



# **Construction Logistics Plan**

# Richmond Upon Thames College London, TW2 7SJ

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# 1. INTRODUCTION

- 1.0.1 The Construction Logistics Plan (referred as "CLP") has been developed as a proposal for the overall Logistics strategy for the Residential Development Zone of the Richmond Upon Thames College, Twickenham development (referred to as "the Project" or "the Site"). Throughout this document various logistics plans have been used to demonstrate visually all key locations of logistical items and these are supplemented with commentary to explain the logic behind each item.
- 1.0.2 This document should be treated as a 'living document' and will be updated during construction if any significant changes to the scope or programme of construction occur. The CLP will be reviewed at suitable intervals throughout the construction period.
- 1.0.3 This document should be read in conjunction with the "Construction Management Statement" in the appendix.
- 1.0.4 This document should also be read in conjunction with the "Construction Management Statement" by Beard Construction, which details the construction management proposals of the wider REEC development.

### 1.1 CLP Objectives

- 1.1.1 The overall aim of the CLP is to minimise potentially negative impacts of construction on the local community. Therefore, the overall objectives of this CLP are to:
  - Lower emissions reduced overall trips of construction vehicles, particularly during peak hours; and
  - Enhance safety improve cycle, vehicle and road user safety to the wider REEC development site; and
  - Reduce congestion ensure construction vehicles utilise strategic roads for routing purposes
- 1.1.2 To support the objectives, several measures have been considered which are expanded on in *Section 5*:
  - Scheduling deliveries outside of peak hours;
  - Reuse of materials on site;
  - Consider conflict with local context and surrounding areas including non-motorised road users;
  - Encouraging the use of sustainable modes by construction workers travelling to site;
  - Reduce the need for construction travel through efficiencies in deliveries or construction techniques and in particular reduce or eliminate trips during peak periods;
  - Encourage the use of sustainable freight modes;
  - Encourage the use of more environmentally friendly vehicle/plant; and
  - Communication of site delivery/servicing strategies to workers and suppliers including appropriate routing and holding areas.



# 1.2 SITE CONTEXT



Fig 1.2.1: Site Location Plan

- 1.2.1 The site is located in Twickenham, within the London Borough of Richmond upon Thames.
- 1.2.2 This development site (shown in red in Figure 1.2.1) forms park of the wider REEC development site (shown in blue), bound by the A316 Cherstey Road to the north and the Harlequins 'Stoop' Rugby Stadium to the west. The site is bounded by the new College buildings and schools to the north (recently constructed) and residential neighbours to the east and south served from Egerton Road and Craneford Way respectively.
- 1.2.3 The Site comprises the 'Residential Development Zone' of the wider mixed-use redevelopment of the REEC site. In August 2016, Outline planning permission 15/3038/OUT was granted for the demolition of the Richmond upon Thames College (RuTC) to provide a new consolidated College campus in the north and west area of the site, enabling the remainder of the site to be redeveloped to provide a mixed-use scheme including a new Secondary School, Special Educational Needs School, Tech Hub, STEM building and Sports Centre, with the residential development to the south.
- 1.2.4 The Site has vehicular access points on Egerton Road and another from Langhorn Drive. A copy of the existing site plan is attached hereto at **Appendix A.**



# 1.3 DEVELOPMENT PROPOSAL

- 1.3.1 The proposed residential development is for; Demolition of existing college buildings, removal of hard-surfacing, site clearance and groundworks together with redevelopment of the site to provide new residential units; together with associated parking, cycle parking, open space and landscaping.
- 1.3.2 Subsequent to the Outline scheme, CLP's were also prepared for the Phase 1 and Phase 2 works to the 'School Development Zone', secured through planning applications 15/3038/DD01 and 15/3038/DD19 respectively. The methodologies set out in these documents have also been considered to ensure consistency in construction delivery practices.
- 1.3.3 A contractor has not yet been appointed however their details will be provided within a revision of the CLP. The contractor will manage the CLP throughout the construction duration.
- 1.3.4 The proposed hours of operation for the site will be:
  - Monday to Friday: 08:00 18:00.
  - Saturday: 08:00 13:00.
  - Sunday, Bank or Public Holiday: No activity unless agreed with the Council.

### 1.4 CLP Structure

- <u>Section 2:</u> Context, Considerations and Challenges
- <u>Section 3:</u> Construction Programme and Methodology
- <u>Section 4:</u> Vehicle Routing and Site Access
- <u>Section 5:</u> Strategies to Reduce Impact
- <u>Section 6:</u> Estimate Vehicle Movements
- <u>Section 7:</u> Implementing, Monitoring and Updating

# 2. CONTEXT, CONSIDERATIONS AND CHALLENGES

- 2.1 Policy Context
- 2.1.1 This section of the CLP references policies we have considered in the preparation of the document.

#### The Traffic Management Act (2004)

2.1.2 The act makes 'provision in relation to the management of road networks; to make new provision for regulating the carrying out of works and other activities in the street'. It



acknowledges that highways may be occupied due to construction activities and identifies appropriate changes levied for any extended occupation.

#### National Planning Policy Framework (NPPF)

2.1.3 The NPPF promotes the use of sustainable transport through the UK, safe road design and the efficient and sustainable delivery of good and supplies, therefore the production of a CLP with align with this.

#### Designing for Deliveries, Freight Transport Association (2006)

2.1.4 Published in 2006, Designing for Deliveries, provides specifications for the size of delivery vehicles, turning radii and clearance requirements and should be used to ensure that delivery vehicles can safely and efficiently access the construction site.

