



Sharpe Refinery Service (Hydro-Carbons) Ltd

Arlington Works, Twickenham

Outline Construction Logistics Plan

July 2018

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1 INTRODUCTION

- 1.1 Caneparo Associates is appointed by Sharpe Refinery Services (Hydro-Carbons) Ltd ('the Applicant') to prepare an Outline Construction Logistics Plan (CLP) for the development proposals at Arlington Works, ('the Site'), within the London Borough of Richmond upon Thames (LBRuT).
- 1.2 The site is located in St Margarets, within a 7-minute walk of St Margarets railway station, and is bound by Arlington Road to the east, railway tracks to the west and residential properties to the north and south. The Site location plans are included at **Figure 1 & 2**.
- 1.3 The application site currently contains a number of commercial / industrial tenants including an oil recycling plant. The development proposal seeks the demolition of the existing buildings, except the Victorian cottages, and the redevelopment of the site to provide 24 residential units and 610 sqm of flexible office / commercial floorspace. The site layout plan, detailing each of the proposed buildings locations, is included at Appendix A of the Transport Statement.

Purpose of CLP

This Outline Construction Logistics Plan (CLP) details the expected management of traffic during the construction period. It seeks to provide a robust construction strategy that will minimise the potential for disruption to 'Community Considerations' such as local residents, businesses, members of the public and visitors to the Site as well as other users of the adjacent highway network. This Outline CLP has been prepared in line with TfL's Construction Logistics Plan guidance (July 2017) and will be updated following input from the appointed contractor as part of the anticipated Condition related to the planning application.

CLP Structure

- 1.4 The remainder of the CLP will be structured as follows:
- **Section 2** details the existing situation from the context of construction vehicles;
 - **Section 3** includes the construction programme and proposed methodology;
 - **Section 4** presents the vehicular routes to and from the Site access;
 - **Section 5** details the strategies and measures to be adopted for construction logistics;
 - **Section 6** presents the vehicular types and anticipated level of movements;
 - **Section 7** includes details of the monitoring and review process for the CLP; and
 - **Section 8** provides a summary.

2 SITE CONTEXT AND SURROUNDING AREA

Policy Context

National Planning Policy Framework (March 2012)

2.1 Paragraph 3 of the NPPF states that *'Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical: Accommodate the efficient delivery of goods and supplies...'*

2.2 The document sets out long-term strategies for sustainable development which includes the management of traffic, including those associated with construction activity.

London Plan (March 2016)

2.3 The currently adopted London Plan provides guidance on CLP documents. Policy 6.14 – Freight – states that *'to promote the uptake of the Fleet Operator Recognition Scheme, construction logistics plans, delivery and servicing Plans and more innovative freight solutions, reflecting the positive experience of the Olympics and seeking opportunities to minimise congestion impacts and improve safety. These should be secured in line with the London Freight Plan and should be co-ordinated with travel plans and the development of approaches to consolidate freight.'*

London Plan (December 2017)

2.4 Though still in draft format, the London Plan is still regarded as a material consideration and has been applied to the CLP. Policy T7 Freight and Servicing states at Point F that:

'Development proposals should facilitate sustainable freight and servicing, including though the provision of adequate space for servicing and deliveries off-street. Construction Logistics Plans... will be required and should be developed in accordance with Transport for London guidance and in a way which reflects the scale and complexities of developments.'

2.5 Plans should *'adopt the latest standards around safety and environment performance of vehicles. The plans should be monitored and managed throughout the construction... phases of the development. TfL's freight tools including CLOCS should be utilised to plan for and monitor site conditions to enable the use of vehicles with improved levels of direct vision. This should be demonstrated through a Site Assessment within a Construction Logistics Plan.'*

Mayor's Transport Strategy (2017)

2.6 The draft Mayor's Transport Strategy states at Proposal 15 that *'The Mayor, through TfL and the boroughs, will work with business and the freight industry to improve the efficiency and safety of freight and servicing in London by:*

A. Developing tailored and targeted approaches to address the unique challenges faced by the individual sectors such as food and construction deliveries.

D. Ensuring that all London is within a 30-minute drive of a construction consolidation centre and encouraging their use through Construction Logistics Plans and the planning process.'

Richmond's Local Plan (2018)

2.7 Richmond's Local Plan was adopted in July 2018 and states *'The Council may also consider requiring a Construction Logistics Plan (CLP) in areas that are subject to high traffic congestion to ensure that vehicles entering the site do not adversely impact on local traffic.'*

Site Location

2.8 The Site is located within St Margarets, and is bounded by residential properties to the north and south, railway tracks to the west and Arlington Road to the east. The Site is provided with access / egress from Arlington Road via an access road shared with the Twickenham Studios site to the east. At present, vehicles have the opportunity to park at this location.

2.9 **Figure 1** appended to this report shows a regional plan of the Site in the context of Greater London and the highway network. **Figure 2** appended to this report shows the location of the Site in relation to the surrounding local area and identifies local community considerations.

Local Highway Network

Arlington Road

2.10 Arlington Road is a residential two-way single carriageway located between Ravensbourne Road to the north and Rosslyn Road to the south. In the vicinity of the site, Arlington Road contains a combination of Resident Permit Holder parking bays, combined Voucher Parking and Resident Permit Holder parking bays and single yellow line parking / waiting restrictions.



Rosslyn Road

- 2.11 Rosslyn Road is a residential two-way carriageway that runs parallel and connects to St Margarets Road to the east and west. Rosslyn Road contains a combination of Resident Permit Holder parking bays, combined Voucher Parking and Resident Permit Holder parking bays and single yellow line parking / waiting restrictions.

St Margarets Road

- 2.12 St Margarets Road forms part of the A3004 and is a two-way carriageway located between Richmond Road / Talbot Road to the north and Richmond Road (A305) to the south.

Controlled Parking Zones

- 2.13 The site is located within Controlled Parking Zone (CPZ) F – East Twickenham. The CPZ is operational Monday to Friday between 10:00 and 16:30. The site also borders CPZ S – St. Margarets South which is also operational Monday to Friday between 10:00 and 16:30. Regardless, the Site is expected to accommodate all vehicles on-site and, therefore, will make no use of on-street parking facilities.

Traffic Management Orders Required Through Construction

- 2.14 No changes to the Traffic Management Orders on the surrounding highway network are expected as part of the construction programme.

Accessibility by Non-car Modes

Walking

- 2.15 A person's willingness to walk is dependent on many factors including: access to a car, safety, road congestion, weather, gradients, parking, health, direction of route, and purpose of journey. It is generally accepted that for journeys of up to 10 minutes' walk time, walking is an appropriate mode to replace car trips and this is set out in the Chartered Institute of Highways and Transport (CIHT) Guidelines.
- 2.16 In the vicinity of the site, there is a good network of footpaths that benefit from having street lighting columns that are located at regular intervals.

2.17 A summary of the local amenity and public transport services available within convenient walking distances of the site is provided at **Table 2.1**. Walking duration is calculated assuming a walk speed of 80 metres per minute.

Table 2.1: Approximate Distances to Local Amenities			
Amenity	Location	Distance (metres)	Approximate Walking Time (minutes)
Public Transport Opportunities			
Bus stops	St Margarets Road, Sandycoombe Road (westbound)	450	6
	St Margarets Road, Rosslyn Road (eastbound)	470	6
St Margarets Rail Station	St Margarets Road, Amyand Park Road	660	8
Local Amenities			
Pharmacy	Crown Road	500	6
Public House	St Margarets Road	500	6
Post Office	St Margarets Road	550	7
Tesco Express	St Margarets Road	650	8

Cycling

2.18 It is generally accepted that 8km (or 5 miles) is an acceptable cycling distance, representing a journey time on average of 30 minutes ("TfL Analysis of Cycling Potential" 2010), although in London, longer journeys are commonplace. Much of southwest London is located within 5 miles of the site, including Richmond, Teddington, Kingston upon Thames and Hampton Court.

2.19 Transport for London (TfL) provides cycle route guidance in the form of cycle maps for different areas. Local Cycling Guide 9 provides information on the cycle routes in the vicinity of the site. Arlington Road, Rosslyn Road, Beaconsfield Road and Park House Gardens are identified by TfL as 'routes signed or marked for use by cyclists on a mixture of quiet or busier roads'. Additionally, part of St Margarets Road is marked as local 'roads that are recommended by cyclists'.

Public Transport

2.20 The Public Transport Accessibility Levels (PTAL) of the centre of the Site is 3, meaning the Site achieves a 'moderate' score in terms of public transport accessibility.

Bus Service

- 2.21 There are six bus routes that operate in the vicinity of the site, with the closest eastbound and westbound bus stops located on St Margarets Road approximately 450 metres and 470 metres south of the site respectively.
- 2.22 A list of these bus routes, alongside a summary of the frequency of service, is provided in **Table 2.2**.

Table 2.2 Local Bus Services				
Route Number	Route	Frequency (in minutes)		
		Weekday Frequency	Saturday Frequency	Sunday Frequency
33	Fulwell – Hammersmith	6-10	7-10	13-17
490	Heathrow T5 – Richmond	8-14	9-13	18-32
H22	Hounslow – North Sheen	11-13	12-13	18-22
H37	Hounslow – Richmond	5-10	6-10	7-17
R68	Hampton Court – Kew	13-17	13-17	13-17
R70	Hampton – North Sheen	9-12	6-10	13-17

Rail Station

- 2.24 St Margaret's railway station is located approximately 660m from the site (an approximate 8-minute walk). The station is located in Travelcard Zone 4. The typical off-peak service of eight trains per hour all terminating at London Waterloo comprises of:
- 4 direct via Richmond and Clapham Junction
 - 2 circuitously via Kingston and Wimbledon
 - 2 circuitously via Hounslow.

Community Considerations

- 2.25 The Site will operate an access / egress from Arlington Road, therefore, consideration will be taken in regards to the impact on pedestrians, cyclists and other vulnerable road users utilising this road as well as local residents near to the entrance.



- 2.26 Consideration will also be required in relation to how the quantum of larger construction vehicles are managed when accessing / egressing the Site.

Twickenham Studios

- 2.27 Twickenham Studios is located adjacent to the Site and is particularly noise sensitive. Therefore, all construction noise including that arising from vehicles will be strictly managed in order to minimise the impact of noise on the studios through best endeavours.

Schools

- 2.28 Though no schools are located on the immediate access / egress route, a number of schools are located in the wider area, including Orleans Primary School and St Stephen's Primary School, therefore, the area of St Margarets is expected to receive an element of school activity along local roads. It will be necessary to mitigate construction vehicle activity before and after the school day, as detailed in Section 5.

Public Relations

- 2.29 A member of the project management team will be elected as a Community Liaison Officer whose contact details will be made available on the construction Site hoarding / gate including a 24 hour emergency number. Their role and responsibilities will be inclusive of being the primary point of contact for the local community and answering queries and questions where necessary.

3 CONSTRUCTION PROGRAMME AND METHODOLOGY

3.1 A detailed construction programme will be provided as part of the Final CLP and once the Contractor has been appointed. As this initial stage the development is expected to take circa 18 months with demolition/enabling works beginning in early 2019.

Proposed Site Arrangement

3.2 The arrangements detailed within the following paragraphs will be used to assist in making the Site safe and secure for pedestrians, cyclists and road users as well as site operatives. It will be necessary for the Contractor to apply to the Council in order to obtain the appropriate permissions for any necessary temporary highway licenses and traffic management measures. The existing and proposed arrangements are shown at **Appendix A**.

3.3 Throughout the construction period, qualified banksmen will be located at the Site access / egress on Arlington Road to manage the arrival and departure movements of construction vehicles as well as any other vehicles entering/exiting the Site.

3.4 All vehicles will be accommodated on-site for the entire construction programme making use of the internal highway network. Appropriate space is provided to accommodate all vehicle sizes within a loading area segregated from the access road throughout all periods of construction, as detailed within **Appendix A**. The access road itself will operate as a holding area to prevent vehicles waiting on-street in the area.

