

Servicing and Car Parking Management Plan

Hampton Waterworks

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Prepared for
Waterfall Planning Ltd



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1. Introduction

1.1 Preamble

1.1.1 Markides Associates (MA) have been instructed by Waterfall Planning Ltd (the applicant, to prepare a Servicing and Car Parking Management Plan (SCPMP) in support of their development proposals at Upper Sunbury Road, Hampton, TW12 2DS. The site sits within the authoritative boundary of London Borough of Richmond-upon-Thames (LBRT) which is also the relevant highway authority.

1.1.2 A Transport Statement (TS) has been prepared by MA in support of the planning application for the proposed scheme. Furthermore, a Travel Plan Statement (TPS) has been prepared to encourage sustainable travel at the proposed scheme. Where relevant this Plan makes reference to those documents which accompany this planning submission.

1.2 The Site

1.2.1 The site is located at the southern side of Upper Sunbury Road (A308), Hampton. The Hampton Waterworks currently occupy the site which comprises four existing buildings. The site is currently vacant and comprised Sui Generis space and two residential cottages.

1.2.2 The site is currently accessed via a simple priority junction on Lower Sunbury Road which forms the main access to the Hampton Waterworks. The southern boundary of the site is formed by a pond which is part of the water treatment site. To the north, the site is bounded by Upper Sunbury Road and to the east it is bounded by Lower Sunbury Road. To the west, the site is bounded by a residential property. A site location plan is shown in **Figure 1.1**.

1.3 Proposed Development

1.3.1 The development proposals are for the conversion of waterworks buildings into residential buildings with part of the one building retained for B1 commercial use. The existing semi-detached cottages and storehouse are proposed to be retained and will be in residential use.

1.3.2 The proposed development is summarised as follows:

- 37 no. residential units comprising 17 no. 1-bed flats, 11 no. 2-bed flats, 9 no. 3-bed flats;
- 306m² of B1 commercial space; and
- 39 no. on-site parking spaces.

1.3.3 The proposed scheme ground floor layout is included in **Appendix A**.

1.4 Document Purpose

1.4.1 As part of pre-application discussions with LBRT Highways officers the following request has been expressed with regards to transport planning deliverables for planning submission:

“Submit a serv[icing] and car parking management plan which sets out who will be responsible for managing vehicular parking within the development and what measures will be taken to ensure that residents and employees do not park unsafely (e.g. in the aisles behind the perpendicular spaces proposed”.

1.4.2 The purpose of this document is to present a strategy for the management of on-site car parking whilst managing servicing activity at the site, providing due consideration and practical measures to manage interactions between car parking and servicing vehicles on-site during the operational phase of the proposed scheme.

1.4.3 In particular with regards to the car parking management, the key aims of this plan are as follows:

- Ensure adequate car parking provision for the needs of the development, in accordance with local and regional car parking and development planning policy;
- Enforce the use of the car park to ensure that only those eligible make use of the facilities, including preventing parking by non-residents and those not having spaces as part of their ownership/tenancy;
- Enforce appropriate use of the car park such that it remains accessible to all eligible users and the servicing area remains free of obstruction for the passage of vehicles.

1.5 Document Structure

1.5.1 Following this introduction, the SCMP will comprise the following sections:

- **Section 2** outlines local and regional car parking policy and development planning policy relating to servicing that is of relevance to the proposed scheme;
- **Section 3** presents an overview of existing highway conditions in the vicinity of the site.
- **Section 4** describes the proposed development in respect of vehicular access, on-site car parking provisions and vehicular circulation strategy;
- **Section 5** discusses considerations relating to servicing activity at the proposed scheme;
- **Section 6** presents car parking management measures;
- **Section 7** provides an overview of a programme for on-going update and revision of the plan;
- **Section 8** provides a summary.

2. Relevant Planning Policy

2.1 Preamble

- 2.1.1 This Plan has been prepared within the context of relevant national, regional and local planning policy relating to servicing considerations as well as and car parking for land uses proposed as part of this scheme.

National Planning Policy

2.2 National Planning Policy Framework, February 2019

- 2.2.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for development can be produced.

- 2.2.2 Paragraph 109 of the NPPF states:

Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

- 2.2.3 Paragraph 110 goes on to state that:

Within this context, applications for development should:

- Allow for the efficient delivery of goods, and access by service and emergency vehicles.

- 2.2.4 In respect of car parking at new developments paragraph 110 stresses that applications for development should *"be designed to enable charging of plug-in and ultra-low emission vehicles in safe, accessible and convenient locations"*.

2.3 The London Plan (March 2016)

- 2.3.1 The current London Plan states that delivery and servicing plans should be secured in line with the London Freight Plan (LFP). The LFP states that new developments will be expected to be designed to encourage safe, low emission and efficient delivery and servicing trips. The LFP also stresses the importance of following the London Kerbside Loading guidance document (2017) which includes a number of measures to improve the way delivery and servicing needs of developments are met whilst keeping pedestrians safe and limiting the impact on the highway network.

2.4 Intend to Publish New London Plan

- 2.4.1 The Draft London Plan was published on the 29th November 2017, which provides a blueprint for future development within London. Consultation on the Draft London Plan ran from the 4th December 2017 until the 2nd March 2018, with the Mayor issuing his intention publish

the London Plan in December 2019. While the Intend to Publish London Plan is not adopted yet, it is a material consideration in planning decisions.

- 2.4.2 **Policy T7 Freight and servicing** states that development proposals should facilitate sustainable freight and servicing through the provision of adequate space for servicing and deliveries off-street. It also states that developments should be designed and managed so that deliveries can be received outside of peak hours and in the evening or night time.

Local Planning Policy

2.5 London Borough of Richmond upon Thames Local Plan (adopted July 2018)

- 2.5.1 The Council's Local Plan sets out policies and guidance for the development of the borough over the next 15 years. It looks ahead to 2033 and identifies where the main developments will take place, and how places within the borough will change, or be protected from change, over that period.
- 2.5.2 Policy LP 45 Parking Standards and Servicing states that the council will require new development to make provision for the accommodation of vehicles in order to provide for the needs of the development while minimising the impact of car based travel including on the operation of the road network and local environment, and ensuring making the best use of land. Appendix 3 of the document sets out the maximum vehicle and maximum cycle parking standards which apply in LBRT, which are shown in **Table 2.1, 2.2 and 2.3** for residential and commercial uses.

Table 2.1 Residential and Commercial Parking Standards

Land Use	Parking Standards	Cycle Parking Standard
Residential (including conversion/extension of existing)	PTALs 0-3: 1- 2 bedrooms, 1 space	As per London Plan
	PTALs 0-3: 3+ bedrooms, 2 spaces	As per London Plan
B1 Use	As per London Plan. Servicing to be provided off street unless in town or district centre	As per London Plan

- 2.5.3 The London Plan parking standards for B1 uses are shown in **Table 2.2** while the cycle parking standards for both B1 and residential land uses are shown in **Table 2.3**.

Table 2.2 Parking Standards for Employment Uses

Non-operational maximum standards for employment B1: spaces per sq m of gross floorspace (GIA)	
Location	
Central London (CAZ)	1000-1500
Inner London	600-1000
Outer London	100-600
Outer London locations identified through a DPD where more generous standards should apply (see Policy 6.13)	50-100
Note 20 per cent of all spaces must be for electric vehicles with an additional 10 per cent passive provision for electric vehicles in the future.	

Table 2.3 Cycle Parking Standards

Land Use		Long-stay	Short-stay
C3-C4	Dwellings (all)	1 space per studio and 1 bedroom unit 2 spaces per all other dwellings	1 space per 40 units
B1	Business Offices	inner/ central London: 1 space per 90 sqm outer London: 1 space per 150 sqm	first 5,000 sqm: 1 space per 500 sqm thereafter: 1 space per 5,000 sqm
B1	Light Industry and Research and Development	1 space per 250 sqm	1 space per 1000 sqm

- 2.5.4 As stated in **Section 2.4**, whilst the Intend to Publish London Plan (December 2019) is not adopted yet, it is material in planning decisions.
- 2.5.5 For the purposes of residential parking standards, the Intend to Publish London Plan considers Inner and Outer London differently and relates the parking standard applicable to the Public Transport Accessibility Level (PTAL) of the site.
- 2.5.6 The site under consideration is located in Outer London and has a PTAL score of 2. The Intend to Publish London Plan car parking requirement for sites in Outer London with PTAL 2 is presented in **Table 2.4**.