#### The London Plan (2021)

- 2.1.5 The London Plan 2021 has a variety of policies designated to improve construction logistics, most notably *Policy T7*<sup>1</sup>. This is outlined below:
  - A Development plans and development proposals should facilitate sustainable freight movement by rail, waterways and road.
  - B Development Plans, Opportunity Area Planning Frameworks, Area Action Plans and other area-based plans should include freight strategies. These should seek to:

1) reduce freight trips to, from and within these areas

2) coordinate the provision of infrastructure and facilities to manage freight at an area-wide level

3) reduce road danger, noise and emissions from freight, such as through the use of safer vehicles, sustainable last-mile schemes and the provision of rapid electric vehicle charging points for freight vehicles.

Such strategies should be developed through policy or through the formulation of a masterplan for a planning application.

- C To support carbon-free travel from 2050, the provision of hydrogen refuelling stations and rapid electric vehicle charging points at logistics and industrial locations is supported.
- D Development Plans should safeguard railheads unless it can be demonstrated that a railhead is no longer viable or capable of being made viable for rail-based freight-handling. The factors to consider in assessing the viability of a railhead include:
  - planning history, environmental impact and its relationship to surrounding land use context recognising that the Agent of Change principle will apply
  - location, proximity to the strategic road network and existing/potential markets

<sup>&</sup>lt;sup>1</sup> https://www.london.gov.uk/sites/default/files/the\_london\_plan\_2021.pdf



• the existing and potential contribution the railhead can make towards catering for freight movements by non-road modes

• the location and availability of capacity at alternative railheads, in light of current and projected capacity and market demands.

- E Consolidation and distribution sites at all scales should be designed to enable 24hour operation to encourage and support out-of-peak deliveries. 435 The London Plan 2021 – Chapter 10
- F Development proposals for new consolidation and distribution facilities should be supported provided that they do not cause unacceptable impacts on London's strategic road networks and:

1) reduce road danger, noise and emissions from freight trips

2) enable sustainable last-mile movements, including by cycle and electric vehicle

3) deliver mode shift from road to water or rail where possible (without adversely impacting existing or planned passenger services).

- G Development proposals should facilitate safe, clean, and efficient deliveries and servicing. Provision of adequate space for servicing, storage and deliveries should be made off-street, with on-street loading bays only used where this is not possible.
   Construction Logistics Plans and Delivery and Servicing 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.
- H Developments should be designed and managed so that deliveries can be received outside of peak hours and in the evening or night time. Appropriate facilities are required to minimise additional freight trips arising from missed deliveries and thus facilitate efficient online retailing.
- I At large developments, facilities to enable micro-consolidation should be provided, with management arrangements set out in Delivery and Servicing Plans.
- J Development proposals must consider the use of rail/water for the transportation of material and adopt construction site design standards that enable the use of safer, lower trucks with increased levels of direct vision on waste and landfill sites, tip sites, transfer stations and construction sites.
- K During the construction phase of development, inclusive and safe access for people walking or cycling should be prioritised and maintained at all times.



#### The Vision Zero Action Plan

- 2.1.6 The Vision Zero Action Plan comprises of:
  - **Safe speeds:** Encouraging speeds appropriate to the streets of a busy and populated city through the widespread introduction of new lower speed limits
  - Safe streets: Designing an environment that is forgiving of mistakes by transforming junctions, which see the majority of collisions, and ensuring safety is at the forefront of all design schemes
  - Safe vehicles: Reducing risk posed by the most dangerous vehicles by introducing a world-leading Bus Safety Standard across London's entire bus fleet and a new 'Direct Vision Standard' for Heavy Goods Vehicles
  - Safe behaviours: Reducing the likelihood of road users making mistakes or behaving in a way that is risky for themselves and other people through targeted enforcement, marketing campaigns, education programmes and safety training for cyclists, motorcycle and moped riders
  - **Post-collision response:** Developing systematic information sharing and learning, along with improving justice and care for the victims of traffic incidents

### The Mayor's Transport Strategy (2018)

- 2.1.7 The Mayor's Strategy focusses on shifting car users to more active modes and improving street environments to encourage more walking and cycling. Policy 5 of the strategy sets out how TfL will work to ". prioritise space efficient modes of transport to tackle congestion and improve the efficiency of streets for the movement of people and goods…"
- 2.1.8 Proposal 16 includes the commitment of TfL to improve the efficiency of freight and servicing by moving freight onto the rail network and London's waterways; and completing the network of construction consolidation centres in London.
- 2.1.9 Proposal 17 is including measures to improve the efficiency of last mile deliveries and servicing through smart procurement, micro-distribution services served by zero emissions vehicles and walking/cycling deliveries, retiming of deliveries, considering local access and loading restrictions and improving the design and management of loading/servicing activities and developing a "London lorry standard."

#### London Freight Plan

2.1.10 There are a number of "Actions" included in the Plan for TfL, of which some relate directly to construction activity. Therefore, the CLP needs to consider these Actions to incorporate into the measures. Action 1 relates to a HGV Safety Permit which includes Direct Vision Standards to be incorporated into supply chain contracts and which are to be aligned with FORS. Action 9 includes consideration of consolidation centres, and the importance of the role of marshals for access.



