

**A7S-14574 GREEN RECOVERY
MILVERTON SCHOOL
CONSTRUCTION AND OPERATIONAL TRAFFIC
MANAGEMENT PLAN**

05 October 2023



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CONSTRUCTION AND OPERATIONAL TRAFFIC MANAGEMENT PLAN

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Table of contents

1.	Introduction	4
1.2.	Site Context	4
1.3.	Report Purpose	5
1.4.	Report Structure	5
2.	Construction Details	6
2.1.	Introduction	6
2.2.	Construction Period and Phasing	6
2.3.	Operational Hours	6
2.4.	Movement of Plant and Materials	6
3.	Traffic Generation	7
3.1.	Introduction	7
3.2.	Construction	7
3.3.	Operation	9
4.	Proposed Site Access	10
4.1.	Introduction	10
4.2.	Construction Access	10
4.3.	Operational Access	16
5.	Construction Measures, Management and Control Processes	17
5.1.	Introduction	17
5.2.	Transport Co-ordination	17
5.3.	Booking System	17
5.4.	Route Compliance	18
5.5.	Site Fencing	18
5.6.	Communication Strategy	18
5.7.	Complaints Procedure	18
6.	Environmental Impact Measures	20
6.1.	Context	20
6.2.	Air Pollution, Dust and Dirt Control	20
6.3.	Muck Control	20
6.4.	Noise Control	20
6.5.	Fuel Consumption	20
6.6.	Waste Management	21
7.	Construction Travel Plan	22
7.1.	Introduction	22
7.2.	Trip Generation	22
7.3.	Sustainable Transport	22
7.4.	Measures	23
8.	Summary and Conclusion	25

List of Figures

Figure 1 – Indicative Site Location	4
Figure 2 – Existing Access Arrangements (western ped access – left, eastern vehicle access – right)	5
Figure 3 – Route 1 Overview	11
Figure 4 – Lillington Avenue Looking Northeast	12
Figure 5 – Lillington Avenue Looking Southwest	12
Figure 6 – Roundabout on Rugby Road Looking Northeast	13
Figure 7 – A452 Junction	13
Figure 8 – A452 Looking North	14
Figure 9 – Temporary Signage at Site Access	15
Figure 10 – Temporary Signage along Lillington Avenue	15
Figure 11 – PIA Study Area	16

List of Tables

Table 1 – Estimated Construction Trip Generation (Maximum)	8
Table 2 – 2011 Census JTW Data (Workplace Population)	22

Appendices

- Appendix A – Proposed Construction Access Arrangement
- Appendix B – Proposed Permanent Access Arrangement

1. Introduction

- 1.1.1. Evoke Transport Planning Consultants Ltd (Evoke) has been commissioned by Severn Trent to produce a Construction and Operational Traffic Management Plan (COTMP) to support the installation of an underground storm tank for Severn Trent at Milverton High School playing fields off Lillington Avenue in Leamington Spa.
- 1.1.2. The application concerns the widening of an existing western vehicular access (permanent) and the creation of a new eastern access (temporary for construction) off Lillington Road to facilitate construction and subsequent maintenance of the storm tank.
- 1.1.3. The Local Planning Authority (LPA) is Warwick District Council (WDC) and the Local Highway Authority (LHA) is Warwickshire County Council (WCC).

1.2. Site Context

- 1.2.1. The Milverton High School playing fields comprises an area measuring approximately 1.2 Ha. The Site is bounded by residential land from the north, east, and west facets of the site. Lillington Avenue routes along the southern boundary of the site with a combination of residential and commercial land use beyond.

Figure 1 – Indicative Site Location



Source: Google Maps

- 1.2.2. There are two existing access points to the site, both of which are located off Lillington Avenue. The pedestrian access point is located on the south western boundary of the site and measures approximately 1.2m in width (Figure 2). A vehicle access point is located at the northeast corner of the site with an approximate width of 3.4m. At the access location, Lillington Avenue is a two-way single carriageway road subject to a 30mph speed limit. Informal on street parking occurs along both sides of the carriageway. The existing carriageway width accommodates on street parking without disrupting the two-way vehicular flow.

Figure 2 – Existing Access Arrangements (western ped access – left, eastern vehicle access – right)



1.2.3. Vehicular access to the playing fields will be required regularly during the construction phase of the development which is anticipated to take 14-16 weeks to complete. Upon completion of the works, access will then only be required infrequently for maintenance purposes and recreational visits.

1.3. Report Purpose

1.3.1. The principle aim of this COTMP is to ensure that the construction works are organised and delivered in a manner that safeguards the highway impact, highway safety and amenity of the area surrounding the Application Site. Details of operation and maintenance post construction are also set out.

1.4. Report Structure

- **Section 2** summarises the different phases of work and sets out the construction methodology and working hours.
- **Section 3** outlines the anticipated composition and volume of traffic during the construction phase of the development along with the proposed routing of traffic.
- **Section 4** provides an appraisal of the highway geometry of the identified construction route, having regard to current design guidance in combination with the volume and type of traffic generated by the proposed development.
- **Section 5** focuses on the proposals to ensure that a suitable management strategy and structure is in place to control activity on site and to ensure a suitable reporting procedure for local residents and stakeholders.
- **Section 6** identifies how the environmental impacts of the development in relation to transport will be managed and mitigated.
- Construction Travel Plan measures are outlined in **Section 7**. The findings of the COTMP are summarised in **Section 8**.

2. Construction Details

2.1. Introduction

- 2.1.1. This section outlines the proposed construction methodology and provides details on the way in which deliveries will be controlled with regard to the local highway network.

2.2. Construction Period and Phasing

- 2.2.1. Construction will take place over a 14-16 week (4 month) period. Construction will be broken down into a series of phases but will primarily comprise site setup, excavation, followed by installation and groundworks. Excavation is likely to comprise the most intensive period of vehicle movements to and from the site. The proposed temporary access points will need to be implemented prior to the commencement of the main construction phases (excavation onwards).

2.3. Operational Hours

- 2.3.1. All works will be conducted between the hours of 08:00 to 18:00 hours Monday to Friday with limited construction activities on Saturday mornings (08:00-13:00) foreseen. No construction activities will take place on a Sunday's or Bank Holiday. Works undertaken outside of these timings will only occur should any electrical shutdowns be required and will be agreed in advance.
- 2.3.2. Given the location of the site, to the local Milverton Primary School and Arnold Lodge School it is HGVs will not access the site between the hours of 08:00-09:00 and 15:00-16:00. This will avoid the peak school pick up and drop off timings.

2.4. Movement of Plant and Materials

- 2.4.1. To install the storm tank, excavation of the existing playing field will be required. If the material cannot be reused or stored on site then it will be removed by 8-wheel rigid tipper trucks (up to 9.5m). The period of excavation will likely form the peak for construction vehicle movements to and from the site (maximum of 10 per day).
- 2.4.2. The majority of materials and plant required for construction will be delivered by articulated low loader vehicles and rigid heavy goods vehicles (HGVs). The vehicles will access the site routing in a southbound direction along Lillington Avenue, the vehicles will then perform a U-turn movement at the roundabout junction approximately 100m to the south west of the site, the articulated HGVs will then unload / load materials from the carriageway, the materials will be transported to the site using smaller vehicles.
- 2.4.3. It is considered that 9.5m Rigid HGVs will be the largest vehicle to enter the site from Lillington Avenue, as such the access arrangements have been designed accordingly.

3. Traffic Generation

3.1. Introduction

3.1.1. This section of the report sets out the estimated volume and type of vehicles that will be generated throughout the construction and operational phase of the development. This information has been used in subsequent sections that consider the geometry and safety of the adjoining highway networks, in order to inform the measures proposed.

3.1.2. It should be noted that the construction programme and corresponding construction traffic strategy may be subject to change following the appointment of a construction contractor and prior to work commencing on site. Any substantial changes in the build program and / or number of vehicular movements will be communicated to the local planning and highway authority in advance of construction.

3.2. Construction

Construction Vehicles

3.2.1. The trip generation potential of the construction phase of the development has been informed through discussion with the applicant on the anticipated construction programme and is also based on experience of delivering similar developments in the United Kingdom.

