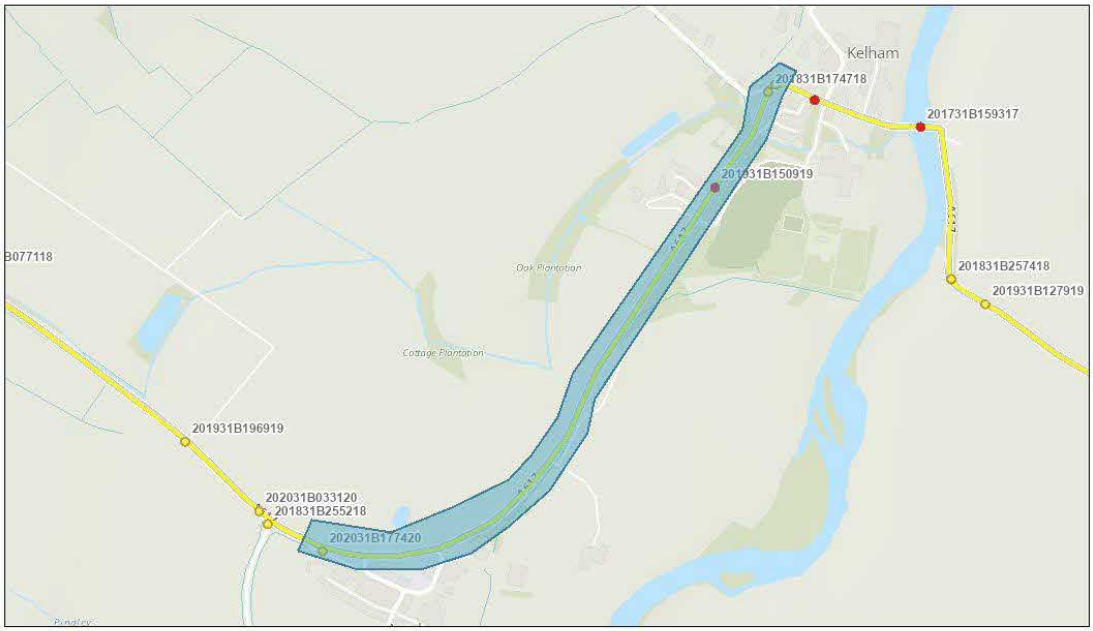
3.3 Road Traffic Collision Data

3.3.1 National guidance states that Transport Statements should include, "an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area."

3.3.2 Whilst the local network is not considered to be a 'high accident area', in order to provide a robust assessment the most recent 5-year period has been considered.

3.3.3 Road traffic collision data has been obtained from the Crashmap database for the most recent five year period available (January 2017 – December 2021). The incident plot diagram within the vicinity of the site is shown in Figure 2.

Figure 2 – 5 year Road Traffic Collision Record [Crashmap]



3.3.4 The assessment area shows that four accidents (1 serious and 3 slight in nature) have occurred over the five year period. The full report can be viewed at Appendix A, and a summary of the incidents is as follows:

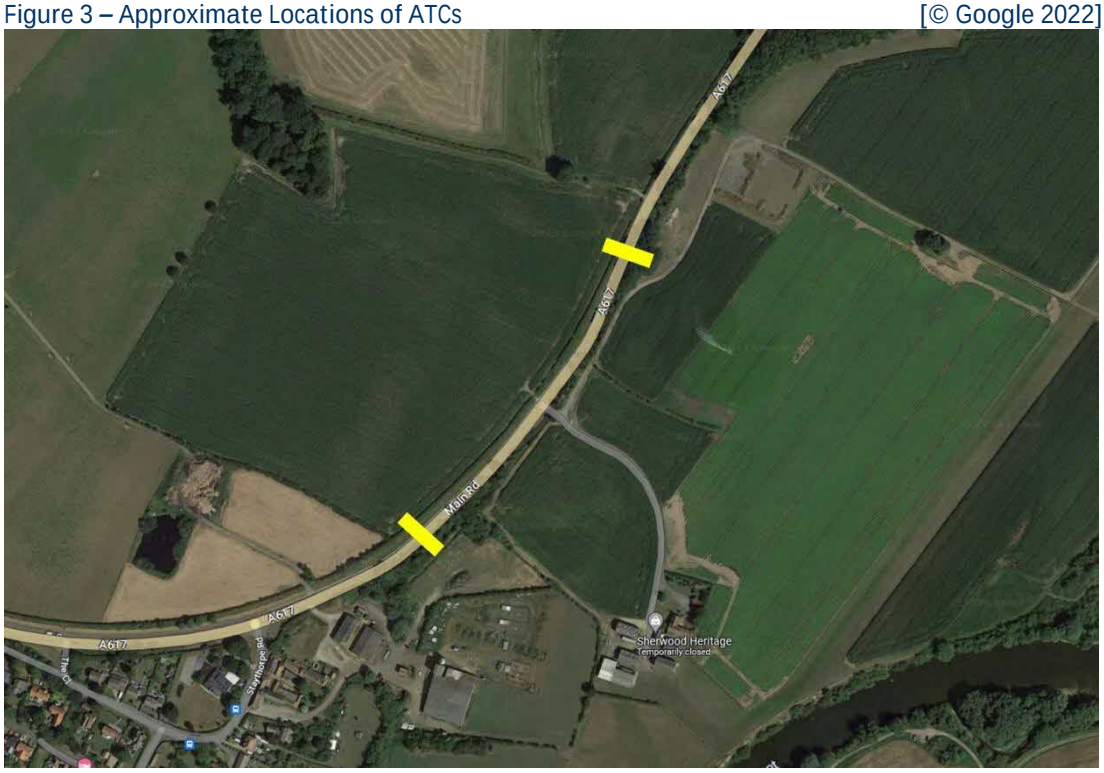
- → Incident Reference: 201731B093617 – occurred Monday 29 May, 2017 at 6:31PM in wet or damp conditions. Two vehicles were involved, travelling in opposite directions on the corner into Kelham. There were four casualties as a result, with all of them experiencing slight injuries.
- → Incident Reference: 201831B174718 – occurred Monday 1 January, 2018 at 4:20PM in dry conditions. A motorcycle and a car, travelling in opposite directions at the same corner as the above incident, collided and the rider of the motorcycle experienced slight injuries.
- → Incident Reference: 201931B150919 – occurred Friday 30 August, 2019 at 1:36PM in dry conditions. An elderly driver in a car was proceeding normally along the carriageway when they collided with a wall or fence, inflicting serious injuries upon themselves.
- → Incident Reference: 202031B177420 – occurred Friday 18 December, 2020 at 6:19AM in wet or damp conditions. A car was proceeding normally along the carriageway, on a left hand bend and collided with a wall or fence off the carriageway, resulting in the driver experiencing slight injuries.

3.3.5 Given the busy nature of the A617, (Annual Average Daily Flow of 15196 (2018), recorded to the west of the site), four accidents occurring within a five year period does not allude to a deficiency within the highway network. The accidents occurred due to driver error and therefore, during the construction phase of the solar farm and BESS site, the accidents are not likely to be exacerbated.

3.4 Baseline Traffic Data

3.4.1 Sanderson Associates Consulting Engineers commissioned Road Data Services Ltd. to carry out an Automatic Traffic Count (ATC) at two points along Main Road (A617). The survey was conducted between Wednesday 15th March and Tuesday 21st March 2023. Figure 3 shows the approximate location of the ATC's.

Figure 3 – Approximate Locations of ATCs [© Google 2022]



3.4.2 The recorded 85th percentile speeds and volumes are shown in Tables 1 and 2 with vehicle composition shown in Tables 3 and 4. The full dataset is included at Appendix B.

Table 1 – ATC Data: Volume and Speeds – Northern ATC

Direction of Travel	Seven Day Average Volume	85th Percentile Speed (mph)
Northeast bound	7908	48.3
Southeast bound	7858	50.4

Table 2 – ATC Data: Volume and Speeds – Southern ATC

Direction of Travel	Seven Day Average Volume	85th Percentile Speed (mph)
Northeast bound	7944	45.8
Southeast bound	7837	49.0

Table 3 – ATC Data: Average Vehicle Composition – Northern ATC

Direction of Travel	Car/LGV/Caravan	OGV 1/Bus	OGV2	Total
Northeast bound	6577	1133	199	7908
Southeast bound	6266	1390	202	7858

Table 4 – ATC Data: Average Vehicle Composition – Southern ATC

Direction of Travel	Car/LGV/Caravan	OGV 1/Bus	OGV2	Total
Northeast bound	6925	894	125	7944
Southeast bound	6213	1478	146	7837

3.4.3 The recorded 85th percentile vehicle speeds have been used to establish the visibility splays which will be required at the proposed site access off Main Road (A617), which are shown in Table 5.

Table 5 – Visibility Splay Requirements

Direction of Travel	Direction of Visibility	85th Percentile Speed (mph)	Stopping Sight Distance (m)
Northeast bound	To Right	45.8	128.88
Southeast bound	To Left	50.4	151.04

3.5 Highway Adoption

3.5.1 Main Road is an adopted highway as can be seen from Figure 4 which is an extract from the Nottinghamshire County Council Definitive Map. The proposed site entrance is shown by the red star.

Figure 4 – Extract of Highway Adoption Map

4. Development Proposals and Impact

4.1 Development Overview

4.1.1 The proposed solar farm and BESS development compound covers an area of circa 65ha (although the planning application boundary (cable runs etc.) measure c.71ha) and will comprise of the following, with a site layout plan (Drawing HC1002/05/03) attached at Appendix C.

- → Photovoltaic (PC) Panels – arranged in rows in an east-west alignment and angled between 10º and 35º to the horizontal and orientate south. Each panel would measure approximately 0.8m-1.2m wide and 1.6m-2.0m in length. Proposed ratio of between 40% to 60% ground cover;
- → Mounting frames – matt finished small section metal structure; Maximum height of 2m above ground level. Lowest part of the panel would measure approximately 0.8-metre above ground level. Rows of panels would be set to between 4-metres and 6-metres apart to avoid overshadowing and allow for scheduled maintenance;
- → Battery Energy Storage System Compound - Located towards the southern end of the site, measuring approximately 1.0 hectare. Batteries accommodated in steel containers;
- → Inverters (accommodated on the mounting frames) and transformers (housed in prefabricated containers) and associated cabling (largely below ground); Transformer and substations typically 3-metres in height.
- → Two 132kV Distribution Network operator (DNO) substations, DNO meter point, customer substation and system - The proposed point of connection would be Staythorpe Substation, which is approximately 1.4km to the south of the proposal site. A below ground cable would connect the facility to the point of connection;
- → Scheme of landscaping and biodiversity enhancement;
- → Deer fencing (approximately 2m high)
- → Infra-red CCTV (CCTV cameras would operate using motion sensors and be positioned inward only to ensure privacy to neighbouring land and property)
- → Temporary set down areas towards the southern part of the site near existing field/ proposed access to accommodate deliveries of materials and equipment during construction phase and staff parking;
- → Internal service roads approximately 4m wide, comprised of compacted crushed stone; and,

4.2 Proposed Access Arrangements

4.2.1 The site is currently accessed from Main Road (A617) to the south east, via an existing agricultural access. The application site will utilise this existing access point, which will be improved to fall in line with DMRB, opposite the access road to Rectory Farm. The proposed access off the A617 will be used during the construction phase of the solar farm and BESS. Attached at Appendix D, is Drawing 153626-001 which illustrates the proposed access design from Main Road and the associated vehicle tracking of a 16.5m maximum legal length HGV entering and egressing the site.

4.2.2 Based on the 85th Percentile speeds that were obtained from the ATC survey, the Stopping Sight Distance (SSD) required, as based on the Design Manual for Roads and Bridges, would be 160m in both directions. Due to the proposed location of the site access, it is not possible to achieve this SSD from a set-back of 2.4m without giving rise to significant impact upon the existing hedgerow running parallel to Main Road.

4.2.3 The recommended and achievable visibility splays from the centre line of the proposed site access are shown on Drawing 153626-002, attached at Appendix D. This drawing demonstrates the following:-

- → Blue lines indicate the required visibility of 2.4m by 160m measured to the nearside kerbline.
- → Red lines indicate the available visibility which to the right on exit from the site access is 2.4m by 160m when measured 500mm into the carriageway which would represent the typical position of an oncoming vehicle within the carriageway. To the left on exit from the site access the available visibility is 2.4m by 112.6m when measured to the nearside kerbline. However, this increases to 2.4m by 151m when extended to the far side kerbline.
- → The pink line represents the forward vision for a driver on Main Road travelling southwest. It can be seen that 160m forward vision is available for such a driver and that a vehicle stood at the give-way line waiting to exit the proposed access is clearly visible.

4.2.4 It is acknowledged that the recommended visibility splays, commensurate with the 85th percentile recorded vehicle speeds, are not achievable when measured to the nearside kerbline. However, to the right, which is the critical direction when entering a major road from a minor road, this can be achieved when measured 500mm into the nearside carriageway. This is considered to be an appropriate position from which to measure visibility as that is the most likely position of an oncoming vehicle within the carriageway. This position would also relate to motorcycles and cyclists.

4.2.5 When viewing the visibility to the left on exit it is clear that the recommended visibility cannot be achieved to the near side kerbline and even by extending this line of sight to the far side kerbline still falls slightly short but is much improved.

4.2.6 It is, therefore, proposed that during the construction period the speed limit will be temporarily reduced to 40mph for the area shown in Drawing 153626-003 which is attached at Appendix D. It is further proposed that the existing average speed cameras present along the A617 will be adjusted within the area shown on Drawing 153626-003 to monitor vehicle speeds throughout the construction period. Drawing 153626-004, attached at Appendix D demonstrates the typical temporary signs that will form part of this mitigation measure and the respective location of each sign. Drawing 153626-005, attached at Appendix D, demonstrates visibility splays of 2.4m by 96m in both directions which is in accordance with DMRB for a 40mph road.

4.2.7 Once operational, the proposed development will be unmanned and traffic generation will be minimal primarily for occasional maintenance and inspection visits which would generally take place once a month on average. Therefore, for all intents and purposes the operational use of the site access after the construction period will be minimal and it is not considered necessary to retain the reduction is speed limit on the A617.

4.2.8 The significantly improved access will be more visible to road users and will have a negligible level of activity which is considered to be comparable to, if not lower than, the existing agricultural use of the land. The proposals will also remove the need for slow moving agricultural vehicles accessing and egressing the site on a regular basis. Therefore, it is considered that after the construction period the speed limit on the road can be reinstated at 50mph and that the available visibility demonstrated on Drawing 153626-002 will be appropriate for the level of activity proposed.

4.2.9 Main Road is accessed by Cattle Market Roundabout, located approximately 2.5km to the east. Main Road is a single carriageway road, subject to a 50mph speed limit and provides access between Kelham, Averham and other villages to the west. It is considered to be of sufficient standard to fulfil the access requirements of the development proposals throughout the construction and operational periods.

4.3 Hours of Operation

4.3.1 It is proposed that hours of operation are as follows:

Monday to Friday	08:00 hours to 18:00 hours
Saturdays	08:00 hours to 16:00 hours

4.3.2 Deliveries will be carried out within the hours above. Under exceptional circumstances, both working and deliveries outside of these hours may be required. In these cases, prior permission will be sought from Newark and Sherwood District Council.