### TfL Healthy Streets

- 2.1.11 The 10 Healthy Streets indicators are:
  - Pedestrians from all walks of life London's streets should be welcoming places for everyone to walk, spend time in and engage in community life.
  - **People choose to walk, cycle and use public transport** A successful transport system enables more people to walk and cycle more often.
  - Clean air Improving air quality delivers benefits for everyone and reduces unfair health inequalities.
  - **People feel safe** The whole community should feel comfortable and safe on our streets at all times. People should not feel worried about road danger.
  - Not too noisy Reducing the noise impacts of traffic will directly benefit health and improve the ambience of our streets.
  - Easy to cross
     Making streets easier to cross is important to encourage more walking and to connect communities.
  - Places to stop and rest A lack of resting places can limit mobility for certain groups of people.
  - Shade and shelter Providing shade and shelter enables everybody to use our streets, whatever the weather.
  - People feel relaxed

More people will walk or cycle if our streets are not dominated by motor traffic, and if pavements and cycle paths are not overcrowded, dirty or in disrepair.

Things to see and do
 People are more likely to use our streets when their journey is interesting and
 stimulating, with attractive views, buildings, planting and street art.

Richmond Upon Thames College Residential Development Site **Outline Construction Logistics Plan** Revision 2

#### Site Plans 2.2



Fig 2.2.1: Regional Plan



Richmond Upon Thames College Residential Development Site Outline Construction Logistics Plan Revision 2



Fig 2.2.2: Local Context Plan



Richmond Upon Thames College Residential Development Site Outline Construction Logistics Plan Revision 2



Fig 2.2.3: Application Site Boundary Plan







# 2.3 Local Access including Highway, Public Transport, Cycling and Walking

2.3.1 This section describes in detail the footways, highways and cycle route provisions surrounding the sites.

#### <u>Highways</u>

- 2.3.2 The site is bound by Chertsey Road (A316) to the north and forms a major part of the Transport for London Road Network (TLRN). Chertsey Road is a dual carriageway road running northsouth in both directions. It accommodates a wide variety of road users, vehicles and bus routes.
- 2.3.3 The site is bound by Egerton Road to the east. Egerton Road is a single carriageway road running north-south turning in both directions. It accommodates predominantly residential road users. Egerton Road does not directly connect to the A316 Chertsey Road with a vehicle restriction/barrier positioned immediately to the south of the College car park. Therefore, all traffic accesses Egerton Road via adjoining residential streets.

#### Public Transport

- 2.3.4 The site is within walking distance of a number of bus services on Whitton Road, approximately 450m from the Egerton Road site access. These bus stops form part of TfL's London Bus Network and serve bus routes 281 and 681.
- 2.3.5 In addition, routes 110 and 969 are accessible further north on Chertsey Road. Table 2.3.1 summarises the bus services available within close proximity of the site, full details of which can be found at <a href="https://tfl.gov.uk/modes/buses/">https://tfl.gov.uk/modes/buses/</a>.

Bus Route	Route Summary	Typical Frequency
281	From: Tolworth Tower To: Hounslow Bus Station	9-13 mins
681	From: Hounslow To: Teddington	Morning and Afternoon Services
110	From: Hampton Hill To: Hammersmith	15 mins
969	From: Gladstone Avenue, Whitton To: Roehampton Vale	Tuesday and Friday Services

Table 2.3.1 Local Bus Information

2.3.6 The site lies within walking distances from Twickenham Rail Station (circa 8-minute walk) which is directly accessible to/from the site on-foot. The station is operated by South West Trains and is served by a number of routes providing regular services into Central London.



#### Walking & Cycling

- 2.3.7 The majority of the roads in the vicinity of the site have footways on both sides which are supported by features such as street lighting, tactile paving and dropped kerbs.
- 2.3.8 In terms of cycle infrastructure, there is no cycle friendly route which passes any of the site access points. The A316 Chertsey Road provides shared pedestrian/cycle footpaths along much of its length with regular crossing points facilitated by pedestrian footbridges and signalised junctions.
- 2.3.9 There is a public right of way which runs along the western side of the College campus, linking the A316 Chertsey Road/Langhorn Drive with Craneford Way to the south.
- 2.3.10 Immediately to the south, Marsh Farm Lane links with Craneford Way Playing Fields, with further dedicated pedestrian and cycle routes continuing south across the railway line or through 'Twickenham Junction Rough' park lane which provides an off-road route to Twickenham District Centre along the River Crane.



Fig 2.3.1: Surrounding Cycle Routes



### 2.4 Community Considerations and Challenges

#### <u>Schools</u>

- 2.4.1 The nearest school is the Richmond upon Thames College (*labelled 1 in Fig 2.2.2*), located to the north of the residential development along A316 Chertsey Road. During Phase 1 of the residential development, an area of the college located in Phase2 will still be in operation.
- 2.4.2 Richmond upon Thames School (*labelled 2 in Fig 2.2.2*) is also located to the north of the residential development along Egerton Road.

#### **Hospitals**

2.4.3 The nearest hospital is West Middlesex Hospital, approximately 2.3 miles away located to the north-east of the site.

#### Local Residential Properties

- 2.4.4 To the south of the site, there are terraced houses along Crayford Way. The southern boundary of the site is backed onto by private gardens from the two-storey residential terrace on Crayford Way.
- 2.4.5 The south-western boundary of the site is bound by Egerton Road hosting a mixture of residential housing opposite the site.

#### **Twickenham Station**

2.4.6 Twickenham Station is located an 8-minute walk to the south-east of the site on the site on London Road (A310).

#### Twickenham Stoop Stadium

2.4.7 To the west of site is The Twickenham Stoop Stadium (*labelled 3 in Fig 2.2.2*) accessed from Langhorn Drive off A316 Chertsey Road. This stadium is home to Harlequins RFC.