Table 2.4 Parking Standards for Residential use, Intend to Publish London Plan

Location	Maximum Parking Provision
Outer London PTAL 2	Up to 1 space per dwelling

2.5.7 The Intend to Publish London Plan parking standards for office use are shown in **Table 2.5**, while the cycling parking standards for both the residential and B1 employment uses are presented in **Table 2.6**.

Table 2.5 Parking Standards for Office use, Intend to Publish London Plan

Location	Maximum Parking Provision
Outer London	Up to 1 space per 100m ² (GIA)

Table 2.6 Cycle Parking Standards, Intend to Publish London Plan

Land Use		Long-stay	Short-stay
C3-C4	Dwellings (all)	1 space per studio or 1 person 1 bedroom dwelling 1.5 spaces per 2 person 1 bedroom dwelling 2 spaces per all other dwellings	5 to 40 dwellings: 2 spaces Thereafter: 1 space per 40 dwellings
B1	Business Offices	areas with higher cycle parking standards: 1 space per 75 sqm rest of London: 1 space per 150 sqm	first 5,000 sqm: 1 space per 500 sqm thereafter: 1 space per 5,000 sqm
B1	Light Industry and Research and Development	1 space per 250 sqm	1 space per 1000 sqm

2.6 LBRT Supplementary Planning Document (SPD) – Refuse and Recycling Storage Requirements (Adopted April 2015)

2.6.1 The Council’s Supplementary Planning Document (SPD) – Refuse and Recycling Storage Requirements (Adopted April 2015) sets out general principles and guidelines in respect of refuse and recycling at developments. The key principles set out at the beginning of the SPD are as follows:

- *“The London Borough of Richmond upon Thames operates a weekly collection of refuse and recycling (mixed paper, card and cartons) and mixed containers (glass, cans, foil, aerosols, plastic bottles, pots, tubs and trays) from domestic properties.*
- *All scheduled collections usually take place between 6am and 4pm Monday to Friday (collection days subject to change during bank holiday weeks). This may be subject to change.*
- *Waste must not be stored on the public highway.*
- *All residential properties must provide their own refuse containers, whether using individual or communal facilities. The Council provides recycling containers free of charge, except for green waste recycling.*
- *Household and commercial waste and recycling must be kept separate at all times.*
- *Consideration should be given to the provision of space for storing recyclable and non-recyclable waste when designing kitchens and utility rooms.”*

2.6.2 In respect of refuse storage capacity at residential developments the SPD sets out guidelines for different types of residential units. **Table 2.7** below summarises refuse and recycling volumes in respect of the residential element of the proposed scheme.

Table 2.7: LBRT Residential Refuse and Recycling Refuse Storage Capacity Guidelines

Number of households served by bin area	General refuse	Mixed paper, card and carton recycling bins	Mixed container recycling bins
26-45	70 liters per bedroom	2x 1100L	2x 1100L

2.6.3 With reference to office developments the SPD presents guidelines for *“calculating the volume of waste generated”*. The SPD advises that *“2.6 cubic metres waste storage should be provided for every 1,000m² gross floor space”*. It is further noted that *“50% of this capacity should be retained for the storage of separated waste for recycling.”*

- 2.6.4 With specific reference to mixed use developments the LBRT guidelines advise that *“for mixed use developments (i.e. commercial and residential), the commercial and residential waste must be stored and collected separately.”* The SPD further states that *“the commercial waste storage area should be clearly separate from the storage area for residential waste, with separate access to each.”*
- 2.6.5 The LBRT guidance states a preference towards off-street refuse collections. In particular, it states that *“in order to further reduce the environmental impact of waste being placed on the pavement for collection buildings will be expected to have an off-street collection area at ground floor level. In most cases waste should be contained in an enclosed store. Exceptions will be made to these requirements only if to make the provision would require structural and visual changes that are unacceptable to the Council.”*
- 2.6.6 In respect of the actual collection of waste it is noted that *“waste collection operatives should not be required to carry waste sacks, dustbins or move wheeled bins more than 20 metres in total. Storage areas for residential dwellings should be sited so that the occupiers are not required to carry refuse or recycling more than 30 metres from an external door”.*
- 2.6.7 The SPD also provides guidelines in respect of refuse vehicle access and, with reference to (BS 5906: 2005) recommends a maximum reversing distance for vehicles of 12m. In this regards it is further explained that *“Greater distances may be acceptable within functional limits where this would allow for substantial gains in other aspects of design. Whatever the distance agreed, any reversing routes should be straight and free from obstacles and visual obstructions.”*
- 2.6.8 The SPD provides specifications for rear compaction vehicles (RCVs) that are used for refuse and recycling collection which are noted to be three axle 21.2 - 26.00 tonnes GVW trucks with 2.5m width and 10.4m overall length and 3.8 height with a minimum working height requirement of 4.5m.

2.7 Summary

- 2.7.1 The above review of relevant national, regional and local planning policy relating to servicing and car parking has informed the preparation of this Plan as reflected in the following sections of this document. In particular, **Section 3** demonstrates that vehicular access, car parking provisions, on-site space for servicing, refuse storage and collection considerations and on-site vehicular circulation of the proposed scheme design have been developed with due consideration of guidance and policies contained in the London Plan, the LBRT Local Plan and the SPD discussed above.

3. Local Highway Conditions

3.1 Overview

3.1.1 This section presents a summary of the existing highway context within the locality of the site. In particular, this section provides a review of constraints relating to on-street loading/unloading and parking within the vicinity of the site.

3.2 The Site

3.2.1 The site is located off Upper Sunbury Road, Hampton and is within an area occupied by Hampton Waterworks.

3.2.2 The site is currently accessed via a simple priority junction on Lower Sunbury Road which forms the main access to the Hampton Waterworks. The southern boundary of the site is formed by a pond which is part of the water treatment site. To the north, the site is bounded by Upper Sunbury Road and to the east it is bounded by Lower Sunbury Road. To the west, the site is bounded by a residential property.

3.2.3 The site is currently vacant and comprised 2,125m² Sui Generis space which was used as office/light industrial, and two residential cottages.

3.3 Local Highway Network

3.3.1 The site is directly accessed from the A308 Upper Sunbury Road which operates a 30mph speed restriction between the M3 (3.5km to the west of the site access) to its junction with the A309 Hampton Court Way (2.3km to the southeast of the site access). Upper Sunbury Road is a single carriageway road varying in between 5.5m and 9.5m in width, incorporating some 6m carriageway width in the vicinity of the site.

3.3.2 The Transport for London Road Network in the locality of the site comprises the A316 (southwest-northeast) and the A312 (south-north). The A316 is a dual carriageway road which connects the Kempton Park area to Chiswick at the A316 / A4 junction. The A4 provides connectivity to central London to the east, and connects to the M4 to the west. The A316 also connects to the A312 which links to the M4 to the north and ends at its junction with the A40 further to the north.

3.4 On-Street Parking and Waiting Restrictions

3.4.1 The site is not situated within a Controlled Parking Zone (CPZ).

3.4.2 Double yellow lines restrict waiting at any time on both sides of Upper Sunbury Road in the vicinity of the site.

3.5 On-Street Loading and Weight Restrictions

3.5.1 Kerbside blips indicating loading restrictions are not present in the vicinity of the site.

3.5.2 Upper Sunbury Road includes signage indicating a restriction on vehicles with a gross vehicle weight of 5 tonnes or above between midnight and 8am and 6pm and midnight.

3.6 Local Parking Stress

3.6.1 Surveys of local on-street parking stress have been carried on 13, 14 and 15 May 2019 in the locality of the site during the following time periods:

- One snapshot on Sunday night, during 00:00-06:00;
- One snapshot on two weeknights, during 01:00-05:30; and,
- Snapshots on two different weekdays, during 06:30-08:00 and 17:30-19:00.

3.6.2 It can be observed from the results of the parking surveys that there is parking availability on Lower Sunbury Road and Belgrade Road. The two roads combined demonstrate a maximum parking occupancy of 50%. On average unoccupied kerbside capacity for some 61 parking spaces was observed throughout the survey period.

