1EW02 Enabling Works – Area South

The Dales Local Traffic Management Plan – Carriageway Shed, Park Village East and Granby Terrace Overbridge Satellite Compound.

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The Dales Local Traffic Management Plan – Carriageway Shed, Park Village East and Granby Terrace Overbridge Satellite Compound.

REVISION CHANGES, AUTHORISATION & ISSUE RECORD

Version	Date	Sections revised	Brief description of the revision	Prepared by	Checked by	Approved by	Reason for Issue	HS2 Acceptance Decal Code
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1 INTRODUCTION

1.1 This mini Local Traffic Management Plan (LTMP) sets out how traffic and transport will be managed for the early enabling works at the Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound. The London Borough of Camden (LBC) wide LTMP was previously consulted upon in late 2017 and this document is being updated separately. This mini LTMP will be appended to it.

1.2 The enabling works to be undertaken include the following works packages:

- P038 – demolition and removal of six residential buildings located within the Regents Park Estate comprising Ainsdale, Eskdale, Silverdale, Old Tenants Hall, Stalbridge House and Granby House;
- P039 – demolition and removal of the DB Cargo Shed; and
- P063 – extension to the Granby Terrace overbridge with associated excavations and buried service diversions.

1.3 These enabling works packages will create a single construction compound which will be bounded to the north by the railway line, to the east by Hampstead Road, to the south by adjacent residential blocks that form part of the Regents Park Estate and to the west by Stanhope Street and Park Village East. The construction compound is also known as 'The Dales', is illustrated in **Figure 3.1**.

1.4 The contractor for these HS2 enabling works is Costain / Skanska Joint Venture (CSJV).

1.5 The LTMP ensures compliance with the following documents:

- Code of Construction Practice;
- High Speed Two Phase One: Route-Wide Traffic Management Plan; and
- Local Environmental Management Plans.

1.6 This LTMP is set out as follows:

- Purpose / Scope of the LTMP;
- Operational LGV requirements;
- Proposed programme / working hours;

- Forecast LGV movements;
- LGV routing arrangements;
- Traffic Management Strategy;
- Stakeholder and community engagement; and
- Workforce transport.

2 PURPOSE / SCOPE OF THE LTMP

2.1 Local Traffic Management Plans (LTMPs) are required to be produced prior to commencement of works in accordance with the HS2 Phase 1 Code of Construction Practice (CoCP). The general requirements for LTMP contents in the CoCP are expanded on within the HS2 Phase 1 Route Wide Traffic Management Plan (RTMP). The CoCP and the RTMP set out the indicative contents of LTMPs. The LTMP sets out how the contractor intends to carry out the works covered in the scope of the LTMP and which affect traffic and transport in the immediate vicinity of the enabling works.

2.2 This LTMP is provided to support the HS2 enabling works specifically to create the Construction Compound only. The LBC wide enabling works LTMP, which considers the traffic effect of all of the HS2 enabling works relevant to LBC, has previously been consulted upon and is currently being updated. This mini LTMP will be referenced in that document.

2.3 In accordance with the CoCP, the LTMP is to be produced in consultation with the highway and traffic authorities, the emergency services and other key stakeholders and provide sufficient confidence that CSJV and all of its contractors can:

- Provide a consistent approach to the management of construction activities across local authority boundaries, and with a wide range of key stakeholders;
- Minimise the impacts from construction traffic on the local community (including all local residents and businesses and their customers, visitors to the area, and users of the surrounding transport network);
- Deliver the HS2 Enabling Works at the construction compound, as described in this LTMP, within a defined area of works in a safe and efficient manner;
- Manage its traffic in association with the identified Enabling Works Packages covered by this LTMP;
- Work with London Borough of Camden, Transport for London, other stakeholders and third parties, to appropriately manage the arising traffic impacts of the Enabling Works referred to in this LTMP compliant with the Environmental Statement; and
- Seek to minimise the impacts of the works as far as is practically possible in accordance with the General Principles Document.

2.4 Importantly, the LTMP is a 'live' document which can be updated where required throughout the duration of this project. Feedback from stakeholders will be coordinated by CSJV and their consultants. If any changes to the LTMP are necessary, CSJV will discuss these with key stakeholders, community and user groups prior to issuing an updated LTMP. Additionally, views expressed by key stakeholders, the community, user groups and other parties will be considered prior in producing any updates to the LTMP

2.5 The Scope of the LTMP identifies:

- Highway safety constraints and opportunities for operational logistical movements and workforce travel to / from the construction compound;
- Routing arrangements for Large Goods Vehicles, in line with the Schedule 17 consent under the HS2 Phase 1 Act;
- The controls that will be placed on HS2 construction traffic;
- Workforce travel arrangements to and from work;
- Temporary traffic management / highway measures;
- Measures to protect all road users, particularly vulnerable road users; and
- Access arrangements in accordance with the CoCP and the RTMP.

Consultation to Date

2.6 **Table 2.1** provides a summary of stakeholder and Traffic Liaison Group (TLG) consultation, to date.

Table 2.1 – Summary of stakeholder consultation

Name of Consultee / Stakeholder	Date(s) of Meeting
Camden Traffic Liaison Group	6th June 2018
Camden Community Traffic Working Group	11th June 2018
Camden Officer/TfL Workshop to discuss lorry route options	27th March 2018
	15th May 2018
Regent Park Children's Centre	12th June 2018
Maria Fidelis School	15th June 2018
Netley School	19th June 2018

2.7 Consultation has also taken place with other stakeholder groups, including emergency services, local schools, London and Camden Cycle Campaign and Living Streets.

Code of Construction Practice

2.8 CJSV is contractually bound to comply with the controls set out in the EMRs. The scope of the EMRs encompasses the High Speed 2 Code of Construction Practice (CoCP).

2.9 The CoCP was included within the documents submitted with the HS2 Bill. Chapter 14 of the draft CoCP sets out project-wide requirement for managing traffic and transport related to the construction activities to deliver Phase One of HS2.

Undertakings and Assurances

2.10 The undertakings and assurances register can be found at the following web location: https://www.gov.uk/government/publications/high-speed-rail-london-west-midlands-bill-register-of-undertakings-and-assurances.

2.11 The register records all individual undertakings and assurances given to petitioners and to parliament in a single document. The purpose of the register is to ensure that any nominated undertaker (any person appointed to the construction of HS2), the Secretary of State for Transport or au other organisation exercising powers provided by the Act, complies with them throughout the project lifecycle.

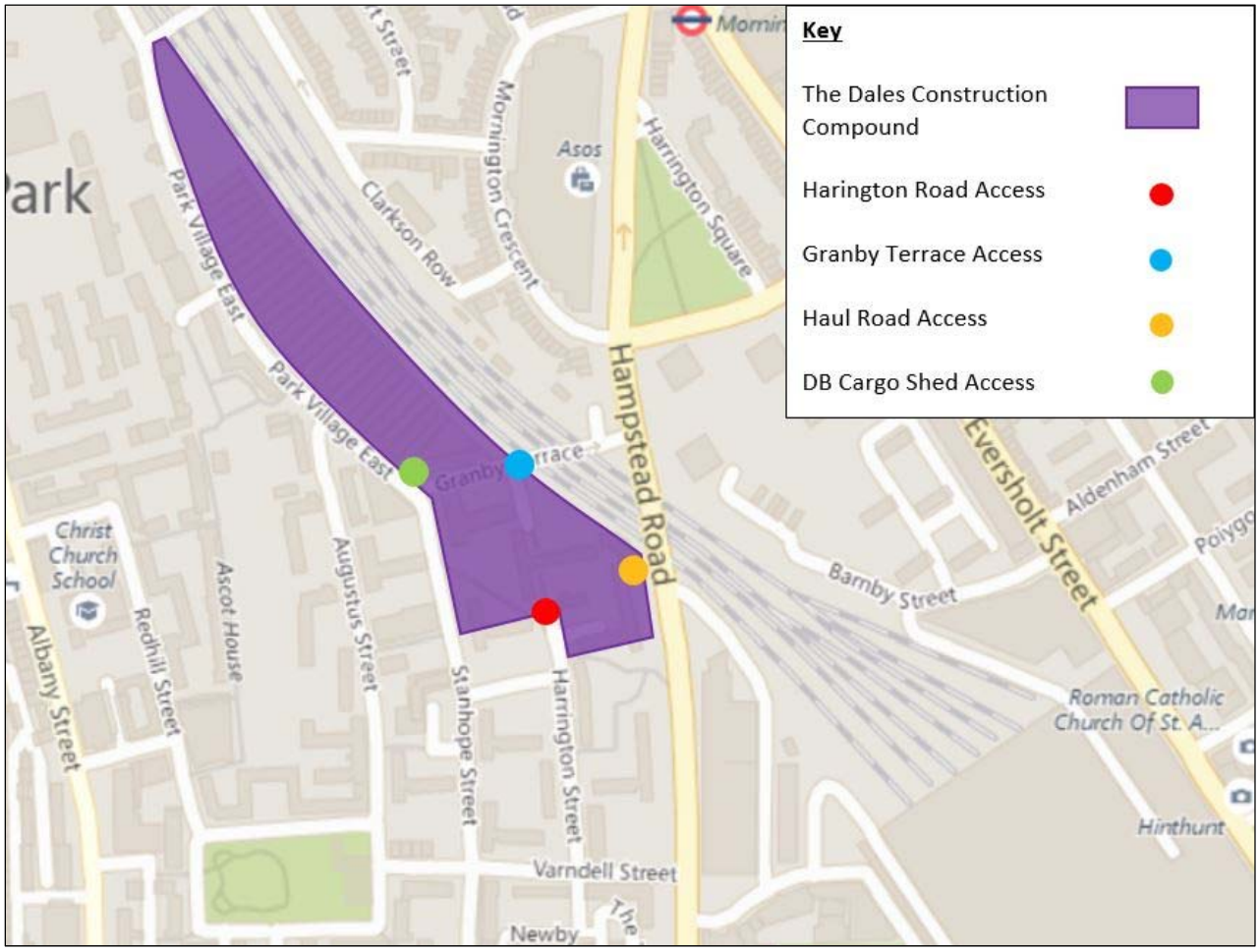
3 THE CONSTRUCTION COMPOUND

Description

3.1 The 'Sector 1' enabling works area is formally known as the 'Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound' and includes the DB Cargo Shed, the Granby Terrace overbridge and six residential buildings located within the Regents Park Estate comprising Ainsdale, Eskdale, Silverdale, Old Tenants Hall, Stalbridge House and Granby House. It is also known as 'The Dales' construction compound.