#### Twickenham Stadium

2.4.8 To the north of the site beyond A316 Chertsey Road is the Twickenham Stadium (*labelled 4 in Fig 2.2.2*). The stadium is situated beyond a series of residential housing and is accessed from Whitton Road, off A316 Chertsey Road.

#### Nuffield Health Fitness and Wellbeing Centre

2.4.9 To the west of site is the Nuffield Health Twickenham Fitness and Wellbeing Centre (*labelled 5 in Fig 2.2.2). The centre is accessed from Langhorn Drive off A316 Chertsey Road.* 

#### Local Commercial Businesses

2.4.10 The site has no immediate surrounding commercial businesses. The nearest can be found along Whitton Road to the east of the site.



# 3. CONSTRUCTION PROGRAMME AND METHODOLOGY

### 3.1 Construction Programme

- 3.1.1 Total duration of the residential development is 159 weeks, with a planned start date of January 2024 and first occupations intended in February 2026. The whole development is planned to be operational by January 2027.
- 3.1.2 Timetables summarising the potential of the site's construction sequences are set out in **Table 3.1.1** below; although it is dependent on the timescale to discharge the relevant planning conditions and appoint a contractor.

Phase 1 Construction stage	Start	End
Start on site	January 2024	N/A
Substructure	July 2024	April 2025
Superstructure	October 2024	November 2025
Facade	October 2024	June 2026
Fit out	July 2025	November 2026
Completion date	November 2026	N/A
Phase 2 Construction stage	Start	End
Start on site	September 2024	N/A
Substructure	January 2025	June 2025
Superstructure	April 2025	December 2025
Facade	April 2025	July 2026
Fit out	September 2025	January 2027
Completion date	January 2027	N/A

Table 3.1.1 Site programme



Fig 3.1.1: Phasing Plan



3.1.3 The programme of works will be subject to review to take into account external factors like the works programme for other parts of the REEC site (such as the construction of the A316 Chertsey Road/Langhorn Drive junction for example).

### 3.2 Methodology

#### Site Setup and Demolition

- 3.2.1 The initial site phase will include erection of hoarding to the curtilage of the site, demolition works to remove the existing college structures and setting up the welfare. The appropriate licenses will be acquired by the Main Contractor in advance and prior to commencement.
- 3.2.2 Any demolition will be undertaken by using mechanical plant with materials stored on site for future reuse where possible. Existing hard standing and obstructions across the site will be crushed on site and re-used within the pile mat to minimise the amount of construction vehicle movements. License waste carriers will collect any unusable materials.
- 3.2.3 Required service diversions will also commence during this period.

#### <u>Piling</u>

3.2.4 Some of the structures will require piled foundations. Construction vehicle movements throughout this phase will comprise mainly of concrete deliveries and muck away lorries. Excavated materials will be kept on site until full loads can be taken away.

#### **Substructure**

3.2.5 Below ground works include excavation of material and construction foundations. The substructure will be formed of concrete and steel reinforcement with concrete deliveries and steel deliveries being the primary vehicles accessing the site during this stage of construction.

#### **Superstructure**

3.2.6 The main structural elements of the frame will be constructed using a mixture of concrete and steel reinforcement, or traditional blockwork. The main deliveries during this phase will again be concrete and steel deliveries or blocks and bricks. A tower crane will be installed on the site in Phase 2 to facilitate the construction of Block 5. Scaffold systems will be used to construct the superstructures.

#### **Facades**

3.2.7 The faced includes the external elements of the building currently proposed as brickwork, roofing and glazing. The materials will be delivered on large, consolidated bulk loads, aiming to reduce the number of vehicle movements to site. Telehandlers and a tower crane will again facilitate the unloading and placement of materials.



### <u>Fit out</u>

3.2.8 Where possible, elements of the fit out will be manufactured off site and brought to site ready for final installation. The stage includes all mechanical, electrical and plumbing installation and testing.

# 4. VEHICLE ROUTING AND SITE ACCESS

4.0.1 This section sets out the proposed vehicle routing and access arrangements for construction both outside the site on the main highway network and within site.



### 4.1 Routing

Fig 4.0.1: Regional Plan with Construction Routing

- 4.1.1 The route proposed for construction vehicles will be from Langhorn Drive Road for access and egress to the site (*as shown in Fig 4.0.1 & Fig 4.0.2*), via the strategic highway network in the form of A316 Chertsey Road, which in turn facilitates access to/from the M3 or A4. The routing will not change throughout the construction duration.
- 4.1.2 A temporary haulage road has been constructed within the overall site to serve all construction traffic, in a similar layout to the final scheme (without the traffic calming), to then be constructed as the final access road to serve the residential development once construction is complete.





Fig 4.0.2: Local Context Plan with Construction Routing

- 4.1.3 To facilitate the delivery of the development there will be a requirement for a temporary vehicular access to serve residents of the development from Egerton Road during a period of the construction programme. This is considered important from a site management and safety perspective in order to avoid the potential conflict between construction traffic/activity and residential traffic.
- 4.1.4 Traffic marshals will be located at each site gate to ensure pedestrian safety is maintained in the vicinity of the site.