3.2.2. The construction period is estimated to last for up to four months (14-16 weeks), with deliveries fluctuating within this period. It is envisaged that the majority of movements would be Monday to Friday with only a limited number of movements on a Saturday. All deliveries will be instructed to avoid school peak hours comprising 08:00-09:00 and 15:00-16:00.

3.2.3. Deliveries will vary in amount per day during the construction period with a maximum of 10 a day in the early phases of the build when disposing of excavated material which is equivalent to 10 inbound and 10 outbound trips, and comprises a maximum of 2 HGVs arriving and 2 HGVs departing per hour. Although it is likely to be lower than this the majority of the time and there will be a period of the construction process when there are no daily HGV movements at all.

Construction Vehicle Types

3.2.4. A variety of vehicles will need to travel to and from the Site during construction. These will include 8 wheel Rigid HGV's, articulated HGV's, dumper trucks and mixers.

3.2.5. Based on information provided it is confirmed that there will be no abnormal loads accessing the site for the entirety of the construction process.

Dwell Times

3.2.6. Delivery vehicles are likely to attend the Site for approximately one hour per vehicle. There are sufficient spaces within the Site to accommodate a vehicle waiting for materials, or at the curtilage for a vehicle delivering to site. It is proposed that a Temporary Traffic Regulation Order (TTRO) is implemented along the site frontage during the construction period to prohibit informal parking in order to facilitate access and associated visibility splays and to provide sufficient space to accommodate HGVs to unload materials.

3.2.7. Further measures that will be employed to control the number and frequency of vehicles and these are detailed within Section 5 of this report.

Construction Staff

- 3.2.8. Between eight and ten full time jobs will be generated by the scheme. Car sharing will be employed to minimise traffic so far as is practically possible.
- 3.2.9. All staff are anticipated to arrive at the site in the 30-minute periods preceding the start of the operating day (i.e. 07:30 to 08:00hrs) and depart in the 30-minute period that follows the end of the operating day (i.e. 18:00 to 18:30hrs). Staff trips are likely to travel to / from different origins / destinations and hence spread their movement across the highway network.
- 3.2.10. The material in Section 7 outlines full details on construction worker trips and the measures within the Construction Travel Plan that will seek to minimise construction workers travel.

Summary

- 3.2.11. Based on the information presented above, an estimated profile of construction vehicle and construction worker movements is set out for the most intensive period of construction activity, which will comprise excavation.

Table 1 – Estimated Construction Trip Generation (Maximum)

Hour		Construction Vehicles		Construction Workers		Total	
Start	End	Arr	Dep	Arr	Dep	Arr	Dep
07:00	08:00	0	0	10	0	10	0
08:00	09:00	0	0	0	0	0	0
09:00	10:00	1	0	0	0	1	0
10:00	11:00	2	1	0	0	2	1
11:00	12:00	2	2	0	0	2	2
12:00	13:00	2	2	0	0	2	2
13:00	14:00	2	2	0	0	1	2
14:00	15:00	1	2	0	0	1	1
15:00	16:00	0	0	0	0	1	1
16:00	17:00	0	1	0	0	0	1
17:00	18:00	0	0	0	0	0	0
18:00	19:00	0	0	0	6	0	10
Total		10	10	10	10	20	20

- 3.2.12. Assuming all vehicles and workers use the same route to travel to and from the Site, and all construction workers travel individually by car or van, which is unlikely, the maximum increase in movement through any single junction in an hour is expected to be ten vehicles (cars or vans) between 07:00 and 08:00 and 18:00 and 19:00.
- 3.2.13. The results indicate that the increase in traffic on the network will be negligible across the day and within the limits of daily variation. Furthermore, minimal movements are expected to occur during the network peak hours, whilst construction vehicle movements will be limited during school peak hours.

3.3. Operation

- 3.3.1. After the construction phase, the proposed development will not require significant maintenance with operational traffic limited to maintenance visits, which are likely to take place every one to three months. The maximum size of vehicle entering the site would be a HGV Jetter, which is equivalent to an 8 wheel rigid, although for the majority of the time access would be by panel van or similar.
- 3.3.2. During the operational phase there would be a separate maintenance contract, and this is expected to support at least two operational and maintenance staff.
- 3.3.3. The impact of maintenance vehicles is considered to be negligible given the low and sporadic nature of the maintenance visits.
- 3.3.4. In addition to the maintenance visits, operational traffic may be constituted by the potential re-use of the playing fields by the school which would be existing movements.

4. Proposed Site Access

4.1. Introduction

- 4.1.1. This section of the report sets out an appraisal of the highway characteristics and geometries along the identified access route along with safety considerations to ensure that vehicles are able to travel safely and efficiently to the Application Site, having due regard to the traffic volumes and vehicle types identified previously.