3.5 The Site will be fully secured with a hoarding to all exposed boundaries. The hoarding will be provided in line with all TfL/LBRuT regulations with a noticeboard placed in prominent visible position on Arlington Road. The noticeboard will be standardised across the entire the Site.

3.6 Fully equipped offices and welfare facilities for staff and operatives will be provided on Site. All plant, material and equipment will be stored on-site and not on the public highway. It is noted that an element of parking will be available for site managers or equivalent.

Construction Traffic Hours

3.7 It is proposed that the core operational hours for construction traffic will be as follows:

- Weekdays: 08:00 – 18:00
- Saturday: 08:00 – 13:00
- Sunday & bank holidays: subject to agreement between TfL, LBRuT and resident groups.

- 3.8 The Applicant will be aware of activity at Twickenham Studios and will manage construction activity throughout the programme to limit noise impact during construction traffic hours.
- 3.9 In other circumstances it is anticipated that there will be a requirement for vehicles to arrive and depart outside of usual construction hours to allow specialist construction activities to be undertaken; or to deliver bulky machinery / materials before busy traffic periods in London. The Council will be provided with prior notification in regards to any special dispensation for out-of-hours vehicle activity.
- 3.10 There will be no working on Sundays and bank holidays unless there is a requirement for emergency works, abnormal deliveries or cranes. The Council will be provided with prior notification.
- 3.11 The Site will be provided with 24 hour security to prevent any unauthorised access outside of the construction traffic hours.

Vehicle Types

- 3.12 Vehicles are expected to generally range between 8m and 10m in length. Numerous types of vehicles will be used to bring materials to and from the Site. The main vehicle types will include:
- 10.2m length, 2.5m width rigid Tippers;
 - 6.3m length, 2.4m width Skip Lorries; and
 - 8.3m length, 2.4m width Concrete Lorries;
 - 3.5T Luton Vans / 5.5m length LGVs
 - 8.8mm length, 2.5m width Low-Loader / Flatbed Lorries;
- 3.13 A vehicle activity survey was undertaken for the existing site and included within the accompanying Transport Statement. The survey highlights that the site currently receives up to 33 vehicles per day of which the majority were formed of Light Goods Vehicles. Therefore, the operation of numerous servicing vehicles is already established at the site.

Construction Phasing

Site Setup

- 3.14 Owing to the available space on-site, any spoil to be removed will be via tipper lorries as well as skips, both of which will be located within an off-street loading area.

Piling

- 3.15 Piling will be installed using piling rigs located within the Site to create the structural footings of the buildings. All vehicle activity will occur within the Site with no need for secondary loading on-street.
- 3.16 Heavy equipment such as the piling rig, excavator and crane will be delivered by flatbed lorry, depending on the specific contractor's requirements. All vehicles will be located within the off-street loading area.

Sub-Structure

- 3.17 The principal works associated with this phase will be the pouring of concrete to form the foundations of each building. This will require an intense period of vehicle activity to ensure a continuous pour of concrete is achieved. It is noted however that the size of the concrete vehicle will be as large as possible in order to minimise the number of vehicle movements required.
- 3.18 Concrete lorries will be located within the off-street loading area with concrete moved to the correct location via a concrete pump.

Super-Structure

- 3.19 The superstructure of each building is likely to be a continuation of the concrete groundworks into a concrete frame or a combination of concrete and traditional loadbearing masonry. Steel frame is likely for the top floors. Vehicles during this period will be no larger than 10m in length and will make use of the off-street loading area.

Cladding

- 3.20 It is envisaged that cladding and glazing will be brought to the Site on low-loader and flatbed vehicles and transferred to the Site by crane in the same manner as the construction of the super-structure.

Fit-out, Testing and Commissioning

- 3.21 Traditional construction techniques will be used for the building fit-out phase with deliveries undertaken to the off-street loading area.



3.22 Deliveries will be primarily undertaken by vehicles in the 3.5T – 7.5T range with a small number of deliveries undertaken by rigid lorries up to 8m in length.

4 VEHICULAR ROUTEING AND SITE ACCESS

Site Access

- 4.1 Vehicles as well as pedestrians will be able to access the Site via the existing access point on Arlington Road. The entrance / exit into the Site will be made appropriate for construction vehicles and will be monitored by banksmen throughout the day before being gated.

Proposed Vehicular Route

- 4.2 **Figure 3** appended to this report shows the proposed vehicle access route across the wider local area. The routes follow the TfL strategic road network until the final approach to the Site where local roads are used for access. The route follows the same route used by the existing waste oil recycling plant on-site, which seeks to spread HGV impacts equally on local residential roads.
- 4.3 The proposed construction vehicle route is considered to be the most appropriate and suitable for larger vehicles and seeks to reduce and minimise disruption to local road users. All construction vehicle arrivals will be managed by banksmen at the Site to ensure appropriate safety and traffic management measures are adhered to.
- 4.4 Traffic marshals / banksmen shall be employed throughout the contract to manage the flow of construction vehicles to ensure that public and pedestrian safety is maintained at all times. The surrounding highway will be kept open for normal traffic to ensure satisfactory access and movement for existing occupiers of neighbouring properties during construction. In particular, banksmen will be positioned to assist larger vehicles turning into / out of the Site. Coordination will also be carried out with surrounding developments when necessary, to minimise potential disruption.

Swept Path Analysis

- 4.5 Vehicle swept path analysis has been prepared to demonstrate that the vehicle types and sizes proposed will be able to safely access and egress from the Site at the proposed loading bay location. A copy of the drawings prepared are included at **Appendix B**. It is noted that following the demolition and partial construction of buildings, at a point where access and turning areas begin to restrict, construction vehicles up to circa 10m length will still be able to access the site, as presented in the swept path analysis included at Appendix F of the associated Transport Statement.



5 STRATEGIES TO REDUCE CONSTRUCTION IMPACTS

Overview

5.1 **Table 5.1** below sets out the committed, proposed and considered checklist replicated from the TfL Construction Logistics Plan guidance (July 2017).

Table 5.1: Medium Impact Site Planned Measures Checklist			
	Committed	Proposed	Considered
Measures Influencing Construction Vehicles and Deliveries			
Safety and environmental standards and programmes	X		
Adherence to designated routes	X		
Delivery scheduling		X	
Re-timing for out of peak deliveries		X	
Re-timing for out of hours deliveries		X	
Use of holding areas and vehicle call off areas		X	
Use of logistics and consolidation centres		X	
Measures to Encourage Sustainable Freight			
Freight by Water			X
Freight by Rail			n/a
Material Procurement Measures			
DfMA and off-site manufacture			X
Re-use of materials on Site		X	
Smart procurement		X	
Other Measures			
Collaboration amongst other Sites in the area			X
Implement a staff travel plan		X	

Project Manager

5.2 Contact details for the Project Manager will be provided following the appointment of the Contractor:

Name: TBC

Company: TBC

Address: TBC

Telephone: TBC

Email: TBC



- 5.3 The Project Manager will assume all responsibility for implementing the measures within the CLP until such a time when the Main Contractor is appointed, at which point relevant details will be submitted to LBRuT. The contact details for the Project Manager will be displayed at the Site and published on any temporary licenses granted by the Council (such as for hoarding or scaffolds).
- 5.4 The Project Manager will liaise with local stakeholders and the project managers for other construction activity in the local area when and where it is relevant to do so. The Project Manager will also be responsible for monitoring and reviewing this CLP on an ongoing basis to reflect the changing needs of the project and/or any changes to the local road network.
- 5.5 The appointed Project Manager will act as a point of contact between local stakeholders / businesses so that in the event of issues / concerns arising during the construction process, action can be taken without delay. There are a number of development proposals ongoing in the surrounding area and so the Project Manager will liaise with the project managers for any other sites where work is carried out concurrently such that matters can be coordinated where required.
- 5.6 Information boards will be displayed at the Site highlighting the key personnel on Site including their contact details. A 24-hour emergency contact number will also be provided.
- 5.7 Local neighbours will be able to call the Site office to raise any concerns and the Project Manager will personally deal with any comments or complaints to ensure that they are resolved quickly. A record will be kept of any / all comments and complaints received.

Neighbourhood Consultation

- 5.8 As part of the construction process, neighbourhood consultation will be undertaken with local residents / communities in order to effectively manage construction impacts. This will take the form of monthly newsletters with local residents as well as neighbourhood meetings at key construction stages. The hoarding of the site will also be provided with contact details for the site manager so that the community can remain in contact through the build.

Measures Influencing Construction Vehicles and Deliveries

Safety and environmental standards and programmes

- 5.9 The construction project will be registered with the Considerate Constructors Scheme in order to minimise any negative impact that construction activity may have on the local area.



5.10 It will be a requirement for Contractors to be registered with the FORS scheme and to ensure all subcontractors are also registered. FORS will be a mandatory requirement where applicable (except in the rare instances of international deliveries, other non-standard deliveries, and vehicle types and sizes that are not subject to the FORS standard) and recognise that FORS:

- Creates safer drivers – with significantly reduced occurrence of accidents;
- Will encourage suppliers to improve fuel economy associated with the project;
- Provides a system to identify 'at risk' drivers, allowing the project team and suppliers to target training and incentives effectively;
- Improves certainty of deliveries and collections; and
- Promotes a reduction in journeys to and from the Site.

5.11 A collision reporting system will be mandated to ensure all collisions and accidents involving the projects' vehicle and drivers are reported to the Project Manager and any relevant parties. In order to effectively undertake this, the 'FORS Manager' reporting tool will be utilised.

5.12 It is a requirement for all contractors to be signatories of the Construction Logistics and Community Safety (CLOCS) initiative. Operating to the CLOCS standard will ensure that transport and logistics are managed to the highest industry standard during all stages of demolition and construction.

5.13 Banksman will be located at the loading area when in use throughout the demolition and construction periods to ensure appropriate safety and traffic management measures are adhered to.

Pedestrian and Cyclist Safety

5.14 Construction traffic can pose a potential risk to pedestrian and cyclist safety when not managed effectively. Vulnerable road users' safety will be paramount throughout the construction period. The use of banksman during all periods of operation at the Site will assist pedestrian and cyclist safety, particularly when vehicles are accessing and egressing the Site.

5.15 A hoarding will be installed around the perimeter of the Site. The hoarding will screen off any works or activities and protect passers-by as well as reduce dust and noise emissions.

5.16 In addition, hoarding gates will be locked each evening by the contractor's project team.



Adherence to Dedicated Routes

- 5.17 Details of routes to be used for journeys to and from Site for road operations are provided in Section 4. The routes to/from the Transport for London Road Network and Strategic Road Network are specified. These access routes have been reviewed with respect to potential impacts, conflicts and hazards. Junctions and parts of the routes of particular potential concern have been identified in terms of coming into conflict with other road users, with particular attention paid to pedestrians and cyclists around access to work sites.
- 5.18 A copy of the routing plan, shown at **Figure 3**, will be given to all suppliers when orders are placed to ensure drivers are fully briefed on the required route to take. The supplier will be made aware that these routes are required to be followed at all times unless agreed or alternate diversions are in place.
- 5.19 Vehicle arrivals / departures will be programmed and staggered to reduce the potential for unnecessary delay and congestion at the Site.
- 5.20 A web-based delivery management system will be used to control the volume of deliveries to site. This system will work by defining the number of 'resources' a site has and thus can service. It then limits the number of delivery bookings to manage an efficient process to the defined capacity. Sub-contractors and hauliers must be booked in a minimum of 48-hours in advance in order to allow the request to be reviewed and subsequently approved/declined. The system can be accessed by completing a new user application form and submitting it, countersigned by your supplier relationship manager or package manager to the delivery manager.
- 5.21 The scheduling of materials, deliveries and waste collection will be managed in order to effectively utilise the loading area on-site. Suppliers will be given instructions asking the vehicle driver to call ahead to ensure that the Site is ready to receive a vehicle. In addition, verbal briefings of the access route will be provided to all suppliers, contractors and visitors prior to them undertaking a journey.
- 5.22 An efficient and effective logistical operation could provide material benefits to the efficiency of deliveries and, as such, a robust delivery system will be implemented. A holding area will be implemented on the access road.
- 5.23 In the event an unauthorised delivery arrives at Site the vehicle will be accommodated within the holding area. Persistent unauthorised deliveries will be dealt with via a 3-strike policy whereby their contract to deliver to the Site will be reviewed.