3.2 **Figure 3.1** illustrates the 'Sector 1' enabling works area that is the subject of this LTMP.

Figure 3.1 – Enabling Works Area



Existing (DB Cargo Shed) Compound Access

3.3 There is currently a compound access located on the Granby Terrace / Park Village East / Stanhope Street junction. This access currently serves the demolition of the DB Cargo Shed

only. Once the Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound has lorry route approval, this access will close and all vehicle movements will be transferred to the future construction compound accesses, as detailed below. Following this there will be no LGV movements associated with the Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound routing along Stanhope Street or Park Village East.

Future Construction Compound Access

3.4 The primary access to the compound will be via the Granby Terrace railway overbridge until it is deemed unusable by the progression of utility works and / or bridge extension works. At this point, all vehicles will then use one of the alternative accesses detailed below. HS2 remain committed to reducing the use of Harrington Street and Varndell Street – utilising Granby Terrace railway overbridge for primary access as long as it is available will assist in this objective.

3.5 The Granby Terrace railway overbridge has a 40T weight limit which will be reduced to circa 35T during the enabling works period due to the siting of barriers and other construction-related equipment on the bridge itself. This may restrict its use by heavier LGVs, which will also have to use one of the alternative accesses detailed below.

3.6 Granby Terrace is also currently a one-way street with vehicles exiting (right and left) on to Hampstead Road. To facilitate LGV access the junction has to accommodate left-turning vehicles (from Hampstead Road to Granby Terrace) and two-way traffic along Granby Terrace.

3.7 Discussions with TfL are progressing well and it is anticipated that a temporary traffic signal arrangement will be provided at the Hampstead Road / Granby Terrace junction in October 2018, which will allow Granby Terrace to be used up until the works to the overbridge itself. The temporary traffic signal-controlled junction will continue to include a pedestrian phase to allow for the safe crossing of pedestrians across Granby Terrace and Hampstead Road and the junction layout is included. The junction layout is included at **Appendix A**.

3.8 An alternative access will be located at the northern end of Harrington Street, which will be accessed via Harrington Street and Varndell Street. This route would be used as a back-up

route up until the Granby Terrace overbridge works commence, whereupon it will revert to being the primary access route to/from the compound.

3.9 Additionally, a dedicated haul route to serve the compound is being considered, which will remove the need for LGV movements on Harrington Street and Varndell Street after its construction. Investigations continue about such a haul route and at present it is believed that construction would not be possible before June 2019 due to the programme of demolitions necessary to allow for a connection to Hampstead Road. Moreover, it is not yet known what form the junction could take or its exact location and in addition, there are a number of obstacles to overcome before a haul route could be introduced. These include, but are not limited to:

- Agreeing a suitable junction layout and undertaking suitable junction capacity analysis with TfL;
- Potentially amending the bus lane Traffic Regulation Order;
- Potentially relocating the northbound and southbound bus stops;
- Protection and/or diversion of buried utilities; and
- Traffic management and protection for pedestrians and cyclists.

3.10 However, CSJV will continue to work with TfL, utility providers and stakeholders to investigate the possible ways in which a haul road and associated highway infrastructure can be constructed for use in the later part of the enabling works.

Alternative Construction Compound Access

3.11 Any additional points of access needed to access the construction compound will be made under Schedule 4 of the High Speed Rail (London – West Midlands) Act 2017, and this document will be updated periodically to reflect such changes.

4 LGV ROUTING ARRANGEMENTS

4.1 The origin for LGV movements is the waste disposal site Westminster Waste Ltd, Maybank Wharf, Herringham Road, London, SE7 8NJ. This work site will be accessed via the Transport for London Road Network (TLRN) and the LGV routing agreements were developed to achieve the quickest practical route between the Construction Compound and the TLRN.

4.2 Alternative disposal sites are still being sought and if a suitable alternative is found, this document will be updated accordingly. The s17 lorry routes will not require amending as the local routes between the site and the TLRN will not change.

LGV Routes to the Construction Compound

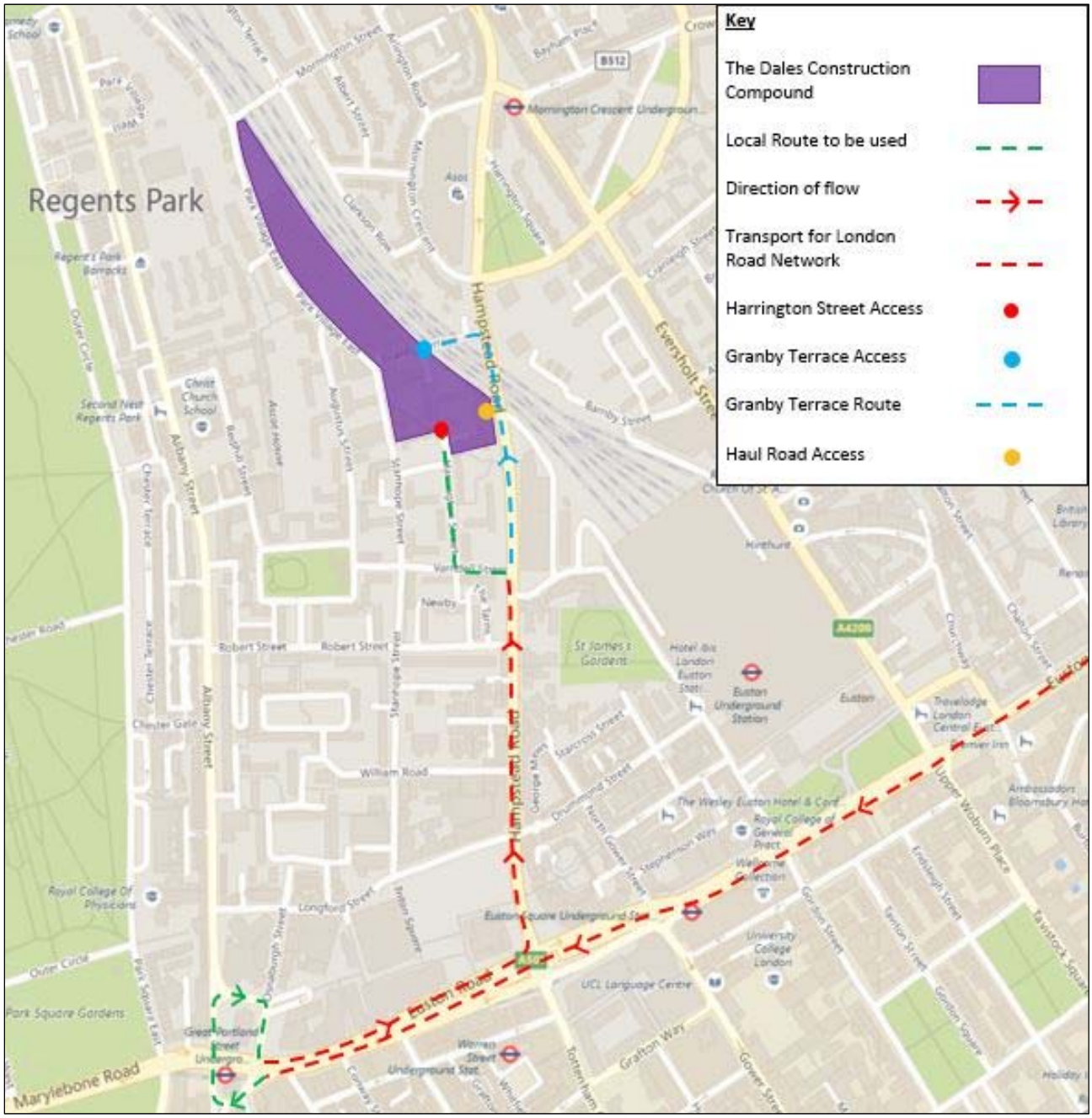
4.3 Following consultation, the LBC access route to the site is illustrated in **Figure 4.1**.

4.4 The LGV access route to the construction compound will be via the TLRN Euston Road (A501), the Great Portland Street gyratory, Albany Street, the Osnaburgh Terrace Loop, Euston Road (E), Hampstead Road (N). This route has been chosen to avoid the Gower Street, Grafton Way Gyratory, West End Project construction and associated emergency services relating to University College London Hospital. Furthermore, LGV movements on the access and egress routes have been carefully considered against the traffic effect of the agreed LGV routes associated with the EW Sector 1 works adjacent to Euston Station, and the combined effect is not considered to be significant or detrimental to highway safety and are within the movement parameters as presented in the ES.

4.5 The LGV route from Hampstead Road will then depend upon the chosen compound access:

- Granby Terrace – LGVs will turn left onto Granby Terrace following the introduction of temporary traffic signals and enabling two-way movement on Granby Terrace itself;
- Varndell Street & Harrington Street – LGVs will turn left onto Varndell Street from Hampstead Road and then right onto Harrington Street; and
- Haul Road – LGVs will turn left onto the haul road directly from Hampstead Road. The exact form of junction has yet to be tested and agreed with TfL.