4.2. Construction Access

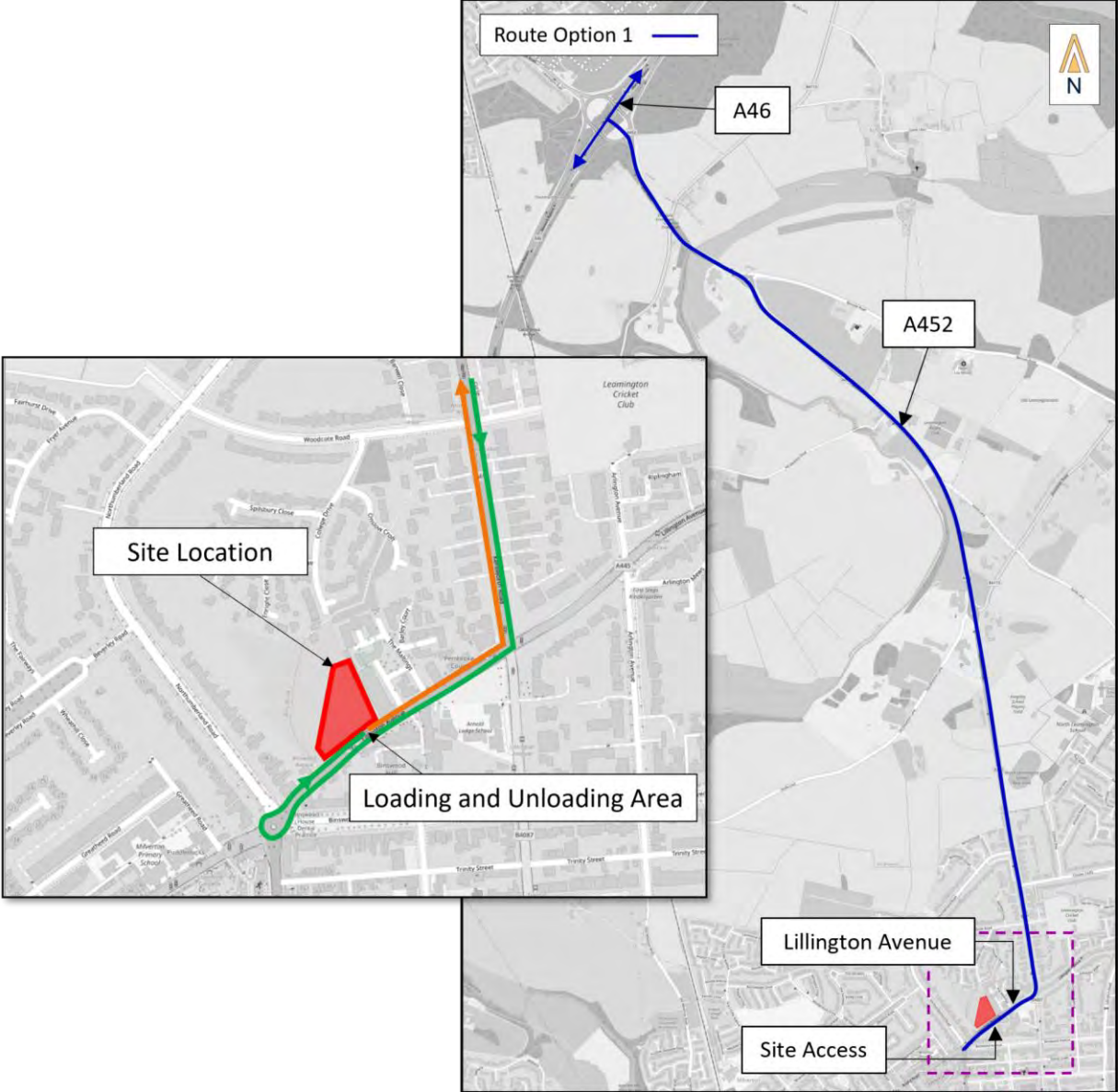
Proposed Access and Visibility

- 4.2.1. Vehicular access to the Site is currently taken via an existing vehicular access point off Lillington Avenue measuring approximately 3.4m in width. Lillington Avenue is a two-way single carriageway road subject to a 30mph speed limit with an average carriageway width of 10.2m.
- 4.2.2. The construction access will be provided via a widening of the existing vehicular access points to the east, and by the creation of a new vehicular access to the west, at the location of an existing pedestrian gate (which currently measures c.1.4m). The proposed access arrangements will include an access width of 10m with kerb radii's to accommodate safe access and egress for construction vehicles. The provision of each access point will require the removal of a section of the existing brick.
- 4.2.3. The proposed changes to facilitate construction access will be temporary and for construction purposes only. The western access will be reinstated to its original form, whilst minor modifications will be made relative to the existing case at the western access upon reinstatement (see Section 4.3).
- 4.2.4. Temporary signage will be used to direct construction traffic to the site along the proposed construction traffic route utilising existing street furniture.
- 4.2.5. The proposed construction access arrangements are illustrated by Drawing B-23-0033-GA-001 at **Appendix B**. The visibility splays at the proposed construction access are also indicated and accord with the advice contained within MfS2 on routes subject to a 30mph speed limit (2.4m x 43m). It is proposed that a TTRO to prohibit parking is implemented to ensure appropriate visibility at each access point.
- 4.2.6. Visibility at the proposed construction access ensures there is adequate inter-visibility between vehicles on the major and minor arms. The visibility at the proposed access has been based on the following guidance provided in Manual for Streets.

Proposed Construction Route

- 4.2.7. Due to the nature of the surrounding transport network and to minimise the impact on any one section of road, construction vehicles will be permitted to using a single route option. All traffic accessing the Application Site for construction purposes will be required to do so by travelling southbound from the A46 by the A452. Additionally, these vehicles leaving the site will be required to travel northbound to the A46 by the A452. A summary of the proposed construction route is outline below.
- 4.2.8. An overview of Route 1 from the site is shown below in Figure 3.

Figure 3 – Route 1 Overview



Source: QGIS, with database from OpenStreetMaps

4.2.9. The construction route connects the A46 and the proposed site via the A452. The site’s vehicle access point connects with Lillington Avenue which is a moderately trafficked road and has a moderate number of HGVs using the route. Lillington Avenue provides sufficient road width for HGVs to pass other vehicles as shown in Figure 4 and Figure 5.

Figure 4 – Lillington Avenue Looking Northeast



Figure 5 – Lillington Avenue Looking Southwest



- 4.2.10. For construction vehicles heading Southwest on Lillington Avenue to access the loading and unloading area, they will be required to use the roundabout to proceed northeast on Lillington Avenue as shown in Figure 6.

Figure 6 – Roundabout on Rugby Road Looking Northeast



- 4.2.11. From the site to the A46 as shown in **Error! Reference source not found.**, there is a junction in which the vehicles must head north from Lillington Avenue onto the A452. On the A452, construction vehicles can continue to head north to reach the A46 which routes to Coventry in a northern direction, and Tewkesbury and the M5 in a southern direction.

Figure 7 – A452 Junction

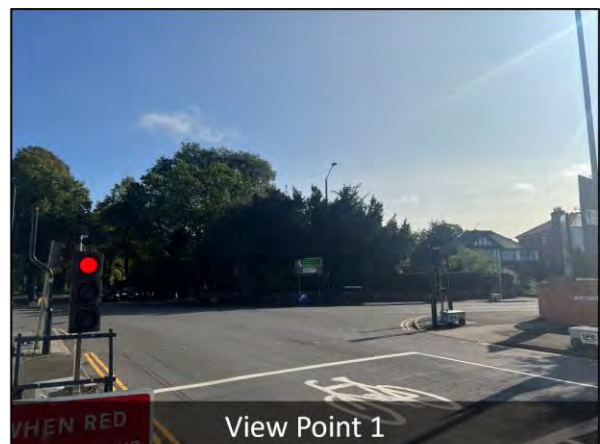


Figure 8 – A452 Looking North



4.2.12. In summary, this route provides sufficient road width and passing points to accommodate the minor temporary increase in HGV movements due to construction. During on site investigations, it was evident that the route to the wider strategic highway network is already trafficked by HGVs, as such a minor uplift in vehicle movements is unlikely to result in a severe impact to the existing highway network. Thus, the route will provide the preferred route for construction traffic during the construction phase as it is the most direct route to the wider highway network and the route already accommodates a greater number of HGV movements on a daily basis.

Access Management Measures

- 4.2.13. Management measures will be implemented to ensure that construction HGVs can access and exit the site safely.
- 4.2.14. Construction HGVs will be subject to a booking system with fixed arrival times. A banksman will be utilised when needed to assist HGVs in accessing and egressing the site and will only instruct HGVs to depart the site when Lillington Avenue is clear of traffic in the vicinity of the site access, and it is safe to do so.
- 4.2.15. Temporary signage will be located in the vicinity of the site access during the construction period to warn drivers of the site access, as shown in Figure 9.

Figure 9 – Temporary Signage at Site Access



4.2.16. Additional signage will advise motorists of HGVs turning through the site access as shown in Figure 10.

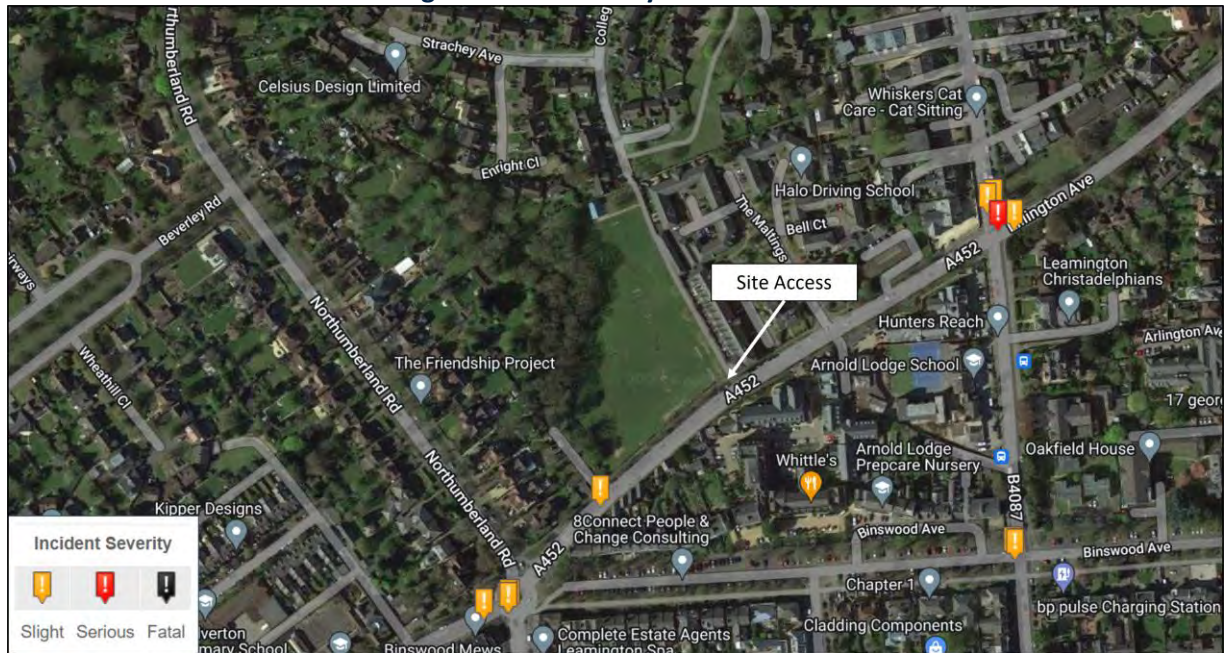
Figure 10 – Temporary Signage along Lillington Avenue



Highway Safety

4.2.17. An investigation of Personal injury Accident data in the immediate vicinity of the site access has been undertaken using www.crashmap.co.uk. Personal Injury Accidents between 2017 and 2021 along Lillington Avenue in the vicinity of the site access have been analysed. The study area is shown below in Figure 11.