# Richmond Upon Thames College Residential Development Site Construction Logistics Plan Revision 2





Appendix B: Overall Proposed Site Plan (Phase 2 commenced)

### 4.2 Types of Vehicles

- 4.2.1 London Square's strategy aims to reduce environmental impact by utilising larger delivery vehicles, consequently reducing journey numbers, pollution and congestion in line with the London Plan. This will be managed appropriately to avoid excessive impact on the local highway network.
- 4.2.2 Where possible, offsite construction methods such as roof trusses will be utilised which will require articulated vehicle delivery (*see paragraph* **5.3.1**).
- 4.2.3 Due to the above, there are several types of deliveries that cannot be consolidated in size. Therefore, London Square have demonstrated the swept path analysis (SPA) of 16.5m articulated deliveries within the logistical plans, anticipating the largest vehicle movements to site.
- 4.2.4 The following list provides an indication of the types of vehicles anticipated during the construction process:



<b>Construction Vehicle</b>	Operation	Dimensions
Skip Lorries	Waste Removal	Length: 6.3m
		Width: 2.9m
		Height: 2.9m
Large Tipper Lorries	Transporting loose materials	Length: 10.2m
		Width: 2.5m
		Height: 2.9m
Small Tipper Lorries	Transporting loose materials	Length: 6.5m
		Width: 2.5m
		Height: 2.9m
Concrete Lorries	Mixing components and materials	Length: 8.4m
		Width: 2.4m
		Height: 4.0m
Flat-bed rucks	Transport materials / steels etc	Length: 8.0m
		Width: 2.1m
Transit Vans	It is anticipated that these will be	Length: 5.3m
	used for the majority of finishing	Width: 2.0m
	materials and sanitary ware	Height: 2.5m
Articulated Lorries	Transport materials / steels etc	Length: 15.5m
		Width: 2.5m
		Height: 3.0m

Table 4.2.1 Type of Construction Vehicles

4.2.5 In addition to these regular vehicles, there will be a requirement for access mobile cranes and road sweepers.



### 4.3 Site Access



Appendix C: Site Plan and Swept Path Analysis (Phase 1)

- 4.3.1 The proposed construction site set up and swept path analysis during the phase 1 construction works is illustrated in *Appendix C*.
- 4.3.2 The site is accessed via the access gate on Langhorn Drive, controlled by Beard Construction who are managing the wider REEC development. Deliveries will enter the site and then use the internal haul road to the residential development site.
- 4.3.3 All deliveries will then be able to enter the residential site in a forward gear and turn on site, egressing in a forward gear. Traffic marshals shall be on hand at all times to assist vehicle manoeuvring at the site access.
- 4.3.4 Barriers have already been installed as part of the wider development on the side of the temporary haul road to segregate pedestrians and cyclists of the college from the site haul road during construction access and egress movements. The management of this is to be undertaken by Beard Site Team.



- 4.3.5 Due to site constraints, the site will have to demolish the existing structures in two phases whilst the second phase is still occupied by the college.
- 4.3.6 A temporary access will be provided off Egerton Road for new residents during the later stages of Phase 1. The temporary access allows the new residents to move in once homes are compete rather than have new homes completed but unoccupied. It also allows home and landscaping on Egerton Road to be completed first reducing the impact of construction on residential neighbours.
- 4.3.7 The temporary access off Egerton Road would be used by residents for a period of approximately 12 months, where some homes are occupied and there is still significant ongoing construction on the remained of the site. This access would enable the early occupation of the development prior to the completion of the full development when all vehicular access would then be gained from Langhorn Drive.
- 4.3.8 There would be no through route permitted across the site in either direction and all early residents of the development would use the temporary entrance to gain access.
- 4.3.9 All new residents occupying the development during the initial 12-month period would be made fully aware of the temporary nature of the vehicle access and kept up to date on the timescales for its permanent closure.
- 4.3.10 As committed to under the Outline Planning Consent, a new and improved signalised junction is due to be constructed where Langhorn Drive meets the A316 Chertsey Road. The construction of these junction improvement works is the responsibility of Richmond College but will need to considered timings with the residential development.
- 4.3.11 Drawing 2020/5453/004 (*Appendix E*) illustrates the proposed temporary access arrangement to be implemented during the construction phase. The proposed access would provide suitable geometry to allow two cars to pass at the bell-mouth.
- 4.3.12 The proposed access arrangement would also provide suitable space for a refuse vehicle to enter and exit the site, with space temporarily laid out for a refuse vehicle to turn on site. A temporary agreement would be arranged with LBRT's refuse collection department to add this arrangement to its existing route off Egerton Road.
- 4.3.13 The proposed temporary works on Egerton Road will be secured through an appropriate legal agreement there will also be the requirement for a legal agreement to undertake works within the public highway with the details to be agreed by the Council. This will include, amongst other details, the requirement for the temporary access to be closed off and the footway reinstated with full height kerbs.
- 4.3.14 The proposed arrangement provides the safest and most appropriate strategy during the building phase of the new development, given the constraints.

# Richmond Upon Thames College Residential Development Site Construction Logistics Plan Revision 2





Appendix D: Site Plan and Swept Path Analysis (Phase 2)

# 4.4 Loading/Unloading & Storage of Materials

- 4.4.1 Deliveries will be on 'just in time' basis with all deliveries needing to be booked in 48 hours prior to the day of delivery. This will assist in the minimum amount of materials being stored within the site at any one time and will help to improve delivery efficiency, as well as ensuing access via legitimate vehicles only.
- 4.4.2 The delivery of materials will be received within the loading areas within the residential site boundary and immediately transferred to the appropriate location on the site. Dedicated storage areas are also provided during construction for materials requiring longer term storage.
- 4.4.3 Any storage of materials on-site will need to be constantly reviewed as work progresses and the site conditions change to ensure that all materials are accommodated on the site and not on public highways.