3.6.3 Based on the above, the parking surveys demonstrate a medium level of on-street parking stress in the locality of the site with a moderate level of available unused parking capacity.

3.6.4 The survey outputs are presented in full and appended to the TS that accompanies this application.

4. The Development

4.1 Development Proposals

- 4.1.1 The development proposals are for the conversion of waterworks buildings into residential buildings with part of the one building retained for B1 commercial use. The existing semi-detached cottages and storehouse are proposed to be retained and will be in residential use.
- 4.1.2 In summary, the proposed development includes 37 residential units, B1 commercial space of 306m² and 39 parking spaces. The proposed layout is included in **Appendix A** and the accommodation schedule is shown below:

Table 4.1 Accommodation Schedule

Use	Accommodation size	Number of units / GFA
C3 Residential	1	17
	2	11
	3	9
B1 Commercial	-	306m ²

4.2 Site Access Arrangements and Layout

- 4.2.1 Vehicular access will be via a currently unused simple priority junction on Upper Sunbury Road. A new vehicular egress will be introduced which provides 2.4m x 43m visibility splays as shown in **Appendix B** and therefore complies with Manual for Streets guidance for 30mph roads. Vehicle swept path analysis of a large car entering and existing the site is shown in **Appendix C**.
- 4.2.2 The internal layout provides a one-way system with separate entry and exit. It is noted that this arrangement suitably accommodates access and egress from the public highway in forwards gear for servicing and refuse collection vehicles. Accordingly, **Drawing 17200-01-102D** (included in **Appendix C**) demonstrates that a 10m rigid servicing vehicle can access and egress the proposed site via Upper Sunbury Road. **Drawing 17200-01-103E** (included in **Appendix C**) presents the vehicle swept path envelope of an 11m refuse vehicle (longer than the RCV truck presented in the LBRT SPD as discussed in **Section 2**) accessing and egressing the site in forwards gear.
- 4.2.3 In accordance with the guidance contained within the Council's SPD, the on-site vehicular circulation area provides suitable opportunity for off-street loading/unloading within the site. Furthermore, the proposed one-way on-site vehicular circulation and separate access and egress points allow for refuse collection to take place without any necessary reversing manoeuvres by large trucks.

4.3 Parking

4.3.1 Based on the standards presented in **Table 2.1** and **Table 2.2** and the proposed development schedule, there is a maximum parking requirement for:

- 46 parking spaces for the residential use;
- 3 parking spaces for the employment use;
- 49 parking spaces in total.

4.3.2 Furthermore, based on the Intend to Publish London Plan standards presented in **Table 2.4** and **Table 2.5** and the proposed development schedule, the future maximum parking requirement will be:

- 37 parking spaces for the residential use;
- 3 parking spaces for the employment use;
- 40 parking spaces in total.

4.3.3 The internal layout provides 39 parking spaces. These are split between the proposed uses with 36 spaces assigned to the residential units and 3 spaces assigned to the B1 use. Vehicle swept path analysis has been carried out for the critical spaces and confirms that all spaces are accessible by a large car, as shown in **Appendix C**.

4.3.4 The parking spaces will be marked to indicate whether their allocated to the residential or employment use.

4.3.5 Furthermore, 63 long stay and 12 short stay cycle parking spaces will be provided. On this basis, the proposed cycle parking provision complies with the cycle parking standards of the currently adopted London Plan (**Table 2.3**)

4.4 Local Car Ownership

4.4.1 It is possible to estimate the car parking demand associated with the proposed development scheme using 2011 Census data for the Hampton Ward, within which the site is located. Reference has therefore been made to the 2011 Census data table 'CT0103: Accommodation Type by Tenure by Number of Rooms by Car or Van Availability'.

4.4.2 Analysis of the Census 2011 data for Hampton has been conducted and shows that the car ownership for privately owned flats is 0.98 cars per dwelling. Applying this ratio to the proposed 37 units suggests that the parking demand for the residential part of the development is 36 spaces. On this basis, the proposed residential provision of 36 spaces is considered sufficient.

4.5 Refuse Storage Points

4.5.1 The proposed design incorporates dedicated on-site refuse storage points within the periphery of each building.

- 4.5.2 The location of the on-site storage points has been designed such as to accord with LBRT SPD guidance which states that “*waste collection operatives should not be required to carry waste sacks, dustbins or move wheeled bins more than 20 metres in total*”. The majority of the refuse storage points are within 10m of the one-way on-site access road that forms a one-way route through the proposed development, with one refuse storage point being situated within 20m of the collection route.

5. Servicing Activity

5.1 Overview

5.1.1 As set out in **Section 4**, the proposed development comprises residential and commercial uses which necessitate different management considerations due to the type of activity and pattern of use associated with each land-use. This section provides a robust framework for the management of servicing activity at the proposed development by consideration of the following:

- An analysis of the likely servicing demand generated by the proposed uses at the site;
- An overview of the type of servicing activity that will be associated with each land use at the proposed development;
- Defining responsibilities in relation to management of servicing activity;
- Measures to be employed at the site in order to manage servicing activity;
- Refuse collection procedures.

5.2 Servicing Demand Analysis

5.2.1 The level of servicing demand generated by the proposed scheme can be accurately observed and monitored once the site is fully operational. The level of management that will be required at the site is linked to the level of servicing activity that will be generated by the land uses which will operate at the site. In seeking to estimate the servicing demand associated with the proposed uses at the site reliance has been made on surveys of existing sites with similar transport characteristics as contained within the industry standard TRICS database.

5.2.2 A trip generation exercise has been carried out as part of the TS that accompanies this application. The servicing (OGV and LGV) trip generation from the TS has been used to derive estimates for the proposed residential and commercial uses at the site. Additionally, in order to assess the frequency of on-site interactions between servicing vehicles and cars using the car park, the number of car trips generated by each land use have also been included in **Table 5.1** and **Table 5.2** which show the estimated arrival and departure profile across a typical weekday for the residential and commercial land uses respectively.

Table 5.1: Residential Servicing and Car Park Trips (37 Units)

Time	INBOUND				OUTBOUND			
	Car	LGV	OGV	Total	Car	LGV	OGV	Total
07:00-08:00	1	0	0	1	3	0	0	3
08:00-09:00	1	0	0	1	3	0	0	4
09:00-10:00	1	0	0	2	2	0	0	2
10:00-11:00	1	0	0	2	2	0	0	2
11:00-12:00	1	0	0	1	2	0	0	2
12:00-13:00	2	0	0	2	1	0	0	2
13:00-14:00	2	0	0	2	2	0	0	2
14:00-15:00	1	0	0	2	2	0	0	2
15:00-16:00	3	0	0	3	2	1	0	2
16:00-17:00	3	0	0	4	2	0	0	2
17:00-18:00	4	1	0	4	1	0	0	2
18:00-19:00	4	0	0	4	2	0	0	2
19:00-20:00	3	0	0	3	3	0	0	3
20:00-21:00	2	0	0	2	2	0	0	2
Total	28	3	1	32	28	3	1	32

Table 5.2: Commercial Servicing and Car Park Trips (297m² GFA)

Time	INBOUND			OUTBOUND		
	Car	OGV	Total	Car	OGV	Total
07:00-08:00	1	1	2	0	2	2
08:00-09:00	1	0	1	0	1	1
09:00-10:00	0	1	1	0	1	1
10:00-11:00	1	1	2	0	1	1
11:00-12:00	1	1	2	1	1	2
12:00-13:00	0	1	1	1	1	2
13:00-14:00	0	1	1	1	1	1
14:00-15:00	0	1	1	0	1	2
15:00-16:00	0	1	1	1	0	1
16:00-17:00	0	1	1	1	0	1
17:00-18:00	0	0	1	1	0	1
18:00-19:00	0	0	0	1	0	1
Total	6	9	15	8	9	17

5.2.3 In seeking to generate a robust estimate of an unmanaged arrival and departure profile for servicing and car park trips on a typical day, the estimated trips for the residential and commercial uses have been summed together and presented in **Table 5.3** below.