Figure 11 – PIA Study Area



Source: Crashmap

- 4.2.18. The data indicates that a total of nine injury accidents have occurred in the study area, eight slight and one serious with no fatal collisions recorded.
- 4.2.19. PIAs were located at the junction 190m northeast of the access site (four PIAs) and at the roundabout 190m southwest of the access site (5 PIAs) over the five year period. There were no collisions at the proposed site access junctions. Based on the recorded injury accident data there is not considered to be an undue road safety problem within the vicinity of the Application Site and it is considered that the access management measures proposed will help to mitigate any potential impacts.

4.3. Operational Access

- 4.3.1. Drawing A7S14574-WSP-SA-ZZ-DR-C-0005 (attached at **Appendix B**) provides details of the permanent access arrangements off Lillington Avenue following the completion of the construction phase. Upon completion of construction the temporary western access will be reinstated to its current form. The permanent eastern access will also be reinstated with minor modifications to ensure appropriate ongoing access for maintenance. The minor modification will comprise a c.1m widening relative to the existing access arrangement with a section of wall permanently removed as indicatively shown below.

5. Construction Measures, Management and Control Processes

5.1. Introduction

5.1.1. This section of the report sets out the measures, management structure and control processes that will be put in place to implement, monitor and manage the COTMP. The Site Manager will be responsible for the works which will ensure that the control processes are efficiently communicated and implemented.

5.2. Transport Co-ordination

5.2.1. The Applicant will appoint a Site Manager for the project and the details will be provided to the Local Planning Authority once confirmed. The Site Manager for the project will undertake the transport co-ordination role for the site. In this respect, their main responsibilities will include:

- Managing the implementation of the COTMP;
- Vehicle Scheduling;
- Checking for scheduled road works on the <http://roadworks.org> and <https://www.warwickshire.gov.uk/roadworksmap> websites;
- Checking for scheduled refuse collections with Local Planning Authority;
- Handling any complaints; and
- Acting as a point of contact for employees, contractors and the general public.

5.2.2. The Site Manager will ensure that there is adequate liaison between the following key stakeholders throughout the construction period:

- The contractor;
- The applicant;
- Site neighbours;
- Other local stakeholders such as emergency services or local transport providers; and
- Local Planning and Highway Authorities.

5.2.3. Regular review meetings and telecommunications will be held between the Site Manager and WDC/WCC if requested. Furthermore, the Site Manager will provide any monitoring data, delivery schedules, complaints or breaches of agreements to WDC/WCC if requested.

5.3. Booking System

5.3.1. On a weekly basis the Site Manager will evaluate details of the daily profile of deliveries proposed for the upcoming week. Through discussions with hauliers the Site Manager will, as far as practical, ensure that the deliveries are spread out across the week and across the day to minimise any potential disruption.

5.3.2. The proposed deliveries will be checked against the weekly delivery schedule. This will be overseen by the Site Manager to ensure that construction deliveries are managed in an efficient manner with minimal disruption and delays.

5.3.3. Where possible sufficient time will be given between deliveries to allow for any delays as a result of the delivery vehicle getting stuck in traffic or loading / unloading taking longer than expected to avoid any vehicles waiting.

5.3.4. The Applicant will provide banksmen, where required, to assist with the manoeuvring of delivery vehicles in to and out of the construction compound, as well as any internal movements throughout the application site.

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- 5.3.5. Where possible, all deliveries by goods vehicles (>3.5 tonnes) will be undertaken outside of the school peak hours (08:00-09:00 and 15:00-16:00). All vehicles ready to depart the application site during these periods shall be held back within the compound area until the appropriate time has passed. Any vehicle enroute and likely to arrive during the restricted period will be required to park in the nearest lay-by or service station, until the restricted period has passed (drivers legal driving hours permitting).

5.4. Route Compliance

- 5.4.1. Use of the agreed vehicle route shall be included as a contractual requirement of the Contractor and will be communicated to all driver accessing the site. This will include information of the times of operation, delivery routes and the vehicle booking system.

5.5. Site Fencing

- 5.5.1. A security fence will be constructed around the application site prior to any construction works taking place (where required given the existing brick wall and fence). The fencing of the site will protect members of the public from the ongoing construction works as well as preventing unauthorised personnel accessing the site.
- 5.5.2. Any disruption to the northern footway, associated with the construction of the access points, will also be notified to the schools in the area, and agreed with the LHA in advance. A TTRO for any temporary or partial closure of the footway will be sought in advance of any works with appropriate temporary fencing erected around the works. However, it is intended that this is completed outside of school periods where possible.
- 5.5.3. The fencing will also have environmental benefits in terms of reducing the impact of dust generated on the surrounding environment and reducing noise pollution from the site. Mandatory safety signage will be displayed for construction staff entering the site along with contact details for the Site Manager. The fencing will be kept clean and tidy at all times.

5.6. Communication Strategy

- 5.6.1. As identified above, the Site Manager will be responsible for ensuring that there is adequate liaison between all stakeholders (including local schools) and the Local Planning Authority and Highway Authorities throughout the construction period.
- 5.6.2. Prior to any works taking place, the contractor shall inform the schools and neighbours such as schools and residents along Lillington Avenue which may be affected by noise, dust or vehicle movements arising from the construction work or nature of the works, proposed hours of work and their expected duration. In addition to this a notice will be placed at the main site entrance informing the neighbours of the hours of work.

5.7. Complaints Procedure

- 5.7.1. Whilst the Site Manager will use reasonable endeavours to ensure that site neighbours are informed of the construction programme and potential impacts it is possible that complaints may be raised by the site's neighbours. The Site Manager will therefore be available to meet and explore issues with concerned neighbours directly via appointment.
- 5.7.2. Complaints shall be taken seriously and addressed immediately by the construction team. All complaints that are received will be reviewed in weekly site meetings to ensure that any required actions are communicated to all employees.

Evoke Transport

- 5.7.3. The Site Managers contact details will be provided to the Local Planning and Highway Authority prior to work commencing on site. Contact details for the Site Manager will also be displayed at the site entrance.

6. Environmental Impact Measures

6.1. Context

6.1.1. It is important that construction impacts in relation to issues that may arise along the local highway network, as well as increases in vehicle emissions and waste attributable to the proposed scheme are addressed. Suitable mitigation measures aimed at reducing these impacts with specific regard to transport are identified below.

6.2. Air Pollution, Dust and Dirt Control

6.2.1. During works the main air pollution emissions are the dust and the fumes from machinery. The contractors will use high pressure hoses to saturate all bulk materials with water during the process and whilst loading the waste materials for disposal. Machinery exhaust emissions will be kept as low as is practical by using well maintained vehicles and machinery at all times.

6.2.2. The three main potential sources of air pollution emissions during construction works are the use of compressors, generators and portable petrol cut off saws. Any compressors and generators used will be of the latest design available with low emission ratings. All machinery will be switched off when not in use to minimise emissions as well as noise. Any portable petrol cut off saws will be operated with an automatic water applicator. The water application is designed to dampen any arising debris and dust as well as reduce the wear to the blade. Use of cut off saws without water attachments will not be tolerated under any circumstances.

6.2.3. Burning of materials on site will not be permitted in order to prevent smoke emissions.

6.3. Muck Control

6.3.1. Mud and debris on the road are regarded as one of the main environmental nuisances and safety problems arising from construction sites. A wheel washing facility will be provided for the duration of the construction works to ensure levels of mud and debris on roadways near the application site is minimised. The wheel washing facilities will be in the form of a hose down point located adjacent to the construction compound. All vehicle wheels will be cleaned whenever a vehicle leaves the site.