Figure 4.1 – LGV route to the enabling works area

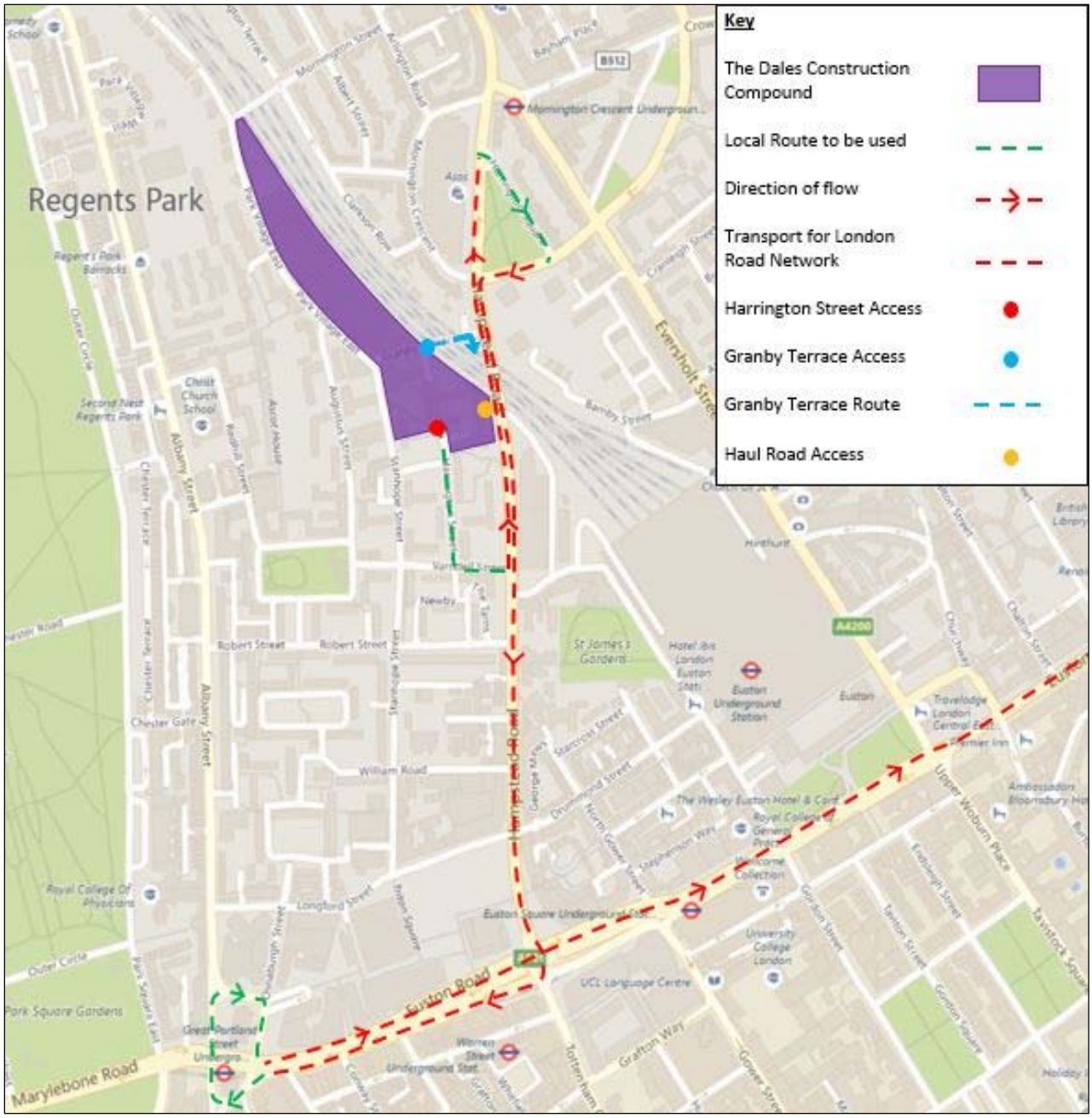


4.6 **Figure 4.1** illustrates LGV left turn movements from Hampstead Road on to either Granby Terrace, Varndell Street / Harrington Street or the haul road. Please note the location of the haul road is not currently agreed with TfL and is shown for illustration purposes only.

LGV route from the site

4.7 The LBC egress route from the site to Westminster Waste is illustrated in **Figure 4.2**. Please note the location of the haul road is not currently agreed with TfL and is shown for illustration purposes only.

Figure 4.2 – LGV route from the enabling works area



4.8 The LGV egress route will depend upon which compound access each LGV leaves by:

- Granby Terrace – LGVs will turn right on to Hampstead Road (southbound);
- Haul Road – the form of junction is yet to be agreed with TfL, however LGVs may either turn right on to Hampstead road (southbound), or will turn left on to Hampstead Road (northbound), circulate around the Harrington Square loop and turn back on to Hampstead Road (southbound); or
- Varndell Street and Harrington Street – LGVs will turn left out of Varndell Street on to Hampstead Road (northbound), circulate around the Harrington Square loop and turn back on to Hampstead Road (southbound).

4.9 From Hampstead Road LGVs will turn right on to Euston Road (W), Great Portland Street gyratory, Albany Street, the Osnaburgh Terrace loop, Euston Road (E), Westminster Waste.

4.10 The current LGV route (from the DB Cargo Shed compound) utilises Stanhope Street and Park Village East and directly passes two schools. The Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound LGV route will utilise Varndell Street and Granby Terrace (eastbound) and as such, will no longer directly pass these schools.

Route Considerations

4.11 The possibility of a right turn from Varndell Street to Hampstead Road (south) was carefully considered, especially as such a turn would avoid looping LGV traffic around the Harrington Square loop. However, the right-turn out of Varndell Street is currently prohibited by a kerbed central island, which forms part of the signal-controlled Cardington Street junction. Amending or adding a signalised junction would require detailed junction modelling and design to allow for integration with other nearby signalised junctions and crossings. Discussions with TfL estimate this process to be 10-18 months which is beyond the timeframe of the enabling works.

4.12 In any event, there is no guarantee that this would provide LGVs with the opportunity to safely turn right out of Varndell Street and the relatively small number of vehicles wishing to make this manoeuvre does not justify a complete junction modification and removal of pedestrian and cycle infrastructure. Furthermore, the lead time for junction modelling and signal design agreement, programming and implementation would be protracted and would not fit with the

current CSJV works programme for demolitions and bridge works. As such, construction traffic is routed around the Harrington Square loop for egress movements utilising Harrington Street and Varndell Street.

4.13 In addition, there is a no left turn from Hampstead Road (S) to Euston Road (E) and therefore construction traffic is routed around the Osnaburgh Terrace Loop. The option to reinstate the left turn would require fundamental changes to the junction layout and signal staging. Reintroducing the left turn would remove pedestrian crossing facilities on the north eastern arm of the junction. Mitigating this impact to pedestrians would have significant impacts on Euston Road (reducing green time to traffic). Further to this, reintroducing the left turn would create a significant conflict between left turning vehicles and southbound cyclists.

4.14 As mentioned in 4.12, Harrington Square will only accommodate LGV egress movements from those exiting the Varndell Street access, but also from a potential haul route if a left in – left out junction is sought. LGVs exiting the Granby Terrace access, or the haul road if a right turn out is provided, will not use this loop as they will turn right out of the respective accesses and travel southbound along Hampstead Road. As such, it is likely that very few LGVs will end up using this loop, however as a worst-case if all LGVs egressed from Varndell Street then there would be a daily quantum of 20 LGV movements and a peak of 35 LGV movements. Moreover, this is likely to mean an average of 2 LGV movements and a peak average of 4 LGV movements per hour, based on a 10-hour working day. This equates to a minor change in hourly traffic flow on this part of the highway network that would be undetectable to other road users and would not affect pedestrian ability to cross the highway. The peak vehicle movements coincide with the ground lowering to Granby Terrace bridge which is anticipated to take place in March 2019.

4.15 The Camden-wide enabling works LTMP will include the content of this mini-LTMP and will provide further details of TLG discussions pertaining to the coordination of HS2 traffic associated with the other enabling works compounds and utility works so as to minimise the traffic effect on other road users.

5 PROPOSED PROGRAMME & WORKING HOURS

5.1 The programme for the proposed Enabling Works is between September 2018 and February 2020. Working hours will be 08:00 - 18:00 Monday to Friday and 08:00 -13:00 on Saturdays and start up and close down periods in accordance with the CoCP.

5.2 There will be a site establishment and traffic management implementation period prior to the enabling works beginning which will include plant mobilisation and site preparation. This will take approximately one month and is earmarked to begin at the start of October 2018. However, please note that this date is linked to the vacant possession of the residential blocks to be demolished and may be subject to change.

5.3 Following the completion of the enabling works construction period there will also be a month period, earmarked for January 2020, when site operations are disbanded and site plant is removed.

5.4 These dates are subject to change and this LTMP, as a live document, will be periodically updated as and when revised dates may become available.

Specific Considerations

5.5 The HS2 (phase 1) CoCP states that the nominated undertaker will ensure public access is maintained, where reasonably practicable. To that end, the traffic barriers located on Varndell Street will be raised during out of working hours to maintain public access. Public access to Harrington Street will be maintained at all times.

5.6 Additionally, the CoCP also commits to minimising LGV movements adjacent to schools during drop off and pick up periods. The LBC undertaking & assurance (ref 1239) states that *'a list of roads which may be used by construction traffic in the vicinity of the site including any restrictions to construction traffic on these routes, such as the avoidance of large goods vehicles operating adjacent to schools during drop off and pick-up periods and any commitments set out in the register of Undertakings and Assurances'*. The nearest school to the proposed LGV route / satellite compound is Netley Primary School, located on Stanhope Street. The LGV route for the Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound will no longer use Stanhope Street. The LGV route will now use Varndell Street and Granby Terrace (eastbound) via Hampstead Road. LGV movements are therefore not expected to affect the drop off and pick up arrangements for the school,

which are generally contained to Stanhope Street. As such it is not proposed to reduce the quantum of LGV movements during the drop off and pick up periods and the school has been consulted on this basis. However, ongoing consultation with the school will be maintained throughout the enabling works period and LGV movements reviewed accordingly.

6 FORECAST LGV MOVEMENTS

6.1 The forecast LGV traffic movements are associated with all Enabling Works activities at the Carriageway Shed, Park Village East and Granby Terrace overbridge satellite compound. These activities are detailed in Section 1, but include demolition, site clearance, excavation, ground investigations, utility works / diversions and bridge extension. The LGV movements associated with all of these enabling works are as follows:

- Over the duration of the Enabling Works it is envisaged that the average number of LGV's per day will be 20 (40 combined in & out movements), based on a 10-hour working day (rounded up). On average, this equates to approximately four LGV movements per hour throughout the working day, including the peak hours;
- During the busiest times of activity, it is envisaged that the average number of LGV's per day will be 35 (70 combined in & out movements), based on a 10-hour working day (rounded up). On average, this equates to approximately seven LGV movements per hour throughout the working day, including the peak hours; and
- The level of peak LGV activity is expected to occur over a period of between 1-3 months and coincide with the ground lowering to Granby Terrace Bridge which is planned to take place approximately five months after vacant possession.

Reuse of Materials

6.2 The number of LGV movements associated with this part of the HS2 Enabling Works has been reduced through efficiency measures and the reuse of materials on site.

6.3 For perspective, if this worksite was to be operated as three separate worksites instead (i.e. relating to works for DB Cargo Shed, Granby Terrace Bridge and The Dales demolitions) then each could operate up to the 24 LGV movement per day threshold without requiring lorry route approval. In such an instance, the combined total of movements would be 72, whereas the maximum forecasted movements with a combined worksite is 70 for a limited period of time.

6.4 A concrete crusher will be located on-site which will enable the concrete of the buildings undergoing demolition to be re-used as backfill.