Table 5.3: Total Proposed Development Servicing and Car Park Trips

Time	INBOUND				OUTBOUND			
	Car	LGV	OGV	Total	Car	LGV	OGV	Total
07:00-08:00	2	0	1	3	5	0	2	7
08:00-09:00	2	0	0	2	4	0	1	5
09:00-10:00	2	0	1	3	3	0	2	4
10:00-11:00	2	0	1	3	3	0	1	5
11:00-12:00	2	0	1	3	3	0	2	5
12:00-13:00	2	0	1	3	3	0	2	5
13:00-14:00	2	0	1	3	2	0	2	4
14:00-15:00	2	0	1	3	3	0	2	5
15:00-16:00	3	0	1	4	2	1	1	4
16:00-17:00	4	0	1	5	2	0	1	4
17:00-18:00	4	1	0	5	2	0	1	3
18:00-19:00	4	0	0	4	2	0	1	3
19:00-20:00	3	0	0	3	3	0	0	3
20:00-21:00	2	0	0	2	2	0	0	2
Total	34	3	10	47	37	3	18	59

5.2.4 Based on **Table 5.3** it is estimated that in an ‘unmanaged’ scenario the highest number of car parking and servicing movements will occur during the hour of 07:00-08:00 with 3 vehicles arriving and 7 departing during this hour.

5.2.5 Given that the on-site car park is to cater for authorised and familiarised users, it is considered that the proposed scheme layout (discussed in **Section 4**) provides generous on-site circulation capacity to suitably accommodate the estimated peak hour vehicle movement. Notwithstanding the above, the remainder of this section outlines management measures to regulate and reduce servicing trips (and the potential number of on-site interactions) such as to ensure the efficient and safe use of the site during the operational phase of the development.

5.3 Servicing Requirements

5.3.1 Further to estimating the scale and frequency of servicing at the proposed development it is also important to establish different servicing activities associated with each land use in order to be able to, where necessary, allocate resources and space accordingly to manage tasks safely and efficiently.

Residential Deliveries and Collections

5.3.2 Deliveries and collections generated by the residential use will be primarily associated with deliveries of small goods. In terms of vehicle type, typically deliveries are anticipated to be carried out by light vans with a 7.5 tonne box van generally being the largest vehicle that is

expected to require access to residential developments for deliveries. Dwell times for residential deliveries are anticipated to be approximately 5-10 minutes.

- 5.3.3 Where larger items such as furniture are to be delivered or collected from the site, it is possible for servicing vehicles to load/unload for longer dwell periods at the southern perimeter of the site. This would still allow sufficient carriageway clearance for the cars to pass the loading/unloading vehicle.

B1 Commercial Deliveries and Collections

- 5.3.4 It is anticipated that the commercial space will attract a low level of service/delivery trips. Given that the commercial space management will be coordinating with established suppliers there will be suitable opportunity for more accurate scheduling of deliveries and collections.

- 5.3.5 As with the residential element, some larger deliveries/collections associated with the commercial use may require longer dwell times for loading/unloading vehicles, and it is proposed that this activity be carried at the southern perimeter of the site in an area of the internal access road such as to maintain a clear approach into the site from Upper Sunbury Road.

5.4 Servicing Management Responsibilities

- 5.4.1 In order to ensure the smooth and efficient implementation of the servicing management measures that are discussed later in this Section, a member of the site management team will oversee the co-ordination of the Plan.

- 5.4.2 General duties of the servicing activity co-ordinator are listed below:

- Coordinating refuse collection with local authority waste operatives to ensure that refuse bins are in the appropriate collection point at the anticipated/designated collection time and that the bins are returned to the storage area efficiently after collection has taken place;
- Managing pre-booking of any large planned deliveries at the site;
- Managing pre-booking of any significant maintenance vehicle access at the site;
- Informing residents at the site of servicing arrangements at the site and ensuring that residents are aware of their responsibilities with regards to refuse collection;
- Identifying opportunities for consolidating deliveries via local consolidation points (e.g. Duddle);

5.5 Servicing Management Measures

- 5.5.1 The measures presented below seek to ensure that the freight, servicing and deliveries required by the development will be managed in such a way that minimises adverse impacts.

Scheduling and Booking System

- 5.5.2 In view of the servicing activity typically associated with residential and commercial uses, it is anticipated that the majority of deliveries and servicing trips will take place during traditional working hours of 07:00-19:00. These hours are sufficiently flexible to allow delivery and service vehicles to access the site outside of peak hours, thereby reducing its contribution to local congestion. However, some trips might be expected outside of these times, predominately associated with the site's residential development.
- 5.5.3 Service vehicle trips that take place in the early morning could include those associated with residential and commercial waste collection. In the evening the site could experience some home shopping trips, which generally take place at pre-booked time slots, at times when residents are at home.
- 5.5.4 In conjunction with work undertaken to support sustainable travel patterns throughout the development, it is envisaged that the site management team will become aware of service vehicle arrival profiles, to ensure that the right balance is made between minimising the impact of servicing vehicles on general traffic and reducing disturbance to local residents and occupiers. The collection of this data can facilitate the formulation and adoption of a booking system where the supplier or collector details an estimated time of arrival and departure at the site. The need for this will be determined after occupation of the development by each unit's management liaison personell (MLP).
- 5.5.5 Part of the MLP role, and the role of the site management team, will be investigated with regular suppliers which goods can be delivered outside of peak hours and set up a procedure to encourage this.
- 5.5.6 Large deliveries will be scheduled to take place outside of the peak periods on the local highway network, specifically not between the hours of 07:30-09:30 in the morning and 16:30 and 18:30 in the evening.
- 5.5.7 Deliveries and collections will also be managed by the site management so as to ensure that no other deliveries are scheduled when the largest vehicles are due to service the site. Deliveries for the employment use will be coordinated as much as is feasible in order to prevent conflict between service and delivery vehicles accessing the site.

Consolidation and Backloading

- 5.5.8 Consolidation is the act of transporting several part loads in one vehicle to reduce the number of required journeys or by adopting backloading where spare capacity on vehicle return legs is utilised. It can be organised between different commercial organisations who are aiming to reduce their delivery vehicles' impact and gain economic benefits by reducing the unit cost of transportation. Reducing the number of vehicle movements similarly reduces associated emissions and congestion and is therefore supported by surrounding stakeholders.

- 5.5.9 Consolidation requires an effective communication strategy to be in place where administrators can highlight that they are about to place a specific order to other departments / organisations and allow them to share the delivery where possible.

Pedestrian Management and Public Safety

- 5.5.10 In order to reduce the risk of incidents occurring as a result of servicing vehicles accessing the on-site circulation areas, it will be important to ensure that all suppliers are aware of the appropriate access point and area from which they will be servicing the development. It is therefore essential that, where possible, a communications channel is created between the site management agent and suppliers through which this information can be sent.
- 5.5.11 On-site congestion can be mitigated by reducing the time a supplier spends on-site. This could be achieved through the adoption of a booking system where the supplier or collector details an estimated time of arrival on-site. The need for this will be determined by site/facilities management after occupation of the development.
- 5.5.12 Further to the above, a member from the site management team will be on site to ensure pedestrian safety is protected when larger deliveries, servicing and waste collection are taking place.

Encouraging Best Practice and Sustainable Modes of Transport Amongst Suppliers

- 5.5.13 As part of the management of servicing and coordination with suppliers, facilities management will encourage regular suppliers to join a best practice scheme such as TfL's Freight Operators Recognition Scheme (FORS) and investigate whether deliveries and collections to the site can be undertaken using electric or hybrid vehicles. FORS helps suppliers across London to be safer, greener and more efficient with organisations needing to fulfil certain criteria to gain membership.
- 5.5.14 Where possible, especially in respect of deliveries required by the building maintenance contractor, the site's servicing coordinator will actively seek to procure the services of suppliers with green credentials. This will include consideration of suppliers who operate 'green' vehicles (electric/ hybrid) or in some cases, suppliers who make use of bicycles instead of carbon fuel based vehicles.
- 5.5.15 While vans and lorries are the vehicles most commonly associated with freight movement, cycles and motorcycles are more suitable for smaller items and are actively promoted as a strategy for usage of low or no emission vehicles/modes. Procurement staff would be encouraged by the servicing coordinator to negotiate with suppliers to establish whether there is scope for deliveries to be carried out use of Electric or hybrid vehicles. The range and performance of electric and hybrid vehicles has increased in recent years and encouraging suppliers to switch to a 'greener' vehicle fleet will reduce the carbon footprint of the supply chain, and could save the supplier, and potentially the operator, money.