6.3.2. The contractor will ensure that the area around the application site including the public highway is regularly and adequately swept to prevent any accumulation of dust and dirt.

6.4. Noise Control

6.4.1. Noise generated by the construction process will be considered and its impact on neighbouring properties mitigated. Suitable mitigation measures to be used include:

- Standard construction hours;
- The use of quieter alternative methods or mechanical plant, where reasonably practical;
- Locating plant, equipment, site offices, storage areas and worksites away from neighbouring properties where practical;
- Machines and equipment in intermittent use will be shut down or throttled down to a minimum when not in use; and
- Maintaining and operating all vehicles, plant and equipment in an appropriate manner, to ensure that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.

6.5. Fuel Consumption

6.5.1. The appointed Construction Contractor will strive to procure local contractors for the project thereby minimising transport costs and impact on the local environment. The use of the booking system for

deliveries will also help to ensure that the construction site is serviced in an efficient manner which help to minimise the number of vehicle movements that would be generated.

- 6.5.2. A further measure that will be employed is encouraging all delivery vehicles to switch off engines as they are waiting at the site, thereby preventing unnecessarily idling vehicles.

6.6. Waste Management

- 6.6.1. In order to seek to reduce the number of HGV trips that are generated, any limited aggregates generated on site during any works will be re-used wherever practical.
- 6.6.2. All waste materials will be collected and stored in suitable receptacles before they are taken off site. Waste materials will not be allowed to accumulate because of fire/vermin risk. The waste will be separated into recycling types and general waste in designated general waste and refuse and recycling stores.
- 6.6.3. Whenever deliveries are undertaken, banksmen will be used to ensure that materials are transferred into the site as soon as possible to ensure that no dirt or rubbish is left on the public highway.

7. Construction Travel Plan

7.1. Introduction

- 7.1.1. A Travel Plan (TP) is a package of measures aimed at promoting greener, cleaner travel choices and reducing the reliance on the private car. It enables employers to reduce the impact of travel on the environment, whilst also bringing a number of other benefits to the organisation as an employer and to staff.
- 7.1.2. This TP seeks to address activities related to the construction of the application site which includes commuter journeys for construction workers, material supplies and deliveries. By successfully addressing these different types of travel by promoting travel via sustainable modes and sourcing labour and goods locally, the TP objectives can be achieved.

7.2. Trip Generation

- 7.2.1. The Applicant estimates that the application site will require up to 6 staff on site per day. Table 2 below shows the 'Method of Travel to Work' for the workplace population of Warwick 007C Middle Super Output Area (MSOA) in which the application site is located. This has been used to estimate the method by which those 6 construction workers could travel to the application site.

Table 2 – 2011 Census JTW Data (Workplace Population)

Method of Travel	Proportion of Trips	Number of Trips
Motor Vehicle (Driver)	58.7%	6
Motor Vehicle (Passenger)	7.3%	1
Public Transport	10.5%	1
Taxi	0.1%	0
Motorcycle	0.4%	0
Walking	20.3%	2
Cycling	2.4%	0
Other	0.3%	0
Total	100%	10

- 7.2.2. As Table 2 shows, if existing journey to work mode shares of the local area were to be assumed in this instance, it could be anticipated that seven trips to the application site would be undertaken by car (six drivers, one passenger), with one trip undertaken by public transport and two trips on foot. In the worst case, assuming all constructions workers travel by car or van and individually, the maximum additional number of vehicles using Lillington Avenue would be ten vehicles (as assumed in Table 1 as a worst case scenario). However, experience of similar sites has shown that sustainable measures are adopted and many of the anticipated staff trips will be made via car sharing with fellow construction workers.
- 7.2.3. Section 3 has calculated that during the construction phase the development would generate an average of approximately 10 deliveries (10 inbound / 10 outbound movements) per day over the 14-16-week period.

7.3. Sustainable Transport

- 7.3.1. The contractor, where feasible, will seek to recruit construction workers from the local area. This will help maximise the potential for construction workers to travel to the site sustainably.
- 7.3.2. Bus stops are provided to the east of the site access along Kenilworth Road. These stops are served by Service 11 Electric to Leamington Spa and Coventry, Service 18 to Stratford and Leamington, Service U1

and U2 to Warwick Gates and University of Warwick, Service X17 to Coventry and Warwick bus station, and Service X18 to Coventry and Stratford.

- 7.3.3. Stonehouse Railway Station is located 1.7km to the south of the site and provides services to various local stations including Stratford-Upon-Avon and Warwick. Given the distance to the rail station it is likely that rail would provide a suitable mode of transport to the site.
- 7.3.4. There is good potential for construction workers to car share to work, especially given the fact that some sub-contractors are likely to be travelling from the same origin (their workplace) to the same destination (the application site).
- 7.3.5. Car sharing represents a relatively convenient form of travel offering a significant potential to reduce overall private mileage of construction workers and visitors. It is this mode of transport which often forms one of the most convenient methods of sustainable travel for construction workers.
- 7.3.6. The Site Manager will determine construction staff willingness to car share and would promote car-sharing scheme throughout the construction program. The Site Manager would also make construction workers aware of existing car sharing schemes such as <https://liftshare.com/uk>.
- 7.3.7. The construction site will provide facilities in accordance with requirements set out in HSE guidelines. As such the application site will provide a drying room, storage facilities, toilets and offices. This will further encourage people to travel to the application site by sustainable modes whilst having the added benefit of reducing the number of trips made off site during lunch breaks.

7.4. Measures

- 7.4.1. As indicated above there is some potential for construction workers to travel to the Site by sustainable modes such as walking, cycling and public transport. There is also great potential for construction workers to car share to the application site. It is therefore deemed appropriate to promote the local services available as well as following the measures to promote sustainable travel by construction staff.
 - Include local public transport timetables and route maps within the on-site compound for construction staff to review;
 - Providing changing and storage facilities for construction staff; and
 - Promote car sharing.
- 7.4.2. Further to this the following measures are to be promoted to minimise the environmental impacts of HGV trips generated by the development.
 - Initiate a weekly booking system for the delivery of plan and materials to the site;
 - Strive to procure local contractors for the project, thereby minimising transport costs and impact on the local environment;
 - Switch off their engines as they are waiting at the site, thereby preventing unnecessarily idling vehicles;
 - Use agreed vehicle routes and include as a contractual requirement of the Contractor – to be communicated to all individuals associated with the works; and
 - Provision of wheel washing facilities at the application site entrance / egress.
- 7.4.3. The Department for Transport (DfT) have published guidance relating to the efficient use of freight on the network. “Review of Low Carbon Technologies for Heavy Goods Vehicles” (2009) setting out a number of HGV technologies with the potential for reducing carbon emissions. Within this DfT report it assesses a number of vehicle technologies and driver behavioural styles for reducing the environmental impact of HGVs. It is likely that these measures have been incorporated into the vehicle fleet in order to reduce the environmental impact of generated traffic. Such measures include:

