TECHNICAL NOTE

Project	Twickenham Stadium – East Stand Extension
Report Title	Construction Logistics Plan
Date	15/06/2016
Prepared by	Momentum Transport Planning
Prepared for	London Borough Richmond upon Thames (LBRuT)

1.1 Introduction

1.1.1 The Construction Logistics Plan (CLP) Guidance for Planners (Transport for London) describes CLPs as an effective way of reducing the negative effects of construction works such as congestion, pollution and noise that may affect local communities, residents, businesses and the environment.

1.1.2 The Construction Logistics Plan (CLP) provides a framework to better manage all types of freight vehicle movement to and from construction sites.

1.1.3 The CLP will improve the safety, efficiency and reliability of deliveries to that location. It will also identify journeys and deliveries that could be made by more sustainable transport modes, to help reduce congestion and minimise the environmental impact of freight activity.

1.1.4 This note has been prepared with input from the Applicant's Construction Advisors (Mace). It provides information regarding the construction programme, access and traffic management, construction traffic flows, operation and construction waste management.

1.2 Policy

1.2.1 The CLP has been prepared following policy and guidance set out in:

- Traffic Management Act (2004);
- National Planning Policy Framework (2012);
- Construction Logistics and Cyclist Safety (CLOCS, 2013);
- The London Plan (2016);
- The Mayor's Transport Strategy (2010); and
- London Freight Plan (TfL, 2007).

1.3 Construction Programme

1.3.1 The construction programme for the Twickenham Stadium East Stand will start in the first quarter of 2016 (design and consultation) and is due for completion in the second quarter of 2018. Table 1 provides a high-level breakdown of the key stages in the programme.

Table 1 – Construction Programme Key Stages

Stage	From	To
Pre-Construction	Q1 2016	Q1 2017
Procurement	Q2 2016	Q4 2017
Construction	Q1 2017	Q2 2018

1.4 Access and Traffic Management

1.4.1 All traffic entering and leaving the construction sites would be closely controlled. Vehicles making deliveries or removing spoil would travel via designated routes which would be agreed with LBRuT and other relevant bodies.

1.4.2 Detailed information regarding these issues and measures to minimise the risk of traffic congestion would be presented in detail through a construction traffic management plan that would be compiled by the Contractor and agreed with LBRuT prior to commencement of any works. Measures are likely to include:

- Deliveries being phased and controlled on a 'just in time' basis;
- The setting of specific delivery and collection times;
- Traffic marshalling while vehicles enter and exit construction areas;
- Consolidation of deliveries where possible;
- Prior authorisation to be scheduled with the logistics manager when visiting the site via vehicle; and
- In the event of unusual activities or events that can be anticipated, LBRuT and other relevant adjacent property owners or occupiers would be notified, in advance of the activity, wherever possible.

1.5 Construction Traffic Flows

1.5.1 The North Car Park will be used to manage all deliveries. Part of the North Car Park will be used as a holding point for all deliveries to ensure that no vehicles will cause disruption on the local highway network. Contractors, staff and delegate parking will still be available in the unused part of North Car Park,

1.5.2 The estimated number of construction vehicle arrival trips is based on the delivery schedule which has been produced by Mace. These vehicles will comprise a combination of rigid HGVs, small articulated vehicles, vans and cars. Where possible, peak times (rush hour) will be avoided for deliveries.

1.5.3 Table 2 provides a summary of the Twickenham Stadium East Stand average daily construction trips during each construction period, based on the delivery schedule provided by Mace. The full delivery schedule is provided in Appendix A.

Table 2 – Summary of Construction Trips

Period	Average Daily Trips
March – April 2017	23
May 2017	17
June 2017	1
July – September 2017	3
October 2017	4
November 2017	2
December 2017 – June 2018	2
July 2018	0
August – December 2018	1

1.5.4 It is anticipated that peak traffic flows would occur during Q1 and Q2 2017. This would include the main piling works. Construction deliveries would be transporting mainly concrete to the site.

1.5.5 Construction vehicle arrivals within the peak construction phase of the programme would average at 23 per day in March and April 2017. This equates to 2 to 3 construction vehicles per hour during a weekday. This would be a combination of rigid HGVs, small articulated vehicles, vans and cars, in addition to specialist vehicles when necessary.

1.5.6 Where possible, peak times of the day will be avoided for deliveries. The Contractor appointed will request that construction delivery forms are filled in and liaise with the RFU to ensure conflicts with RFU deliveries are avoided. This will be part of the Stadium Interface meetings

1.5.7 The flow of vehicles and deliveries on site will be managed by utilising the North Car Park. It is proposed that part of the North Car Park is made available for construction purposes (as shown in the Construction Management Plan). The car park will be used as a holding point for all deliveries, thus ensuring that delivery vehicles do not cause disruption on the local highway network.