4.4 Staff Movements

4.4.1 It is estimated the 50 members of staff will be on site during the construction period, depending on the phases of the construction schedule. It is envisaged that staff trips will be made by mini-buses and/or transit vans with a 'crew cab' with an expected minimum capacity of 6 persons. All vehicle parking will be provided within the temporary construction compound, there will be no parking on the public highway.

4.4.2 Once the site is operational, there will be no staff based on the site. However, monthly routine checks will be required which will be carried out via LGVs or pick-ups.

4.5 Parking and Servicing Strategy

4.5.1 Parking standards applicable in the area are contained within the Nottinghamshire County Council Design Guide Part 4.2. However, no standards are provided for a site of this nature.

4.5.2 Whilst no parking spaces are provided during the operational phase there is sufficient space on site to accommodate vehicles.

4.6 Proposed Vehicle Movements

4.6.1 The construction of the proposed solar farm and BESS is expected to last around 6 to 12 months, however, the majority of vehicle movements, associated with the arrival and departure of site staff and the delivery of equipment and construction materials, will occur within the first six months. The remaining 6 months will be commissioning and 'snagging' works which typically do not generate HGV movements

4.6.2 Table 6, below, shows the expected vehicle movements during the construction phase. This is subject to change when a contractor is appointed, and a construction phasing plan and timetable is drawn up.

Table 6 – Indicative Vehicle Deliveries during Construction Phase

Construction Activity	Month						
	1	2	3	4	5	6	Total
Delivery of plant, equipment and materials	60	60	40	30	15	15	220
Erection of security fencing and construction compound	45	10					55
Cabling on site		13	7				20
Delivery of inverters, transformer & control equipment			15	15			30
Delivery of frames & support posts	50	40					90
Delivery of PV panels	70	70	70	70			280
Delivery of battery units				25	25		50
Removal of plant and equipment						45	45
Total	225	193	132	140	40	60	790

4.6.3 It is anticipated that the construction phase will generate approximately 790 deliveries to site, or 1,580 individual movements (in and out). The first month will see the highest deliveries to site at 225.

4.6.4 Assuming a 6 month construction period and a 6 day working week (156 days total) on average this equates to approximately 5 deliveries a day. Although the number of deliveries on average appears low, this is because the deliveries are to be phased to reflect when materials and equipment are needed (based on a "just in time" approach), to avoid having to store materials and equipment on site for unnecessarily long periods.

4.6.5 The majority of deliveries will be made during the beginning of construction works as site preparation works are carried out, and towards the end when the electrical infrastructure and equipment is delivered.

4.6.6 HGV movements will be generated through the import of fencing, cabling, crushed stone for the tracks and passing places, inverters, transformers, control cabins, battery containers and customer substation. The largest vehicles across the site will be a 16.6m articulated lorry. The design of the internal roads allows sufficient space for these vehicles to manoeuvre.

4.6.7 It is envisaged that there will be up to 50no. employees working on site during the construction phase. Workers will access the site using minibuses/vans containing a 'crew cab'.

4.7 Operational Phase

4.7.1 Once operational, the solar farm and BESS will be unmanned and access for occasional maintenance will be typically made by light goods vehicles, e.g. vans or 4x4 vehicles. Maintenance will typically occur once a month.

4.7.2 Solar farms and BESS developments require little maintenance, the majority of monitoring of such sites is undertaken remotely and will not need for everyday inspection of the site.

4.7.3 There will be no public access into the site. However, a permissive bridleway is proposed around the perimeter of the site. There is also an existing PRoW that crosses the site. These public areas will be securely fenced.

4.7.4 Internal access roads will be maintained throughout the life of the proposed development.

4.8 Proposed Vehicle Routing

4.8.1 As the site access is located on the A617, deliveries and construction staff will ultimately operate via Main Road (A617). Main Road is a single carriageway, with an average width of 7.0m.

4.8.2 Prior to the site visit being undertaken, it had been noted two sharp corners in the village of Kelham (north of the site), which may have proven difficult for construction vehicles. Figure 5, displays the two corners in question.

Figure 5 – Two Sharp Corners in Kelham Village [© Google 2023]

4.8.3 During the site visit, observations were taken of the two corners in Kelham. It was noted that HGVs are very common on this road and are able to negotiate the corners. Figure 6 shows the corner immediately after the bridge over the River Trent. As can be seen, the road width increases to accommodate the turning of larger vehicles.

Figure 6 – Corner after Bridge over River Trent

4.8.4 For delivery of construction materials, the proposed site entrance is located approximately 4km to the A46, to the west of the site. A further 2.75km connects the A46 to the A1. As these are all principal roads, there should be no issue with the delivery of construction materials to the site.

5. Accessibility by Sustainable Modes

5.1 Overview

5.1.1 Due to the proposed use of the site, staff will not be required to be present during the normal operation of the site, only when repairs need to be made. Therefore, this brief accessibility audit will outline the accessibility by sustainable modes for those working during the construction phase of the Solar Farm and BESS.

5.1.2 The sustainable modes addressed in this section are as follows:

- → Active Travel – Walking and Cycling
- → Public Transport – Bus and Rail

5.2 Active Travel

Walking

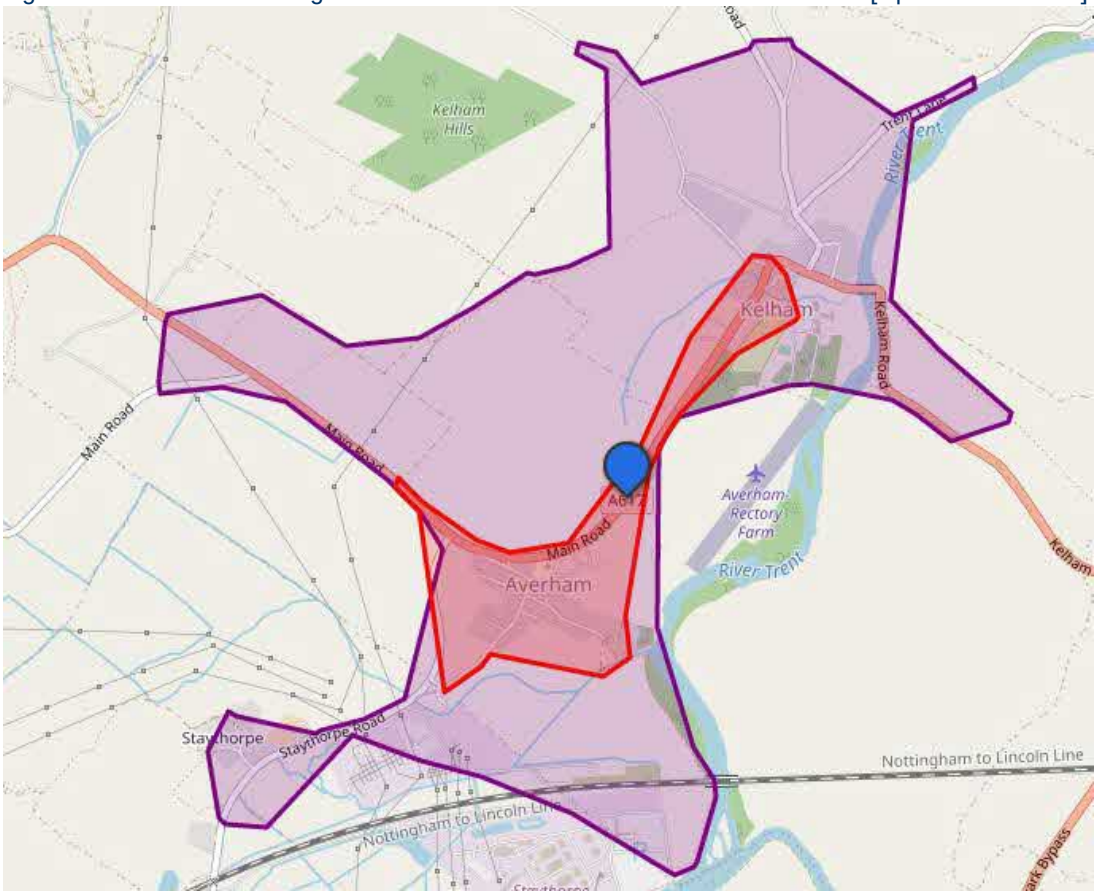
5.2.1 Walking is the most common form of travel in Britain and has the potential to replace short car trips, particularly those under 2km.

5.2.2 The IHT publication 'Providing for Journeys on Foot' also identifies suggested acceptable walking distances for commuting, school and sightseeing as follows with times based on a walking speed of 1.4m/s.

- → Desirable 500m – 6 minute walk
- → Acceptable 1000m – 12 minute walk
- → Preferred Maximum 2000m – 24 minute walk

5.2.3 Figure 7 identifies the 1km and 2km walking isochrones from the site, indicating areas which should be easily accessible to the site on foot.

Figure 7 – Indicative Walking Isochrone [OpenRouteService]



5.2.4 Figure 7 illustrates that due to the rural nature of the site, there are limited services and amenities which are available within an acceptable walking distance. Within an acceptable walking distance, bus stops are located on Main Road, and a restaurant is located (The Fox Inn), in Kelham to the north of the site.

5.2.5 Within the preferred maximum walking distance, residential areas of both Averham and Kelham can be reached, which may allow for local employment opportunities during the construction period.

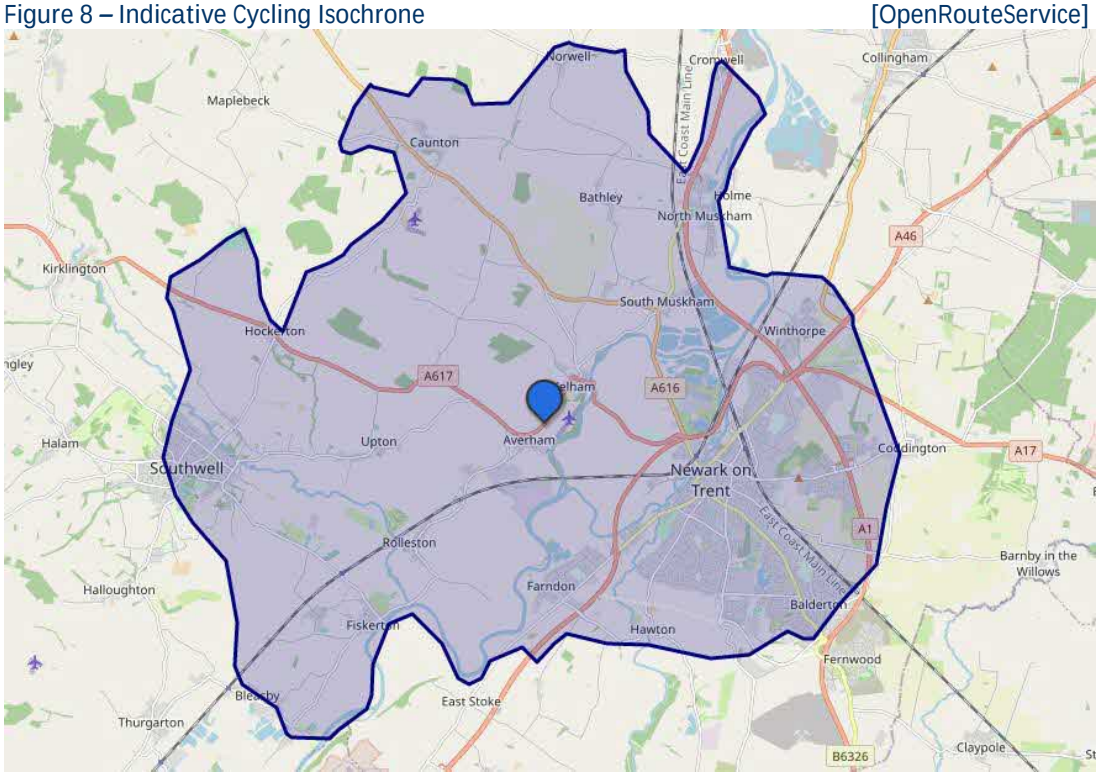
Cycling

5.2.6 Like walking, cycling has an important part to play in reducing congestion, and pollution and improving accessibility. Cycling may also allow people without cars to reach destinations that they may otherwise be unable to reach. CIHT's Planning for Cycling (2014) states that:

"The majority of cycling trips are for short distances, with 80% being less than five miles and with 40% being less than two miles. However, the majority of trips by all modes are also short distances (67% are less than five miles, and 38% are less than two miles); therefore, the bicycle is a potential mode for many of these trips. Electric bicycles extend the range that can be cycled comfortably, and combined cycle-rail or cycle-bus journeys offer an alternative to car travel for many longer trips."

5.2.7 Figure 8, identifies the destinations which lie within the 8km (5 miles) isochrone from the proposed development.

Figure 8 – Indicative Cycling Isochrone [OpenRouteService]



5.2.8 From Figure 8, the 8km indicative isochrone encompasses many surrounding villages, and includes the city of Newark-on-Trent.

5.2.9 The construction workers will have the option to utilise active travel modes, cycling will allow staff from a wider area to actively commute to the site.

5.3 Public Transport

Bus Services

5.3.1 The nearest bus stops are located approximately 400m from the proposed site entrance, in Averham. There are further bus stops located to the north-east of the site on the A617, approximately 600m from the proposed site entrance. The stops on the A617 are over the preferred maximum walking distance for bus stops (>400m from the site), but they are still within an acceptable walking distance.

5.3.2 Details of the services which serve these stops are provided in Table 7.

Table 7 – Summary of Bus Services

Number	Route	Approximate Peak Frequency		
		Mon – Sat Daytime	Mon- Sat Evening	Sunday
28	Mansfield – Newark	120 minutes	No Service	No Service *
29	Mansfield – Newark	120 minutes	No Service	No Service
300	Newark – Lowdham	2 Service in Each Direction (M-F)	No Service	No Service
965	Winkburn – Southwell Minster School	1AM/ 1PM	No Service	No Service

* Service 28 does operate on Sundays but does not serve the above stops.

5.3.3 The services available from the above stops does not provide a frequent service and therefore may prove difficult for construction workers, living in surrounding areas to utilise the bus, especially during evenings and at the weekend.

Rail Services

5.3.4 The nearest train station is Newark Castle, approximately 4km from the site to the west. It is therefore not accessible on foot but is within an acceptable cycling distance.

5.3.5 The station is manged by East Midlands Railways and the typical off-peak services see one train per hour to Leicester, one to Crewe and one train to Lincoln.

5.4 Accessibility Summary

5.4.1 Due to the somewhat rural location of the site, it has been proven difficult to fully utilise sustainable modes to travel to the site. Therefore, during the construction period, car sharing for the construction workers may prove the best sustainable mode as it does reduce the use of single occupancy car use to the site, helping to reduce traffic and pollution generated.

6. Summary and Conclusions

6.1 Sanderson Associates Consulting Engineers has been appointed by Sirius Planning Ltd. to provide highway consultancy services in relation to proposals to develop a solar farm and Battery Energy Storage System (BESS) on land off Main Road, Kelham, Newark-on-Trent.