Monitoring

- 5.5.16 The site's servicing coordinator will monitor and update the Plan as necessary and will commit to dealing with any complaints by neighbours relating to servicing and deliveries at the site.
- 5.5.17 **Section 7** further discusses the on-going update and revision of the Plan.

5.6 Refuse Collection Procedures

- 5.6.1 With regard to waste management the primary responsibility lies with the producer to minimise the generation of waste. For non-residential land uses, once waste has been produced it is the responsibility of the business tenant to arrange for collection, handling, treatment and disposal.
- 5.6.2 As set out in **Section 4**, the on-site vehicular circulation area and layout of the bin stores has been suitably designed to accommodate on-site refuse collection for both the residential and employment uses at the site. As such, no waste generated by the proposed development will be dealt with on-street.
- 5.6.3 As discussed earlier in this section, the site's servicing coordinator will liaise with the local authority environmental services department to ensure that they are informed of the location of the on-site residential refuse storage points. Key information such as collection times and storage protocol will be communicated to residents via introductory information packs as well as through any noticeboards.
- 5.6.4 For the employment use, site management will oversee that the various tenants occupying the employment space will arrange their own confidential waste collections. As discussed in **Section 4**, the proposed layout of the scheme has been designed such that proximity of the bin store to the internal collection route is based on local authority recommended drag distances. It is noted that in practice, private refuse collection contractors generally exercise a higher level of flexibility in accommodating the requirements of their clients. As such, it is considered that, by nature private refuse collection arrangements will be favourable for implementing stringent management measures, especially in respect of scheduling and on-site safety logistics.

6. Car Park Management

6.1 Overview

- 6.1.1 This section of the Plan considers the measures to be implemented as part of the management of car parking demand generated by the development.
- 6.1.2 Full details of the development scheme are set out in the main Transport Statement document. The proposed car parking layout is presented within architectural plans contained at **Appendix A**.
- 6.1.3 This element of the SCPMP will take into consideration the requirements to ensure the car park will function efficiently, safely and that it will be kept in good repair and condition.

6.2 Car Park Management Responsibilities

- 6.2.1 From the outset, it is essential that a strong management regime be established for the maintenance and administration of the parking and on-site vehicular circulation areas. The responsibility for the long-term stewardship of all shared and public areas of the scheme will lie with the landlord and will be delivered by the appointed managing agent. The detailed over-riding management strategy for the scheme as a whole will incorporate the principal elements of good estate management.
- 6.2.2 Throughout the life of the development, site management or an appointed representative will monitor the car park and its usage in order to ensure that it is conducted in accordance with the approach discussed in this Plan.

Car Parking Schedule

- 6.2.3 As indicated above, the car parking area will serve residential and commercial uses and incorporate disabled spaces as part of these use allocations. The parking spaces will be appropriately demarcated to differentiate these users and avoid mistaken use of spaces. All parking spaces will be numbered.
- 6.2.4 As presented in **Section 4**, the internal layout provides 39 parking spaces. These are split between the proposed uses with 36 spaces assigned to the residential units and 3 spaces assigned to the employment use. Of the 39 parking spaces, 3 no. have been designed to accommodate disabled users.
- 6.2.5 In accordance with the requirements of the London Plan, 20% (8 no. spaces) of the parking bays will incorporate 'Active' Electric Vehicle Charging Points (EVCP), with a further 20% provided as 'Passive' EVCP points.
- 6.2.6 All car parking spaces will be 2.4m by 4.8m, with disabled spaces afforded appropriate additional width and length to facilitate accessibility requirements.

Site Access Control

- 6.2.7 The site's access and egress points will not be gated.
- 6.2.8 Signage will be utilised to indicate that the parking is not for public use. Careful consideration will also be given to the site boundary treatment as well as differential surface materials on the site access to reinforce the private nature of the parking area.

Car Park Layout/Marking

- 6.2.9 As indicated above, the car parking area will serve residential and commercial uses and incorporate disabled spaces as part of these use allocations. The parking spaces will be appropriately demarcated to differentiate these users and avoid mistaken use of spaces. All parking spaces will be numbered.
- 6.2.10 The disabled spaces are to be demarcated with yellow lines, a protected hatched area and appropriate road markings to identify the spaces. The proposed location of the disabled parking spaces have been located conveniently in close proximity to building entrances.
- 6.2.11 The Active and Passive EVCP spaces are similarly appropriately located throughout the car park.
- 6.2.12 'Standard' parking spaces will be demarcated with white lines.

Allocation of Spaces

- 6.2.13 The development makes provision of approximately 0.98 spaces per dwelling with 3 no. spaces for the commercial use. Based on the estimate of parking demand as presented in **Section 4.3.1**, it is considered that the proposed residential parking provision will suitably accommodate the anticipated parking demand without encouraging undue car use by facilitating levels of car ownership that are in accordance with the local car ownership statistics. In terms of the employment use, given the sustainable travel choices presented in the TS, the constrained level of commercial parking is not considered to be an impediment to effective operation of the site and is considered acceptable for an outer London location with realistic public transport accessibility opportunities.
- 6.2.14 Parking in the adjacent road network, on Upper Sunbury Road, is restricted for waiting or parking at any time. As such, residents unable to park on the site will not have opportunities to park in the adjacencies of the development. In the absence of a clear allocation policy, there remains potential for residents to make decisions on car ownership based on the perception that parking is available and then subsequently realise that it is not possible, leading to increased potential for either illegal parking on the site or overspill parking on the wider public highway.
- 6.2.15 To mitigate this issue, this Plan will facilitate the process of providing parking for specific residents. This will provide a clear indication to all residents as to the availability of car parking and allow decisions on living at the development and/or subsequent car ownership to be made.

- 6.2.16 It is envisaged that a right to park system will operate at the proposed development whereby access to parking spaces are sold with the flats. This provides the tenant a right to use a parking space; they are not provided an allocated space but rather have a right to park in any space other than a disabled space.
- 6.2.17 Allocation of employment spaces will be associated with the tenancy agreement of each employment occupier while the individual allocation of spaces will be at the discretion of the practice's internal protocol.
- 6.2.18 Residents and staff will be notified of the Active and Passive EVCP spaces, and informed how to operate them. Residents without an electric car will be informed to park in 'standard' parking spaces unless they have an electric car. The site management company will review the level of Active and Passive EVCP spaces and make any necessary changes.

Allocation of Permits

- 6.2.19 Individual spaces will be allocated to owners of residential units and residents will only be permitted to park a single motor vehicle or motor bike in any one space. The managing agents will maintain a database of those apartment owners who are entitled to park at the building and this will be key if further enforcement is required.
- 6.2.20 Three disabled spaces have been specifically set aside as part of the scheme. As indicated above, these are enlarged for the purposes of assisting disabled drivers / passengers entering or leaving the vehicles. Disabled staff or residents will be specifically allocated these spaces. It is anticipated that the proportion fulfilling the criteria will not exceed the available provision, although in the event that this occurs, other spaces will be allocated if available.
- 6.2.21 The disabled spaces will be retained for use by appropriate individuals. In the event that none, or only one resident/staff member is an eligible disabled badge holder, the remaining disabled spaces will remain unallocated and not issued for use by other car park users. The additional benefit of this approach is the ability to issue a space to new disabled staff/visitor who may start working at, or visit, the site and requires a space immediately.
- 6.2.22 It is not envisaged that any visitor parking permits will be issued.

Enforcement Process

- 6.2.23 In order for the permit system to operate effectively, it must be monitored and enforced appropriately. The site management agent will be responsible for dealing with any enforcement issues relating to misuse or unauthorised use of the car park. Certain activities within the car park will be seen to constitute a trigger for enforcement action, including as follows:
- Vehicle not authorised to park (in the first instance, without a permit);
 - Vehicle not parked in a correct space (disabled space);
 - Vehicle not parking within a demarcated space, but otherwise authorised;

- Vehicle parking inappropriately and liable to cause obstruction.
- 6.2.24 Every effort will be made to minimise any intervention by a third-party parking control company, necessary to manage the use of the car park. However, the site management agents may appoint a local accredited independent third-party parking patrol company to enforce the regulations and issue penalty fines, if necessary. This company will be responsible for regularly and periodically inspecting the car parking and will issue penalty fines to any vehicles incorrectly parked. The parking control company may be called upon in the event of residents mis-use of the parking spaces.
- 6.2.25 It is anticipated that the parking patrol company will be initially appointed for a period of 12 months. The appointed parking patrol company will be responsible for the provision and erection of any signage required for compliance purposes.
- 6.2.26 The following vehicles will be exempt from parking enforcement:
- Emergency vehicles;
 - Doctors / Nurses on call displaying the relevant Health Emergency Badge;
 - Any vehicle displaying a fire brigade notice;
 - All utility vehicles (e.g. gas, electricity);
 - Funeral vehicles; and,
 - Post office vehicles.