1.5.8 There will be two points of access to the construction compound, one access via Whitton Dene, adjacent to the Delivery Holding area to the north of the compound, and the existing vehicle access via Rugby Road. Two access points will help avoid vehicles queuing.

1.5.9 No road closures are anticipated but the closure of the western footway on Rugby Road adjacent to the stadium may be required to provide access for cranes and cherry pickers during certain phases of the construction. Timings of any necessary closure will be agreed with LBRuT prior to commencement.

1.5.10 Indicative vehicle routes to the stadium from major roads to the north, south, east and west can be seen in Figure 1. These routes only use roads that are considered to be suitable for HGV traffic.

1.5.11 This section also considers the construction traffic for the Richmond College development (ref: 15/3038/OUT). The traffic impact of the Twickenham Station development (ref: 10/3465/FUL) could not be assessed as no construction vehicles numbers have been provided.

1.5.12 Chapter 16 of the Richmond College development Transport Assessment (June 2015) states that during the construction period the site will accommodate 12 HGVs per day.

1.5.13 Should the peak construction phases for both sites overlap (Twickenham Stadium East Stand extension and the Richmond College development) approximately 35 additional construction related vehicles (comprising a combination of rigid HGVs, small articulated vehicles, vans and cars) per day would be on the local highway network. This equates to an additional 3 to 4 construction vehicles per hour spread across major and local roads during a weekday. This is based on a worst case scenario that the peak construction phases for both sites will coincide.

1.6 Operation

1.6.1 It is anticipated that the working hours for the Works would be:

- 08:00 - 18:00 hours Monday to Friday;
- 08:00 - 13:00 hours Saturday; and
- No working on Sundays or Bank Holidays.

1.6.2 The Contractor will implement security procedures that integrate with stadium security. The compound will be secured with 2.4m high hoarding and access for deliveries into the holding area will be controlled by the Contractor.

1.7 Construction Waste Management

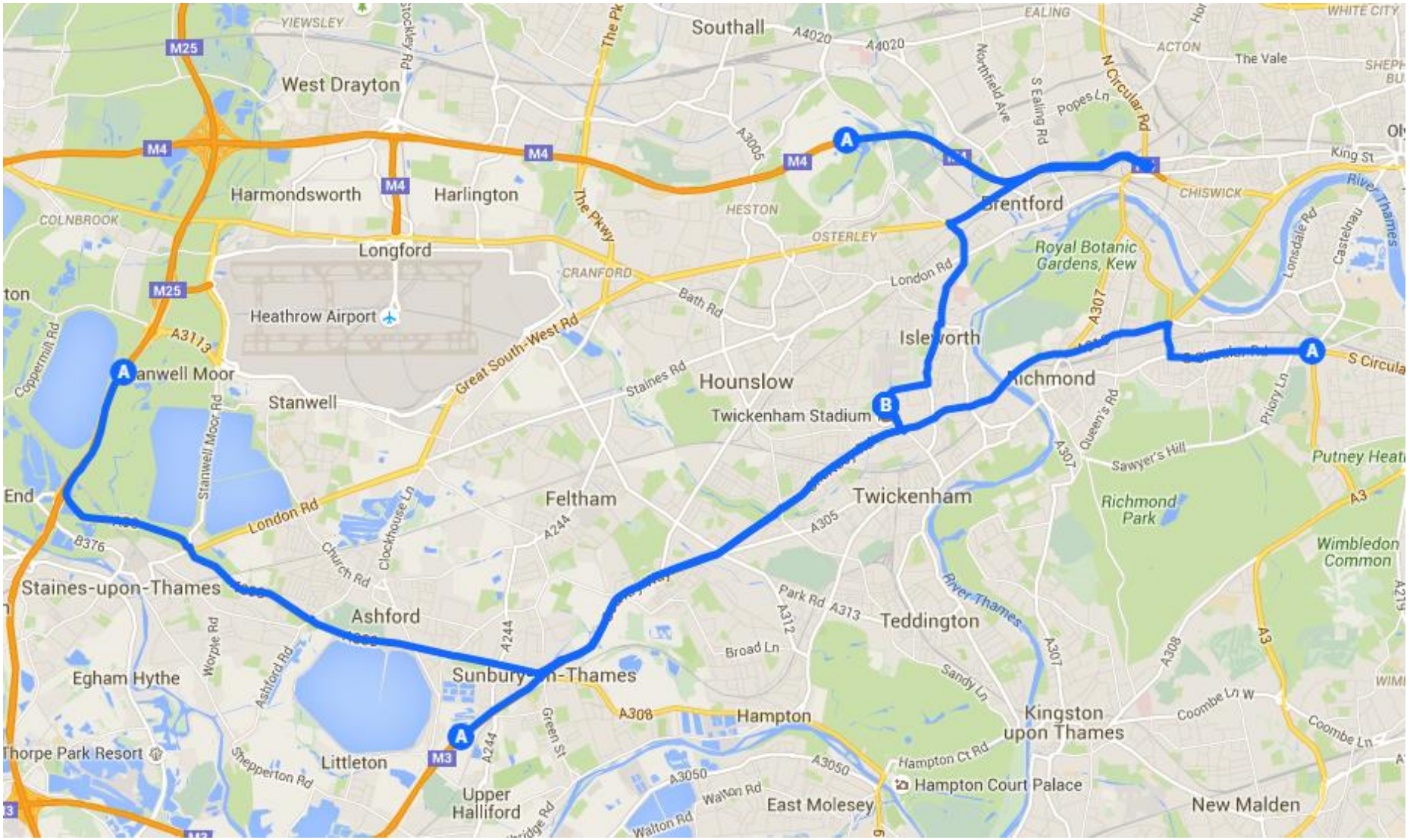
1.7.1 A Site Waste Management Plan (SWMP) would be developed by the appointed Contractor, detailing how construction waste would be managed and disposed of. Targets for waste minimisation and recycling would at least meet the Applicant's corporate targets and look to exceed all policy requirements. The SWMP would ensure all Contractors investigate opportunities to minimise waste arising at source and, where such waste generation is unavoidable, to maximise recycling and reuse.