5.24 In the event space is not available at the Site for unauthorised deliveries the driver will be instructed to exit the area and re-schedule a delivery time with the main contractor.

Key Performance Indicators – Vehicle Deliveries / Collections

5.25 In order to effectively manage vehicle movements into and out of the site during construction the Project Manager will implement Key Performance Indicators which will be used to monitor the scheme. The KPI's to be implemented are as follows:

- Zero unplanned vehicles.
- Zero non-complaint vehicles.
- Zero instances of project-related vehicles involved in a collision.

Measures to Encourage Sustainable Freight

5.26 It is not possible to undertake deliveries by water or rail for this project owing to its separation from both. The Main Contractor will constantly monitor the CLP and in the event deliveries by rail are possible / feasible, will provide an update to the Council for approval.

Material Procurement Measures

5.27 Where possible, segregation of recyclable and non-recyclable material will be employed for all waste generated throughout the construction process.

5.28 All waste materials will be deposited into containers held on Site with each trade responsible for clearing their own waste. All Site waste will be collected by a licensed waste carrier and will be taken to a registered waste transfer station for sorting and recycling / re-use.

5.29 Waste Management will be monitored and recorded as part of the Site's 'Smart Waste' obligations.

5.30 A Site Waste Management Plan (SWMP) will be implemented if deemed necessary / appropriate to detail the disposal and management procedures relevant to the demolition and construction phases. If implemented, the SWMP will seek to minimise and reduce waste production.

5.31 Consideration will be given to the opportunities to employ off-site manufacturing processes upon appointment of a contractor.

- 5.32 Consideration will be given to the employment of smart procurement measures such as last mile logistics solutions and sourcing local suppliers. This will also be explored following the appointment of a contractor.

Other Measures

- 5.33 The developer and appointed contractor will consult with LBRuT, TfL, and other contractor/developers in the area to minimise disruption and undertake joint trip generation analysis. The contractor, once appointed, will liaise with other developers and contractors in the area.

Public Highway

- 5.34 At no time will material or plant be stored on the public highway.
- 5.35 It is confirmed that cranes and other large pieces of construction equipment will not oversail the highway at any point when on-site. The size of the site allows for issues of over-sailing to be effectively negated.
- 5.36 The Contractor will monitor the condition of the public highway in the immediate vicinity of the Site. This will form a condition survey undertaken by the Contractor of the highway network surrounding the Site.
- 5.37 The Project Manager will make contact with the relevant utility companies in order to co-ordinate any scheduled work.

Road Closure

- 5.38 There is no need for road closures as part of the development, however, in the event this is required, appropriate consent and licenses will be obtained. Any road closures will be planned in advance, in accordance with the relevant authorities and in compliance with prescribed notice periods.
- 5.39 Notice regarding planned closures and diversions of roads and footpaths forming part of the Site will be given to the Council, the Police, Fire Brigade, other emergency services and bus operators.

Control of Dirt and Dust

- 5.40 The objective in regards to the control of dirt and dust is to ensure footways and carriageways adjacent to the Site are kept clean at all times.
- 5.41 The following measures will be implemented where necessary:
- All HGVs removing demolition spoil and soil will be sheeted over before leaving the Site to limit dust particulates.
 - The Project Manager will ensure that the perimeter of the Site is patrolled twice a day to ensure that the footway is kept clear of any construction debris.
 - Road sweeping to clean the Site hard standing and any mud or debris deposited by Site vehicles on roads or footpaths in the vicinity of the Site.
 - Sufficient bins and waste facilities.
 - Litter picking facility for un-attributable materials.
 - Facilities to minimise the formation and spread of dust by continuous fine water spray.
 - A wheel wash facility will be established at the Site access / egress points (within the Site boundary) to minimise the transfer of dust and particulate matter onto surrounding highways.
 - Banksmen will be charged with the responsibility of checking the cleanliness of vehicles exiting the Site.

Noise

- 5.42 The Applicant recognises the potential impact construction may have on the adjacent Twickenham Studios and will engage with the studios throughout the construction programme to limit the impact of construction traffic wherever is reasonably possible. All drivers will be made aware of the presence of the studios before attending the site as well as the objective of minimising noise. All vehicles when attending the Site will be required to turn off their engines.
- 5.43 Noise and vibration caused by Site activities will be controlled as far as is reasonably practicable so that surrounding receptors are protected from excessive levels arising from the construction process.
- 5.44 All hand operated tools and equipment shall be effectively silenced and will bear the manufacturer's guaranteed maximum sound level generated. The recommendations made in BS 5228-1: 2009 "Code of Practice for Noise and Vibration control on Construction and Open Sites" will be adopted by subcontractors.

5.45 The Contractor will work under the guidelines set out in the legislation below.

- Public Health Act 1961
- Health & Safety at Work act 1974
- Control of Pollution Act 1974
- Environmental Protection Act 1990
- The Noise at Work regulations 2005
- British Standard 5228

5.46 The Contractor will aim to keep noise levels to a minimum. This will be carried out by:

- Ensuring all plant is fitted with the correct and working exhaust mufflers and noise suppression kits.
- Changing where possible methods and processes to keep noise levels low.
- Position plant as far away from residential property as physically possible.
- Limit the hours worked on noisy operations.



6 ESTIMATED VEHICULAR MOVEMENTS

- 6.1 At present, a Contractor has not been appointed and therefore a detailed construction programme as well as method of construction is unavailable. Once a Contractor has been appointed and a programme provided, a detailed breakdown of vehicles per phase of construction, based on the quantum of spoil removed / material delivered will be provided within the Final CLP.

7 IMPLEMENTING, MONITORING AND UPDATING

7.1 An appointed Construction Logistics Manager will be in charge of implementing the CLP and may be a part-time role undertaken by the Main Contractor. It is recognised that the CLP is a 'live' document and as such will be subject to constant review and monitoring in order to react to any changes during the CLP. The Construction Logistics Manager will monitor and record information on the following:

Number of Vehicle Movements to the Site

- Total;
- By vehicle type / size;
- Time spent on-site; and,
- Delivery/collection accuracy compared to schedule.

Breaches and Complaints

- Community concerns about construction activities;
- Vehicle routing;
- Unacceptable queuing;
- Unacceptable parking; and
- Compliance with safety and environmental standards and programmes.

Safety

- Record of associated fatalities and serious injuries;
- Ways staff are travelling to site; and
- Vehicles and operators not meeting safety requirements.

7.2 Data will be recorded at the entrance of the Site by a member of staff, as well as through the delivery booking and tracking system to be implemented.

7.3 A Contractor Handbook and Driver Handbook will be produced as part of the CLP, in conjunction with the site wide CEMP, in order to distribute information relating to site operations. The information to be provided is as follows:



Contractors Handbook

- Safety procedures;
- Anti-idling procedures;
- Vehicle routing and delivery scheduling; and
- Driver training

Drivers Handbook

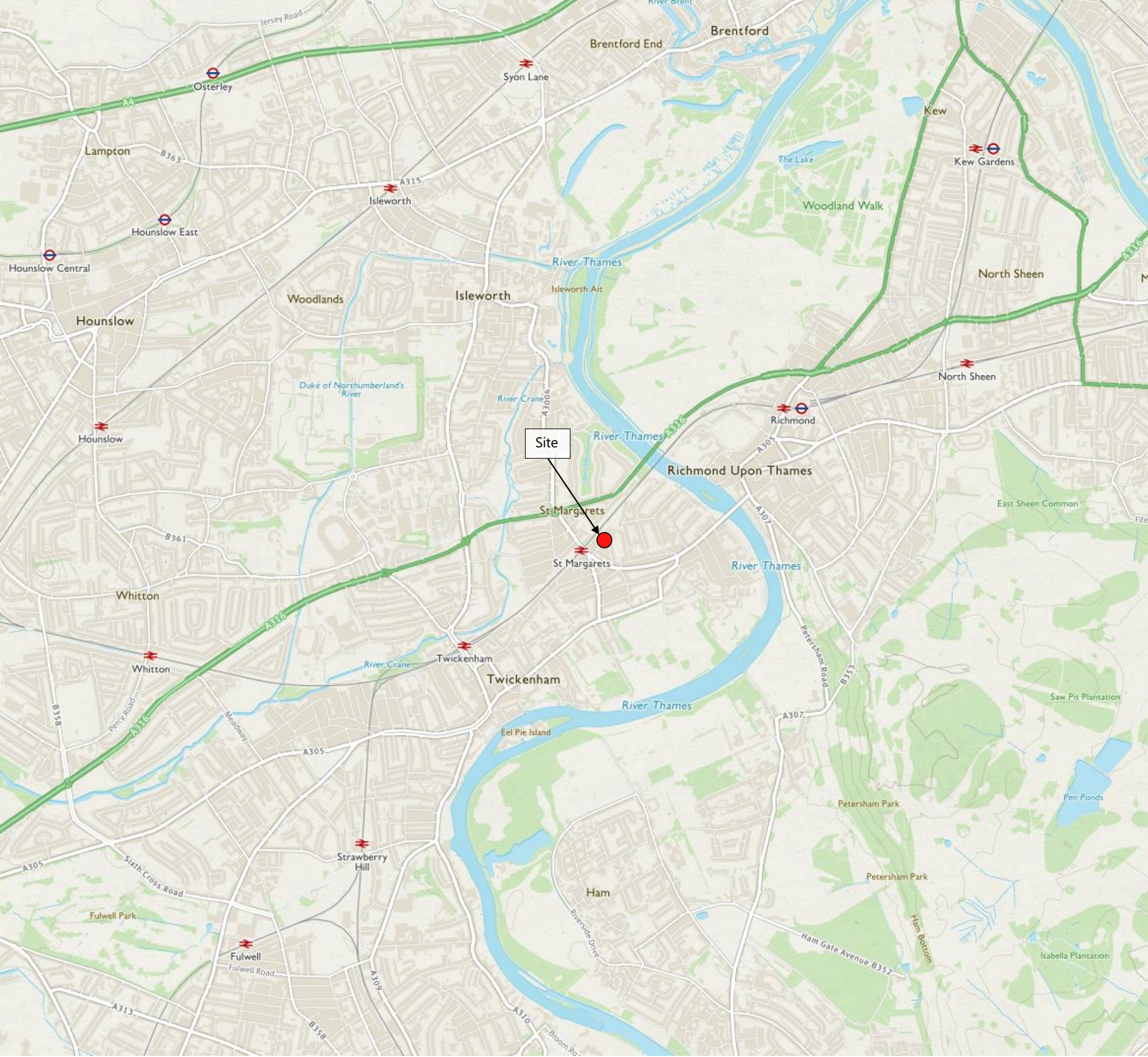
- Authorised routes to and from the Site;
- Site opening times;
- Booking and scheduling information;
- Site entry and exit points, and other information relating to access;
- Anti-Idling; and
- Vulnerable road user safety.



8 SUMMARY

- 8.1 The CLP provides all details required for the successful management of construction vehicles to and from the Site. The CLP is a live document and will be updated if any changes are required throughout the construction period.