Interaction with Servicing Activity

- 6.2.27 When occupied, the access route for vehicles servicing the residential and employment uses is shared with that of the car park. It is anticipated that the majority of deliveries will be made whilst site management staff are present on site and the delivery driver will adhere to the managers instructions.
- 6.2.28 The leases grant to the employment space tenants will contain strict regulations on deliveries and delivery drop off points. These will be firmed up once the actual occupiers are known and their delivery requirements clarified during the letting negotiations.

7. Monitoring and Updating of Plan

7.1 Overview

- 7.1.1 Following the initial implementation of the SCPMP, the Plan will be subject to an annual review to ensure that the delivery/collection, refuse collection and maintenance activity at the site are being carried out suitably in practice and that any operational issues relating to parking allocation, permits and use are assessed and addressed in further updates of the Plan.
- 7.1.2 The continual monitoring and update of the servicing and car parking activity and use will ensure that the Plan itself remains a live document. It is anticipated that measures set out within the SCPMP will evolve to best suit the needs of residents, the operators of the site and the wider users of the highway network

7.2 Servicing, Monitoring and Updating

- 7.2.1 The servicing activity at the site will be reviewed firstly within three months of full occupation to ensure that the procedures set out earlier in this report have been followed and work effectively in an operational sense.
- 7.2.2 Further to the above, a log of deliveries can be maintained to identify regular suppliers and where possible establish periodic scheduling for recurring activities.
- 7.2.3 In particular, the monitoring and review of servicing activity can be used to identify any conflicts and interactions between different users and suppliers that can be avoided through engagement and scheduling. The on-site locations where deliveries and collections are carried out can also be reviewed in order to reduce any unforeseen risks that are reported once the site is operational.

Integration with the Travel Plan Statement

- 7.2.4 The TPS prepared in association with this proposed scheme does not consider formal travel surveys at the site. However, the implementation of the TPS provides an opportunity for the management contractors at the site to undertake informal monitoring of car park usage after occupation of the development; this can be an on-going process through the life of the Travel Plan.
- 7.2.5 In order to support this SCPMP, a review of service vehicle travel patterns can also be carried out to inform the wider monitoring measures discussed in this Plan. Associated surveys could include a classified count of the number of servicing vehicles and the associated dwell times for a week day and weekend to establish typical arrival/departure profiles and to identify any areas for consolidating or managing deliveries and collections.

7.3 Car Parking Monitoring and Update

- 7.3.1 The car parking management measures set out in this document have been developed to be appropriate for the development and the prevailing conditions in terms of car ownership and travel patterns.
- 7.3.2 It is not envisaged that a formal review process is needed for the management of the car parking, rather key changes will arise through feedback from key stakeholders, including the residents and parking control subcontractors.

Review of Allocation Process

- 7.3.3 In the longer term, there is potential for demand for car parking to drop, such that the criteria and allocation process may require appropriate revision.
- 7.3.4 It is not envisaged that the priority to disabled users will change.

Monitoring of Enforcement

- 7.3.5 Throughout the life of the development, the Landlord or its appointed representative will continue to monitor the enforcement activities carried out by the subcontractor in order to ensure that it is conducted in accordance with the agreed approach.

8. Summary

- 8.1.1 Markides Associates (MA) have been instructed by Waterfall Planning Ltd (the applicant), to prepare a Servicing and Car Parking Management Plan (SCPMP) in support of their development proposals at Upper Sunbury Road, Hampton, TW12 2DS. The site sits within the authoritative boundary of London Borough of Richmond-upon-Thames (LBRT) which is also the relevant highway authority.
- 8.1.2 The development proposals are for the conversion of waterworks buildings into residential buildings with part of the one building retained for B1 commercial use. The existing semi-detached cottages and storehouse are proposed to be retained and will be in residential use.
- 8.1.3 This SCPMP has been prepared subsequent to pre-application discussions with LBRT Highways officers. The Plan proposes measures and outlines responsibilities for management of servicing and car parking activity at the site to ensure safe and efficient use of the site once the development is occupied and operational.
- 8.1.4 This Plan has been prepared within the context of relevant national, regional and local planning policy relating to servicing considerations as well as and car parking for land uses proposed as part of this scheme.
- 8.1.5 Servicing and car parking activity associated with the proposed development can be carried out on site. Carriageway width constraints and any time waiting restrictions in operation at the public highway immediately adjacent to the site on Upper Sunbury Road support the management procedures proposed in this Plan by limiting opportunities for on-street parking and servicing.
- 8.1.6 An assessment of the servicing demand generated by the proposed residential and employment uses at the site has been carried out as part of this Plan. It is considered that the quantum of service/delivery trips anticipated as part of the development will have a negligible impact on the surrounding highway network. The level of servicing demand generated by the proposed scheme can be accurately observed and monitored once the site is fully operational.
- 8.1.7 Servicing management measures have been proposed as part of this Plan to ensure that the freight, servicing and deliveries required by the development will be managed in such a way that minimises adverse impacts. This SCPMP also proposes measures that can be employed with a view to reducing servicing trips by engaging suppliers.
- 8.1.8 Refuse collection considerations and procedures for proposed residential and commercial uses at the site have been presented with reference to the proposed scheme layout which suitably facilitates on-site collections.
- 8.1.9 Within this report it has been demonstrated that the proposed parking provision is sufficient for the development and the development proposals will not have an impact on on-street parking.

- 8.1.10 This Plan has proposed management measures to ensure the car park will function efficiently, safely and that it will be kept in good repair and condition. The allocation of car parking spaces and associated enforcement of such has been proposed in the form of suitable management strategies.
- 8.1.11 The continual monitoring and update of the servicing and car parking activity and use will ensure that the Plan itself remains a live document. It is anticipated that measures set out within the SCPMP will evolve to best suit the needs of residents, the operators of the site and the wider users of the highway network.