6.5 The forecast of material reuse is circa 24,500 T which equates to around 2,722 less LGV movements.

6.6 The actual material reuse will be calculated throughout the enabling works and reported back to HS2.

Assessed LGV Movements

6.7 The range of peak LGV movements for the Granby Terrace Satellite Compound as set out in the Parliamentary Select Committee exhibits was between 260-280 movements per day. The forecast enabling works LGVs for typical and peak daily movements are 40 (typical) and 70 (peak), which is significantly less than that considered in the ES and presented to the Parliamentary Select Committee.

Abnormal LGV's

6.8 Any abnormal LGV loads will be undertaken in line with the parameters and notice periods for key stakeholders (LBC, TfL and emergency services) as set out in *Table 4.4* of the *'High Speed Two Phase One: Route-Wide Traffic Management Plan'*.

7 TRAFFIC MANAGEMENT STRATEGY

Proposed Highway Mitigation

7.1 In order to ensure that the highway safety is commensurate with the agreed LGV routes, a number of mitigation measures are proposed. Mitigation will require a combination of road closures, traffic management, parking spaces suspension and ongoing consultation with the statutory consultees and emergency services and may require ongoing amendments should unforeseen issues arise. Regular TLG consultation will continue throughout the enabling works. furthermore, monitoring of all traffic management within the area will also be undertaken throughout the enabling works and will be regularly reviewed in consultation with stakeholders, emergency services and the wider community. Any required amendments and updates to the mitigation strategy will be consulted upon and this LTMP updated accordingly.

7.2 This section also provides details of how this LTMP will coordinate with other HS2 activities that involve vehicle movements on Hampstead Road and other key traffic corridors.

7.3 The proposed traffic management measures are illustrated in **Appendix B**.

7.4 Should additional traffic management be required for as part of the haul road then stakeholders will be consulted and any additional works included in a future version of this document.

7.5 The overall safety elements of the scheme will include:

- Pedestrian segregation barrier and pedestrian diversions required at Hampstead Road / Varndell Street junction and along Varndell Street;
- Pedestrian barriers the length of Harrington Street and Varndell Street with specific gaps to permit pedestrian to cross;
- Temporary drop ramps;
- Strong wall barriers;
- Raise / lower barrier control to slow traffic at Varndell Street and the site access with Traffic Marshals to operate them from a safe location to be agreed with the London Borough of Camden;
- Safety bollards at the corner of Varndell Street / Harrington Street;

- Drivers of HS2 construction vehicles and LGV's will benefit from Safe Urban Driving training in accordance with the training requirements in the RTMP; and
- Highway conditions on Harrington Street and Varndell Street will be monitored with road dilapidation surveys to ensure that any reasonable liabilities for repair are considered at the end of the works. To note, Harrington Street will remain open to all traffic throughout the enabling works timetable.

7.6 The movement of LGVs in to and out of Varndell Street will be managed by traffic marshals and the raise/lower barrier operators so that no two opposing LGVs travel through the Varndell Street Hampstead Road junction at the same time. Outbound vehicles will be held at the barriers if an inbound vehicle is seen to be turning. Similarly, LGV drivers will be instructed so that if on approach to the Varndell Street junction (inbound) they observe an outbound LGV waiting to turn left, they will slow and allow the outbound vehicle to make a left turn manoeuvre and exit Varndell Street, prior to them making a left turn manoeuvre in to Varndell Street. The barrier operator will not allow more than one outbound LGV to queue at the Varndell Street / Hampstead Road junction so that inbound LGVs do not cause unnecessary delay to northbound Hampstead Road traffic.

7.7 CSJV will review TfL's designer toolkit for Healthy Streets and endeavour to adopt these principles to Varndell Street, Harrington Street as may be appropriate.

7.8 This LTMP will be revised as safety matters progress and stakeholders will continue to be engaged during and the public consulted through this ongoing process.

7.9 Varndell Street and Harrington Street benefit from an existing 20 mph speed limit, which is reinforced by speed-hump traffic calming features. Regular HS2 LGV drivers will be briefed to take extra care when driving over the speed humps to seek to minimise additional vehicle noise.

7.10 Lower speed limits for LGV drivers has been considered but ultimately discounted as it is considered that LGVs are highly unlikely to be able to travel at even 20 mph due to the barriers on Varndell Street and traffic calming features on Harrington Street, which could damage vehicles if driven over at speed. LGV operators are professional drivers and will drive within the legal speed limits and at an appropriate speed for the surroundings and highway conditions.

7.11 Pedestrian barriers are provided on Hampstead Road to ensure pedestrians are ushered onto Varndell Street and are directed to cross at a safe point. LGV movement restrictions were considered during school drop off and pick up times, however this was not considered necessary for the following reasons:

- LGVs will no longer route along Stanhope Street or Park Village East, i.e. directly past the school entrances;
- Existing traffic signal-controlled pedestrian crossing facilities are located on Hampstead Road, which will not change during the enabling works;
- Pedestrian barriers are located along Varndell Street and Harrington Street to prevent pedestrians from crossing at unspecified points; and
- Safe crossing points are included at appropriate locations on the pedestrian desire lines.

Route Requirements / Traffic Management

7.12 Specific traffic management requirements to facilitate the proposed works are summarised as follows:

- Temporary closure of part of Varndell Street between Hampstead Road and Harrington Street to general traffic although emergency vehicle access will be maintained. This will be controlled by two raise / lower barriers on Varndell Street which will be attended by marshals to manage vehicles movements in / out during operational hours. The barriers will be raised outside of operational hours (see Chapter 4) and Varndell Street will be open to general public vehicles;
- To safely allow for construction vehicle access to the Construction Compound, access to Varndell Street from/to Hampstead Road will be available for HS2 vehicles, emergency services and refuse vehicles only;
- Temporary Suspension of 32 parking spaces and installation of double yellow lines on Harrington Street and Varndell Street so that parked cars do not prevent two-way working at all times. The removal of the street furniture will be included within a Schedule 4 submission and as set out in the HS2 Phase 1 RTMP;

- Pedestrian segregation barriers and minor pedestrian diversions will be required at Hampstead Rd / Varndell Street junctions; and
- Pedestrian barriers will be used along the entire length of Harrington Street with specific crossing points and safety bollards will be used at the corner of Varndell Street / Harrington Street and other key desire lines.

7.13 Diversion routes for traffic that cannot use Varndell street will be shown on specific diversion plans which will need to take into account all Thames water / Utilities and UKPN works.

Pedestrian Barriers

7.14 It is necessary to introduce pedestrian barriers along the entire length of Harrington Street and Varndell Street, between Harrington Street and Hampstead Road, to prevent pedestrians from crossing anywhere other than the predetermined safe crossing points.

7.15 The crossing points are, for the most part, located on the pedestrian desire lines at junctions and adjacent to existing pedestrian routes between Harrington Road and Hampstead Road. Although barriers are provided, crossing points are located on all of the key desire lines and the quantum of LGV movements is not so high as to be problematic for pedestrians to cross the highway. Therefore, pedestrian severance is not anticipated to be an issue.

7.16 There is one pedestrian crossing point that will necessitate a small diversion for pedestrians, and that is for those walking north / south along the western side of Hampstead Road. To protect pedestrians from turning LGVs, this crossing point is located some 25 m west of the natural crossing point across the face of the junction. This will mean that pedestrians will have to walk an additional 50 m in their journey but will ensure their safety.

7.17 The (unmanned) crossing points provide gaps in the barriers and are supplemented with appropriate 'Pedestrians Take Extra Care' signage.

7.18 Useable footway width will be maximised on Varndell Street and Harrington Street, however this is largely dependent upon the existing pedestrian infrastructure and the space required by the pedestrian barriers. However, there is a commitment that no part of the useable footways bounded by pedestrian barriers will be less than 1.2 m wide, which is sufficient for an adult to walk with a child side by side.

7.19 The pedestrian barriers and crossing facilities are illustrated in **Appendix B.**

Road Safety Audits

7.20 Road Safety Audits will be undertaken for the traffic management scheme as well as the Granby Terrace / Hampstead Road temporary traffic signals arrangement. Any issues raised by the audit team will be addressed by CSJV and highway authorities will be consulted on any required amendments. Any changes will be reported in a future update at the Camden TLG.

Works Coordination

7.21 In relation to the Regents Park works, CSJV is working closely with Thames Water and SCS to ensure all works are carefully co-ordinated in the Regents Park area. Regular updates will also be given to the monthly HS2 Camden Traffic Liaison Group meetings. CSJV are producing a document which highlights all closures whether full or part in the whole area by all contractors. This will be a month by month presentation to be shown at the TLG.

7.22 Focused co-ordination meetings are currently being implemented between all emerging and proposed HS2 works, including those of the Enabling Works Contract, Thames Water and UK Power Networks. Representatives from London Borough of Camden and TfL will be invited to all such co-ordination meetings. These will raise comprehensive awareness, co-ordination and mitigation strategies as to the specific and cumulative effects that the presence of HS2 works may have within Regents Park Estate. These co-ordination meetings will give clarity and resolution on the essential functions that must be permitted within Regents Park Estate, such as for emergency services access, refuse collection, pedestrian, cyclist and vehicular permeability, with particular reference to vulnerable pedestrians and road users. The proposals agreed following these co-ordination meetings will be incorporated into the Camden-wide LTMP. It is understood that there may be a requirement to temporarily close all or part of Robert Street, which as the next street to the south of Varndell Street is the most likely alternative route for vehicles travelling to / from Hampstead Road whilst the enabling works and the Varndell Street closure is in operation. It is highly likely that in the event of this occurrence that vehicles travelling southbound or eastbound would route south along Stanhope Street and then connect with Hampstead Road via Drummond Street. Additional safety provisions around the Netley Primary School may be required during this time, however this will be coordinated with Thames Water, the school and LBC. Any vehicles travelling

northbound are likely to route along Park Village East and cross the Mornington Street railway over-bridge. There are no other known / planned highway closures that could affect the enabling works.

7.23 It is likely that during the enabling works timeframe there will be a need for unplanned highway interventions by other key stakeholders such as the strategic and local highway authorities and utilities companies. This cannot be avoided and may range from simple traffic management, to closed streets and necessary diversions. If the unplanned highway interventions require diversions for a significant period of time then CSJV will consult with highway authorities to consider options.

Site Access Process

7.24 The CSJV control mechanism to control vehicles entering and exiting the construction compound, as well as Varndell Street and Harrington Street, is shown in detail in the flow charts presented in **Figures 7.1** & **7.2**.