Figures



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DRAWING REFERENCE:
Figure 1

CLIENT: **Sharpe Refinery Service
 (Hydro-Carbons) Ltd**

PROJECT:
Arlington Works

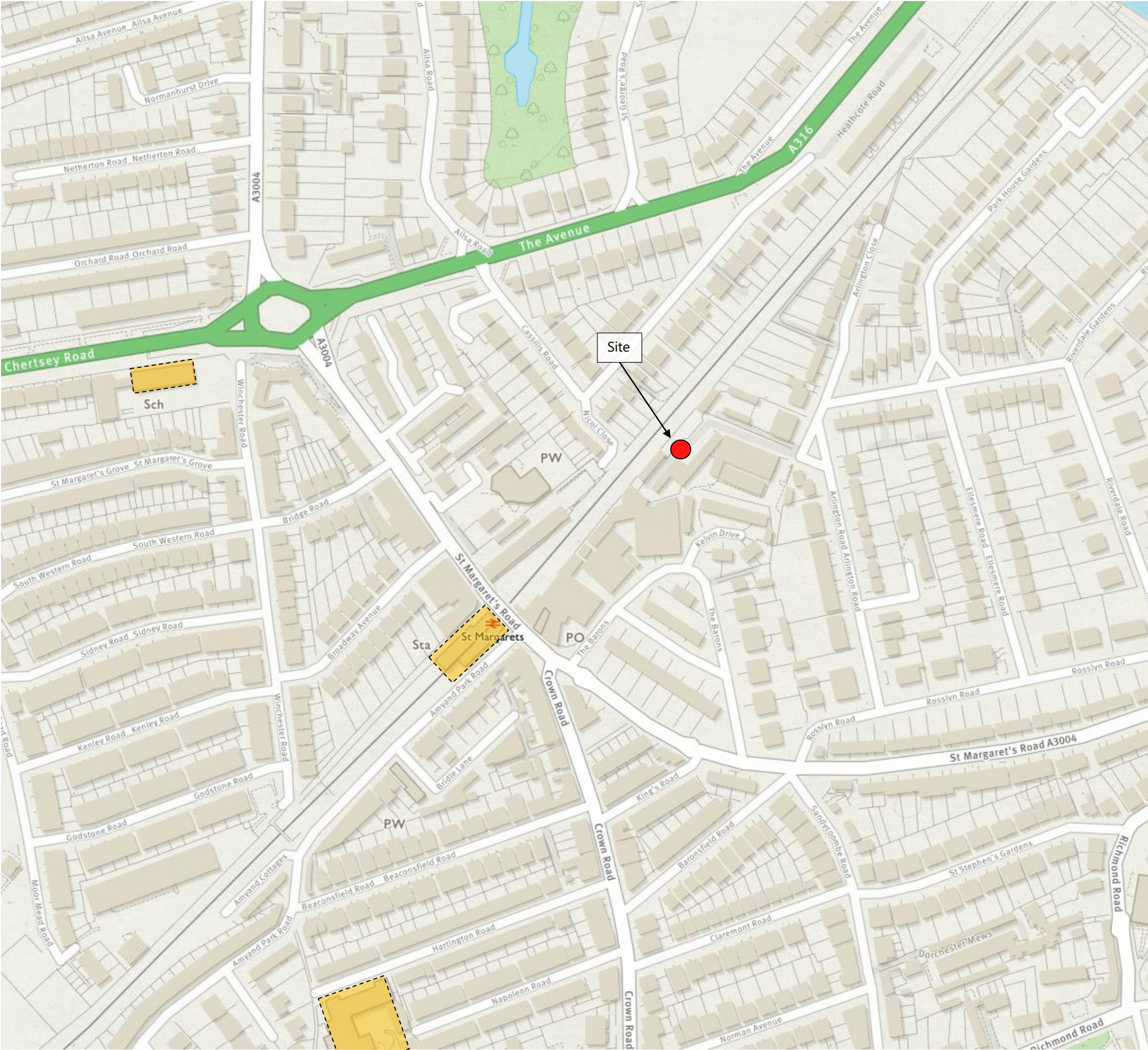
TITLE:
Regional Location Plan

SCALES: **NTS**


DRAWN: DP CHECKED: -- DATE: 18.07.2018 REVISION: .



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 London W1W 8BT
 Tel: 020 3617 8200
 www.caneparoassociates.com
 Registered in England: 9930032



Site

Key:
 Community Considerations 

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DRAWING REFERENCE:
Figure 2

CLIENT: **Sharpe Refinery Service (Hydro-Carbons) Ltd**

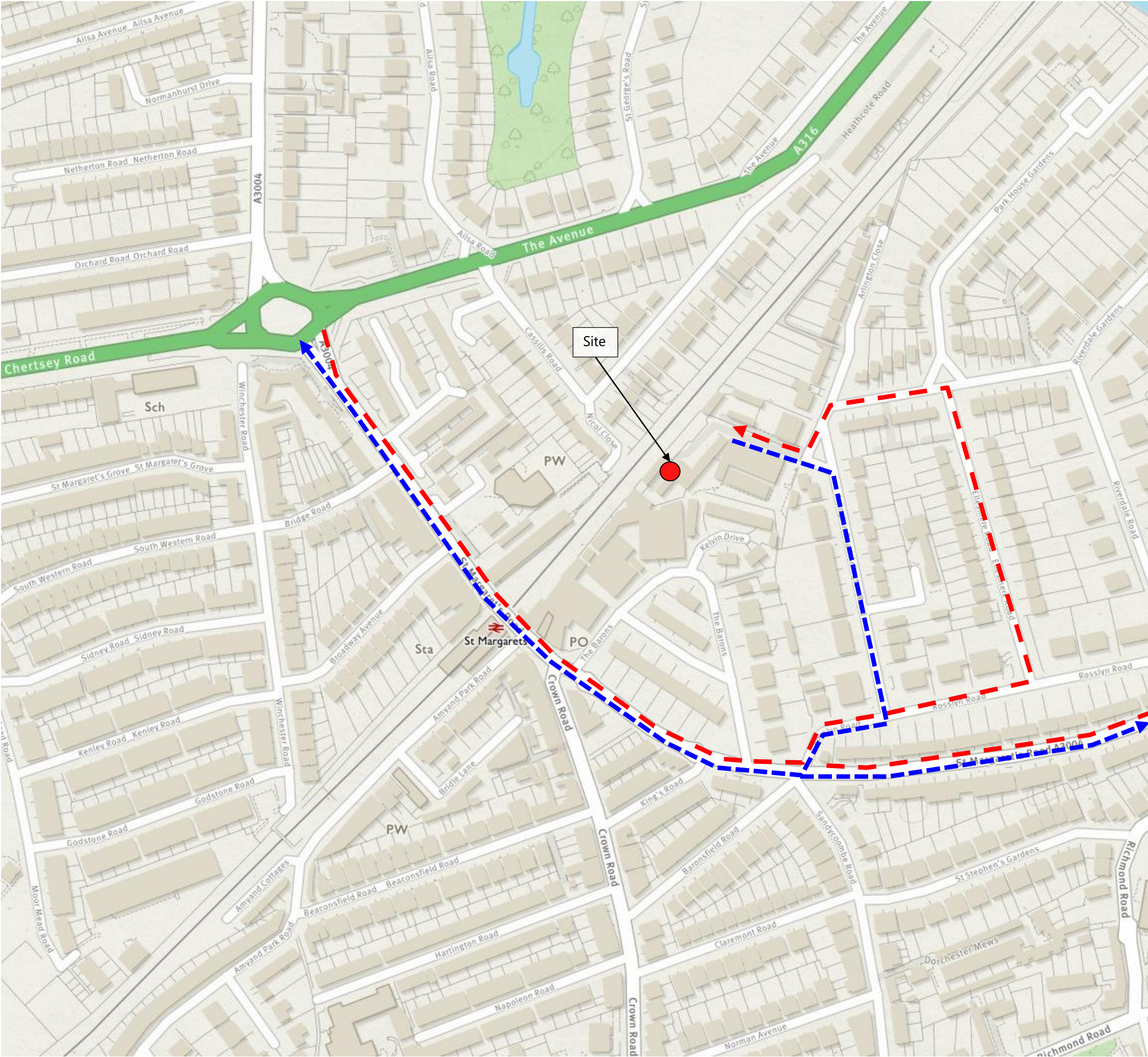
PROJECT:
Arlington Works



TITLE:
Context Plan

SCALES: **NTS**
 DRAWN: DP CHECKED: -- DATE: 18.07.2018 REVISION: .



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Key:
 Route to the Site 
 Route from the Site 

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DRAWING REFERENCE:
Figure 3

CLIENT: **Sharpe Refinery Service (Hydro-Carbons) Ltd**

PROJECT:
Arlington Works

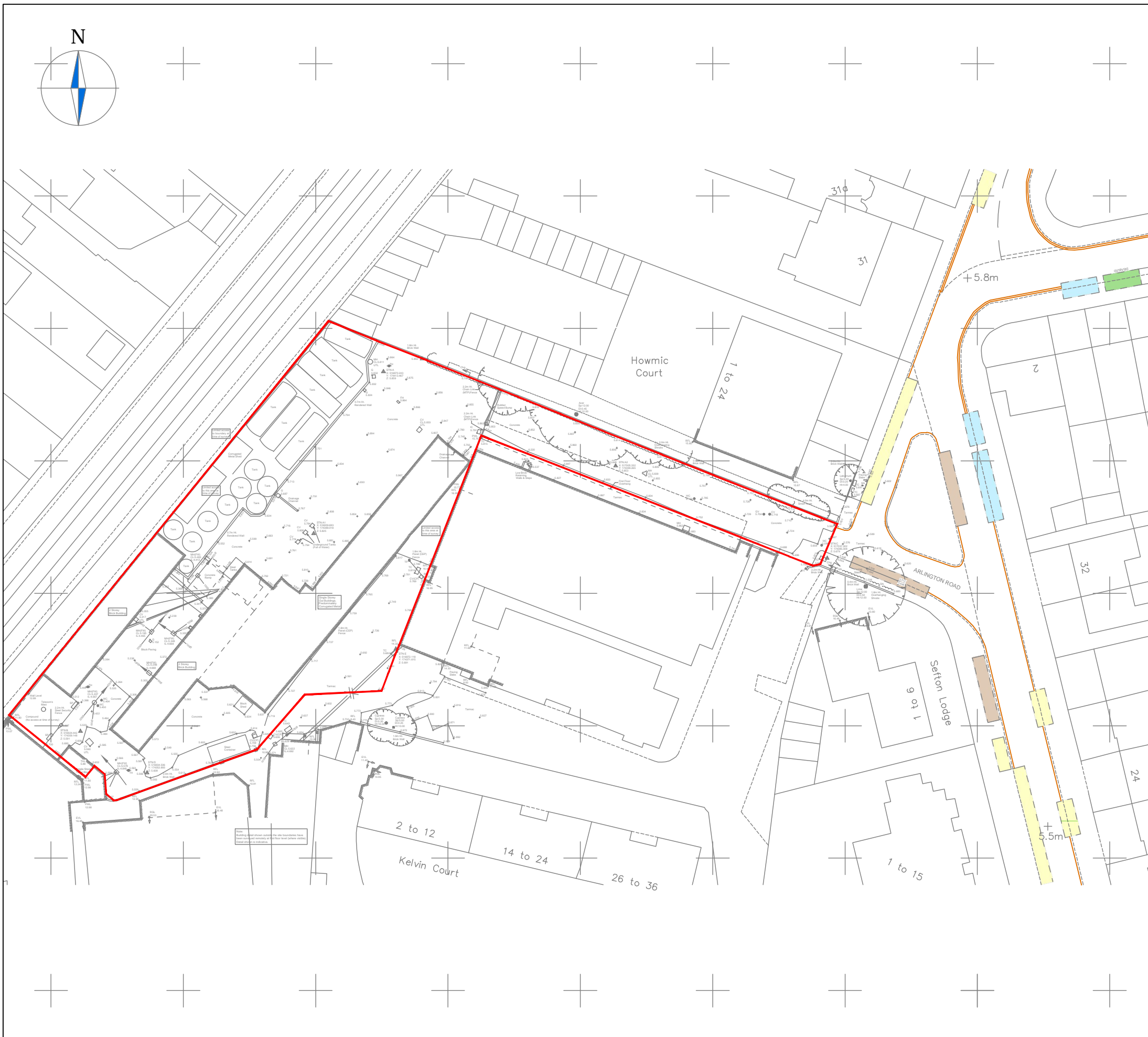
TITLE:
Vehicle Routing Plan

SCALES: **NTS**
 DRAWN: DP CHECKED: -- DATE: 18.07.2018 REVISION: .