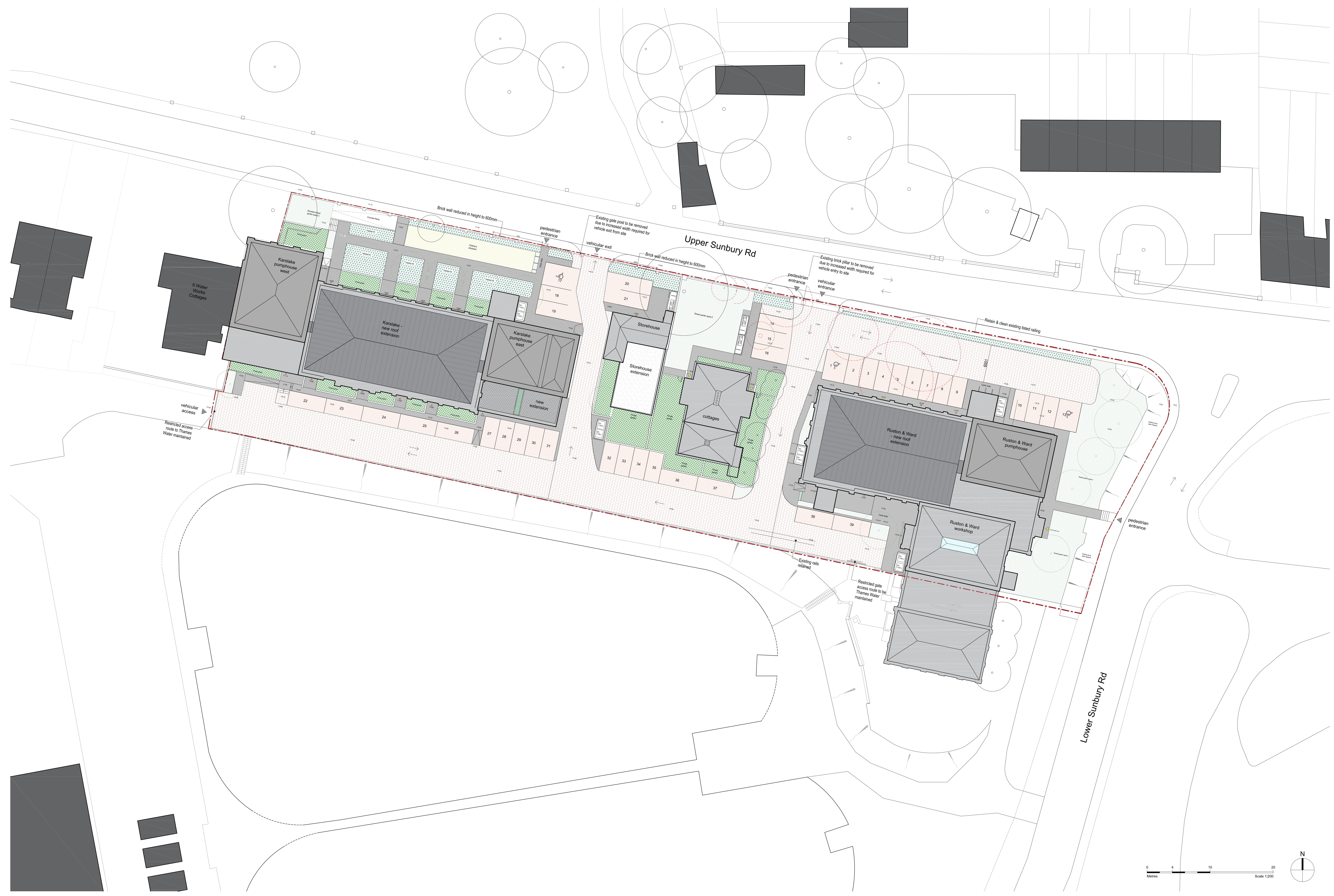
APPENDIX A – PROPOSED SITE LAYOUT

USE OF DRAWINGS
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REVISIONS

REV.	DATE	DESCRIPTION	DESIGNED	CHECKED
-	11.10.2019	INITIAL ISSUE	MC	RW
A	04.11.2019	LEVEL ADJUSTMENTS	MC	RW
B	04.06.2020	LEVEL ADJUSTMENTS, ADDITIONAL TREES TO GASTON BOUNDARY	SJ	RH
C	06.05.2020	MAIN VEHICULAR EXIT AMENDED	SJ	RH
D	15.05.2020	AMENDMENTS TO TREES AND LANDSCAPING	SJ	RH
E	27.05.20	HABITAT PLANTING SHOWN	SJ	RH

NOTE:
 - DRAWINGS ARE DESIGN INTENT FOR THE PURPOSE OF PLANNING APPROVAL.
 - ALL DRAWINGS ARE SUBJECT TO FURTHER DESIGN DEVELOPMENT AND COORDINATION WITH ENGINEERS IN ORIGINATOR.
 - ALL FURNITURE AND INTERIOR FINISHES ARE INDICATIVE AND SUBJECT TO DETAILED DESIGN.
 - EXISTING HERITAGE BRICK AND STONE FACADES TO BE CLEANED AND RESTORED.
 - INTERNAL WALLS TO BE STRIPPED OUT, REMOVING 19TH C. WORK AND RESTORING ORIGINAL FABRIC.
 - INDUSTRIAL HERITAGE DETAILS - TILES, BRICK, ELECTRICAL SWITCHES, LIFTING CRANES, ETC. - TO BE CLEANED AND RETAINED.
 - ALL EXISTING ORIGINAL WINDOWS TO BE RETAINED AND RESTORED, WITH NEW HIGH PERFORMANCE SECONDARY GLAZING INSERTED BEHIND.
 - ALL EXISTING WINDOWS WHICH ARE NOT ORIGINAL TO THE BUILDING TO BE REPLACED WITH HIGH PERFORMANCE WINDOWS TO MATCH EXISTING DESIGN.



Key

[Grey Box]	Asphalt
[Light Grey Box]	Shared surface paving
[Dark Grey Box]	Pedestrian paving
[Pink Box]	Car parking bays
[Green Box]	Private amenity space
[Light Green Box]	Shared soft landscaping
[Yellow Box]	Children's play area
[Blue Box]	Habitat planting
[Circle]	Trees: Existing & retained
[Red Circle]	Removed
[Green Circle]	New

Client: **WATERFALL PLANNING LTD**

Project: **HAMPTON WATERWORKS**

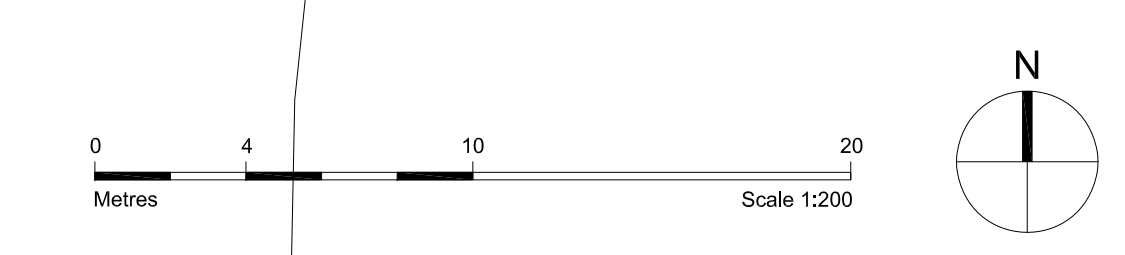
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Sheet size: **A1**
 Scale: **1:500 @ A1**

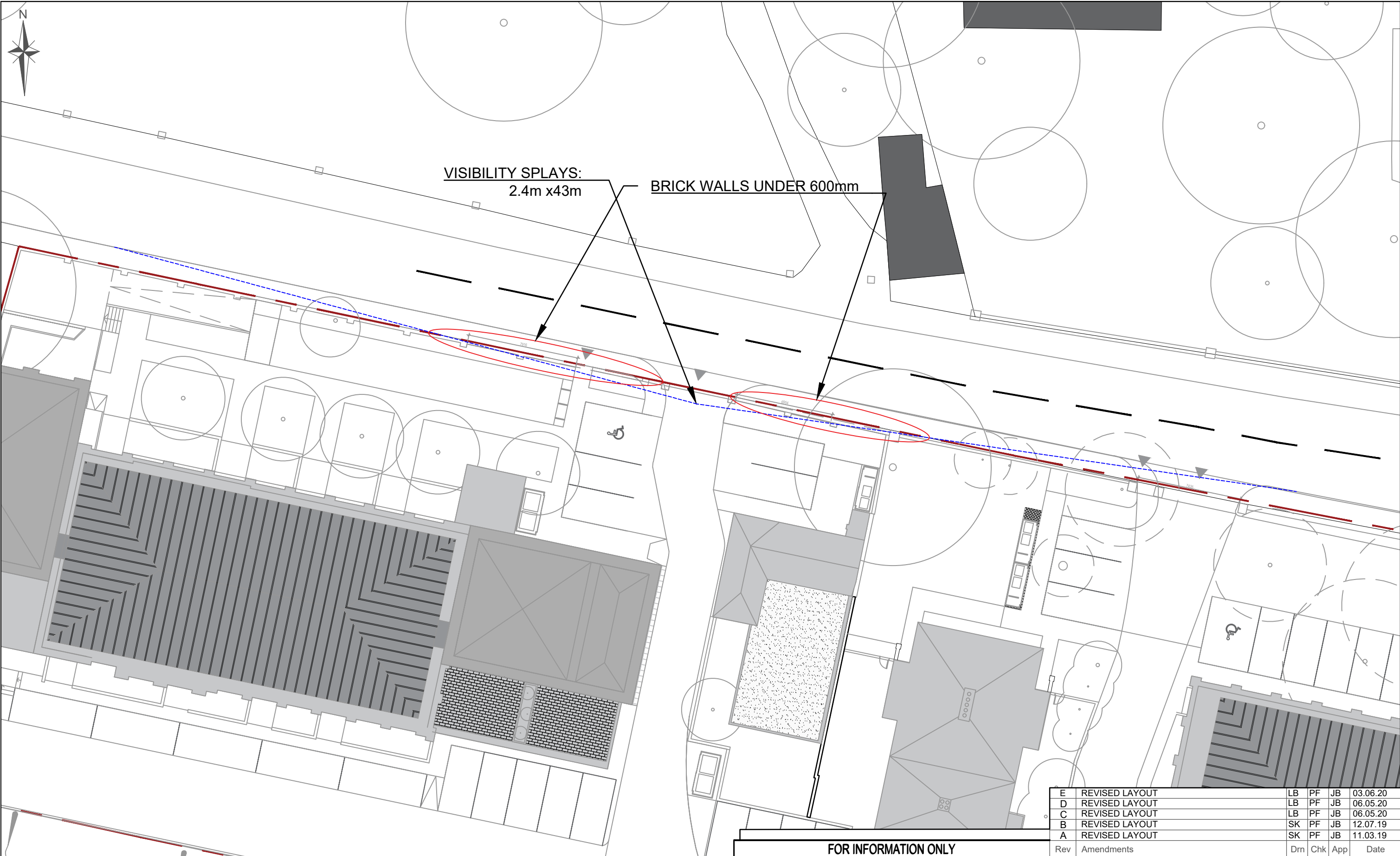
Status: **PLANNING**
 Drawing no: **1685-A-P100**
 Revision: **E**