1.7.2 The Contractor will be required to carry out the works in a way that minimises the amount of spoil and waste to be disposed of, and that any waste arising from the site is properly categorised and dealt with in accordance with the appropriate legislation and guidance.

1.7.3 In the unlikely event that potentially contaminated soils are identified during the Works they would require suitable treatment. In this event, works would cease until the contamination has been investigated and an appropriate strategy implemented for its management.

1.7.4 In accordance with relevant health and safety legislation, all construction staff would be provided with appropriate Personal Protective Equipment (PPE). Welfare facilities would be provided on the Site for washing and changing.

Figure 1 – Indicative Construction Routes



Appendix A

Construction Delivery Schedule

RFU ESD - Anticipated Deliveries

Material	Total Quantity no.	Total Quantity m2	Total Quantity m3	Approx. quantity per delivery	Approx. No. of vehicle movements	Programme Dates	Duration
Breaking out existing hard surfaces for piling, nominal depth 200mm		1000	200	12	17	March 2017 - April 2017	6 weeks
Soft Strip			2448	12	204	March 2017 - April 2017	6 weeks
Piles 300dia - concrete	120		720	6	120	March 2017 - May 2017	9 weeks
Piles - rebar	120				24	March 2017 - May 2017	9 weeks
Piles - arisings			720	12	60	March 2017 - May 2017	9 weeks
Pilecaps - arisings			9	12	1	March 2017 - May 2017	9 weeks
Pilecaps - rebar	10ton				1	March 2017 - May 2017	9 weeks
Pilecaps - concrete			9	12	1	March 2017 - May 2017	9 weeks
Piles 600dia - concrete	170		2040	6	340	March 2017 - May 2017	9 weeks
Piles - rebar	170				34	March 2017 - May 2017	9 weeks
Piles - arisings			2040	12	170	March 2017 - May 2017	9 weeks
import pilemat			305	12	25	March 2017 - May 2017	9 weeks
dispose pilemat			305	12	25	March 2017 - May 2017	9 weeks
Pilecaps - concrete			340	6	57	March 2017 - May 2017	9 weeks
Pilecaps - rebar	51			12	4	March 2017 - May 2017	9 weeks
Pilecaps - arisings			340	12	28	March 2017 - May 2017	9 weeks
Plant Deliveries					20	March 2017 - Nov 2017	16 weeks
steel frame	1015			26	39	June 2017 - October 2017	18 weeks
metal decking		1200			5	July 2017 - October 2017	14 weeks
concrete			360	6	60	July 2017 - October 2017	14 weeks
cladding		12935		200	65	July 2017 - November 2017	16 weeks
Internal facades		1680		200	8	October 2017 - June 2018	36 weeks
Internal blockwork			421	26	16	October 2017 - June 2018	36 weeks
partitions double skin		3426		100	34	October 2017 - June 2018	36 weeks
partitions single skin		2686		150	18	October 2017 - June 2018	36 weeks
IP systems & cubicles		851			3	October 2017 - June 2018	36 weeks
Doors					5	October 2017 - June 2018	36 weeks
Floor finishes		7500		500	15	October 2017 - June 2018	36 weeks
Ceilings		7500		500	15	October 2017 - June 2018	36 weeks
Roof finishes		1137		100	11	October 2017 - June 2018	36 weeks
Plant					40	August 2018 - December 2018	16 weeks
Services Misc					50	August 2018 - December 2018	16 weeks
Joinery Misc					20	October 2017 - June 2018	36 weeks
Landscaping		700			20	October 2017 - June 2018	36 weeks
Drainage					20	October 2017 - June 2018	36 weeks
Furniture					50	October 2017 - June 2018	36 weeks
Misc. items (lifts etc.)					100	October 2017 - June 2018	36 weeks
Approx. Total Deliveries					**1726**		