Evoke Transport

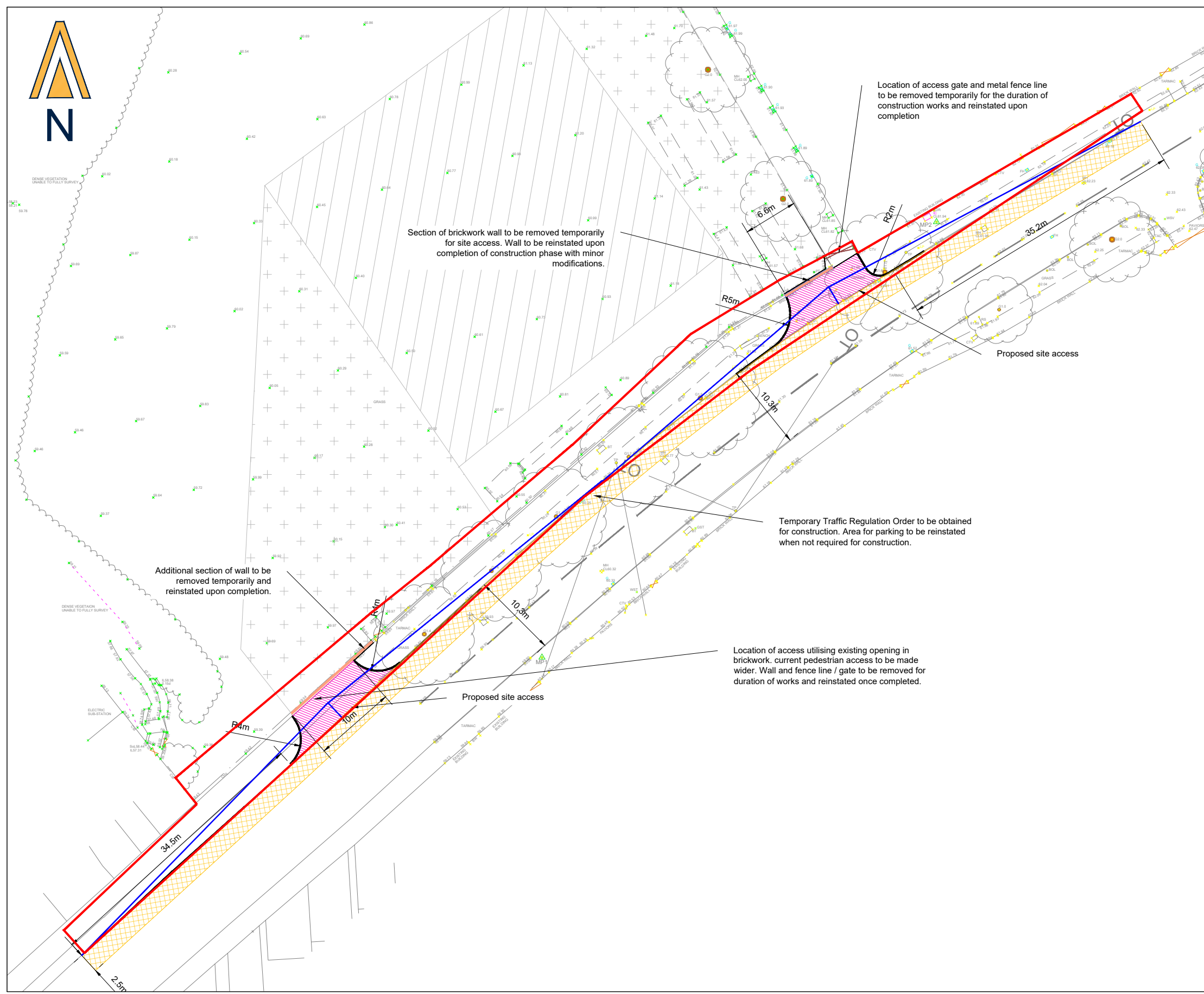
- Aerodynamic improvements to trailers – reduce the aerodynamic drag of the vehicle;
- Spray reduction mud flaps – reduces spray and provides aerodynamic benefits;
- Low rolling resistance tyres – can reduce CO² emissions by up to 5%;
- Automatic tyre pressure adjustment – automatically monitors and adjusts tyre pressures which could provide CO² reductions of around 7-8%;
- Predictive cruise control – improves fuel efficiency of vehicles; and
- SAFED Driver Training Scheme – Aims at improving accident prevention and reduction and improved fuel consumption.

8. Summary and Conclusion

- 8.1.1. Evoke Transport Planning Consultants Ltd (Evoke) has been commissioned by Severn Trent to produce a Construction and Operational Traffic Management Plan (COTMP) to support a planning application for the widening of an existing western vehicular access (permanent) and the creation of a new eastern access (temporary for construction) off Lillington Road, Leamington Spa. The proposed accesses will facilitate the construction and subsequent maintenance of an underground storm tank at Milverton High School playing fields.
- 8.1.2. The construction period is estimated to last for up to four months (14-16 weeks), with deliveries fluctuating within this period. It should be noted that the construction programme and corresponding construction traffic strategy may be subject to change prior to work commencing on site. Any substantial changes in the build program and / or number of vehicular movements will be communicated to the local planning and highway authority in advance of construction.
- 8.1.3. The construction access will be provided via Lillington Avenue, in the position of the existing gated access. The existing entrance will be suitably improved to allow for all HGV movements to and from the Site. A secondary access will be provide to the west at the existing pedestrian access gate, this ensures that vehicles can access the site either side of the proposed underground tank. Swept path analysis has been undertaken of the proposed access points to ensure that a 9.5m Rigid HGV can safely enter and exit the site in forward gear (the swept path analysis is shown at **Appendix A**).
- 8.1.4. Any large deliveries to site (e.g. plant) are proposed to take place from Lillington Avenue. An unloading area will be created immediately south of the site. It is proposed that a TTRO is implemented to prevent parking during the construction period adjacent to the site and to protect visibility splays at the access point.
- 8.1.5. The Applicant estimates that eight to ten staff will be required on site during construction. If all staff travelled individually by car or van, this would equate to a maximum of ten additional car trips (10 inbound / 10 outbound) per day. The Travel Plan section seeks to minimise travel by single occupancy vehicle and promote the opportunity to car share, and therefore this is considered worst case and in practice the number of motor vehicles will be lower.
- 8.1.6. The Site would generate a maximum of 10 HGVs (comprising 10 inbound / 10 outbound movements) per day, with this peak occurring during the excavation period. Outside of this period, HGV movements are expected to be a lot lower. Couple with construction workers a maximum of 20 additional vehicle trips per day (20 inbound / 20 outbound) may be expected. Construction vehicles and construction workers would travel outside of school peak periods, with the former required to use the designated route via the A452 and Lillington Avenue.
- 8.1.7. A series of measures are proposed to manage and mitigate the impacts associated with construction vehicles and construction workers. This includes dedicated HGV vehicle routeing (via Lillington Avenue and Kenilworth Road towards the A46), temporary signage, delivery booking system, travelling where possible outside of school peak hours and encouraging car sharing.
- 8.1.8. To further control the environmental impacts, measures to be employed include covering any materials being brought on or off the site, wheel washing facilities, mitigation measures for noise, employing local contractors and the implementation of a waste management strategy.
- 8.1.9. The scale and volume of vehicle movements associated with the development construction period is therefore not considered to have any significant impacts on the operation of the local highway network, and falls within daily variation of traffic along these routes.

- 8.1.10. Overall, it is considered that the measures and control processes outlined in this COTMP are appropriate to overcome any constraints associated with the application site, and that the proposed application will not have a severe impact on the operation of highway network.

Appendix A – Proposed Construction Access Arrangement



NOTES

1. DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
2. EVOKE TRANSPORT PLANNING CONSULTANTS LIMITED ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THIRD PARTY INFORMATION - THIS MUST BE TREATED AS INDICATIVE ONLY.
3. VISIBILITY SPLAYS ARE BASED ON THE POSTED SPEED LIMIT OF 30MPH ALONG LILLINGTON AVENUE.