Figure 7.1 – Control mechanism for vehicles accessing the enabling works area

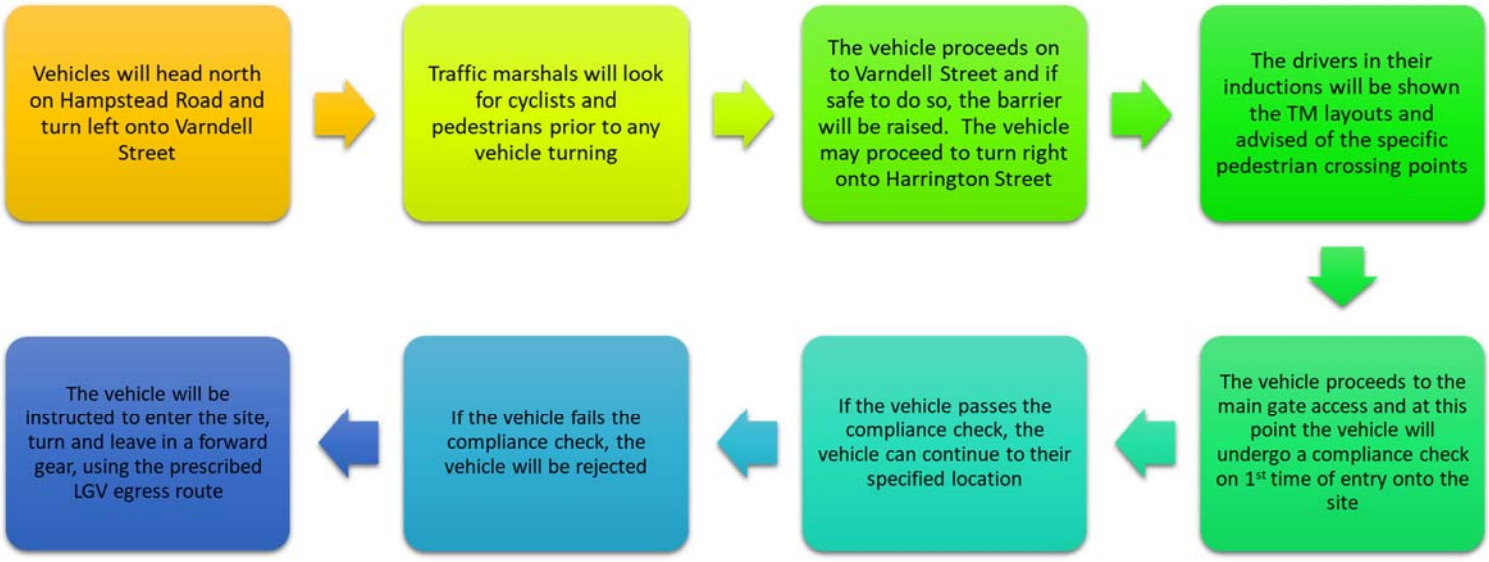
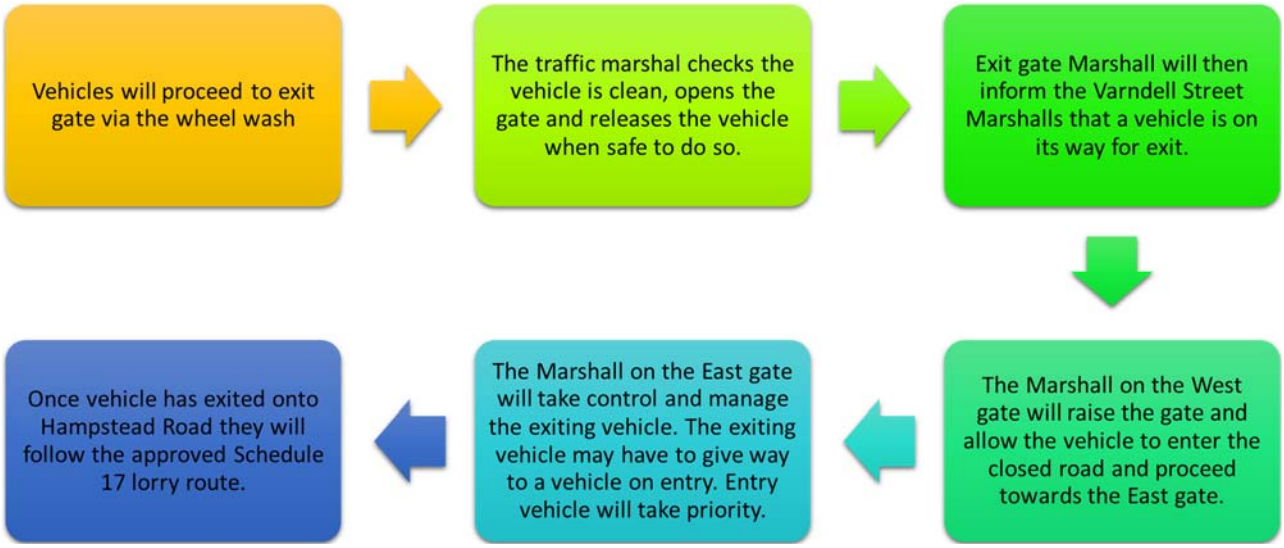


Figure 7.2 – Control mechanism for vehicles egressing the enabling works area



Parking Space Suspensions

7.25 CSJV have identified that 32 parking spaces will be required to permit the safe and efficient operation of the proposed lorry route serving the satellite compound in Regent's Park Estate.

7.26 A total of eight parking spaces are required at the northern end of Harrington Street, from the Vacant Possession date (currently expected to be Friday 21st September 2018), for the duration of the works (approximately February 2020). The parking spaces are required to permit establishment of site hoarding and utilities works.

7.27 The remaining 18 parking spaces identified along Harrington Street and the six on Varndell Street will only be required from approximately 6-8 weeks after the Vacant Possession date (around November 2018), and not until the Schedule 17 submission has been granted approval by London Borough of Camden. The parking spaces will be required to facilitate safe two-way traffic along Harrington Street and Varndell Street and will remain in place until the enabling works are completed.

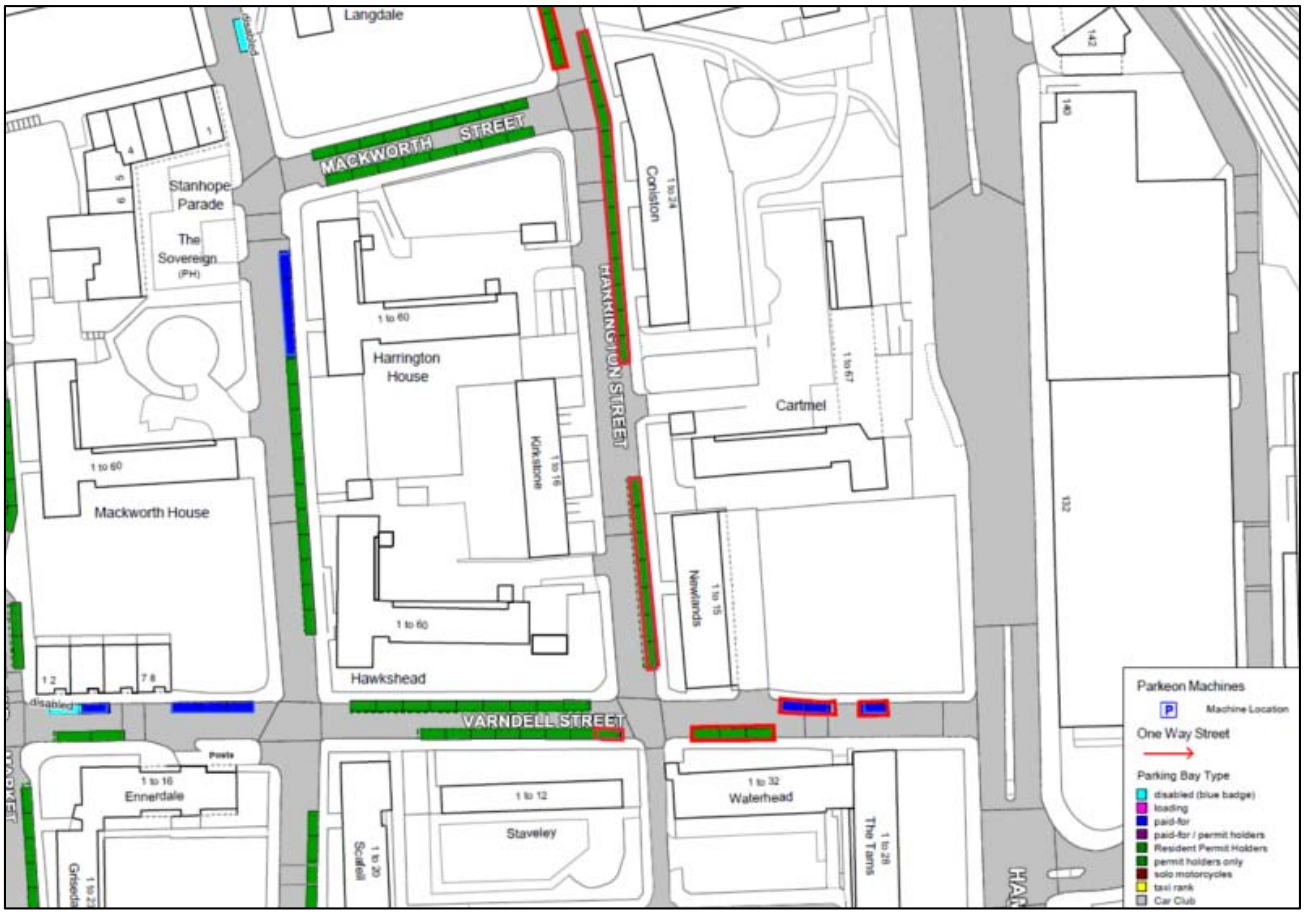
7.28 Discussions have been ongoing with London Borough of Camden as to parking space requirements. These include efforts to support point 6.4.178 (Volume 5 Appendix – Transport Assessment – TR-001-000 – London Assessment (CFA1) "*(I)n order to mitigate against parking suspensions, bays will, where possible, be re-provided to make up for any shortfall in availability that may arise from the parking suspensions*."

7.29 Site visits have taken place with LBC representatives to identify opportunities for replacement parking and these discussions are continuing. CSJV will continue to work with

LBC to explore ways to temporarily replace the 32 suspended parking spaces elsewhere within the Controlled Parking Zone (CPZ), for the duration of the enabling works. Particular attention will be paid to replacing disabled spaces and other priority spaces as set out in the RTMP.