6.2 This Transport Statement has been provided in order that the Local Highway Authority is able to consider the predicted transport impact of the proposed development, including the likely trip generating potential of the site, the likely vehicles needing access to the site and how this will be achieved.

6.3 It is recognised that the site is located in a rural area and therefore the opportunity to access the site by sustainable modes is limited. Where possible, contractors needing access to the site will travel in as few vehicles as possible.

6.4 The site will be accessed from the A617 via an improved field access. The access has been designed to accommodate the required vehicles. Appropriate signage will be provided to warn road users, cyclists and pedestrians of the presence of construction vehicles.

6.5 It has been demonstrated that there are no collision trends, clusters of collision or collisions with common causality on the highway network surrounding the site which would give rise to any highway safety concerns.

6.6 Automatic Traffic Counts have been undertaken which have established the average number of daily vehicles and average 85th percentile speeds expected across the site. As the deliveries are expected to be spread out over the whole 6 month construction period (an average of five deliveries expected a day during the peak activity month) and with staff arriving in 'crew cars', the construction period is not expected to have a detrimental impact on the highway safety. After construction has been completed, the site will be unmanned with occasional visits undertaken by a transit sized van for maintenance.

6.7 It can therefore be concluded that this section of the highway is operating safely and there are no highway safety concerns which are likely to be exacerbated by the proposed development or the vehicular traffic it will generate during the construction phase.

Appendix A

Crashmap Report

Crash Report

Area of Interest (AOI) Information

Area : 132,213.65 m²

Mar 6 2023 16:05:45 Greenwich Mean Time

Summary

Name	Count	Area(m²)	Length(m)
Crashes	4	N/A	N/A

Crashes

#	Carriageway_Hazards	Severity	Officer_Attended	Accident_DateTime	Year	Number_of_vehicles	Number_of_casualties	Easting
1	None	Slight	Police officer attended crash scene	May 29, 2017	2017	2	4	477271
2	None	Slight	No officer attended crash scene	January 1, 2018	2018	2	1	477254
3	None	Slight	Police officer attended crash scene	December 18, 2020	2020	1	1	476227
4	None	Serious	Police officer attended crash scene	August 30, 2019	2019	1	1	477131

#	Northing	Highway_Authority	Road_Number	Weather_conditions	Road_Type	Road_surface	Speed_Limit	Light_conditions
1	355750	Nottinghamshire	A617	Fine without high winds	Single carriageway	Wet or Damp	30	Daylight: regardless of presence of streetlights
2	355733	Nottinghamshire	A617	Fine without high winds	Single carriageway	Dry	30	Daylight: regardless of presence of streetlights
3	354674	Nottinghamshire	A617	Raining without high winds	Single carriageway	Wet or Damp	50	Darkness: street lights present and lit
4	355513	Nottinghamshire	A617	Fine without high winds	Single carriageway	Dry	30	Daylight: regardless of presence of streetlights

#	Junction_detail	Pedestrian_Crossing	Involved_pedalcycle	Involved_Motorcycle	Pedestrian_casualty	Child_casualty	Pedal_cycleuser_casualty	Motorcycle_user_casualty
1	T or staggered junction	No physical crossing facility within 50 metres	0	0	0	1	0	0
2	T or staggered junction	No physical crossing facility within 50 metres	0	1	0	0	0	1
3	Not at or within 20 metres of junction	No physical crossing facility within 50 metres	0	0	0	0	0	0
4	Not at or within 20 metres of junction	No physical crossing facility within 50 metres	0	0	0	0	0	0

#	Involved_car	Involved_goodsvehicle	Involved_Bus	Involved_young_driver	Local_Authority_District	Junction_control	Is_Provisional	Is_Amended	Web_Link	Count
1	1	0	0	0	Newark and Sherwood District	Give way or uncontrolled	No	No	https://www.crashmap.co.uk/reports/proreportservice?reportId=201731B093617	1
2	1	0	0	0	Newark and Sherwood District	Give way or uncontrolled	No	No	https://www.crashmap.co.uk/reports/proreportservice?reportId=201831B174718	1
3	1	0	0	0	Newark and Sherwood District	Not Applicable	No	No	https://www.crashmap.co.uk/reports/proreportservice?reportId=202031B177420	1
4	1	0	0	0	Newark and Sherwood District	Not Applicable	No	No	https://www.crashmap.co.uk/reports/proreportservice?reportId=201931B150919	1

Report produced from CrashMap Pro

Appendix B

Automatic Traffic Count Survey Data

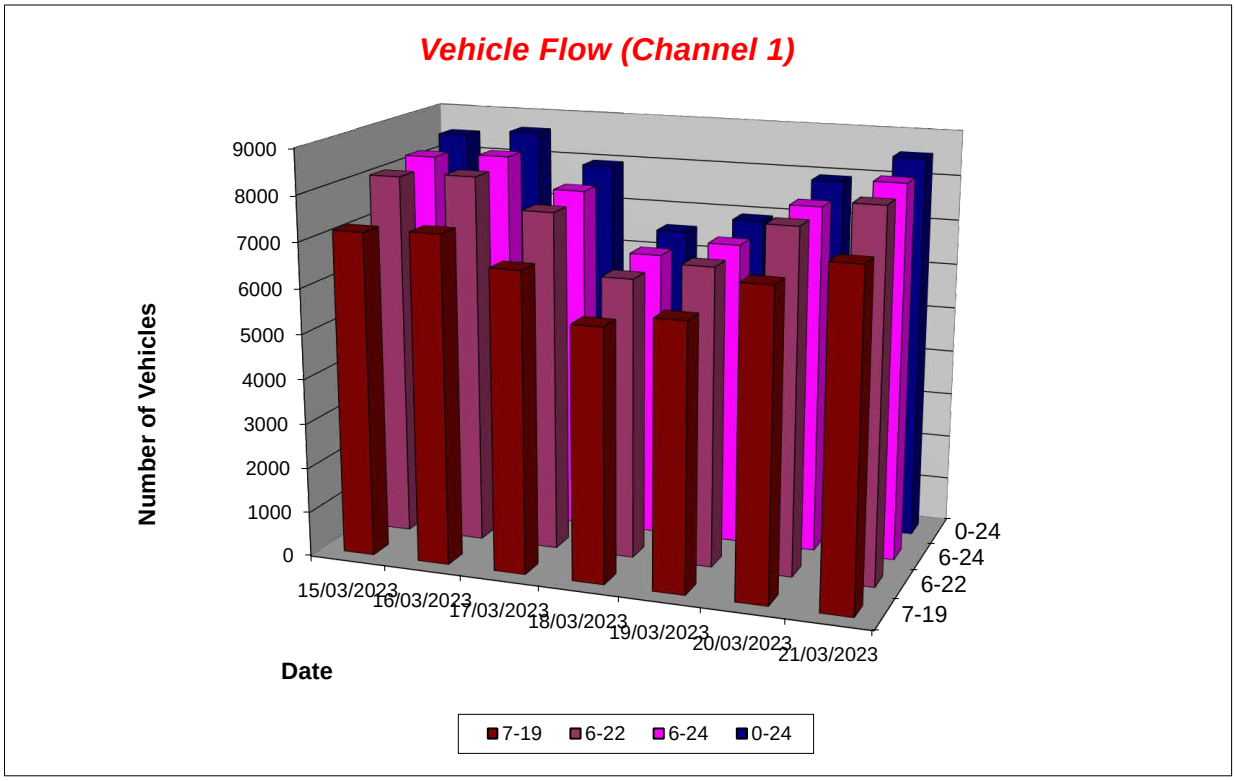
Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound **Vehicle Flow** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday	Weekday Average	Average
1	25	21	20	32	57	17	25	22	28
2	16	32	27	27	28	15	18	22	23
3	7	13	29	25	32	19	16	17	20
4	26	30	28	22	23	31	25	28	26
5	54	54	51	22	17	40	46	49	41
6	109	130	114	55	37	122	116	118	98
7	269	340	318	105	49	327	264	304	239
8	604	564	477	158	92	537	559	548	427
9	668	645	498	347	206	521	658	598	506
10	536	618	543	430	438	477	595	554	520
11	545	488	550	506	545	559	467	522	523
12	535	564	553	587	638	572	498	544	564
13	559	614	524	651	700	620	580	579	607
14	629	556	561	557	670	572	599	583	592
15	602	581	647	540	610	572	599	600	593
16	682	675	531	518	537	574	623	617	591
17	702	830	704	482	561	695	842	755	688
18	657	713	619	463	521	659	753	680	626
19	473	432	437	360	363	395	532	454	427
20	286	258	263	222	307	239	265	262	263
21	175	189	177	155	243	162	200	181	186
22	163	121	128	139	134	116	109	127	130
23	99	102	82	107	64	64	102	90	89
24	61	58	71	48	50	19	47	51	51

7-19	7192	7280	6644	5599	5881	6753	7305	7035	6665
6-22	8085	8188	7530	6220	6614	7597	8143	7909	7482
6-24	8245	8348	7683	6375	6728	7680	8292	8050	7622
0-24	8482	8628	7952	6558	6922	7924	8538	8305	7858



Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound **Average Speed** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	47.1	48.2	45.1	45.0	45.9	49.7	43.4
2	49.6	43.8	39.6	45.7	46.0	45.7	44.0
3	45.5	48.6	46.5	47.8	47.5	48.1	47.0
4	48.9	49.0	49.8	52.2	45.8	47.8	45.1
5	46.9	52.6	49.0	49.0	48.1	51.9	48.9
6	46.3	48.8	48.6	48.5	48.3	49.5	48.2
7	45.1	46.1	46.5	47.6	53.2	45.7	46.3
8	43.2	44.7	45.2	49.0	50.3	45.0	44.9
9	43.6	45.2	44.4	47.7	47.1	43.7	45.2
10	43.8	43.9	45.0	45.7	46.4	43.4	43.4
11	43.8	44.0	43.7	44.8	42.2	43.2	43.8
12	44.1	44.1	43.3	44.9	42.4	43.8	44.3
13	44.3	43.5	44.8	45.2	43.0	42.3	43.1
14	43.2	44.4	44.0	45.2	44.9	44.0	44.5
15	43.9	44.0	46.0	44.8	46.4	45.9	44.0
16	42.7	42.3	47.3	45.9	45.7	45.0	43.6
17	43.7	42.8	45.0	46.5	46.4	45.6	43.2
18	44.4	44.7	44.6	46.1	45.9	45.6	45.6
19	42.9	44.5	45.1	45.2	45.7	44.7	43.6
20	43.6	44.0	44.5	45.0	44.8	44.3	43.3
21	44.8	44.6	45.4	45.6	44.1	44.6	44.4
22	44.9	46.5	46.6	46.1	46.7	47.1	44.4
23	43.6	47.0	46.0	43.8	46.3	46.0	47.0
24	44.5	47.5	46.4	45.9	44.7	47.5	44.9
10-12	44.0	44.1	43.5	44.9	42.3	43.5	44.1
14-16	43.2	43.1	46.6	45.3	46.1	45.4	43.8
0-24	43.8	44.3	45.1	45.7	45.0	44.7	44.3

Average (ALL)	44.7
Weekday Inter-Peak	44.1

Channel 1 - Southwestbound **85th Percentile**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	51.7	53.8	51.1	52.3	53.9	56.2	48.7
2	54.9	53.7	50.4	53.9	53.8	51.0	48.9
3	51.6	53.6	50.9	53.0	53.0	52.5	52.2
4	56.5	57.4	57.8	58.7	50.8	53.8	51.1
5	52.8	59.5	54.3	55.2	55.4	60.0	56.3
6	54.1	56.6	55.2	55.8	57.2	57.7	55.1
7	50.2	51.9	53.0	53.9	62.0	51.5	52.7
8	48.0	50.0	50.3	56.1	56.8	50.1	49.8
9	48.1	49.6	48.9	52.7	52.6	48.1	49.3
10	48.8	48.7	50.1	50.8	52.0	48.5	48.3
11	48.0	48.4	49.2	50.0	51.6	47.8	48.3
12	48.1	48.6	50.0	50.6	50.8	48.8	48.6
13	48.7	49.7	50.4	50.5	52.1	47.5	49.8
14	50.5	48.7	51.1	50.2	51.3	48.7	48.8
15	48.4	48.6	50.0	51.6	51.4	50.3	48.9
16	47.9	47.5	52.5	51.1	51.3	49.8	47.8
17	48.1	47.5	49.7	51.7	52.7	50.6	47.9
18	48.8	49.0	51.9	52.0	52.6	50.9	50.1
19	48.6	49.7	50.1	50.2	51.5	50.2	49.5
20	49.6	49.8	50.7	50.4	49.9	52.1	48.4
21	50.5	49.1	51.0	51.6	49.9	50.8	49.2
22	49.4	52.8	52.8	52.0	53.8	53.2	49.7
23	48.7	53.3	51.1	49.6	52.0	52.8	52.9
24	49.6	56.5	52.4	52.5	49.7	56.6	51.6
10-12	48.1	48.6	49.6	50.4	51.2	48.3	48.5
14-16	48.1	48.1	51.2	51.4	51.4	50.0	48.3
0-24	48.9	49.6	50.9	51.4	52.2	50.1	49.4

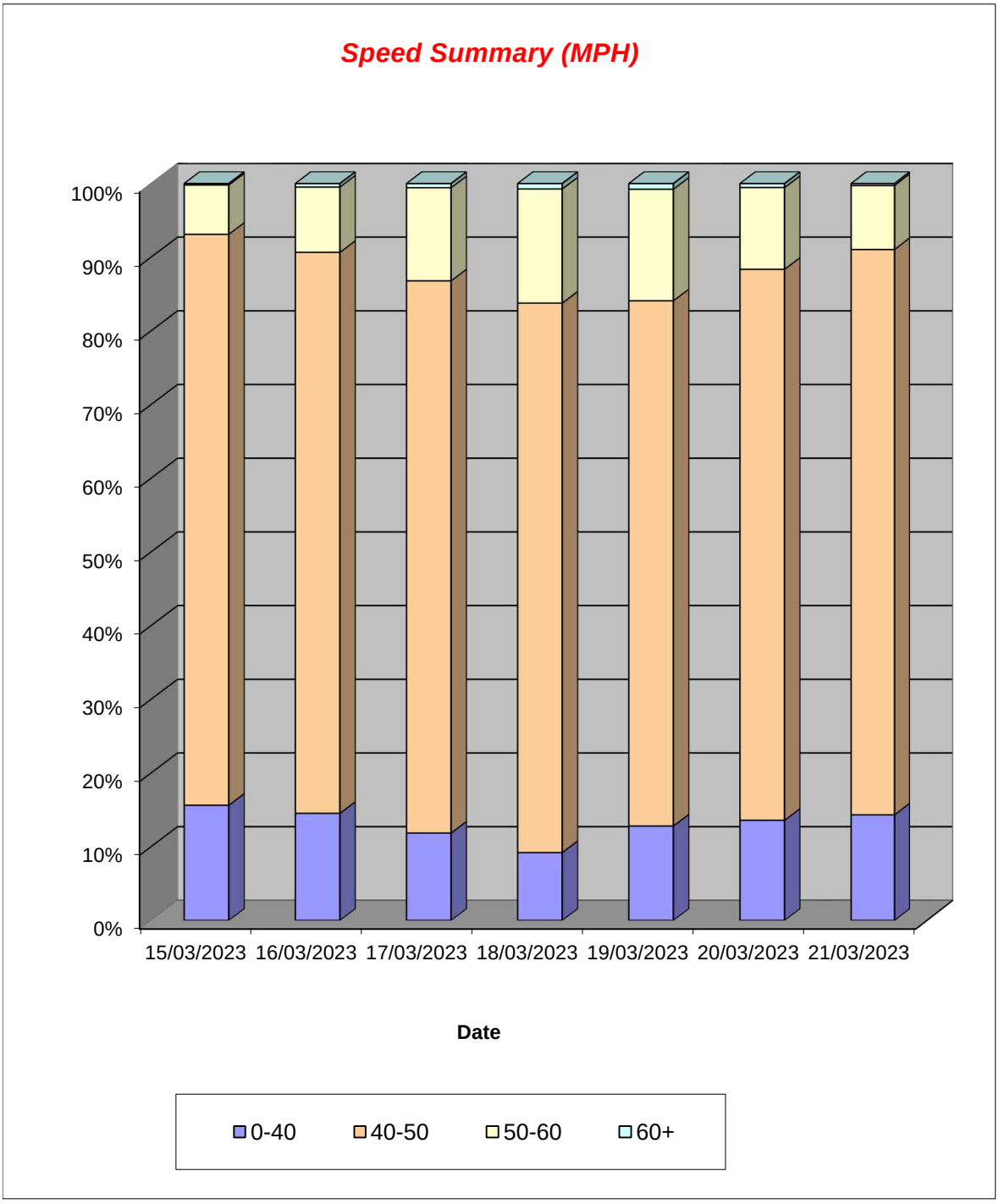
85th %ile (ALL)	50.4
Weekday Inter-Peak	49.0

Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound | **Speed Summary** | **Week 1**

Speed (MPH)	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
0-40	1326	1254	943	604	887	1077	1223
40-50	6572	6569	5959	4890	4934	5925	6551
50-60	568	764	1005	1016	1048	879	742
60+	16	41	45	48	53	43	22
TOTAL	**8482**	**8628**	**7952**	**6558**	**6922**	**7924**	**8538**



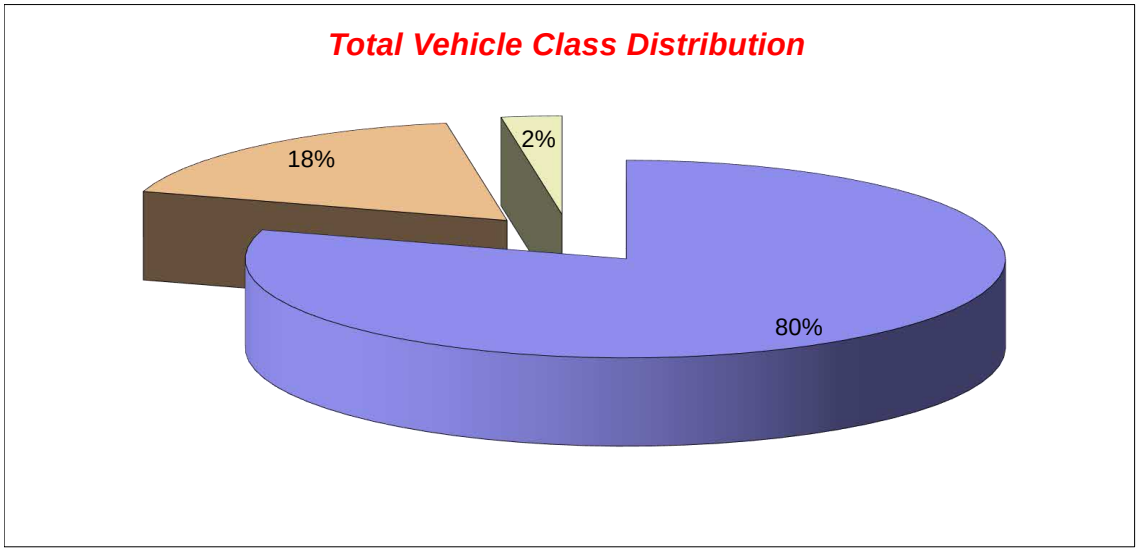
Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound **Vehicle Class** **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
15/03/2023				
7-19	5484	1543	165	7192
6-22	6239	1654	192	8085
6-24	6358	1675	212	8245
0-24	6514	1723	245	8482
16/03/2023				
7-19	5545	1524	211	7280
6-22	6238	1706	244	8188
6-24	6370	1728	250	8348
0-24	6548	1801	279	8628
17/03/2023				
7-19	5238	1219	187	6644
6-22	5947	1364	219	7530
6-24	6077	1384	222	7683
0-24	6238	1456	258	7952
18/03/2023				
7-19	4900	669	30	5599
6-22	5422	755	43	6220
6-24	5547	784	44	6375
0-24	5653	834	71	6558
19/03/2023				
7-19	5225	618	38	5881
6-22	5863	703	48	6614
6-24	5962	716	50	6728
0-24	6113	751	58	6922
20/03/2023				
7-19	5192	1377	184	6753
6-22	5871	1513	213	7597
6-24	5944	1519	217	7680
0-24	6120	1571	233	7924
21/03/2023				
7-19	5715	1392	198	7305
6-22	6394	1519	230	8143
6-24	6512	1542	238	8292
0-24	6679	1592	267	8538

Average				
7-19	5328	1192	145	6665
6-22	5996	1316	170	7482
6-24	6110	1335	176	7622
0-24	6266	1390	202	7858



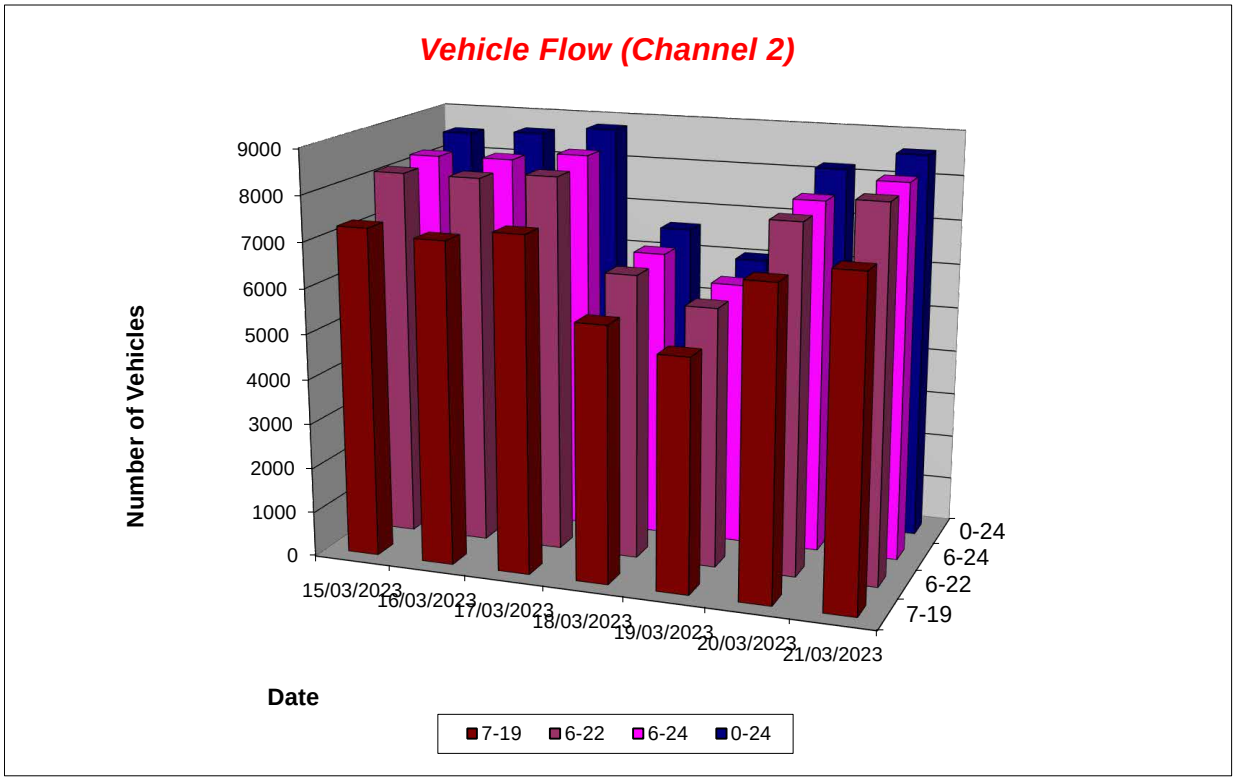
Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound **Vehicle Flow** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday	Weekday Average	Average
1	20	21	32	46	42	25	15	23	29
2	40	21	18	32	24	15	16	22	24
3	13	30	30	19	19	26	15	23	22
4	13	40	27	13	17	41	27	30	25
5	47	44	89	28	15	76	47	61	49
6	131	174	120	71	64	205	176	161	134
7	355	395	333	158	88	454	407	389	313
8	752	806	716	229	123	768	755	759	593
9	799	659	634	388	261	609	691	678	577
10	631	697	642	577	426	585	693	650	607
11	619	555	546	641	544	580	604	581	584
12	585	509	640	598	526	511	569	563	563
13	527	542	541	547	580	495	546	530	540
14	472	516	611	539	531	530	561	538	537
15	615	551	625	461	479	472	523	557	532
16	588	575	691	536	488	549	640	609	581
17	654	705	678	427	460	635	619	658	597
18	628	581	611	380	392	655	569	609	545
19	413	444	459	315	315	419	398	427	395
20	271	255	274	242	235	170	254	245	243
21	141	223	166	139	182	140	225	179	174
22	113	144	128	125	102	116	159	132	127
23	83	92	101	59	57	74	66	83	76
24	16	34	77	39	54	43	30	40	42

7-19	7283	7140	7394	5638	5125	6808	7168	7159	6651
6-22	8163	8157	8295	6302	5732	7688	8213	8103	7507
6-24	8262	8283	8473	6400	5843	7805	8309	8226	7625
0-24	8526	8613	8789	6609	6024	8193	8605	8545	7908



Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound **Average Speed** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	46.2	47.9	48.0	46.4	43.7	48.1	47.8
2	44.9	46.1	45.5	43.5	44.5	45.4	42.3
3	46.8	48.5	48.6	48.4	43.4	43.8	48.7
4	43.5	47.0	45.4	46.4	48.0	47.0	48.6
5	46.9	46.5	49.0	45.3	45.2	47.2	48.1
6	42.6	46.1	46.2	46.8	47.3	45.1	47.3
7	39.9	45.3	44.8	44.8	47.3	44.8	46.6
8	38.8	42.2	43.6	45.6	46.6	38.8	43.4
9	40.3	40.7	43.6	44.3	45.9	40.5	40.3
10	40.1	41.1	41.7	42.3	43.6	39.4	41.2
11	40.9	40.7	41.8	42.0	42.6	41.5	40.9
12	40.4	41.7	41.9	41.8	40.6	37.6	42.0
13	42.1	41.8	41.5	41.4	42.5	40.5	42.3
14	42.2	42.4	42.5	43.4	43.0	41.5	42.6
15	41.7	42.8	41.9	41.9	43.2	43.7	42.5
16	41.7	43.2	42.1	43.3	42.4	41.1	41.6
17	42.7	42.2	42.9	43.7	43.6	41.7	41.8
18	41.9	42.8	43.2	43.8	44.5	41.9	42.2
19	41.5	41.4	42.3	43.2	44.5	46.3	42.0
20	43.4	42.2	43.2	43.0	44.3	47.0	41.7
21	43.8	42.8	45.2	44.9	45.2	47.5	41.4
22	44.4	43.5	44.2	45.3	45.3	47.4	42.4
23	45.7	42.9	44.9	45.3	44.9	45.9	47.7
24	44.8	48.5	46.7	46.3	45.8	42.9	44.9
10-12	40.6	41.2	41.9	41.9	41.7	39.7	41.4
14-16	41.7	43.0	42.0	42.7	42.8	42.3	42.0
0-24	41.3	42.3	42.9	43.1	43.5	41.9	42.3

Average (ALL)	42.4
Weekday Inter-Peak	41.6

Channel 2 - Northeastbound **85th Percentile**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	52.6	53.3	53.6	53.8	50.0	55.8	52.9
2	50.1	49.7	50.3	48.3	49.1	48.7	46.9
3	53.1	55.4	55.4	54.4	50.4	51.2	52.6
4	47.3	53.6	49.7	54.0	51.8	53.9	54.5
5	53.2	50.9	56.1	50.7	51.1	53.7	54.9
6	49.0	51.2	51.1	53.7	54.0	50.8	52.3
7	47.4	50.4	50.9	50.0	52.4	50.7	54.6
8	44.8	47.6	49.9	51.1	53.2	47.6	49.6
9	45.4	45.8	48.3	49.6	52.9	47.8	45.4
10	44.3	45.5	46.5	49.0	50.3	47.2	45.7
11	45.4	46.2	46.6	47.4	48.4	45.2	46.0
12	45.0	46.5	47.5	46.1	47.4	47.0	46.8
13	47.1	46.4	46.0	46.1	47.4	50.3	47.1
14	46.7	47.1	48.0	48.0	47.7	47.8	47.6
15	47.3	47.4	47.3	46.8	48.9	51.0	47.1
16	46.9	48.2	47.4	47.5	47.6	47.9	45.8
17	47.6	47.0	47.4	47.9	48.0	47.8	47.1
18	47.2	48.0	47.5	49.1	49.2	48.9	47.0
19	46.7	46.4	47.2	48.7	49.3	52.1	47.7
20	48.5	47.2	47.7	48.5	48.6	54.6	46.7
21	48.7	49.6	50.7	49.3	50.8	54.7	47.6
22	48.9	49.4	51.1	50.9	50.0	55.6	49.3
23	52.4	50.2	49.5	49.9	50.6	48.8	54.3
24	48.2	55.9	52.7	51.1	51.1	47.6	50.5
10-12	45.2	46.4	47.2	46.8	48.1	47.0	46.4
14-16	47.1	47.8	47.3	47.3	48.2	49.5	46.4
0-24	46.7	47.6	48.3	48.4	49.2	49.6	47.9