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Appendix CLP A



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

KEY:

	SITE BOUNDARY
	SINGLE YELLOW LINING
	DOUBLE YELLOW LINING
	Resident Permit Holders Only Mon-Fri 10am - 4.30pm
	Resident Permit Holders Only
	Mon-Fri 10am - 4.30pm Voucher Parking - 4 hr limit and Residents Permit holders only. Buy vouchers from shops
	Disabled Bay Only

Rev	Details	REVISION HISTORY			Drawn	Checked	Date

Status: Preliminary For Approval For Construction
 For Information For Tender As Built

Client:
...

Project:
Arlington Works
Arlington Road, Twickenham

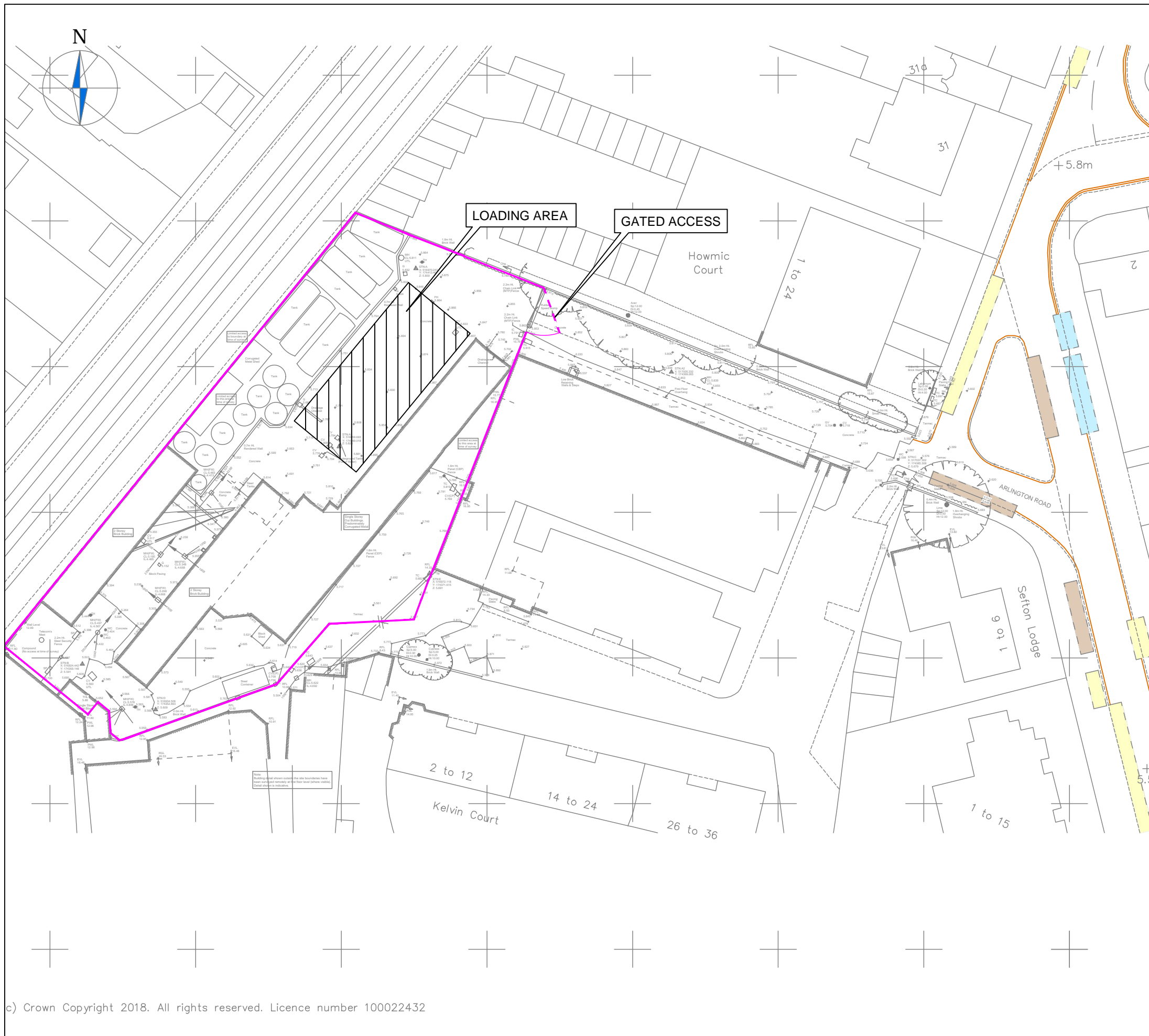
Drawing Title:
Existing Highway and Access Arrangements

Scale: **Not to Scale** Size: **A3**

Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**



Scheme Ref: **CA3743** Drawing No: **CT001** Sheet: **1 of 1** Rev: **...**



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NOTES

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2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

KEY:

	EXISTING SINGLE YELLOW LINING
	EXISTING DOUBLE YELLOW LINING
	Resident Permit Holders Only Mon-Fri 10am - 4.30pm
	Resident Permit Holders Only
	Mon-Fri 10am - 4.30pm Voucher Parking - 4 hr limit and Residents Permit holders only. Buy vouchers from shops
	Disabled Bay Only
	PROPOSED HOARDING
	PROPOSED LOADING AREA

Rev	Details	REVISION HISTORY			Drawn	Checked	Date

Status: Preliminary For Approval For Construction
 For Information For Tender As Built

Client: ...

Project: **Arlington Works**
Arlington Road, Twickenham

Drawing Title: **Proposed Construction Arrangement**

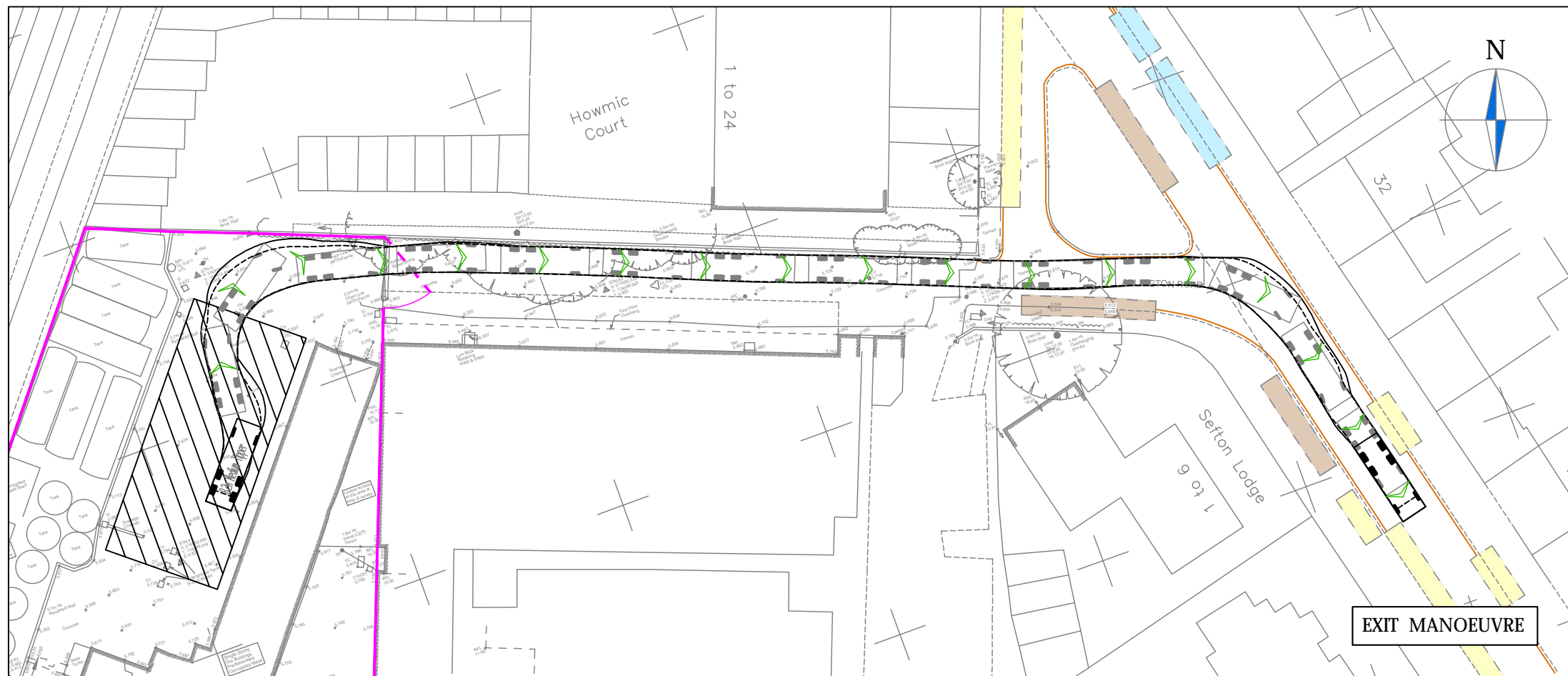
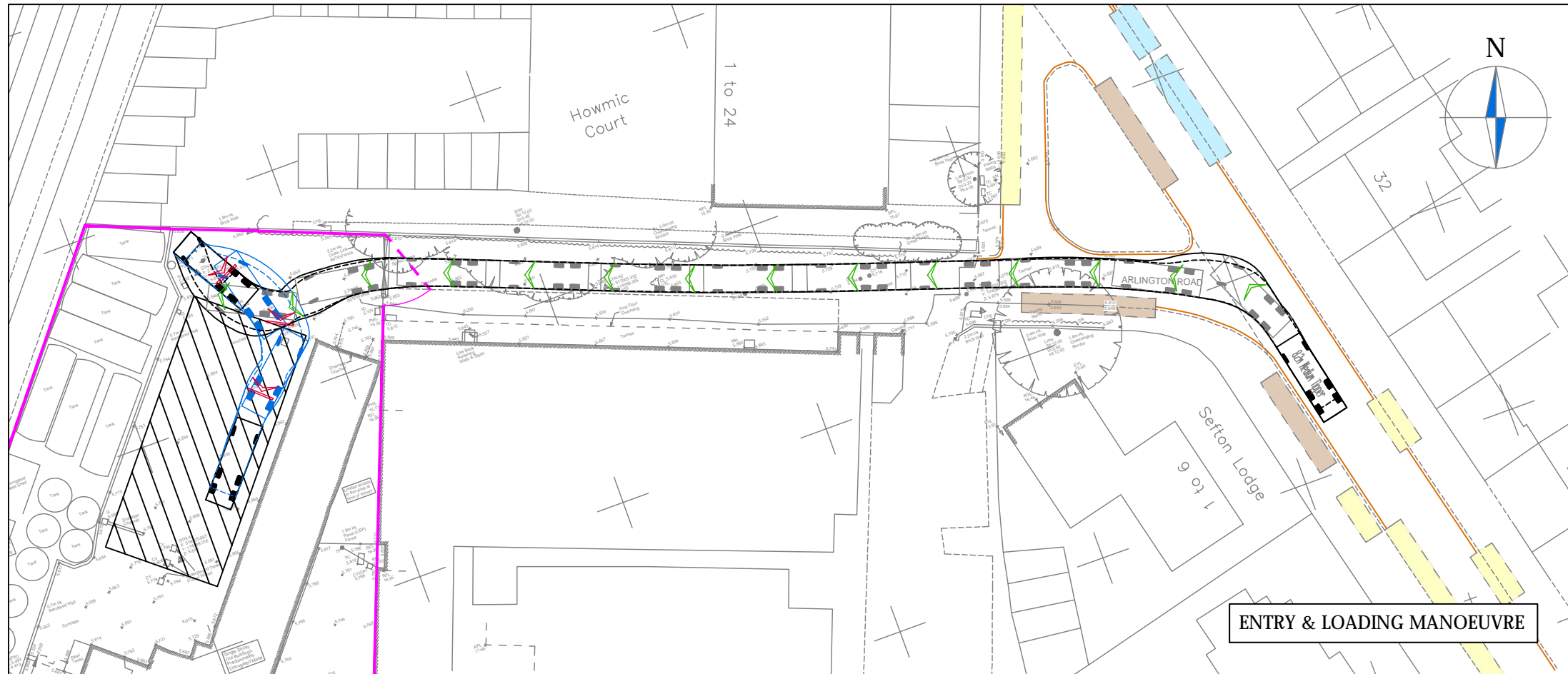
Scale: **Not to Scale** Size: **A3**

Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**

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Scheme Ref:	Drawing No:	Sheet :	Rev:
CA3743	CT002	1 of 1	...