# 5. STRATEGIES TO REDUCE IMPACTS

5.0.1 The following planned measures shown in *Table 5.0.1* have been identified to help the contractors achieve the goals of the CLP and better manage the challenges identified in Section 2.

High Impact Site Planned Measures Checklist	Committed	Proposed	Considered
Measures influencing construction ve	hicles and deliv	veries	
Safety and environmental standards and programmes	х		
Adherence to designated routes	x		
Delivery scheduling	х		
Re-timing for out of peak deliveries	х		
Re-timing for out of hours deliveries	x		
Use of holding areas and vehicle call off areas		х	
Use of logistics and consolidation centres			х
Measures to encourage sustai	nable freight		
Freight by Water			х
Freight by Rail			х
Material procurement m	easures		
DfMA and off-site manufacture			х
Re-use of material on site		x	
Smart procurement		x	
Other Measures			
Collaboration amongst other sites in the area	x		
Implement a Staff Travel Plan	х		

Table 5.0.1 High Impact Site Planned Measures Checklist

# 5.1 Measures Influencing Construction Vehicles and Deliveries

#### Safety and Environmental Standards and Programmes

- 5.1.1 In general, contractors working on the scheme will be expected to adhere to the Construction Logistics and Community Safety (CLOCS) standard. This aims to ensure that the Contractor will follow safe practices in the management of operations, vehicles, drivers and the construction site. This will be included as part of the procurement process by specifying the operator's quality standard which is both a practical solution to construct the development in the time frame, safe and limits the impact on others.
- 5.1.2 In addition, the Contractor is to use the Fleet Operator Recognition Scheme (FORS) to confirm that a fleet operator can demonstrate appropriate systems and policies are in place to ensure drivers are suitably fit, qualified and licenced to operate the vehicles. Also, that the vehicles are properly maintained, equipped and insured. This should be in accordance with FORS Silver.



- 5.1.3 Competent traffic marshals will be employed to oversee the safety of road users, pedestrians and cyclists at the interface of the residential site to the wider REEC site where construction site access and egress is proposed, resulting in minimal conflict with the college users. Banksmen will be employed to ensure safe movement of plant and vehicles when on site.
- 5.1.4 Solid hoarding will be erected to protect members of public from the site, with designated gateman on the proposed site gates. Appropriate signage will be provided along the perimeters of the sites to advise cyclists and pedestrians of the construction works.
- 5.1.5 All materials will be unloaded and loaded on-site and will be stored on-site off the public highway to reduce any conflict with the public highway.

#### Adherence to Designated Routes

- 5.1.6 Details of routes to be used for journeys to and from site for road operations are provided in Section 4. The access/egress routes have been reviewed with respect to the 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/egress to work sites.
- 5.1.7 A copy of the route plan will be given to all suppliers when orders are placed to ensures 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 alternative diversions are in place.

#### **Delivery Scheduling**

- 5.1.8 A web-based delivery management system will be used to control the volume of deliveries to site. All deliveries will be communicated with the wider REEC development team to avoid conflicting timeslots.
- 5.1.9 This system will work by defining the number of 'resources' a site has and thus can service in 30 minute intervals. It then limits the number of delivery bookings per half-hour to this defined capacity.
- 5.1.10 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 a supplier relationship manager or package manager to the delivery manager.
- 5.1.11 KPIs will be proposed to indicate that; zero unplanned vehicles, zero non-compliant vehicles and zero instances of project-related vehicles involved in a collision, arrive at site. Any unplanned vehicles will be redirected to an agreed vehicle holding area.

#### Re-timing for out of peak deliveries

- 5.1.12 Delivery scheduling is designed with consideration to have minimum impact on the wider road network and local context.
- 5.1.13 There will be no HGV movements to or from the site during the following College times of 08:00 09:30 and 15:00 16:30. Nor shall London Square permit for HGV's associated with



the development to be laid up in neighbouring roads or areas due to the areas in questions being residential streets.

- 5.1.14 In addition to this, Game Day deliveries will be restricted to avoid a period of 2 hours before the start and 2 hours after the finish of a match/event held at Twickenham Stoop Stadium.
- 5.1.15 Deliveries are not permitted for the entire day of a match/event held at the RFU stadium.

#### Re-timing of out of hours deliveries

5.1.16 The Contractor will need to determine whether this is feasible and will be considered in the CLP.

#### Use of holding and vehicle call off areas

- 5.1.17 The use of vehicle holding areas has been proposed within the site as part of the wider REEC development strategy. Discussions have commenced between London Square, Clarion and Beard Construction of use of the proposed holding area.
- 5.1.18 Vehicles will not be allowed to wait on any of the surrounding areas outside of the site. Should a situation arrive where a vehicle is required to wait for any unforeseen circumstance, it will be directed to the designated vehicle holding area off the construction haul road within the overall REEC site boundary. The bay is identified in *Appendix C* of this report.
- 5.1.19 The vehicle holding area will be shared with the overall REEC development and there is a dedicated space within the vehicle holding area for 3-4 large deliveries at any given time.
- 5.1.20 During Phase 2 of the residential development there will be adequate space within the residential site boundary to hold vehicles if required.

#### Use of logistics and consolidation centres

- 5.1.21 The use of logistics and consolidations centres will be considered with the chosen contractors.
- 5.1.22 The benefits of using a Construction Consolidation Centre with the proposed development:
  - Reduce on-site storage requirements
  - Store materials in controlled conditions, reducing on-site damage
  - Reduced delivery costs due to fewer freight miles from bulk load deliveries
  - Faster vehicle turnaround times

#### 5.2 Measures to Encourage Sustainable Freight

#### Freight by Water/Rail

5.2.1 The site is not within 100m of the foreshore of navigable waterway or rail freight siding. Therefore, these options are not considered viable for the site.