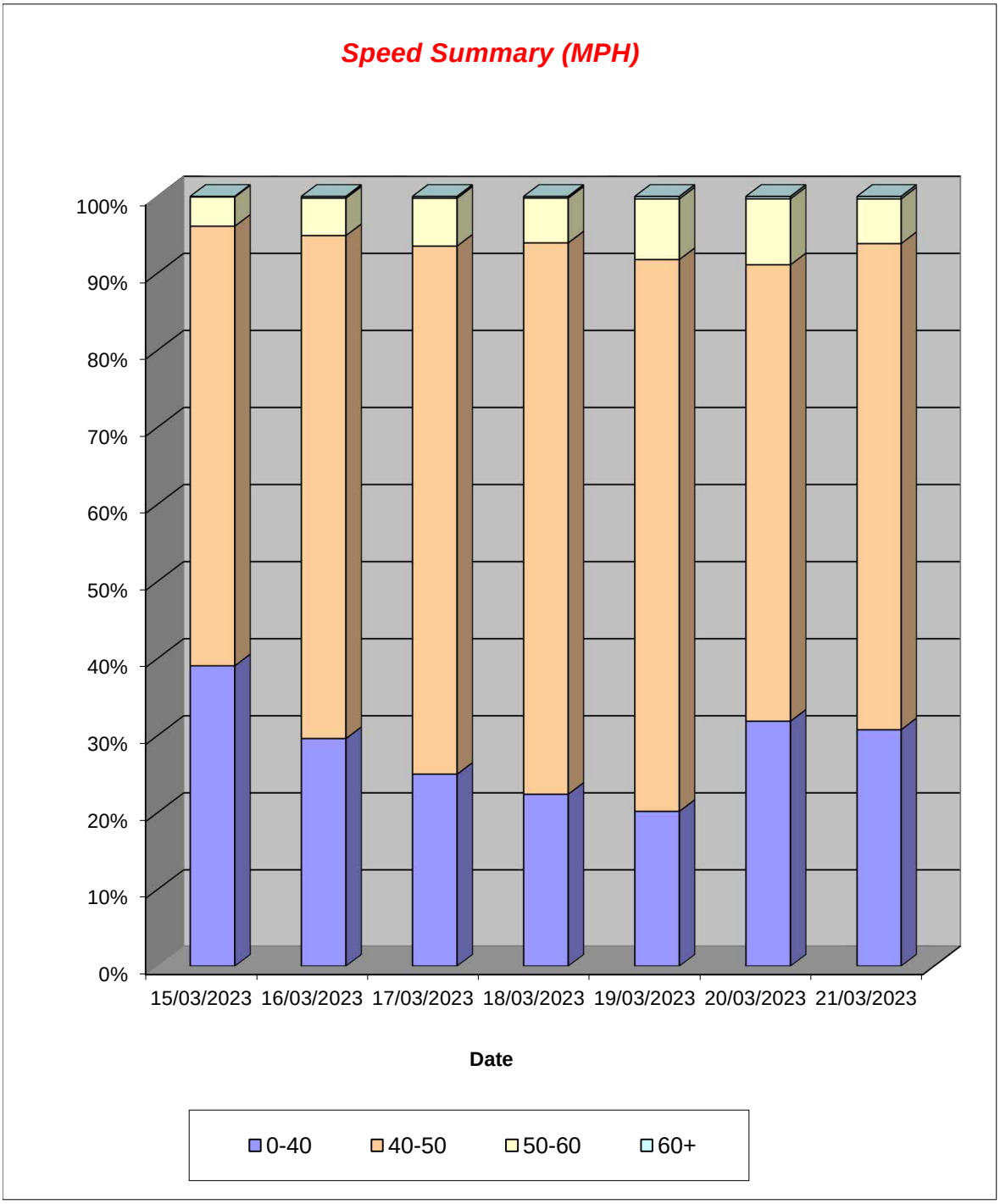
85th %ile (ALL)	48.3
Weekday Inter-Peak	47.2

Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound | **Speed Summary** | **Week 1**

Speed (MPH)	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
0-40	3334	2555	2201	1483	1218	2615	2651
40-50	4863	5621	6022	4728	4313	4852	5428
50-60	323	418	546	384	474	701	499
60+	6	19	20	14	19	25	27
TOTAL	**8526**	**8613**	**8789**	**6609**	**6024**	**8193**	**8605**



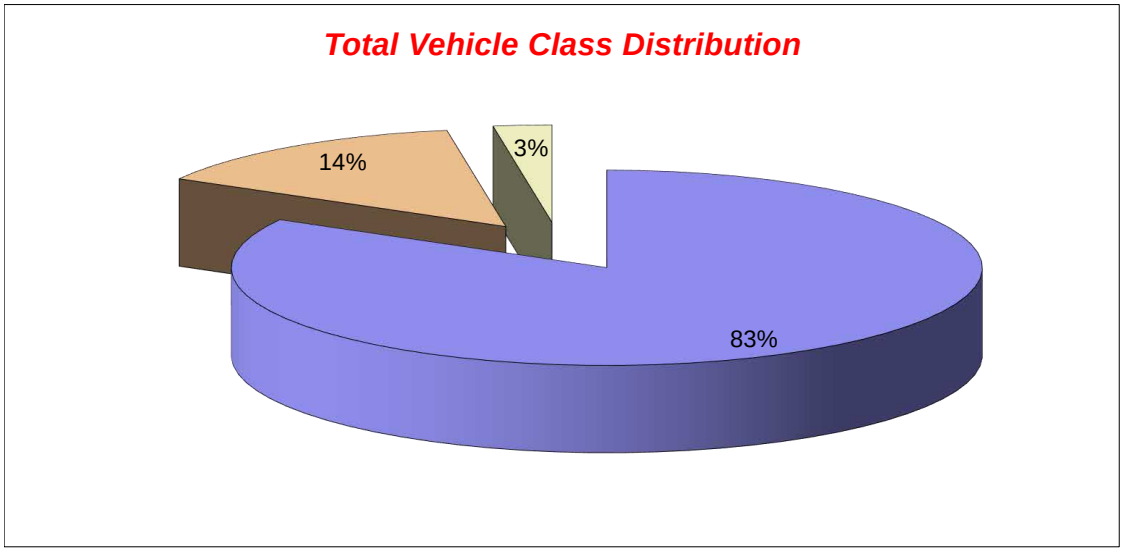
Kelham ATC, A617 Main Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound **Vehicle Class** **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
15/03/2023				
7-19	6134	992	157	**7283**
6-22	6861	1115	187	**8163**
6-24	6953	1121	188	**8262**
0-24	7104	1205	217	**8526**
16/03/2023				
7-19	6078	923	139	**7140**
6-22	6925	1072	160	**8157**
6-24	7037	1080	166	**8283**
0-24	7236	1182	195	**8613**
17/03/2023				
7-19	6171	1106	117	**7394**
6-22	6909	1248	138	**8295**
6-24	7067	1263	143	**8473**
0-24	7222	1380	187	**8789**
18/03/2023				
7-19	5136	472	30	**5638**
6-22	5706	561	35	**6302**
6-24	5788	574	38	**6400**
0-24	5915	644	50	**6609**
19/03/2023				
7-19	4754	350	21	**5125**
6-22	5300	398	34	**5732**
6-24	5402	403	38	**5843**
0-24	5541	434	49	**6024**
20/03/2023				
7-19	5036	1379	393	**6808**
6-22	5720	1568	400	**7688**
6-24	5786	1591	428	**7805**
0-24	6060	1677	456	**8193**
21/03/2023				
7-19	5958	1072	138	**7168**
6-22	6752	1267	194	**8213**
6-24	6838	1272	199	**8309**
0-24	6959	1407	239	**8605**

Average				
7-19	5610	899	142	**6651**
6-22	6310	1033	164	**7507**
6-24	6410	1043	171	**7625**
0-24	6577	1133	199	**7908**



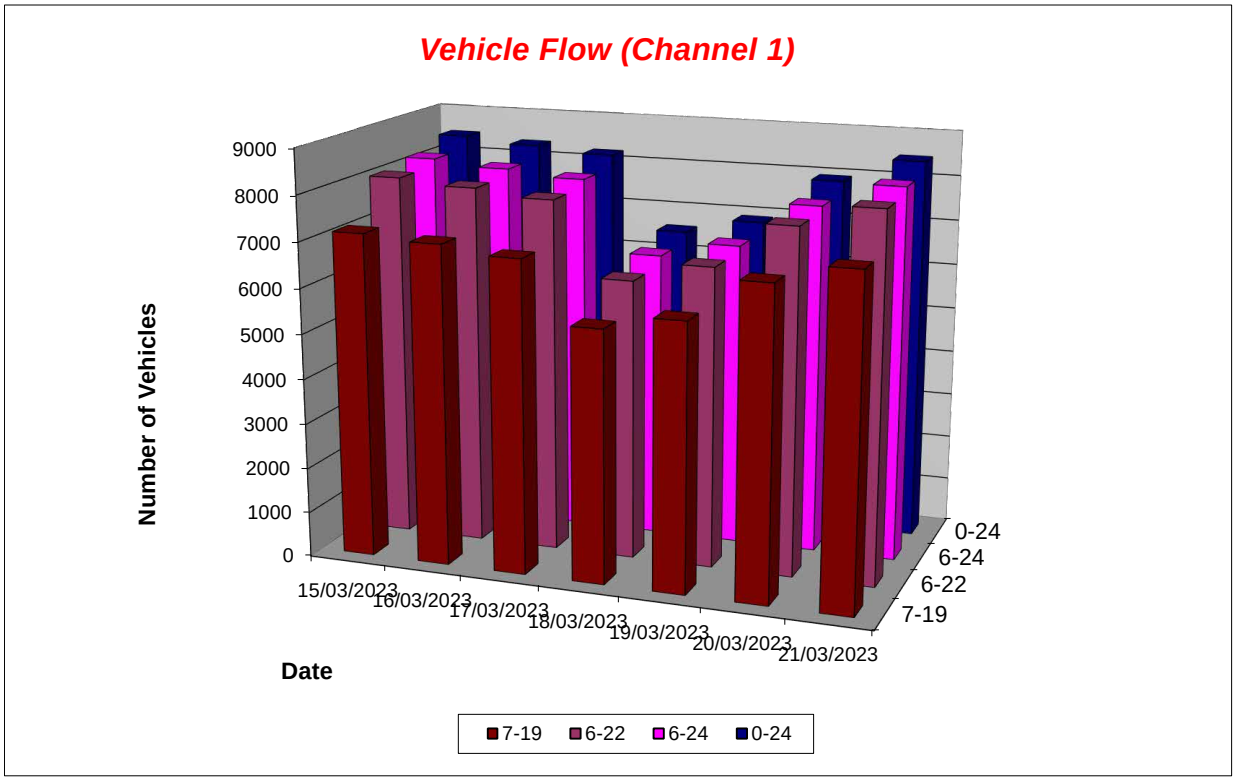
Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound **Vehicle Flow** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday	Weekday Average	Average
1	26	20	27	36	49	13	26	22	28
2	16	21	20	28	37	14	18	18	22
3	12	20	27	21	29	19	16	19	21
4	29	24	25	24	20	27	28	27	25
5	66	47	56	25	14	45	44	52	42
6	112	127	110	57	34	117	116	116	96
7	286	322	312	108	67	316	291	305	243
8	597	551	524	155	111	533	579	557	436
9	618	605	535	330	209	570	632	592	500
10	532	566	530	436	417	479	568	535	504
11	543	476	562	551	549	533	468	516	526
12	512	511	563	581	663	551	493	526	553
13	570	580	544	638	671	649	594	587	607
14	630	559	617	548	639	606	561	595	594
15	584	601	667	497	585	543	598	599	582
16	667	667	553	502	547	563	654	621	593
17	737	814	731	489	573	709	837	766	699
18	686	702	616	475	517	647	725	675	624
19	490	434	447	353	394	413	496	456	432
20	276	256	293	220	303	219	271	263	263
21	179	181	181	164	229	154	198	179	184
22	154	120	126	133	137	114	108	124	127
23	97	81	89	121	57	73	94	87	87
24	44	50	58	64	41	24	53	46	48

7-19	7166	7066	6889	5555	5875	6796	7205	7024	6650
6-22	8061	7945	7801	6180	6611	7599	8073	7896	7467
6-24	8202	8076	7948	6365	6709	7696	8220	8028	7602
0-24	8463	8335	8213	6556	6892	7931	8468	8282	7837



Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound **Average Speed** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	48.2	48.4	45.9	48.4	45.7	48.6	45.2
2	44.6	42.3	41.3	47.7	44.6	45.5	45.7
3	46.8	46.7	45.4	47.2	47.8	46.5	45.3
4	50.9	47.4	50.3	47.3	48.6	47.9	46.7
5	48.1	50.1	50.4	49.3	51.8	49.3	50.0
6	45.0	48.2	48.6	48.2	49.3	49.1	48.3
7	44.6	45.2	45.1	45.9	50.6	44.8	44.6
8	42.5	43.7	43.9	48.1	49.3	44.4	44.1
9	42.6	43.7	43.1	44.9	44.3	42.4	43.6
10	41.9	42.1	43.4	43.1	44.7	42.2	42.1
11	41.9	42.2	41.6	43.8	40.7	41.4	42.0
12	42.3	42.0	41.4	42.1	40.9	41.7	42.4
13	42.8	42.5	43.0	42.7	41.8	39.7	42.5
14	41.5	42.8	41.8	43.7	42.8	42.2	42.7
15	42.2	42.4	44.0	43.6	44.8	43.8	42.4
16	40.9	41.1	44.8	43.7	43.8	43.7	41.7
17	42.3	41.4	43.0	44.1	43.8	44.0	40.7
18	43.0	43.2	41.4	44.2	44.0	44.1	43.5
19	41.2	43.2	43.0	42.8	42.7	43.1	41.1
20	43.3	42.7	43.4	43.7	43.3	43.9	42.7
21	43.5	44.2	43.8	44.6	43.5	44.8	42.8
22	43.9	45.3	44.5	46.1	44.8	46.9	44.6
23	43.2	45.8	44.3	44.5	45.2	45.7	45.9
24	44.9	46.9	45.1	44.2	44.2	45.9	44.0
10-12	42.1	42.1	41.5	42.9	40.8	41.5	42.2
14-16	41.5	41.7	44.3	43.6	44.3	43.7	42.1
0-24	42.4	42.9	43.2	43.9	43.3	43.1	42.7

Average (ALL)	43.1
Weekday Inter-Peak	42.3

Channel 1 - Southwestbound **85th Percentile**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	53.9	55.6	51.9	55.3	54.3	57.3	52.1
2	52.1	53.1	50.6	55.8	52.6	50.0	53.4
3	54.0	52.5	50.9	53.6	54.6	52.1	51.2
4	59.7	54.0	60.2	53.8	56.1	55.4	53.0
5	54.4	57.4	56.5	55.3	63.1	55.6	58.0
6	50.9	55.5	54.9	56.0	58.0	56.4	56.0
7	50.0	50.6	51.8	53.0	58.8	50.6	51.5
8	47.7	48.7	49.4	55.4	55.4	48.8	48.7
9	47.0	48.6	47.5	51.2	50.3	46.9	48.6
10	46.6	47.7	48.8	50.1	50.2	47.1	47.6
11	46.3	46.8	47.6	49.4	49.3	46.0	46.5
12	46.9	46.9	48.0	48.1	48.6	47.0	47.2
13	46.9	48.8	48.4	47.8	48.8	45.2	49.1
14	47.6	47.6	48.6	48.6	49.3	47.1	47.5
15	47.0	47.3	48.7	50.6	49.5	48.3	47.1
16	46.9	46.6	50.3	49.1	50.0	48.5	46.1
17	47.2	46.8	48.4	49.8	50.1	48.8	45.5
18	47.8	47.9	49.2	49.7	51.0	49.4	48.1
19	46.6	48.5	48.2	48.2	48.5	48.7	46.9
20	49.0	48.4	49.7	49.7	48.6	51.6	48.1
21	48.9	49.1	50.2	50.6	49.4	50.0	50.3
22	49.3	52.4	50.3	51.5	52.5	53.1	50.1
23	48.5	52.2	49.4	51.0	52.0	52.4	51.8
24	50.3	53.6	51.0	51.3	49.8	51.4	50.2
10-12	46.6	46.9	47.8	48.8	48.9	46.5	46.9
14-16	47.0	46.9	49.4	49.9	49.8	48.4	46.7
0-24	47.7	48.4	49.3	50.0	50.2	48.6	48.2