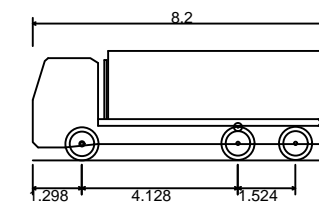
Appendix CLP B



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

MEDIUM TIPPER



Overall Length	8.200m
Overall Width	2.500m
Overall Body Height	2.894m
Min Body Ground Clearance	0.344m
Max Track Width	2.500m
Lock to Lock Time	5.00s
Kerb to Kerb Turning Radius	9.284m

FORWARD MOVEMENTS ARE SHOWN IN BLACK (*design speed - 5kph*)

REVERSE MOVEMENTS ARE SHOWN IN BLUE (*design speed - 2.5kph*)

Rev	Details	REVISION HISTORY		
...	...	Drawn	Checked	Date
Status: <input type="checkbox"/> Preliminary <input type="checkbox"/> For Approval <input type="checkbox"/> For Construction				
<input checked="" type="checkbox"/> For Information <input type="checkbox"/> For Tender <input type="checkbox"/> As Built				

Client: ...

Project: **Arlington Works**
Arlington Road, Twickenham

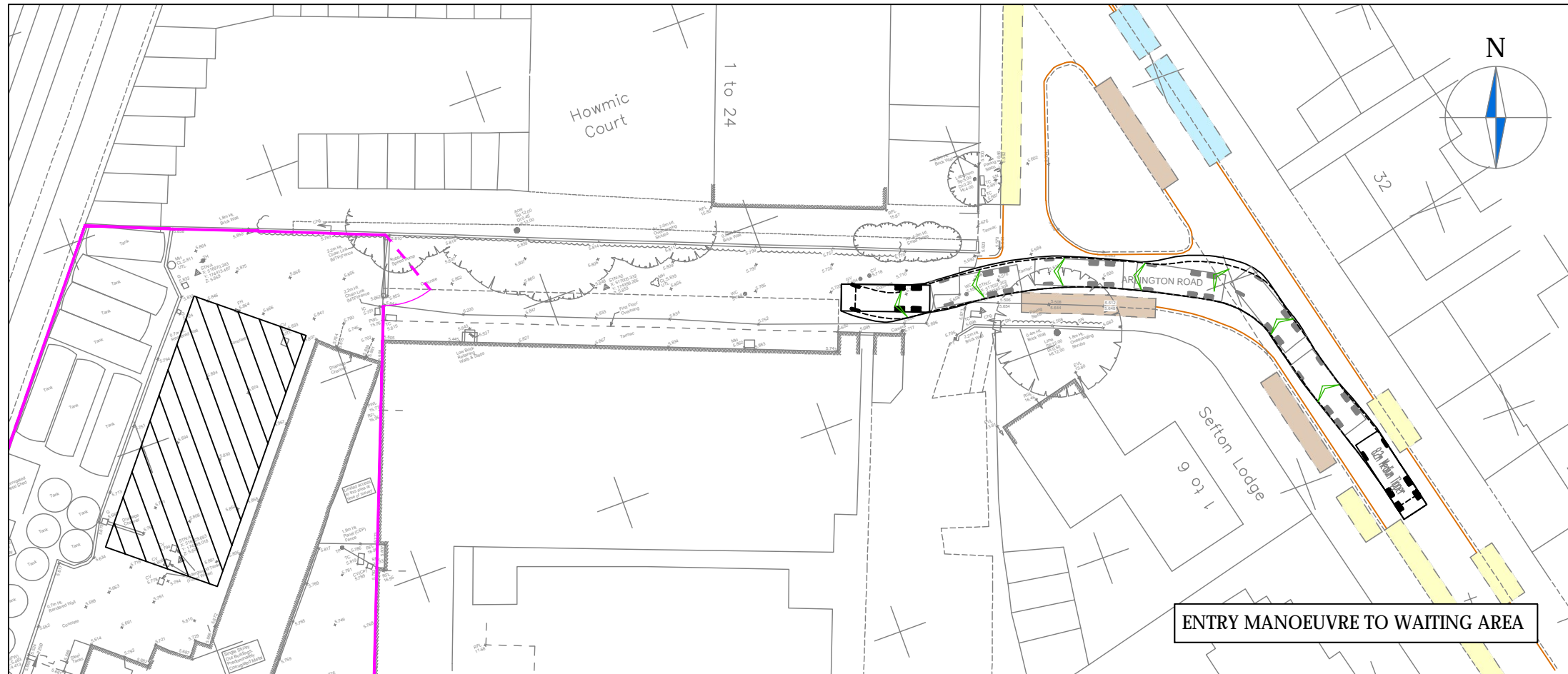
Drawing Title: **Swept Path Analysis using an 8.2m Medium Tipper**

Scale: **Not to Scale** Size: **A3**

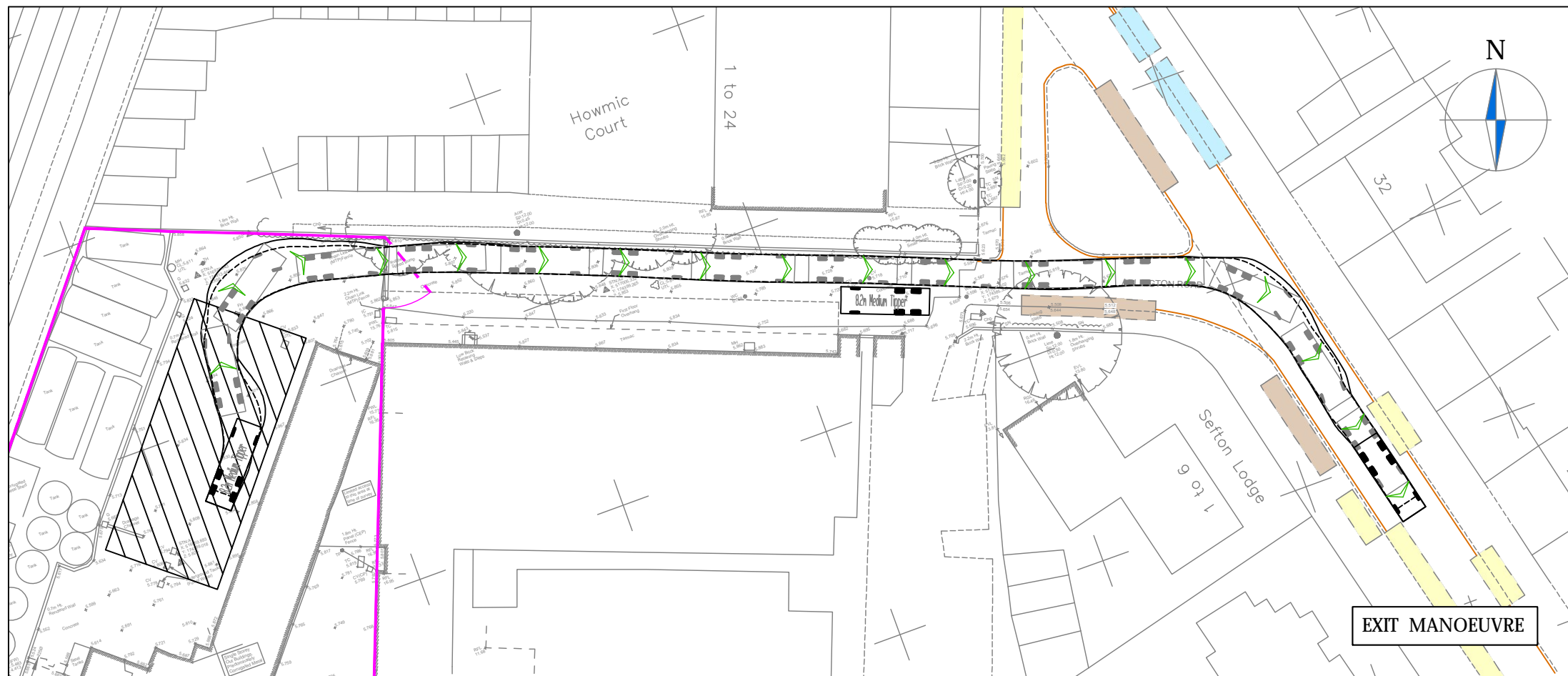
Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**



Scheme Ref: CA3743	Drawing No: CT003	Sheet: 1 of 5	Rev: ...
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ENTRY MANOEUVRE TO WAITING AREA

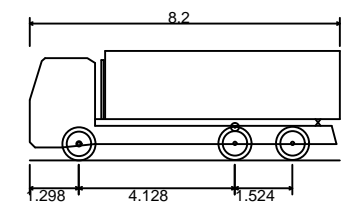


EXIT MANOEUVRE

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

MEDIUM TIPPER



Overall Length	8.200m
Overall Width	2.500m
Overall Body Height	2.894m
Min Body Ground Clearance	0.344m
Max Track Width	2.500m
Lock to Lock Time	5.00s
Kerb to Kerb Turning Radius	9.284m

 FORWARD MOVEMENTS ARE SHOWN IN BLACK (*design speed - 5kph*)

 REVERSE MOVEMENTS ARE SHOWN IN BLUE (*design speed - 2.5kph*)

Rev	Details	REVISION HISTORY			Drawn	Checked	Date

Status: Preliminary For Approval For Construction
 For Information For Tender As Built

Client: ...