KEY

- Proposed Construction Access
- 2.4m x 43m Visibility Splay
- Vehicle Hardstanding
- Proposed Temporary Traffic Regulation Order (TTRO)
- Removal of Existing Brick Wall
- Site Boundary
- Existing Gate

-	Initial Drawing	RH	PK	25.09.23
Rev	Amendment	Drn	App	Date

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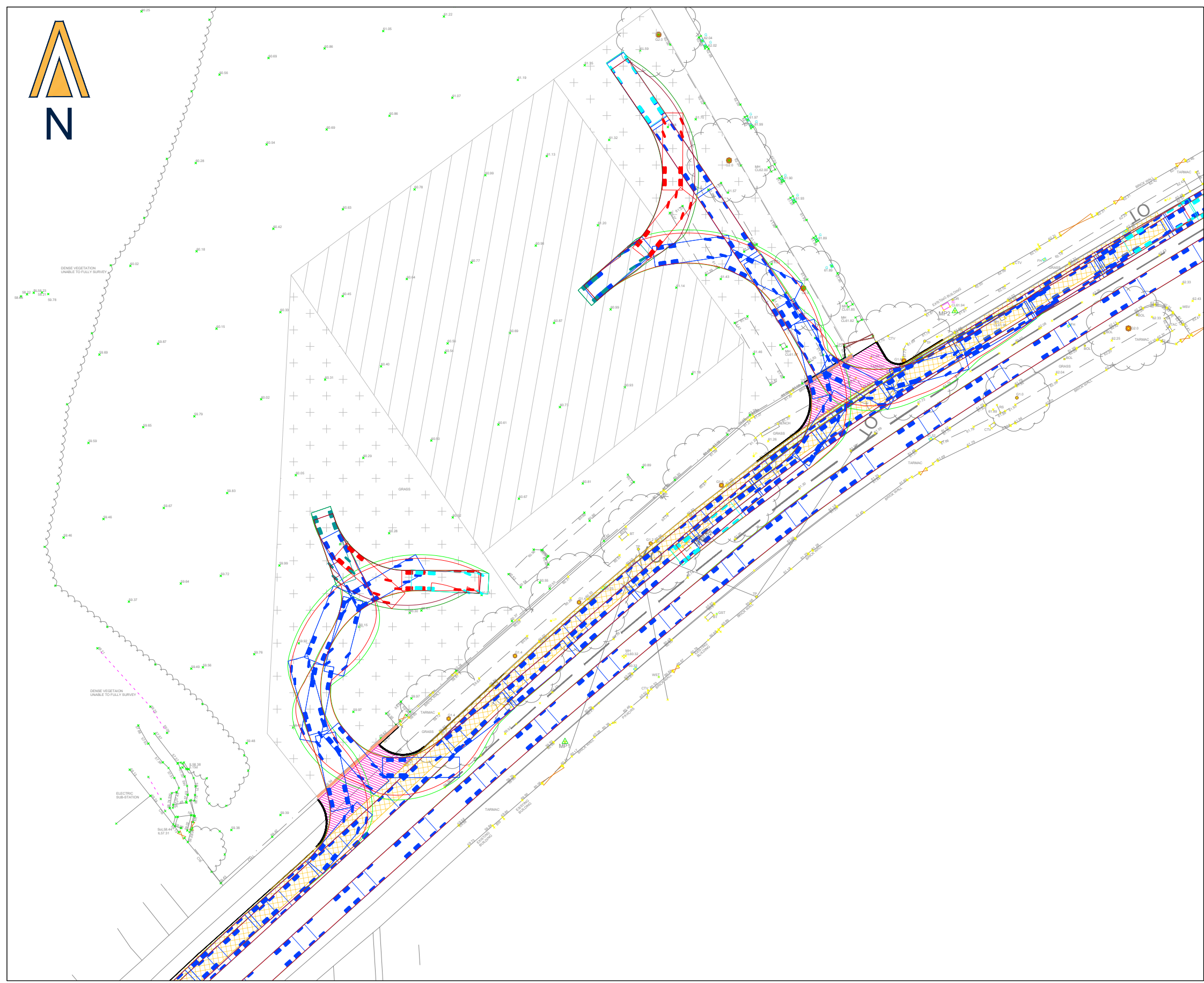
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Scale 1:500 @ A3	Job No B-23-0033	
Drawing No B-23-0033-GA-001	Rev -	



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 W: www.evoketransport.co.uk

Project Name	LILLINGTON AVENUE, LEAMINGTON SPA
Drawing Title	TEMPORARY CONSTRUCTION SITE ACCESS ARRANGEMENT

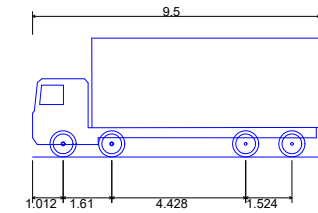
Client	SEVERN TRENT
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VEHICLE PROFILE



9.5 Rigid HGV	
Overall Length	9.500m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.900m

-	Initial Drawing	RH	PK	25.09.23
Rev	Amendment	Drn	App	Date

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Drawing No	Rev	
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Project Name	LILLINGTON AVENUE, LEAMINGTON SPA
Drawing Title	9.5M RIGID HGV SWEPT PATH ANALYSIS

Client	SEVERN TRENT
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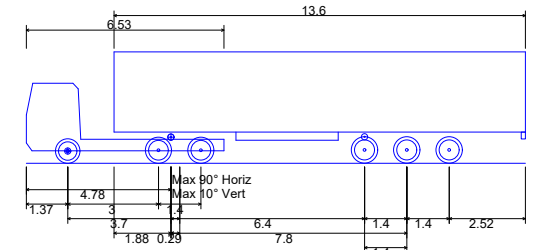
C:\Users\NieveGreene\Evoke Transport\Projects - Documents\Birmingham\B-23-0033 Lillington Spa\Drawings\51 AutoCAD\B-23-0033-SPA-002.dwg



NOTES

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VEHICLE PROFILE



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

-	Initial Drawing	RH	PK	25.09.23
Rev	Amendment	Drn	App	Date

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Drawn by	Approved by	Date
RH	PK	25.09.2023

Scale	Job No
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Drawing No	Rev
B-23-0033-SPA-002	-