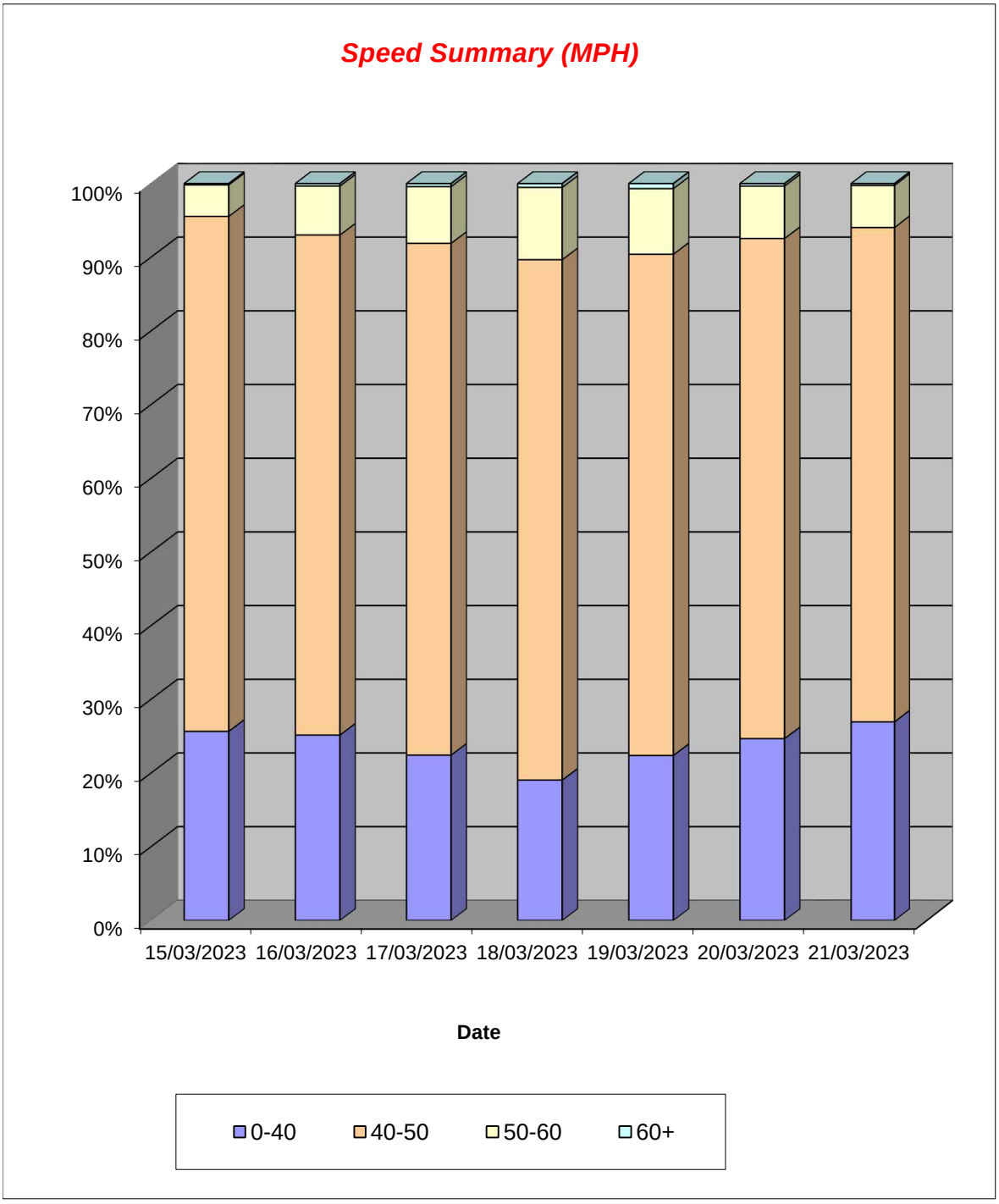
85th %ile (ALL)	49.0
Weekday Inter-Peak	47.5

Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound | **Speed Summary** | **Week 1**

Speed (MPH)	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
0-40	2172	2097	1843	1249	1543	1957	2282
40-50	5914	5656	5704	4630	4688	5383	5681
50-60	362	554	632	643	614	564	484
60+	15	28	34	34	47	27	21
TOTAL	**8463**	**8335**	**8213**	**6556**	**6892**	**7931**	**8468**



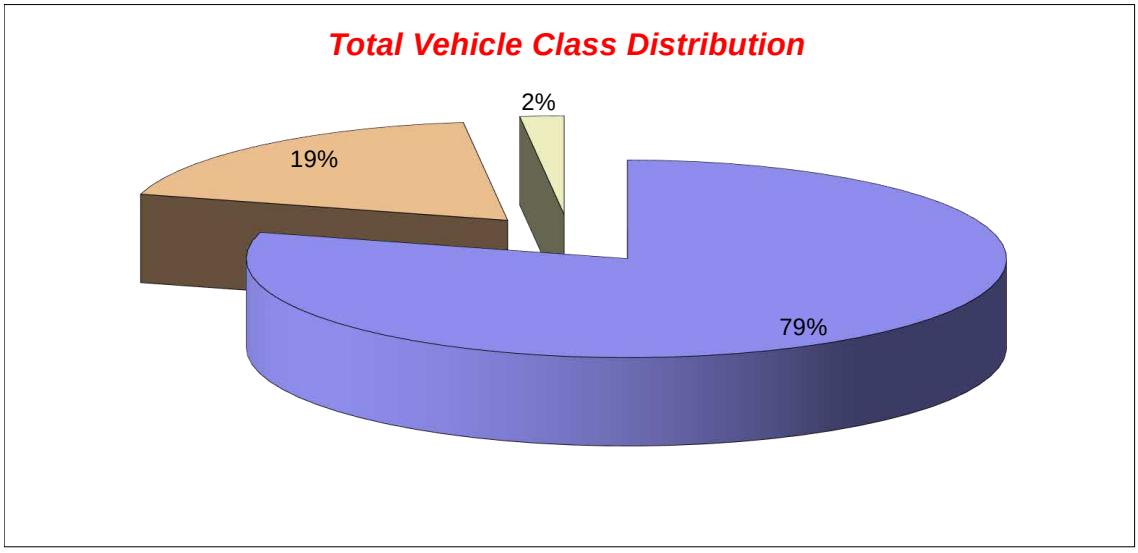
Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 1 - Southwestbound **Vehicle Class** **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
15/03/2023				
7-19	5614	1440	112	7166
6-22	6324	1597	140	8061
6-24	6438	1613	151	8202
0-24	6624	1664	175	8463
16/03/2023				
7-19	5420	1502	144	7066
6-22	6125	1653	167	7945
6-24	6234	1671	171	8076
0-24	6408	1733	194	8335
17/03/2023				
7-19	5346	1425	118	6889
6-22	6111	1559	131	7801
6-24	6239	1577	132	7948
0-24	6422	1631	160	8213
18/03/2023				
7-19	4674	852	29	5555
6-22	5190	950	40	6180
6-24	5341	982	42	6365
0-24	5471	1021	64	6556
19/03/2023				
7-19	5076	769	30	5875
6-22	5706	867	38	6611
6-24	5789	880	40	6709
0-24	5935	909	48	6892
20/03/2023				
7-19	5152	1507	137	6796
6-22	5789	1659	151	7599
6-24	5875	1668	153	7696
0-24	6047	1714	170	7931
21/03/2023				
7-19	5612	1439	154	7205
6-22	6298	1591	184	8073
6-24	6417	1614	189	8220
0-24	6584	1673	211	8468

Average				
7-19	5271	1276	103	6650
6-22	5935	1411	122	7467
6-24	6048	1429	125	7602
0-24	6213	1478	146	7837



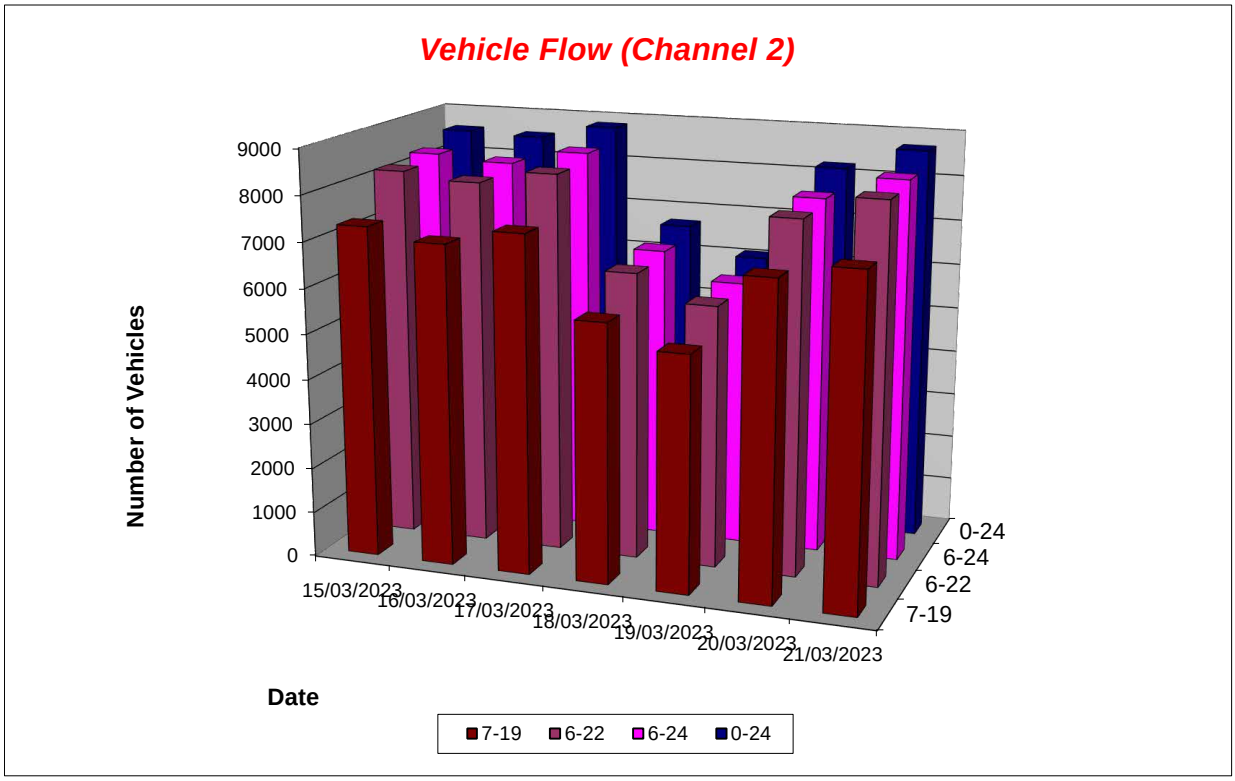
Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound **Vehicle Flow** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday	Weekday Average	Average
1	19	21	26	49	44	23	13	20	28
2	27	21	19	25	31	21	19	21	23
3	12	28	28	13	16	18	16	20	19
4	11	29	29	14	19	37	31	27	24
5	51	52	71	30	18	71	60	61	50
6	148	172	137	88	66	186	195	168	142
7	359	397	356	155	72	417	433	392	313
8	744	762	690	240	115	754	788	748	585
9	792	697	665	401	249	633	721	702	594
10	644	662	639	582	445	602	669	643	606
11	606	559	581	630	545	596	574	583	584
12	574	535	641	593	555	526	557	567	569
13	516	519	563	605	597	504	541	529	549
14	482	535	607	551	536	518	551	539	540
15	603	530	600	466	468	464	538	547	524
16	600	551	657	515	508	556	620	597	572
17	696	679	714	441	468	656	660	681	616
18	612	589	610	364	387	677	575	613	545
19	445	447	444	303	314	409	410	431	396
20	264	256	295	238	237	183	256	251	247
21	142	209	148	139	178	130	208	167	165
22	125	132	140	119	103	123	156	135	128
23	82	104	103	73	61	69	76	87	81
24	25	39	71	50	41	39	31	41	42

7-19	7314	7065	7411	5691	5187	6895	7204	7178	6681
6-22	8204	8059	8350	6342	5777	7748	8257	8124	7534
6-24	8311	8202	8524	6465	5879	7856	8364	8251	7657
0-24	8579	8525	8834	6684	6073	8212	8698	8570	7944



Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound **Average Speed** **Week 1**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	42.7	45.6	44.6	43.7	46.1	47.0	45.4
2	43.6	44.0	45.8	43.2	43.9	46.6	40.7
3	42.9	47.8	46.1	45.4	46.9	43.2	45.6
4	41.6	45.3	44.1	45.6	45.9	44.7	47.7
5	43.4	45.7	45.7	44.3	43.6	45.6	45.9
6	42.7	44.6	45.3	46.0	46.7	43.9	44.1
7	41.3	43.3	42.5	45.5	47.5	41.9	43.2
8	38.3	40.2	40.7	43.5	45.6	38.7	40.0
9	38.6	39.2	41.0	42.0	44.8	39.4	39.2
10	38.5	39.4	39.8	40.3	42.5	38.9	39.5
11	39.9	39.8	40.2	39.8	40.5	39.0	39.5
12	39.6	40.3	39.2	39.8	40.2	39.2	40.2
13	40.1	39.6	39.6	39.5	40.8	40.5	39.4
14	40.1	40.3	41.2	40.8	41.4	40.3	40.4
15	39.9	40.1	39.6	40.4	41.6	41.6	40.1
16	40.1	40.6	40.0	40.8	41.8	40.1	40.3
17	41.0	40.3	40.7	42.0	41.8	41.0	40.2
18	40.6	40.7	40.7	42.0	42.9	39.5	41.0
19	39.9	39.4	39.9	41.3	42.4	41.2	40.5
20	40.6	41.2	40.1	41.3	41.7	42.4	40.3
21	42.1	39.8	42.9	43.2	43.1	43.5	40.8
22	42.4	42.3	42.8	42.5	43.8	42.5	40.4
23	43.4	42.6	43.4	44.5	43.3	41.6	44.9
24	44.4	46.5	43.2	44.4	43.3	41.1	44.2
10-12	39.7	40.1	39.7	39.8	40.3	39.1	39.9
14-16	40.0	40.3	39.8	40.6	41.7	40.8	40.2
0-24	40.0	40.5	40.6	41.2	42.0	40.3	40.4