Project: **Arlington Works**
Arlington Road, Twickenham

Drawing Title: **Swept Path Analysis using an 8.2m Medium Tipper**

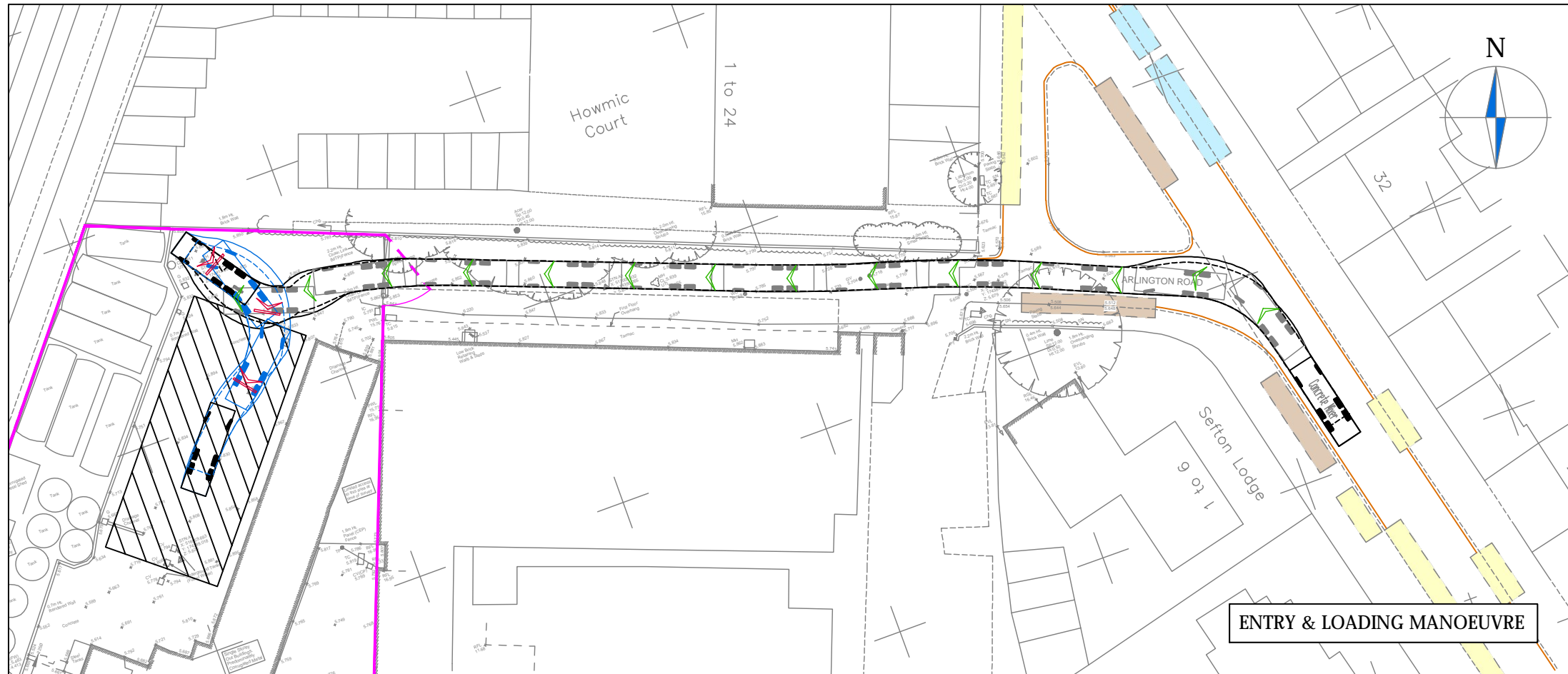
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Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**

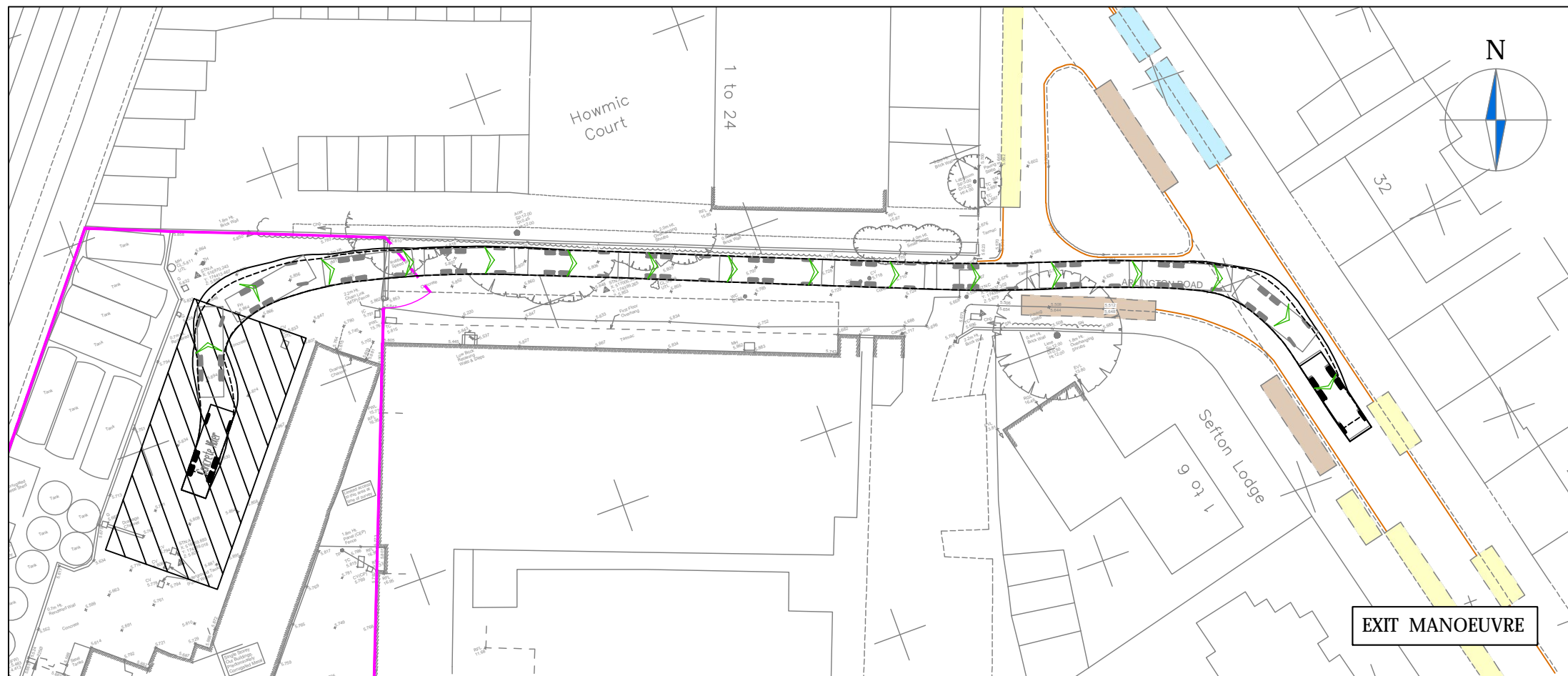


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Scheme Ref:	Drawing No:	Sheet :	Rev:
CA3743	CT003	2 of 5	...



ENTRY & LOADING MANOEUVRE

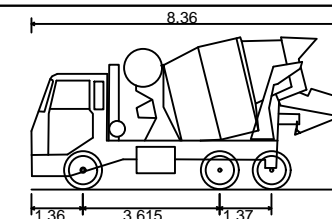


EXIT MANOEUVRE

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

CONCRETE MIXER



Overall Length	8.360m
Overall Width	2.390m
Overall Body Height	4.027m
Min Body Ground Clearance	0.358m
Max Track Width	2.413m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	8.210m

FORWARD MOVEMENTS ARE SHOWN IN BLACK (design speed - 5kph)

REVERSE MOVEMENTS ARE SHOWN IN BLUE (design speed - 2.5kph)

Rev	Details	REVISION HISTORY			Drawn	Checked	Date

Status: Preliminary For Approval For Construction
 For Information For Tender As Built

Client: ...

Project: **Arlington Works**
Arlington Road, Twickenham

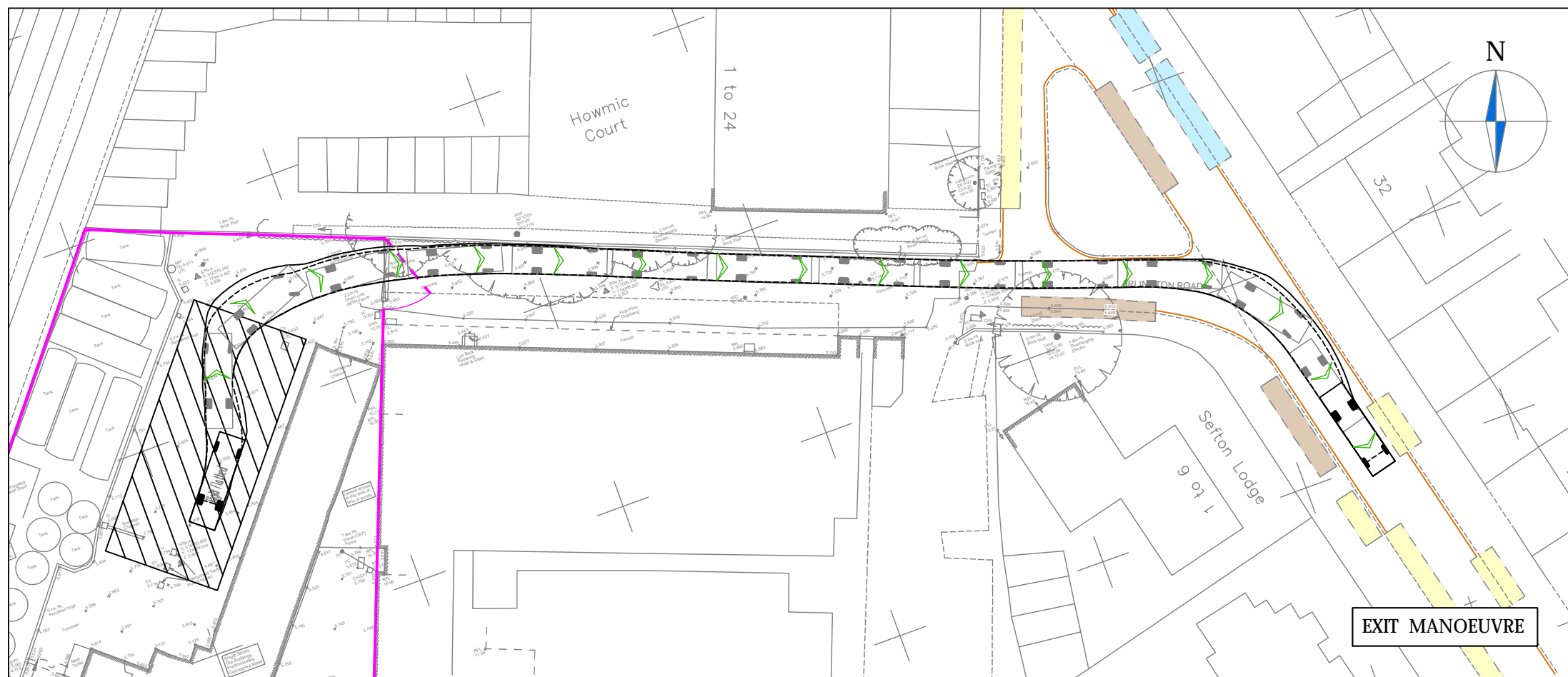
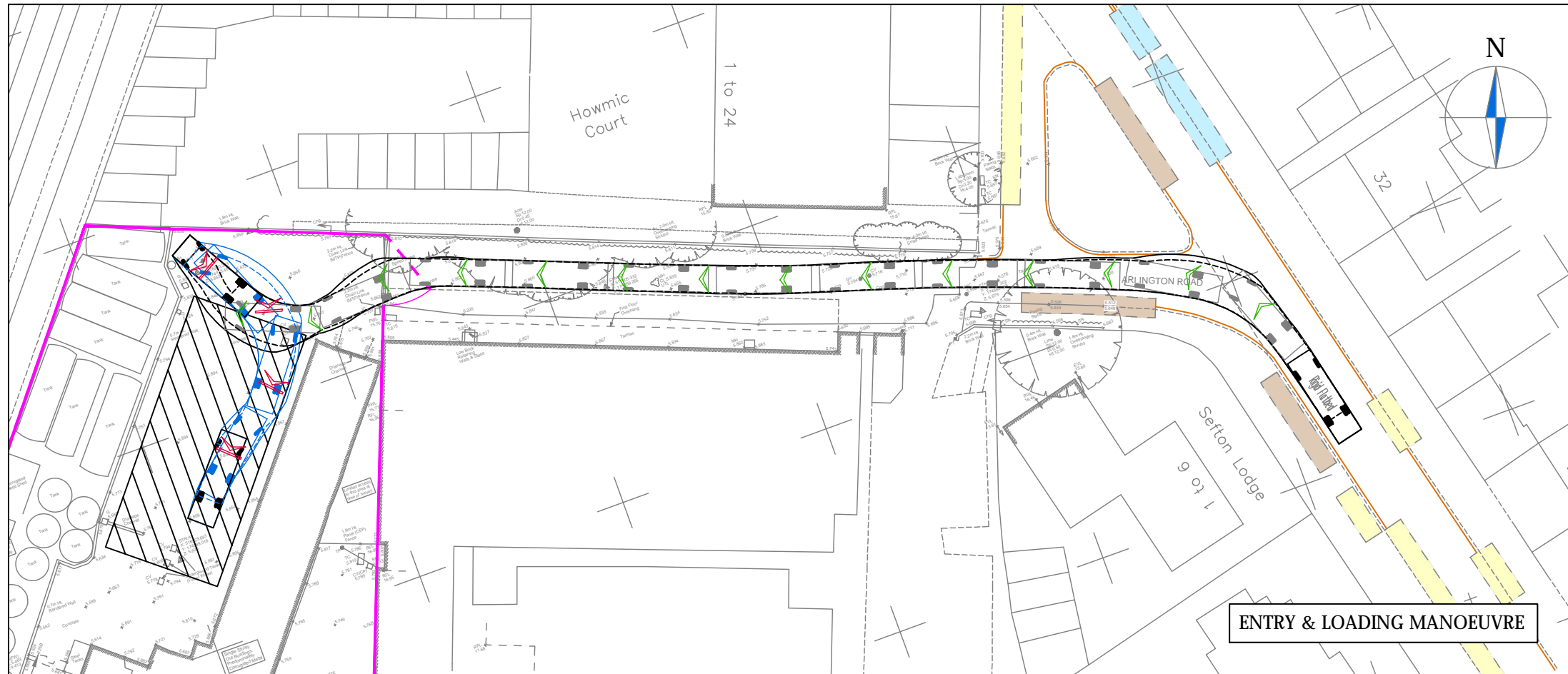
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Scale: **Not to Scale** Size: **A3**

Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**



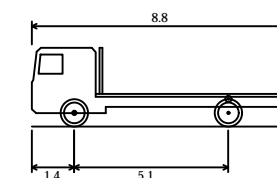
Scheme Ref:	Drawing No:	Sheet :	Rev:
CA3743	CT003	3 of 5	...



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

Rigid Flatbed



Overall Length 8.800m
 Overall Width 2.500m
 Overall Body Height 2.602m
 Min Body Ground Clearance 0.440m
 Track Width 2.470m
 Lock to lock time 3.00s
 Kerb to Kerb Turning Radius 10.000m

FORWARD MOVEMENTS ARE SHOWN IN BLACK (design speed - 5kph)

REVERSE MOVEMENTS ARE SHOWN IN BLUE (design speed - 2.5kph)

Rev	Details	REVISION HISTORY		
...	...	Drawn	Checked	Date
Status: <input type="checkbox"/> Preliminary <input type="checkbox"/> For Approval <input type="checkbox"/> For Construction				
<input checked="" type="checkbox"/> For Information <input type="checkbox"/> For Tender <input type="checkbox"/> As Built				

Client: ...

Project:
Arlington Works
Arlington Road, Twickenham

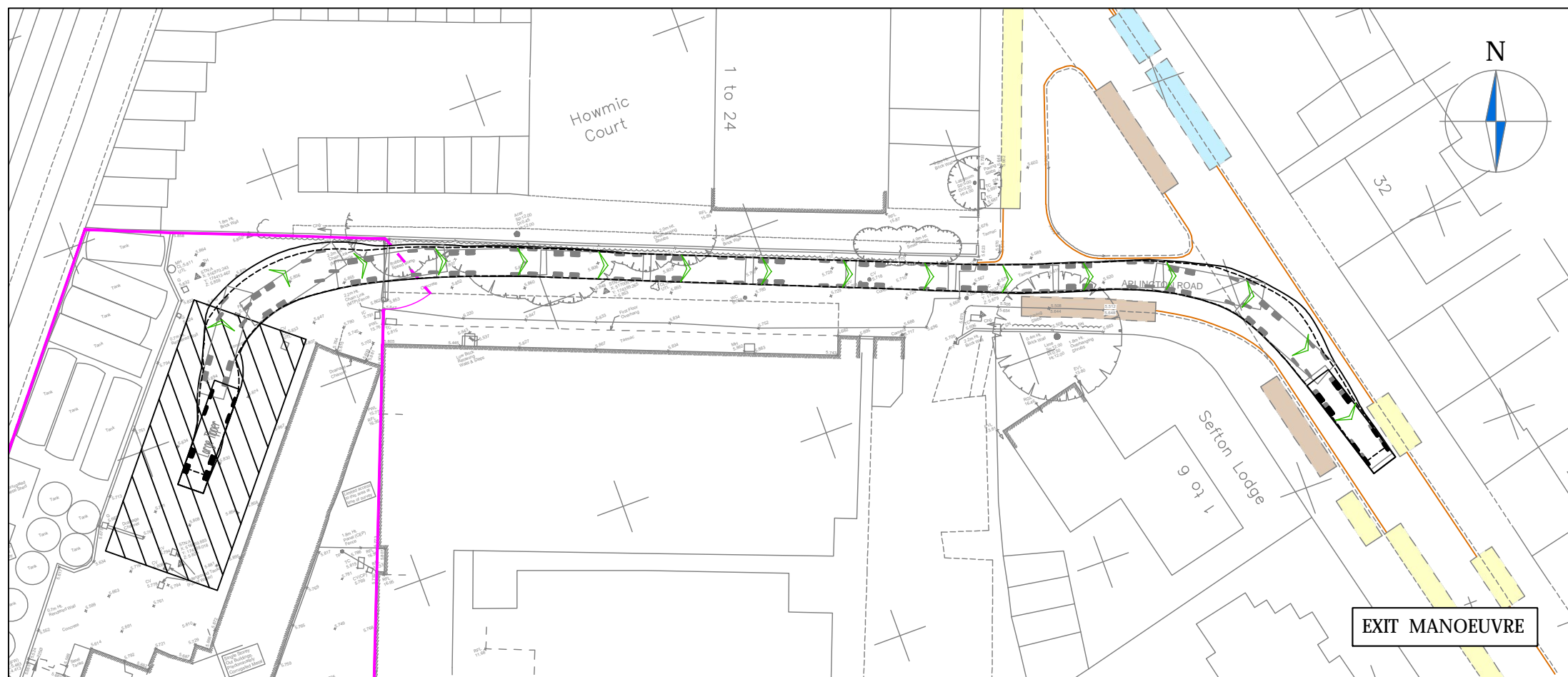
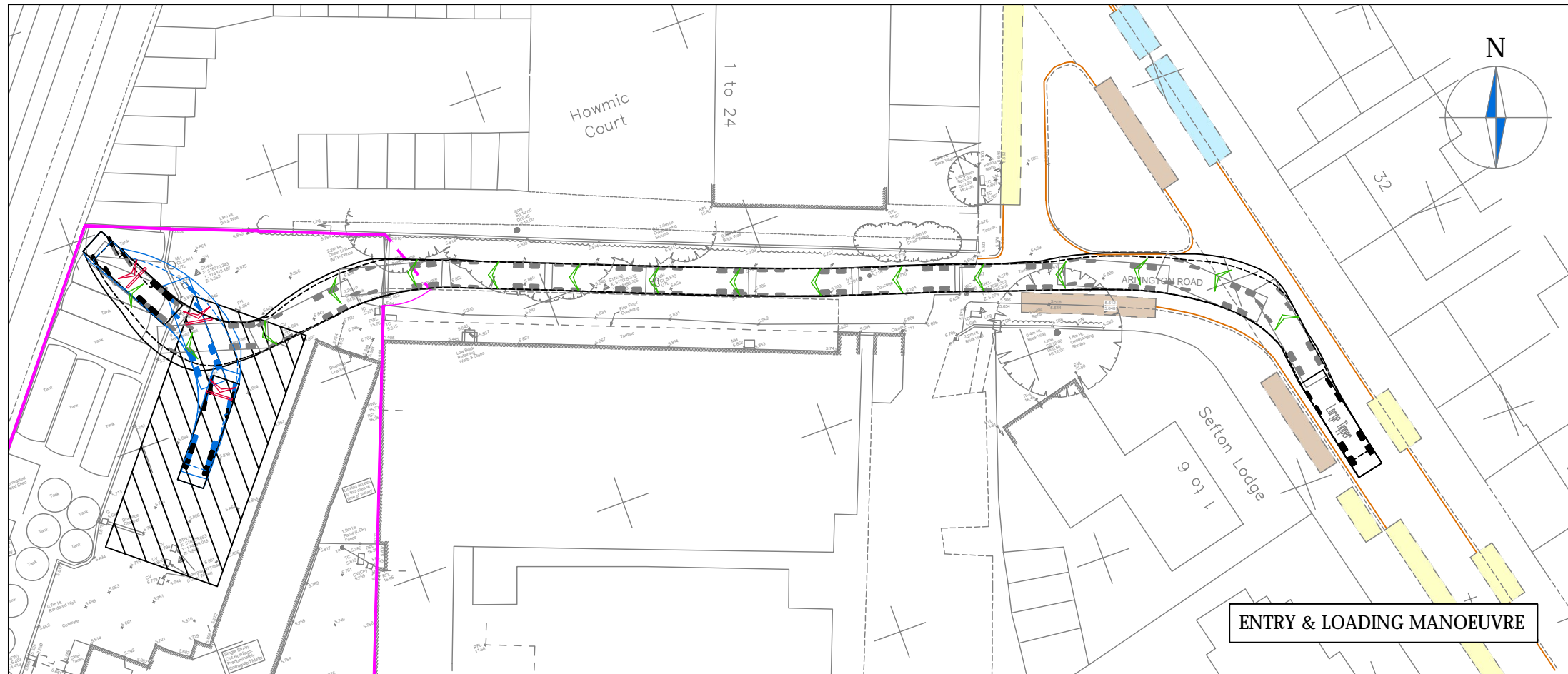
Drawing Title:
Swept Path Analysis using an 8.8m Flat Bed Rigid

Scale: **Not to Scale** Size: **A3**

Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**



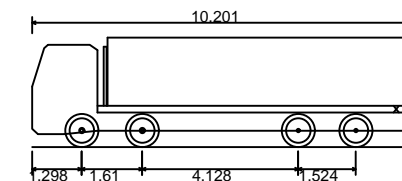
Scheme Ref: **CA3743** Drawing No: **CT003** Sheet: **4 of 5** Rev: **...**



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

LARGE TIPPER



Overall Length 10.201m
 Overall Width 2.495m
 Overall Body Height 2.890m
 Min Body Ground Clearance 0.341m
 Track Width 2.471m
 Lock to Lock Time 6.00s
 Kerb to Kerb Turning Radius 11.550m

FORWARD MOVEMENTS ARE SHOWN IN BLACK (design speed - 5kph)

REVERSE MOVEMENTS ARE SHOWN IN BLUE (design speed - 2.5kph)

Rev	Details	REVISION HISTORY		
...	...	Drawn	Checked	Date
Status: <input type="checkbox"/> Preliminary <input type="checkbox"/> For Approval <input type="checkbox"/> For Construction				
<input checked="" type="checkbox"/> For Information <input type="checkbox"/> For Tender <input type="checkbox"/> As Built				

Client: ...

Project: **Arlington Works**
Arlington Road, Twickenham

Drawing Title: **Swept Path Analysis using a 10.2m Large Tipper**

Scale: **Not to Scale** Size: **A3**

Drawn by: **HE** Checked by: **DP** Date: **16.07.2018**



Scheme Ref: **CA3743** Drawing No: **CT003** Sheet: **5 of 5** Rev: **...**