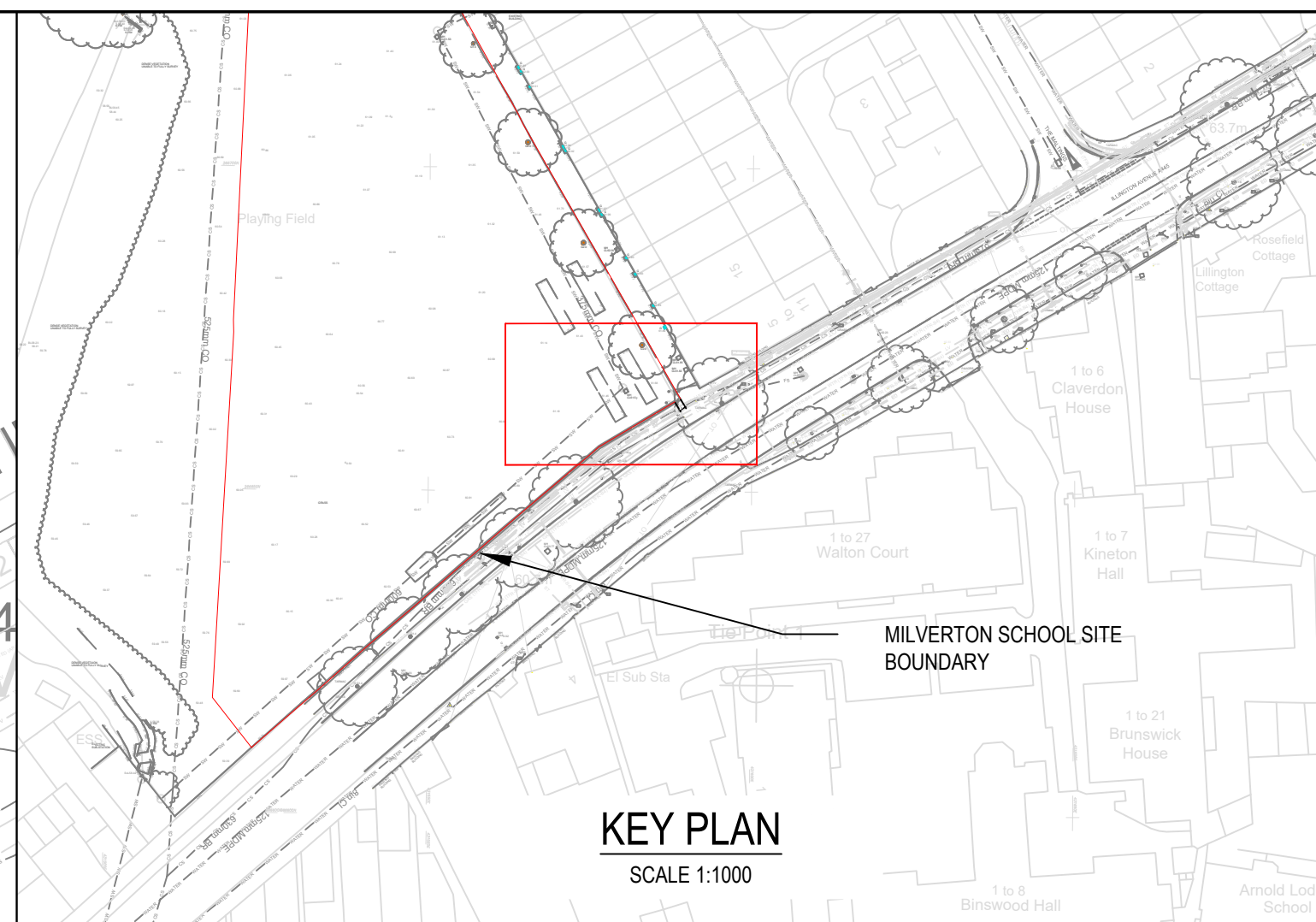
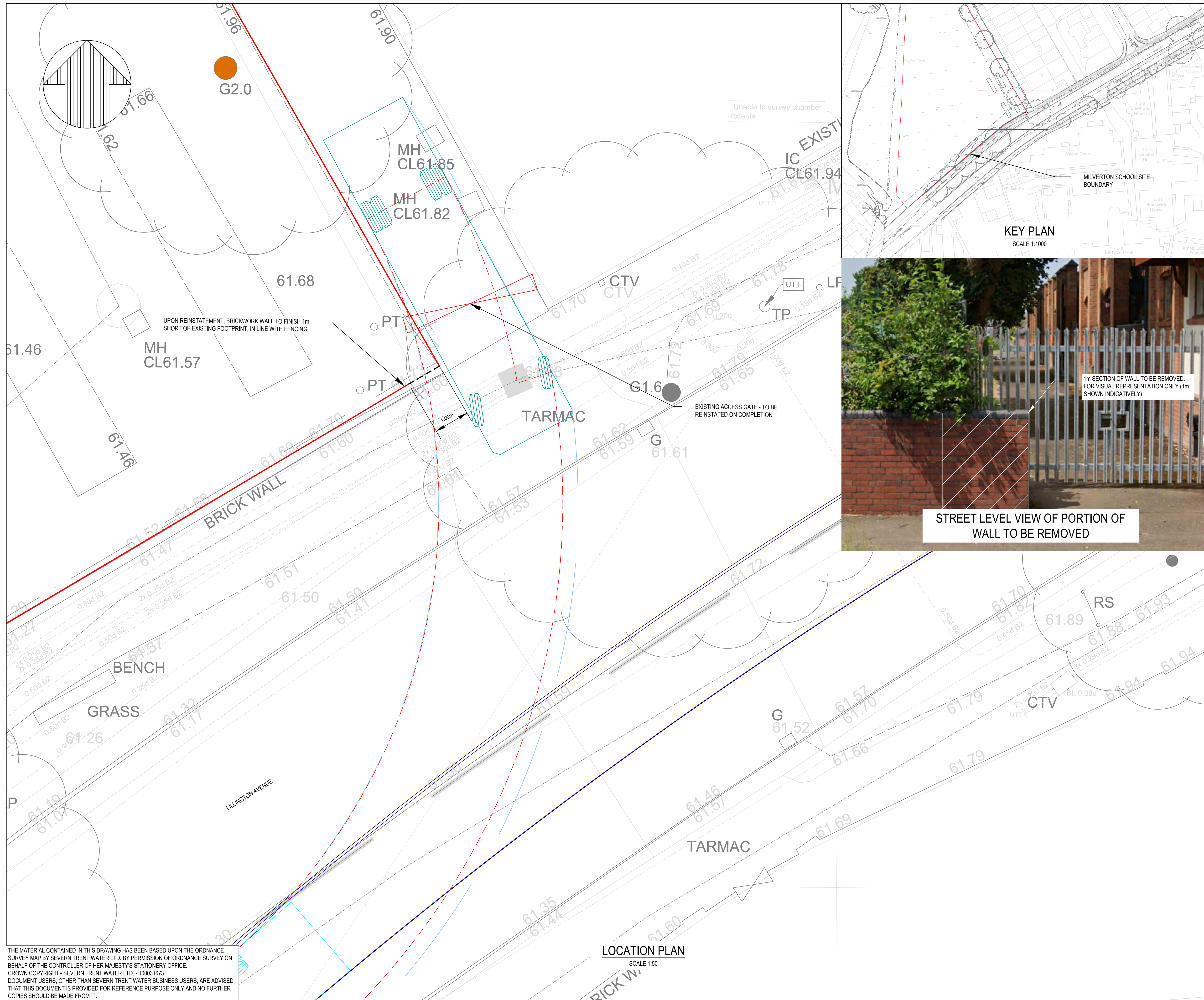


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Project Name	LILLINGTON AVENUE, LEAMINGTON SPA
Drawing Title	16.5M ARTICULATED HGV SWEPT PATH ANALYSIS

Client	SEVERN TRENT
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Appendix B – Proposed Permanent Access Arrangement

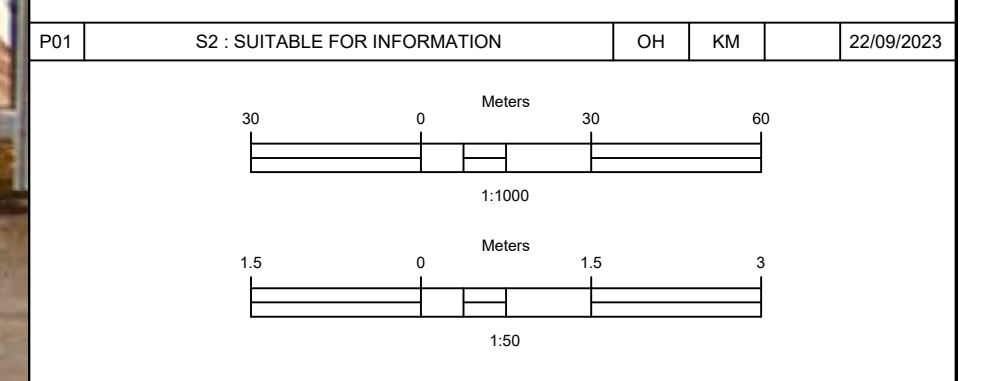


DO NOT SCALE
USE WRITTEN DIMENSIONS ONLY

- NOTES:**
1. ALL RECEIVED UTILITIES ARE SHOWN ON DRAWING. EXACT LOCATIONS SHOULD BE CONFIRMED ON SITE PRIOR TO WORKS COMMENCING.
 2. ALL DIMENSIONS AND LOCATIONS OF DESIGN ELEMENTS ARE TO BE FINALISED DURING DETAILED DESIGN.
 3. STORAGE AT MILVERTON SCHOOL PLAYING FIELDS FINAL DESIGN ARRANGEMENT TBC.
 4. PROPOSED ACCESS TO PLAYING FIELD LOCATED TO AVOID ENVIRONMENTAL (TREE) IMPACT.
 5. RED LINE BOUNDARY AREA (5117m² WORKS AREA) SITUATED TO AVOID CONSTRUCTION VEHICLES TRACKING OVER EXISTING 525mm CO PIPE RUNNING THROUGH PLAYING FIELD.
 6. DESIGN OF PERMANENT ACCESS HAS BEEN BASED ON 4 AXLE RIGID VACUUM TANKER REVERSING IN TO PLAYING FIELD.

LEGEND

--- LENGTH OF WALL TO BE PERMANENTLY REMOVED



Forkers Ltd
Civil & Ground Engineering Contractors

wsp

SEVERN TRENT

PROJECT TITLE
A7S-14574 GREEN RECOVERY LEAMINGTON BATHING WATERS

DRAWING TITLE
MILVERTON HIGH SCHOOL PLANNING PERMISSION PERMANENT ACCESS

DRAWING NO. A7S14574-WSP-SA-ZZ-DR-C-0005	STATUS S2	REVISION P01
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SCALE AS SHOWN	SHEET SIZE A1	QR CODE PLACEMENT
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LOCATION PLAN
SCALE 1:50