7.30 It is not anticipated that the suspension of the 32 parking spaces, and any temporary replacement spaces, will continue to be needed beyond the anticipated enabling works timeframe for the construction compound.

Figure 7.3 – Proposed Parking Spaces Suspensions



LGV Holding Areas

7.31 LGV holding areas, both on the local highway network and the TLRN, are not required and all scheduled LGV arrivals can be accommodated within the compound.

8 STAKEHOLDER AND COMMUNITY ENGAGEMENT

8.1 Throughout the construction programme CSJV will reasonably continue to engage with key stakeholders and the community (as necessary and relevant), and review the LTMP to ensure highway safety, relevant to the works in this LTMP, is maintained for all users, local resident's inconvenience is minimised and emergency / service vehicle access is maintained.

8.2 Likely Stakeholders include:

- Camden Traffic Liaison Group;
- Camden Community Traffic Working Group;
- Local Schools;
- Camden / London Cycle Campaign;
- Living Streets;
- University College Hospital (UCLH);
- London Borough of Camden (education, highways & refuse collection);
- Transport for London (Including London Underground);
- Network Rail; and
- Emergency services (London Ambulance Service, London Fire Brigade, Metropolitan Police and British Transport Police).

Ongoing consultation

8.3 The contractor will provide a local register of construction traffic management undertakings and assurances, so that a single reference document can be referred to concerning the requirements for management of traffic at a local level.

8.4 In addition, the initial programme of temporary traffic management, will be continuously updated and shared with highway authorities and key stakeholders at TLG meetings.

8.4.1 CSJV will engage with NR and TfL to determine their operational requirements and develop a strategy to ensure co-ordination with our works.

9 WORKFORCE TRAVEL PLAN

9.1 Staff will be encouraged to use public transport, cycle or walk to and from work as part of their pre-start induction and site briefings. This is one of the most sustainable locations in the UK and there are a plethora of transport options including rail, bus, tube, cycle, walk for the workforce to use for their daily journeys.

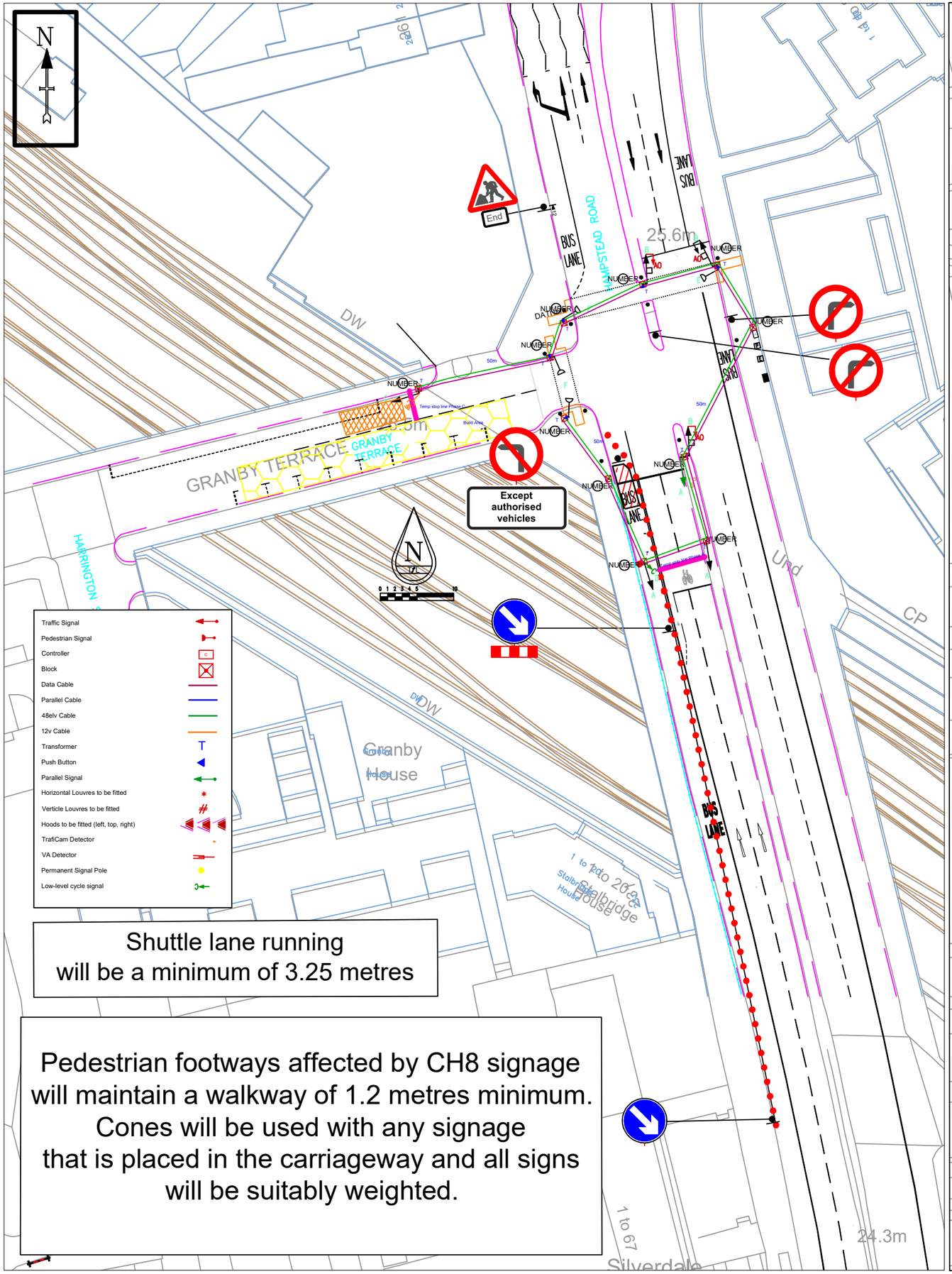
9.2 For journey planning, the TFL website is recommended: https://tfl.gov.uk/plan-a-journey/.

9.3 Parking within the compound is not permitted. Parking controls are in place on surrounding streets to prevent commuter parking.

9.4 In addition, LBC's travel planning officers can provide support where needed.

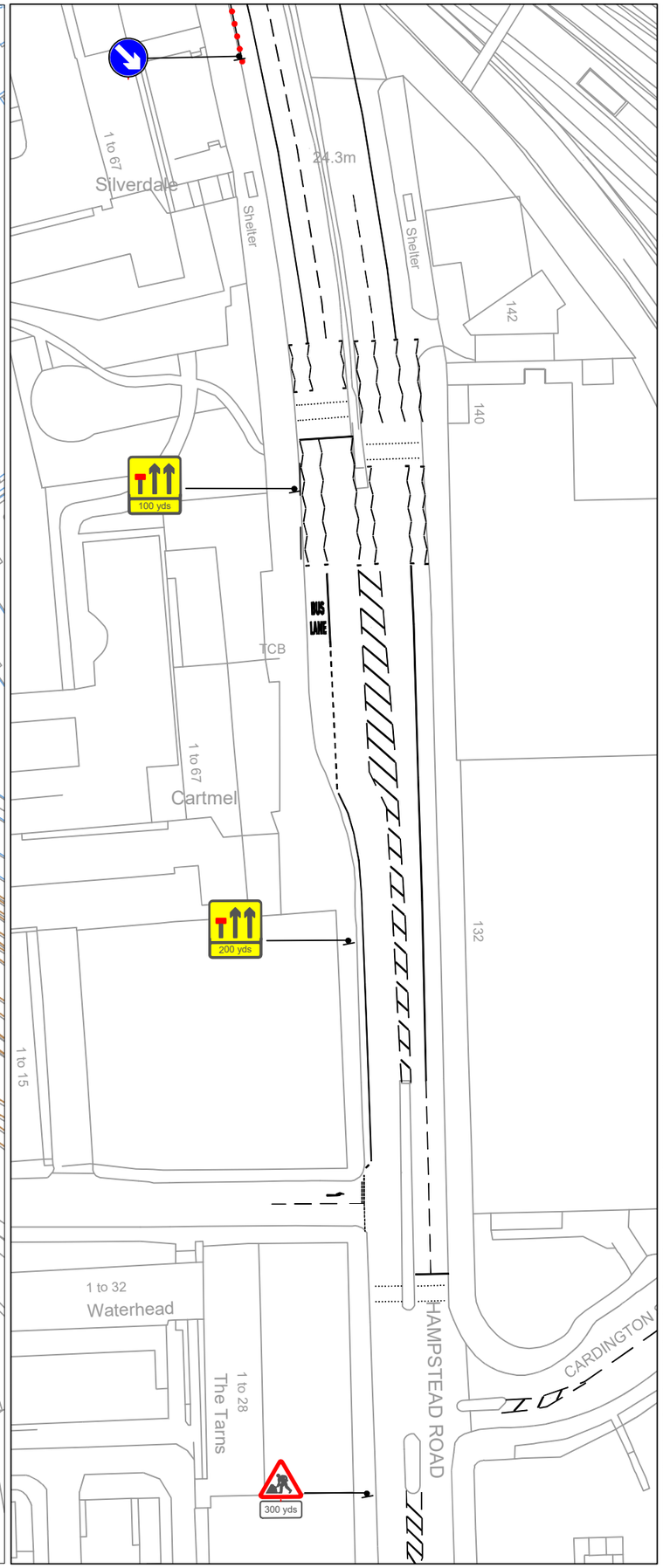
Appendix A

Temporary Junction Arrangements for Granby Terrace / Hampstead Road



Shuttle lane running
will be a minimum of 3.25 metres

Pedestrian footways affected by CH8 signage will maintain a walkway of 1.2 metres minimum. Cones will be used with any signage that is placed in the carriageway and all signs will be suitably weighted.