### 5.3 Material Procurement Measures

#### Design for Manufacture and Assembly and Off-Site Manufacture

5.3.1 Where feasible, components will be manufactured off site and delivered to site to be fitted and this will be considered in more detail when the Contractor is appointed.

#### **Re-Use of Material On-Site**

- 5.3.2 A Site Waste Management Plan has been produced by Velocity "Project No 23/023 Doc No D013 Outline Site Waste Management Plan" and will be implemented to encourage the principles of the waste hierarchy which are to reduce, reuse and recycle waste.
- 5.3.3 The Contractor will aim to ensure that all materials that are recyclable are kept separate from materials which are not. This will be achieved through appropriate management ensuring that there is a separate store for recyclable materials. Signage will be erected to remind construction workers of the requirements.

#### Smart Procurement

- 5.3.4 The Contractor will be encouraged to source through local suppliers to contribute to the local economy and to consider sourcing materials from the same supplier as other sites in the area.
- 5.3.5 The Contractor will be encouraged to reduce vehicle delivery sizes at source by ordering materials with the requirement to be delivered by rigid vehicles. Exceptions will be made where loads are too large and require delivery by larger articulated vehicles.

#### 5.4 Other Measures

#### Collaboration amongst other sites in the area

- 5.4.1 The Project Manager will liaise with project managers for other construction activity in the local area when and where it is relevant to do so in order to coordinate any activity.
- 5.4.2 This is particularly important with the other phases of construction on the REEC site, including the amalgamation of arrival/departure times of site personnel to be coordinated, as well as the use/transfer of plant and materials that might be needed on both sites to avoid duplication.
- 5.4.3 Should the development require any new utility connections the Project Manager will make contact with the relevant utility companies in order to co-ordinate any scheduled work.

#### Implement a Staff Travel Plan

- 5.4.4 There will be no on-site parking provided for construction operative's vehicles which will discourage private vehicle use. The site is well located for sustainable transport options and will be strongly encouraged through the Staff Travel Plan. The site is also to provide cycle parking to encourage active travel options.
- 5.4.5 There will be limited parking on site for site management and visitors only.



5.4.6 Parking on local residential roads to the east of the site is prohibited by the existing Controlled Parking Zones (CPZs). The construction workers will be encouraged to use the nearby public transports connections available. Provisions will be made with the site for essential on-site parking is required for emergencies.

#### Communication Strategy

- 5.4.7 The Principal Contractor will be proactive in facilitating communication with local stakeholders. The Environmental Manager will ensure that the Site Manager is fully aware of particular environmental effects of future phases of the works.
- 5.4.8 The contact details of the Site Manager including an emergency out-of-hours contact will be published at the front of the site and will seek to respond to any formal complaint received within 7 business days with respect to community concerns, vehicle routing issues and unacceptable parking by staff.
- 5.4.9 The Site Manager will be expected to develop a constructive relationship with those in the immediate vicinity and community of the development. A forum for consultation with the public will be set up, where feedback will be encouraged and updates on the development will be posted to keep the community up to date with activities on site. This is likely to be a continuation of the current communications strategies in place for the wider REEC development site.

# 6. ESTIMATED VEHICLE MOVEMENTS

6.0.1 An estimation has been made regarding the potential number of construction vehicles for each individual site based on previous experiences, proposed programmes and construction methodology. The estimated trips have been input into the TfL's CLP Tool to produce the following set of tables and graphs.

### 6.1 Phase 1 Site Vehicle Movements

Construction Stage	Period of stage	Peak no. of trips (monthly)	Peak no. of trips (daily)
Site setup and demolition	Q1 2024 - Q1 2024	75	3
Basement excavation and piling	Q1 2024 - Q1 2024	0	0
Sub-structure	Q3 2024 - Q2 2025	100	5
Super-structure	Q4 2024 - Q4 2025	50	2
Cladding	Q4 2024 - Q2 2026	75	3
Fit-out, testing and commissioning	Q3 2025 - Q4 2026	75	3
Peak period of construction	Q1 2025 - Q3 2025	150	7

Table 6.1.1 Phase 1 No. of Vehicles in Peak Phase (Ex. Other Phases)



Construction Stage	Period of stage	Peak no. of trips (monthly)	Peak no. of trips (daily)
Site setup and demolition	Q1 2024 - Q1 2024	75	3
Basement excavation and piling	Q1 2024 - Q1 2024	75	3
Sub-structure	Q3 2024 - Q2 2025	150	7
Super-structure	Q4 2024 - Q4 2025	150	7
Cladding	Q4 2024 - Q2 2026	150	7
Fit-out, testing and commissioning	Q3 2025 - Q4 2026	150	7

Table 6.1.2 Phase 1 No. of Vehicles in Peak Phase (Inc. Possible Overlap of Subsequent Phases)



Fig 6.1.1: Phase 1 Total Number of Vehicles Through Construction Programme

6.1.1 During the peak months of the construction of the project, approximately 150 vehicles will be accessing the site. This equates to 7 vehicles per day and 1 during each peak hour.

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Fig 6.1.2: Phase 1 Number of Vehicles by Types During Peak of Phase



Fig 6.1.3: Phase 1 Number of Vehicles in Peak Month / Hourly Arrival Profile of Vehicles During Peak of Construction

6.1.2 Each vehicle will be expected to be on site between 10-30mins depending on the load and therefore there is sufficient space to accommodate the estimated delivery numbers.