Average (ALL)	40.6
Weekday Inter-Peak	39.9

Channel 2 - Northeastbound **85th Percentile**

Hr Ending	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
1	51.6	50.6	50.0	49.1	52.7	53.4	50.5
2	48.6	49.1	52.2	47.9	48.0	52.8	45.1
3	49.5	54.6	50.2	51.2	55.7	50.1	54.4
4	44.1	49.5	50.0	51.2	52.3	50.7	54.2
5	50.9	51.0	50.7	49.8	49.2	50.8	51.8
6	48.3	50.5	49.5	52.3	53.1	49.7	48.7
7	46.2	47.9	47.7	50.6	53.6	47.5	48.5
8	44.3	45.3	45.8	48.8	51.8	44.6	44.5
9	43.5	44.6	45.3	47.7	49.4	44.9	44.5
10	42.9	44.1	44.6	45.2	47.3	44.1	43.9
11	44.0	44.7	44.7	44.5	46.3	43.3	44.6
12	44.4	44.7	44.7	44.3	44.9	43.5	45.0
13	45.3	43.8	44.4	44.0	45.6	45.2	43.6
14	44.5	45.1	46.2	45.3	46.6	45.0	45.4
15	45.4	45.1	45.0	45.3	46.4	46.4	45.0
16	45.3	45.3	45.0	45.1	46.7	45.2	44.7
17	45.7	44.6	45.2	46.4	46.4	45.5	44.5
18	45.0	45.4	45.3	46.7	47.4	44.4	45.8
19	45.5	44.3	44.4	46.9	46.9	46.1	46.1
20	45.8	46.6	45.1	46.4	45.9	48.3	44.8
21	47.5	47.0	48.5	49.8	48.4	48.9	46.7
22	47.3	47.7	49.1	48.5	48.4	47.4	46.6
23	49.4	47.8	48.7	49.0	48.9	47.1	51.3
24	49.6	52.6	48.9	48.5	48.5	47.6	48.9
10-12	44.1	44.8	44.8	44.4	45.6	43.4	44.9
14-16	45.3	45.2	45.0	45.2	46.6	45.8	44.8
0-24	45.2	45.6	45.7	46.3	47.2	45.6	45.5

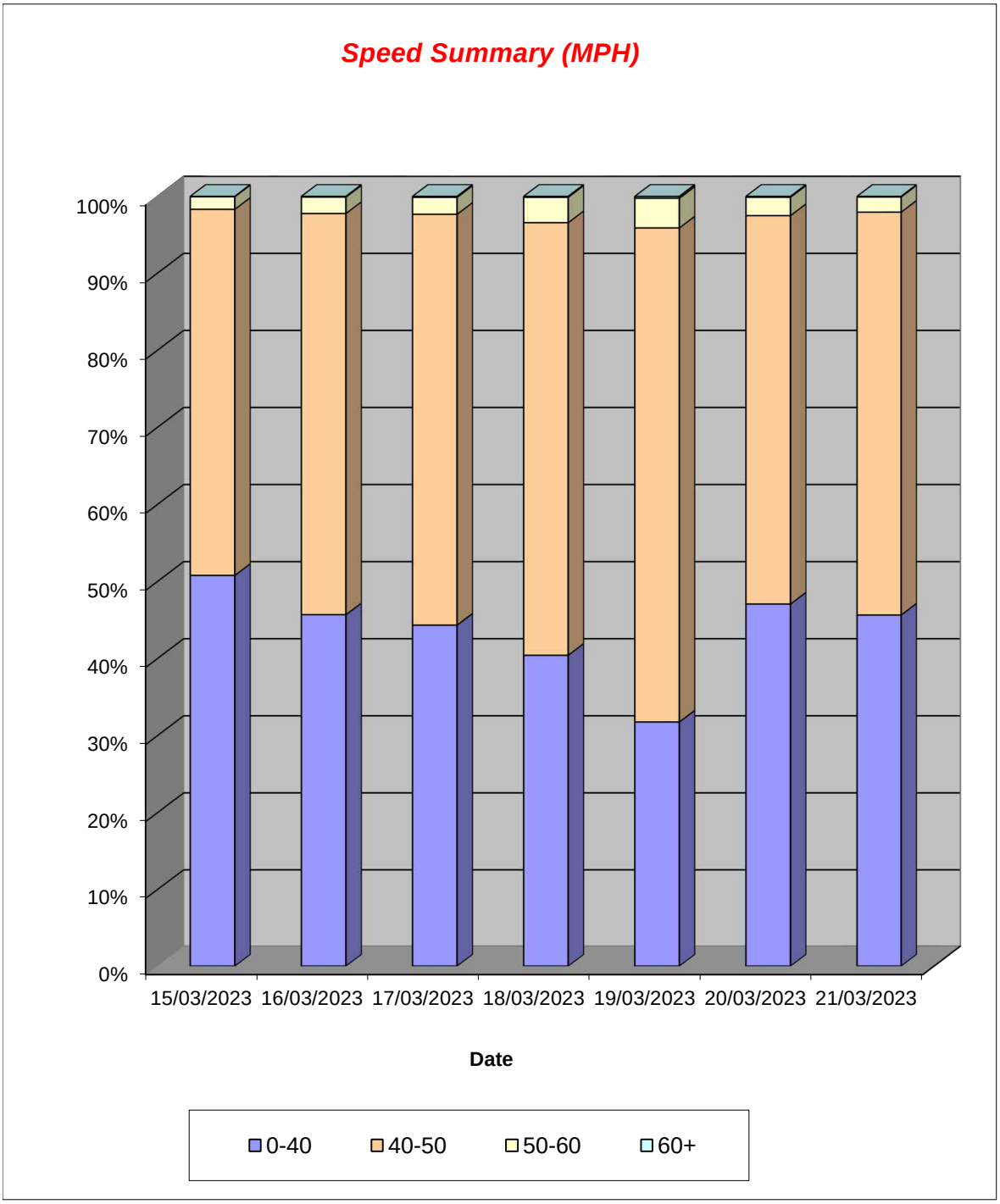
85th %ile (ALL)	45.8
Weekday Inter-Peak	44.8

Kelham ATC, A617 Main Road (Southern Site)

Produced by Road Data Services Ltd.

Channel 2 - Northeastbound | **Speed Summary** | **Week 1**

Speed (MPH)	15/03/2023 Wednesday	16/03/2023 Thursday	17/03/2023 Friday	18/03/2023 Saturday	19/03/2023 Sunday	20/03/2023 Monday	21/03/2023 Tuesday
0-40	4361	3899	3921	2705	1932	3869	3974
40-50	4075	4438	4709	3752	3893	4139	4547
50-60	140	181	194	220	234	196	171
60+	3	7	10	7	14	8	6
TOTAL	**8579**	**8525**	**8834**	**6684**	**6073**	**8212**	**8698**



Kelham ATC, A617 Main Road (Southern Site)

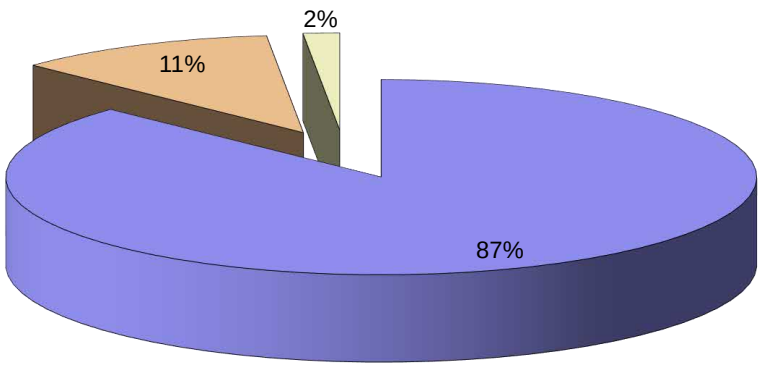
Produced by Road Data Services Ltd.

Channel 2 - Northeastbound **Vehicle Class** **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
15/03/2023				
7-19	6272	902	140	**7314**
6-22	7016	1030	158	**8204**
6-24	7110	1041	160	**8311**
0-24	7263	1135	181	**8579**
16/03/2023				
7-19	6102	838	125	**7065**
6-22	6971	947	141	**8059**
6-24	7101	956	145	**8202**
0-24	7333	1026	166	**8525**
17/03/2023				
7-19	6434	873	104	**7411**
6-22	7252	984	114	**8350**
6-24	7414	993	117	**8524**
0-24	7646	1050	138	**8834**
18/03/2023				
7-19	5217	434	40	**5691**
6-22	5805	494	43	**6342**
6-24	5919	502	44	**6465**
0-24	6087	544	53	**6684**
19/03/2023				
7-19	4873	300	14	**5187**
6-22	5427	332	18	**5777**
6-24	5519	341	19	**5879**
0-24	5691	362	20	**6073**
20/03/2023				
7-19	5859	924	112	**6895**
6-22	6609	1016	123	**7748**
6-24	6705	1026	125	**7856**
0-24	6984	1085	143	**8212**
21/03/2023				
7-19	6205	863	136	**7204**
6-22	7127	982	148	**8257**
6-24	7220	991	153	**8364**
0-24	7469	1057	172	**8698**

Average				
7-19	5852	733	96	**6681**
6-22	6601	826	106	**7534**
6-24	6713	836	109	**7657**
0-24	6925	894	125	**7944**

Total Vehicle Class Distribution



Road Data Services Ltd

Class No	Vehicle Description	Class No	Vehicle Description
1	Car, Light Van, Taxi 	5	Rigid 2 Axle HGV + 2 Axle (Close coupled) Trailer 
1	Light Goods Vehicle 	6	Rigid 3 Axle HGV + 2 Axle Drawbar Trailer 
1	Car or Light Goods Vehicle + 1 Axle Caravan or Trailer 	6	Rigid 3 Axle HGV + 3 Axle Drawbar Trailer 
1	Car or Light Goods Vehicle + 2 Axle Caravan or Trailer 	7	Artic, 2 Axle Tractor + 1 Axle Semi-Trailer 
2	Medium / Large Goods Vehicle 	8	Artic, 2 Axle Tractor + 2 Axle Semi-Trailer 
3	Rigid 3 Axle Heavy Goods Vehicle 	9	Artic, 2 Axle Tractor + 3 Axle Semi-Trailer 
3	Rigid 3 Axle Heavy Goods Vehicle 	10	Artic, 3 Axle Tractor + 1 Axle Semi-Trailer 
4	Rigid 4 Axle Heavy Goods Vehicle 	10	Artic, 3 Axle Tractor + 2 Axle Semi-Trailer 
4	Rigid 4 Axle Heavy Goods Vehicle 	11	Artic, 3 Axle Tractor + 3 Axle Semi-Trailer 
5	Rigid 2 Axle HGV + 2 Axle Drawbar Trailer 	12	Bus or Coach, 2 Axle 
5	Rigid 2 Axle HGV + 3 Axle Drawbar Trailer 	12	Bus or cCoach, 3 Axle 
5	Rigid 2 Axle HGV + 1 Axle Caravan or Trailer 	13	Vehicle with 7 or more Axles 

Classification Classes: Car/Van: 1 OGV1/Bus: 2,3,5,6,7,12 OGV2: 4,8,9,10,11,13

Appendix C

Proposed Site Layout

KEY

- SITE BOUNDARY
- GROUND CONTOURS WITH EXISTING BUND REMOVED
- EXISTING OVERHEAD CABLES
- EXISTING HEDGES
- EXISTING TREES
- PROPOSED PV PANELS
- PROPOSED 2.4m HIGH PALADIN FENCE
- PROPOSED 2.4m HIGH PALISADE FENCE
- PROPOSED 2.0m HIGH DEER FENCE
- PROPOSED 4m HIGH ACOUSTIC FENCE
- PROPOSED 2m HIGH CLOSE BOARDED TIMBER FENCE
- PROPOSED ACCESS TRACKS
- PROPOSED SCREENING BUND
- PROPOSED TRANSFORMER
- PROPOSED SWITCHROOM
- PROPOSED SPARES CABIN
- PROPOSED BATTERY, TRANSFORMER AND INVERTER
- PROPOSED DNO CABIN
- PROPOSED DNO SWITCHROOM
- PROPOSED DNO MAST
- PROPOSED 132kV SUBSTATION

REV	DESCRIPTION	DATE	BY

CLIENT

ASSURED ASSET 2 LIMITED

Sirius Planning
4245 Park Approach, Thorpe Park, Leeds. LS15 8GB. 0113 264 9960

JOB TITLE

KELHAM SOLAR FARM AND BESS

DRAWING TITLE

SITE LAYOUT

DRAWN	DATE	APPROVED	DATE
S.T	19/9/2023	J.C	19/9/2023

SCALE	SHEET	DRAWING NUMBER	REVISION
1:2500	A1L	HC1002/05/03	0

50.0 0.0 100.0 200.0 300.0 400.0 500.0 600.0

Appendix D

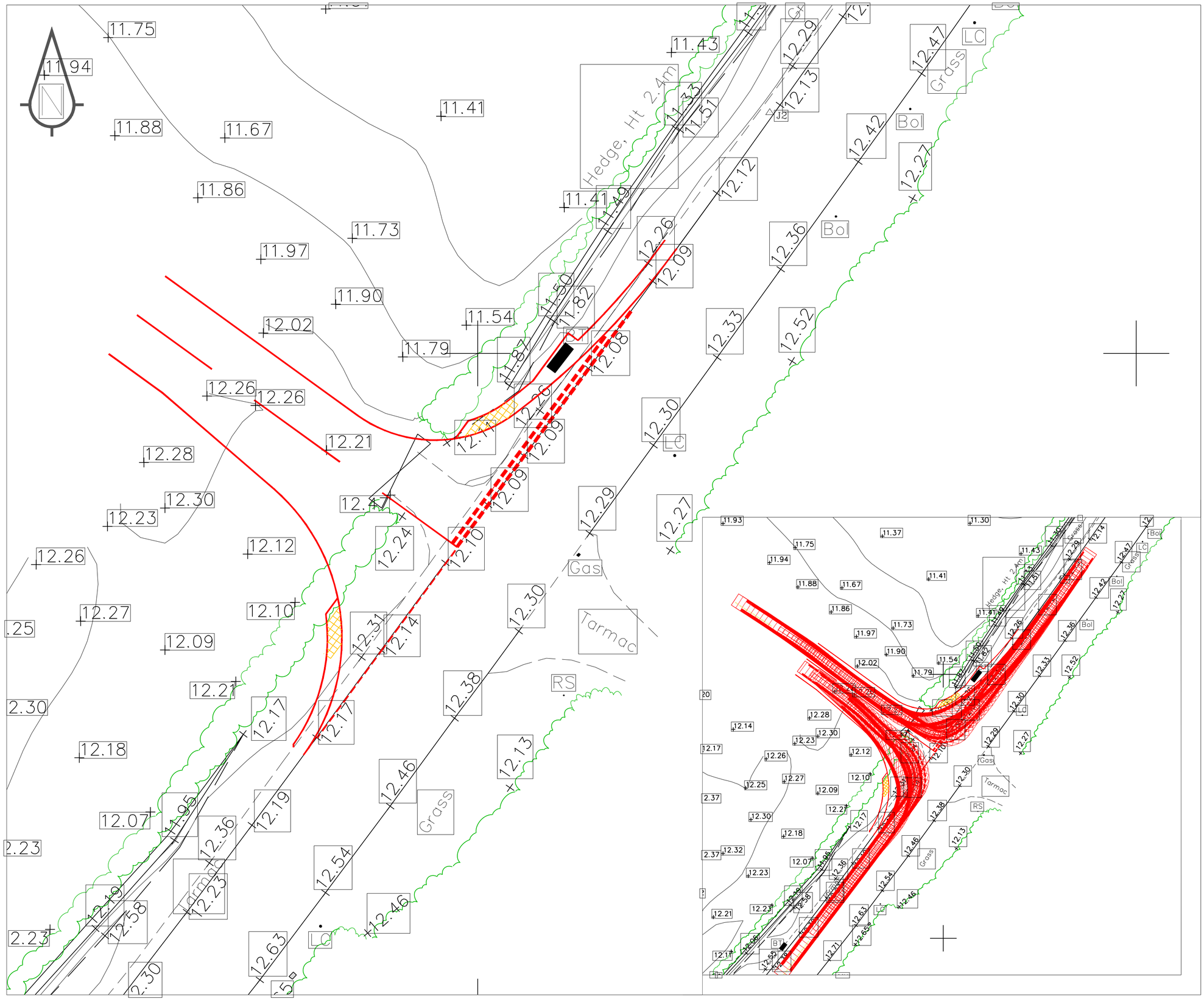
Drawing 153626-001 – Proposed Site Access and HGV Swept Path Analysis