MARTIN
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Additional Information:
All drawings are compliant with

Safety at Street Works
and Road Works

A Code of Practice

Drawing Keys:

KEY

- Traffic sign
- Traffic cone
- Traffic signals to Diagram 3000.1
- Working Space
- Safety Zone
- Pedestrian Barrier
- 450mm No waiting cone
- Pedestrian diversion

SAFETY ZONE DIMENSIONS (S)
Permanent speed limit 30mph or less
Sideways safety zone 0.5m
Longways safety zone 0.5m
(Dimensions are minima)

Client.
CSJV

Type of works:
Lane Closure

Title of Scheme/Project:
HS2

Name of drawing.
Granby Terrace /
Hampstead Rd
Camden

Speed limit of road.
30

Drawing Number.
AL078

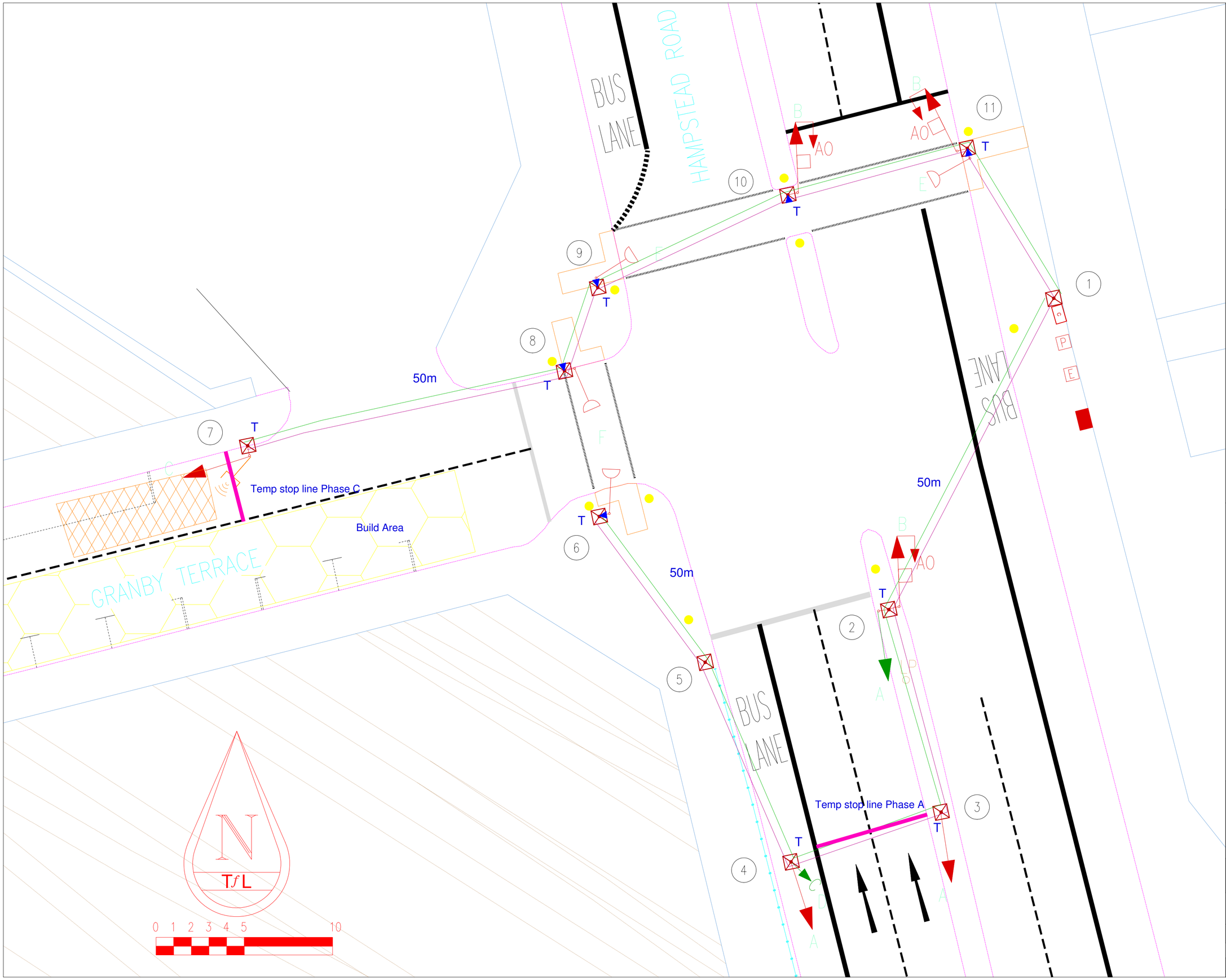
Date Drawn:	Date Checked:	Date Approved:
06/09/18	06/09/18	06/09/18
Drawn by: Jeff Cornwell	Checked by: Paul Crerand	Approved by: Simon Camm

Current revision 2

See previous revisions below.

Rev	Details:	Date:
1		26/06/18
2		06/09/18
3		07/09/18

Original Drawing size A3 | Scale NTS



Traffic Signal
Pedestrian Signal
Controller
Block
Data Cable
Parallel Cable
48elv Cable
12v Cable
Transformer
Push Button
Parallel Signal
Horizontal Louvres to be fitted
Verticle Louvres to be fitted
Hoods to be fitted (left, top, right)
TrafiCam Detector
VA Detector
Permanent Signal Pole
Low-level cycle signal

NOTES:

1. 1.2m walkway to be maintained.
2. Block 8 position to be confirmed.
3. Bus lane on northbound approach to be suspended for duaration.
4. Northbound traffic on Hampstead road can, under our config, turn left onto Granby Terrace.
5. Minimal construction traffic only coming from phase C and can turn Let or Right onto Hampstead Road.
6. Build area is on Granby Terrace.
7. Block 2 NOT sprayed.
8. TrafiCam used because there will be construction traffic which may be accidentally detected with normal VA detectors.
Make a zone of roughly 6m (2 cars).
9. Low-level Cycle Signal (Parallel) attached to pole 4.

BUILD LIST:

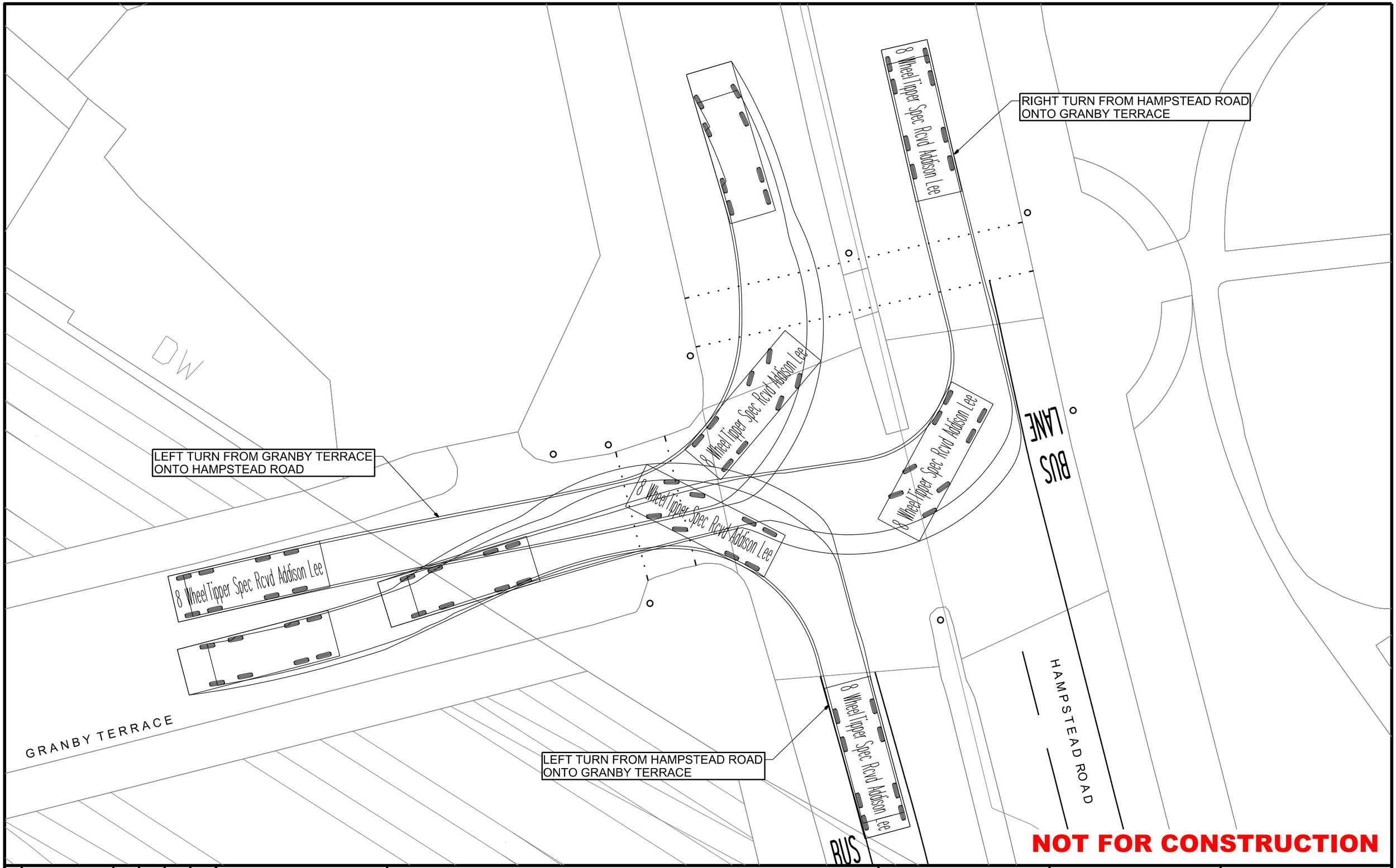
1 x Controller inc. Chameleon & CCTV
1 x Low-level Cycle Signal
3 x Intelligent Traffic
1 x Parallel Traffic
3 x Intelligent Traffic + Box Sign -3xAO
0 x Parallel Traffic + Box Sign -
0 x Intelligent Traffic + Filter Arrow (4-aspect)
0 x Intelligent Traffic + Filter Arrow + Box Sign (5-aspect)
4 x Pedestrian Signal
5 x Push Button
9 x Transformer
11 x Blocks
0 x VA Detector
1 x TrafiCam
0 x Louvres
0 x Hoods
4 x Arrow Masks

SRL traffic systems
urban64® Division
www.srl.co.uk / 01606 738866

Urban64
Intelligent Semi-permanent systems

02/033 Granby Terrace, Hampsted Road, London.

Date: 10/08/2018	Scale: NTS
Created by:	James Smart
Drawing No.:	02/033/001



Rev	Description	Drawn	Checked	Con App	HS2 App
P01.1		04/04/18			

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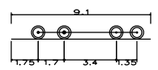
Scale with caution as distortion can occur.