# 6.2 Phase 2 Site Vehicle Movements

Construction Stage	Period of stage	Peak no. of	Peak no. of
Construction Stage	Fellou of stage	trips (monthly)	trips (daily)
Site setup and demolition	Q3 2024 - Q4 2024	75	3
Basement excavation and piling	Q3 2024 - Q4 2024	0	0
Sub-structure	Q1 2025 - Q2 2025	50	2
Super-structure	Q2 2025 - Q4 2025	50	2
Cladding	Q2 2025 - Q3 2026	50	2
Fit-out, testing and commissioning	Q3 2025 - Q1 2027	75	3
Peak period of construction	Q4 2025 - Q1 2026	125	6

Table 6.2.1 Phase 2 No. of Vehicles in Peak Phase (Ex. Other Phases)

Construction Store	Deried of store	Peak no. of	Peak no. of
Construction Stage	Fellou of stage	trips (monthly)	trips (daily)
Site setup and demolition	Q3 2024 - Q4 2024	75	3
Basement excavation and piling	Q3 2024 - Q4 2024	75	3
Sub-structure	Q1 2025 - Q2 2025	100	5
Super-structure	Q2 2025 - Q4 2025	125	6
Cladding	Q2 2025 - Q3 2026	125	6
Fit-out, testing and commissioning	Q3 2025 - Q1 2027	125	6

Table 6.2.2 Phase 2 No. of Vehicles in Peak Phase (Inc. Possible Overlap of Subsequent Phases)



Fig 6.2.1: Phase 2 Total Number of Vehicles Through Construction Programme

6.2.1 During the peak months of the construction of the project, approximately 125 vehicles will be accessing the site. This equates to 6 vehicles per day and 1 during each peak hour.

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Fig 6.2.2: Phase 2 Number of Vehicles by Types During Peak of Phase



Fig 6.2.3: Phase 2 Number of Vehicles in Peak Month / Hourly Arrival Profile of Vehicles During Peak of Construction

6.2.2 Each vehicle will be expected to be on site between 10-30mins depending on the load and therefore there is sufficient space to accommodate the estimated delivery numbers.



# 7. IMPLEMENTING, MONITORING AND UPDATING

- 7.0.1 The Contractor will be responsible for day-to-day management of the CLP to ensure that all construction related vehicle movements adhere to the details contained within this CLP.
- 7.0.2 The Contractor 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. An appointed CLP coordinator will be the first point of contact for site issues. The details of the appointed on-site contact will be provided to LBRuT prior to commencement on site and will be expected to continually liaise with the authorities.
- 7.0.3 The overarching monitoring will include:
  - Number of vehicle movements to site collected through the delivery booking system
    - o **Total**
    - Vehicle type/size/age
    - Time spent on site
    - Consolidation centre utilisation
    - Delivery/collection accuracy compared to schedule
  - Breaches and complaints
    - o Community concerns about construction activities
    - Vehicle routing
    - Unacceptable queuing or parking
    - o Adherence to safety & environmental standards & programmes
    - Low Emissions Zone (LEZ) compliance
    - o Anti-idling
  - Safety
    - Logistics-related incidents
    - o Records of associated fatalities and serious injuries
    - Vehicles and operators not meeting safety requirements
    - Methods of staff travelling to site
    - Driver inductions and briefings
- 7.0.4 The following should be produced to provide important information for distribution to those responsible for abiding by the CLP:
  - Description of the Contractors' Handbook
    - Safety toolbox talk
    - Anti-idling toolbox talk,
    - Vehicle routing
    - Delivery Scheduling System
    - o Driver training
    - o Safety and environmental standards



- Description of the Drivers' Handbook
  - $\circ$  Authorised routes to/from the site
  - Site opening times
  - Booking/scheduling information
  - Site access and egress points
  - $\circ \quad \text{Anti-idling} \quad$
  - Vulnerable road user safety



# APPENDICES

- Appendix A Existing Site Plan
- Appendix B Overall Proposed Site Plan
- Appendix C Site Plan & Swept Path Analysis Phase 1
- Appendix D Site Plan & Swept Path Analysis Phase 2
- Appendix E Egerton Road Temporary Access
- Appendix F Construction Management Statement



Appendix A: Existing Site Plan





Notes:

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1:1250m

125

Do not scale. All dimensions are in millimetres unless otherwise stated. This drawing should be read in conjunction with all relevant project information and contract documentation. All dimensions to be checked prior to fabrication and or commencement of works. All works to comply with all relevant legal standards, building regulations and warranty provider requirements. Report any discrepancies, if in doubt ask.

Rev S	Status	Date	Description	Drn	Chkd
C01	A3	30.04.21	Planning Issue	JM	
202	A3	11.05.21	Planning Issue	PD	
C03	A3	01.07.21	Planning Issue	TZ	

Client Name: Clarion Housing Group Project Name: Richmond College Drawing Name: Site Location Plan Drawing Number: RIC3-BPTW-S01-ZZ-DR-A-0100 C03 A3 Project No: 18-103 RIBA Stage: 18-103 Drawn By: TZ Scale: 1:1250 @ A2 PLANNING ISSUE 40 Norman Road, Greenwich, London SE10 9QX t. 020 8293 5175 bptw.co.uk



Appendix B: Overall Proposed Site Plan





Appendix C: Site Plan & Swept Path Analysis Phase 1