Drawing 153626-002 – Visibility Splays

Drawing 153626-003 – Extent of Proposed Speed Limit Reduction

Drawing 153626-004 – Proposed Temporary Signage Scheme

Drawing 153626-005 – Visibility Splays at 40mph



- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.
- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.
- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

Rev	Amendment	Drawn	Date	Checked
A	Amended following Stage 1 RSA	SB	Aug 23	KS

sanderson associates consulting engineers
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Client

Sirius Planning Ltd

Project Title

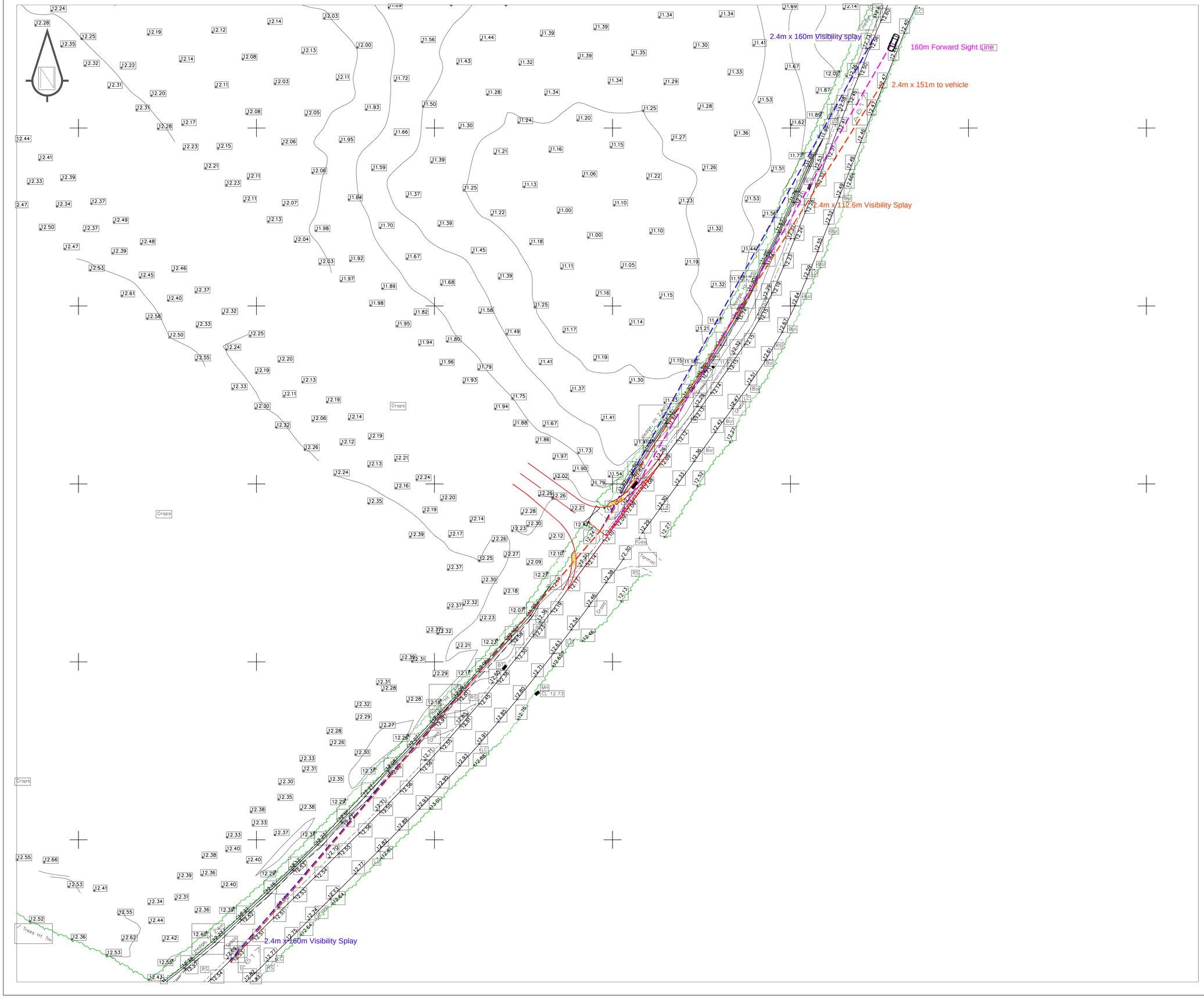
Main Road,
Kelham,
Newark-on-Trent

Drawing Title

Proposed Access Design with Max Legal Length HGV Vehicle Tracking

Scale 1:200		Drawn By LY	
Drawing Size A2		Checked By KS	
Date June 2023		Approved By KS	
	Drawing Number 153626-001		Rev A

FILE REF:



- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.
- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.
- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

Rev	Amendment	Drawn	Date	Checked
A	Amended following Stage 1 RSA	SB	Aug 2023	KS

sanderson associates consulting engineers
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Client

Sirius Planning Ltd

Project Title

Main Road,
Kelham,
Newark-on-Trent

Drawing Title

Visibility Splays from Proposed Access

Scale	Drawn By
1:500	LY
Drawing Size	**Checked By**
A1	KS
Date	**Approved By**
June 2023	KS

Drawing Number	Rev
153626-002	A

FILE REF:

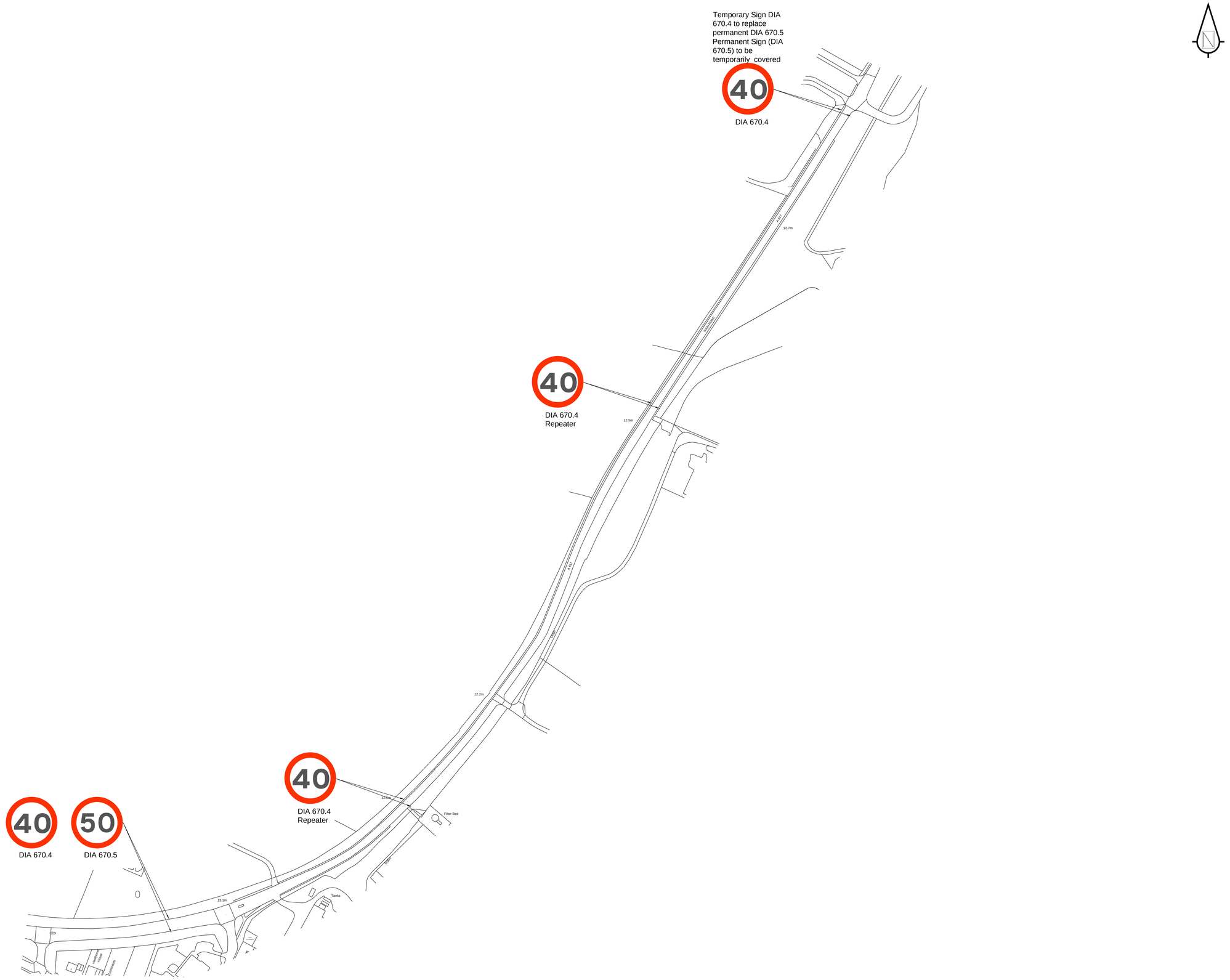
sanderson associates consulting engineers
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Proposed BESS and Solar Farm, Kelham

Proposed 40mph Temporary Speed Limit

Rev	Amendment	Drawn	Date	Checked

Scale: NTS	Draw by: LY
Drawing Size:	Checked by: KS
Date: June 2023	Approved by: KS
Drawing Number: 153626-003	Rev.



- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.
- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agents/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.
- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

Notes

All layouts are indicative.
Final layouts will be provided to the LHA once a contractor is appointed and will be provided in accordance with Traffic Signs Regulation & General Directions 2019 & Chapter 8 Guidelines.
Existing signs to be temporarily covered or removed

Rev	Amendment	Drawn	Date	Checked

sanderson associates consulting engineers
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Client: Sirius Planning Ltd

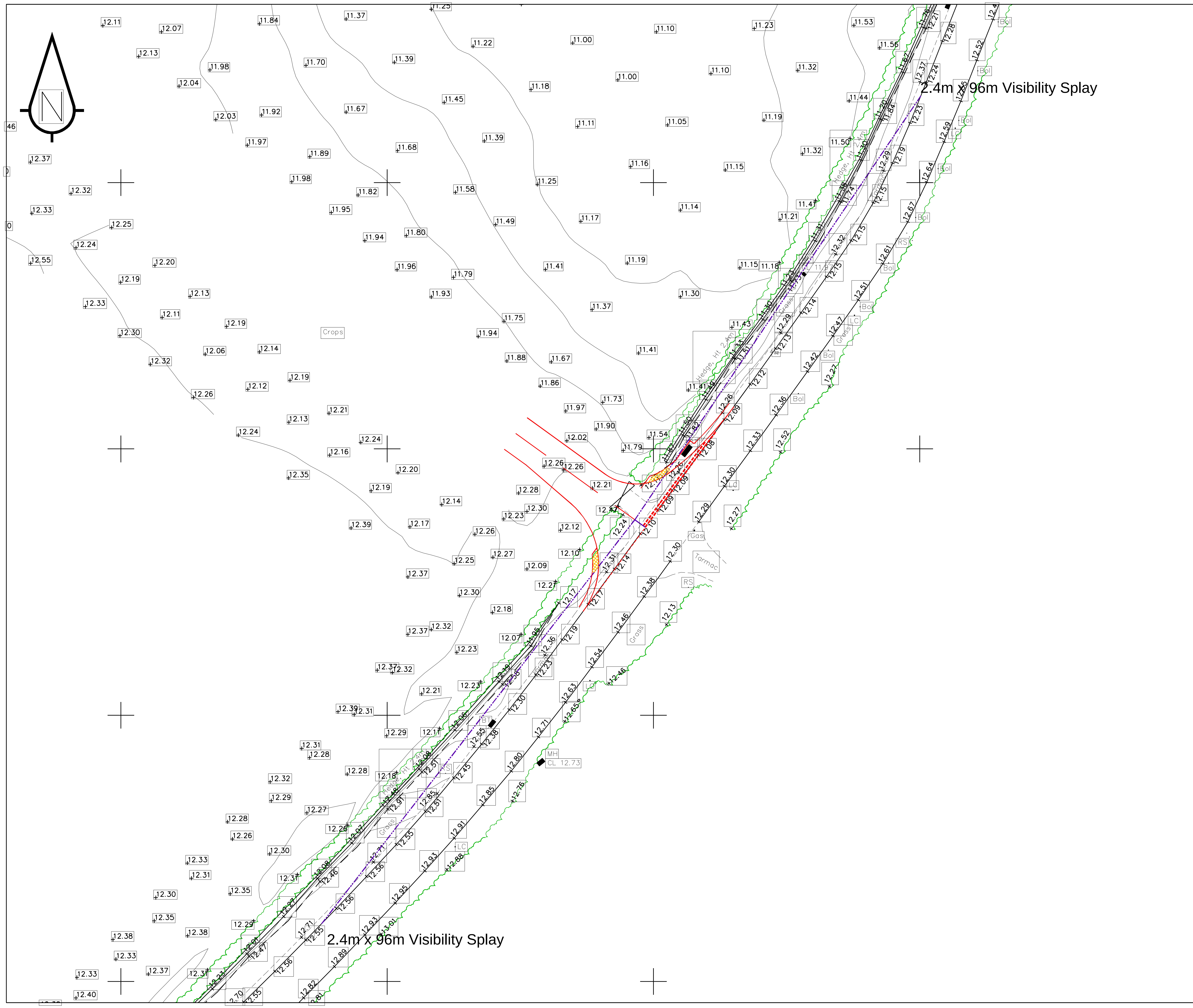
Project Title: Main Road, Kelham, Newark-On-Trent

Drawing Title: Temporary Speed Limit

Drawn By	Checked By	Approved By
SB	KS	KS

Scale	Date
NTS	Aug 2023

Drawing Size	Drawing Number	Rev
A0	153626-004	



- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.
- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.
- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

Rev	Amendment	Drawn	Date	Checked
A	Amended following Stage 1 RSA	SB	Aug 23	KS

sanderson associates
consulting engineers
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Client

Sirius Planning

Project Title

Main Street, Kelham

Drawing Title

40mph Visibility Splays from Proposed Site Access

Scale	1:500	Drawn By	LY
Drawing Size	A2	Checked By	KS
Date	July 2023	Approved By	KS

Drawing Number: 153626-005

Rev: A

FILE REF:

sanderson associates consulting engineers

FAIRHURST

[redacted]

[redacted]

[redacted]