Legends/Notes:



8 Wheel Tipper Spec Rcvd Addison Lee

Overall Length	9.100m
Overall Width	2.750m
Overall Body Height	0.436m
Min Body Ground Clearance	0.436m
Track Width	2.490m
Lock to Lock Time	4.00s
Wall to Wall Turning Radius	10.750m

Registered in England
Registration No. 06791686
Registered office:
2 Snow Hill,
Queensway,
Birmingham, B4 6GA

OFFICIAL

Creator/Originator: COSTAIN SKANSKA JV

Zone: EUSTON BRIDGES

Design Stage: XXX

Drawing Title: HAMPSTEAD ROAD & GRANBY TERRACE

SWEPT PATH ANALYSIS

Project/Contract: ENABLING WORKS SOUTH

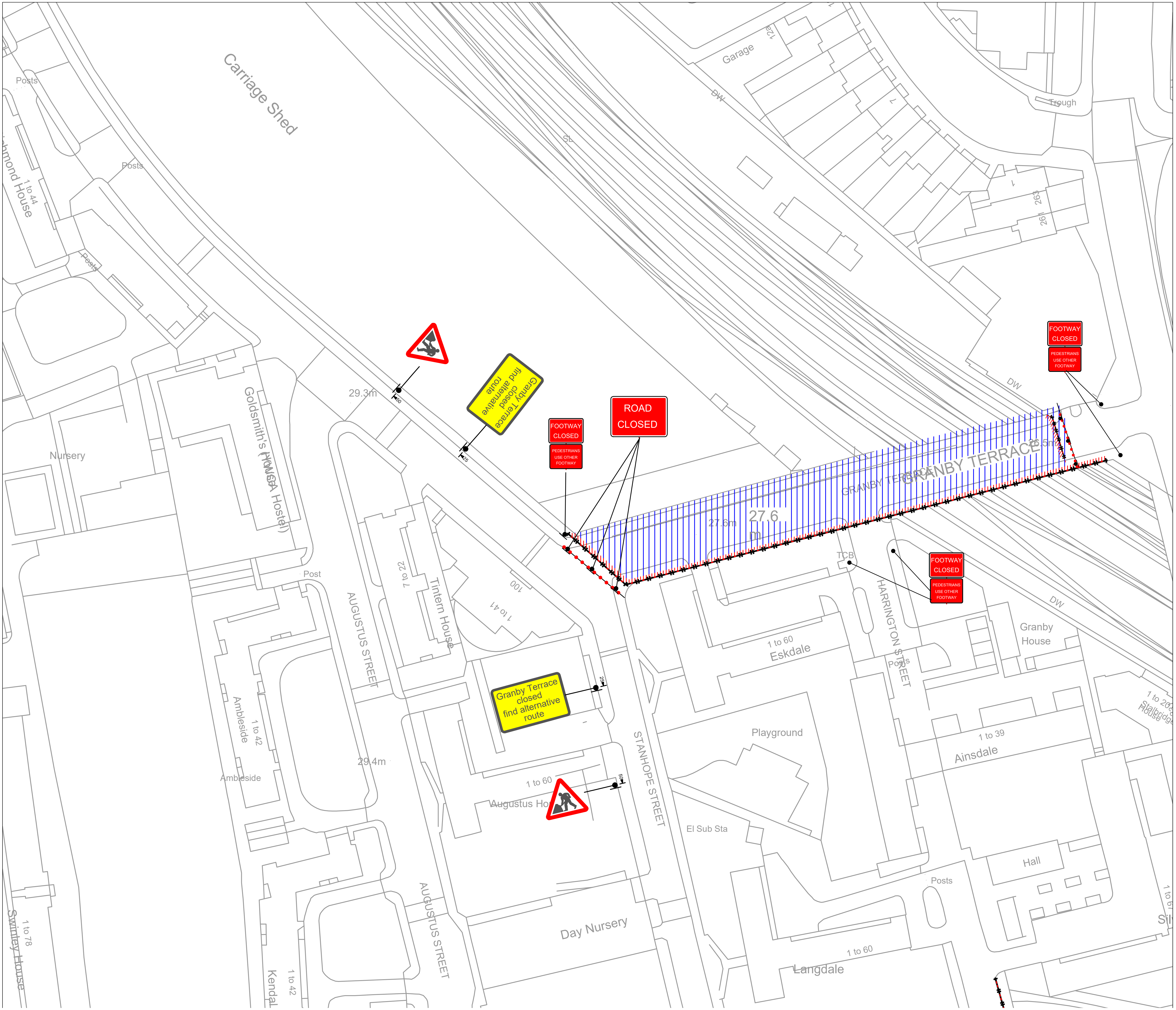
Discipline/Function: CONSTRUCTION & LOGISTICS

Drawn	Checked	Approved
---	---	---

Date	Scale	Size
04/04/18	---	---

Drawing No.: 1EW02-CSJ-CL-DGA-SS06_SL09-146001

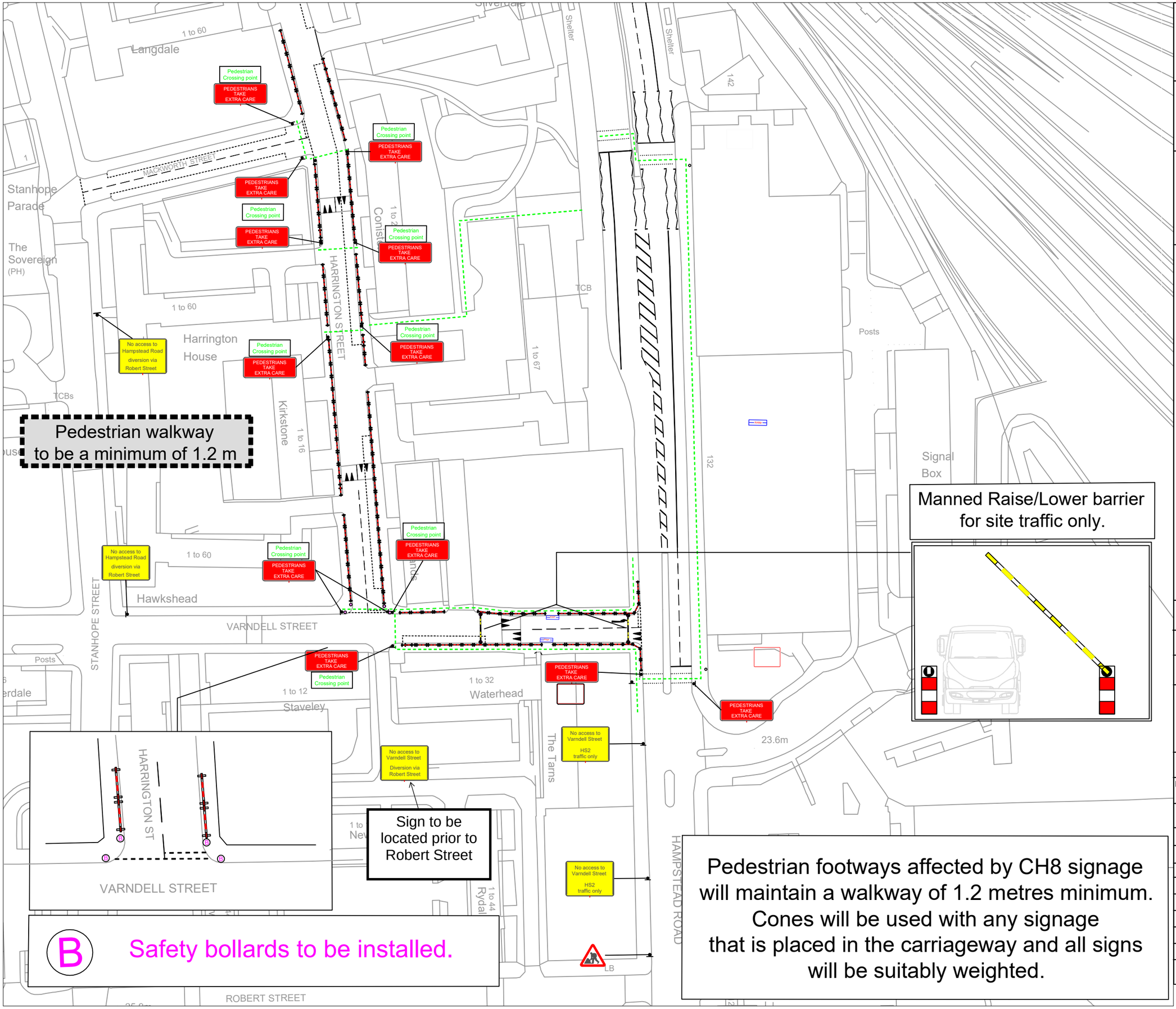
Rev.: P01.1



Carriage Shed
ROAD CLOSED
FOOTWAY CLOSED
PEDESTRIANS USE OTHER FOOTWAY
Granby Terrace closed find alternative route
GRANBY TERRACE
STANHOPE STREET
AUGUSTUS STREET
HARRINGTON STREET
Goldsmith's House (YMCA Hostel)
Tintern House
Nursery
Eskdale
Playground
Granby House
Ainsdale
Augustus House
Day Nursery
El Sub Sta
Langdale
Hall
Ambleside
Kendal
Swinley House
Garage
Trough
29.3m
29.4m
27.6m
Posts
Post
TCB

Appendix B

Proposed Traffic Management



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Additional Information:

All drawings are compliant with

Safety at Street Works
and Road Works

A Code of Practice

Drawing Keys:

KEY

- Traffic sign
- Traffic cone
- Traffic signals to Diagram 3000.1
- Working Space
- Safety Zone
- Pedestrian Barrier
- 450mm No waiting cone
- Pedestrian Route
- Saftey Bell
- Raise/Lower Barrier

SAFETY ZONE DIMENSIONS (S)
Permanent speed limit 30mph or less
Sideways safety zone 0.5m
Longways safety zone 0.5m
(Dimensions are minima)

Client: CSJV

Type of works: Road Closure STOP UP

Title of Scheme/Project: HS2

Name of drawing.
Varndell Street jw
Harrington Street
Camden

Speed limit of road: 20

Drawing Number. AL063 SU

Date Drawn:	Date Checked:	Date Approved:
10/05/2018	10/05/2018	10/05/2018
Drawn by: Jeff Cornwell	Checked by: Paul Crerand	Approved by: Simon Camm

Current revision 2

See previous revisions below.

Rev	Details:	Date:
1	Stop Up	01/05/2018
2	Stop Up	10/05/2018
3	Barrier and bollard amendments	20/06/2018

Original Drawing size A3 Scale NTS