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SCALE 1:500
 Proposed Site Plan



APPENDIX B– VISIBILITY SPLAYS



E	REVISED LAYOUT	LB	PF	JB	03.06.20
D	REVISED LAYOUT	LB	PF	JB	06.05.20
C	REVISED LAYOUT	LB	PF	JB	06.05.20
B	REVISED LAYOUT	SK	PF	JB	12.07.19
A	REVISED LAYOUT	SK	PF	JB	11.03.19
Rev	Amendments	Drn	Chk	App	Date

FOR INFORMATION ONLY



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Job Title	HAMPTON WATER TREATMENT
Drawing Title	VISIBILITY SPLAYS AUTOTRACK ANALYSIS

Client	WATERFALL PLANNING LTD
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Scale	1:250@A3	Date	JUNE 20	Designed	SK
Drawn	SK	Checked	PF	Approved	EJ
Job No	17200-01	Drawing No	17200-01-101	Rev	E

APPENDIX C– VEHICLE SWEEP PATH ANALYSIS



E	REVISED LAYOUT	LB	PF	JB	03.06.20
D	REVISED LAYOUT	LB	PF	JB	06.05.20
C	REVISED LAYOUT	LB	PF	JB	06.05.20
B	REVISED LAYOUT	SK	PF	JB	12.07.19
A	REVISED LAYOUT	SK	PF	JB	11.03.19

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London
SE1 7NX

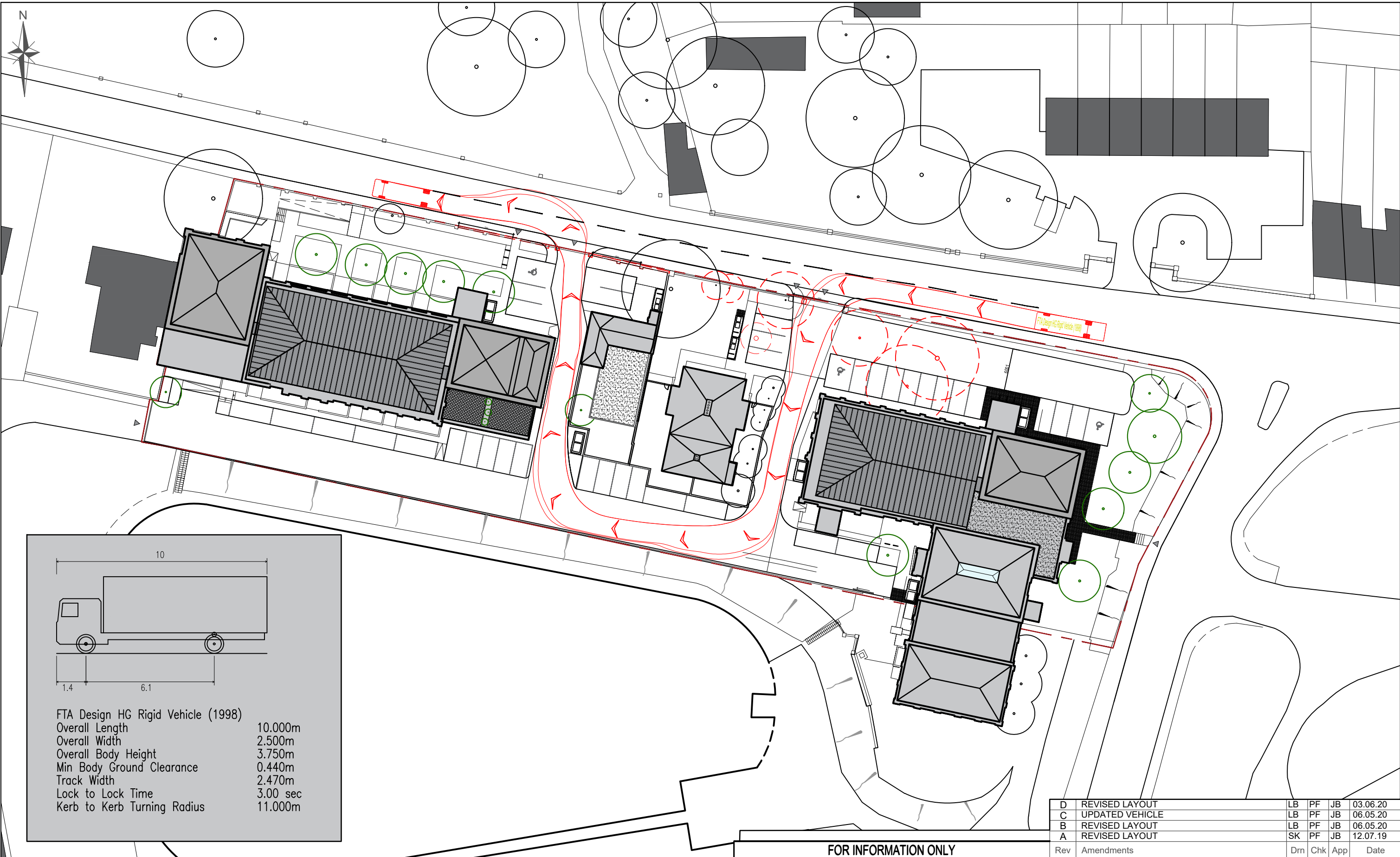
Telephone: 0207 442 2225
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W: www.markidesassociates.co.uk

Job Title
HAMPTON WATER TREATMENT

Drawing Title
LARGE CAR AUTOTRACK ANALYSIS

Client
WATERFALL PLANNING LTD

Rev	Amendments	Drn	Chk	App	Date
Scale	1:500@A3	Date	JUNE 20	Designed	SK
Drawn	SK	Checked	PF	Approved	EJ
Job No	17200-01	Drawing No	17200-01-100	Rev	E



FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.750m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to Lock Time	3.00 sec
Kerb to Kerb Turning Radius	11.000m

Rev	Amendments	Drn	Chk	App	Date
D	REVISED LAYOUT	LB	PF	JB	03.06.20
C	UPDATED VEHICLE	LB	PF	JB	06.05.20
B	REVISED LAYOUT	LB	PF	JB	06.05.20
A	REVISED LAYOUT	SK	PF	JB	12.07.19

FOR INFORMATION ONLY

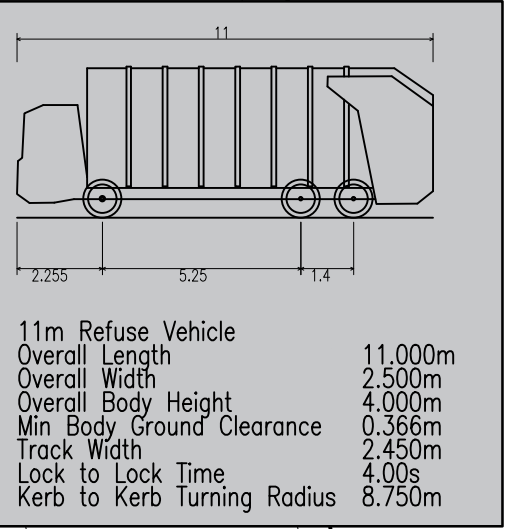
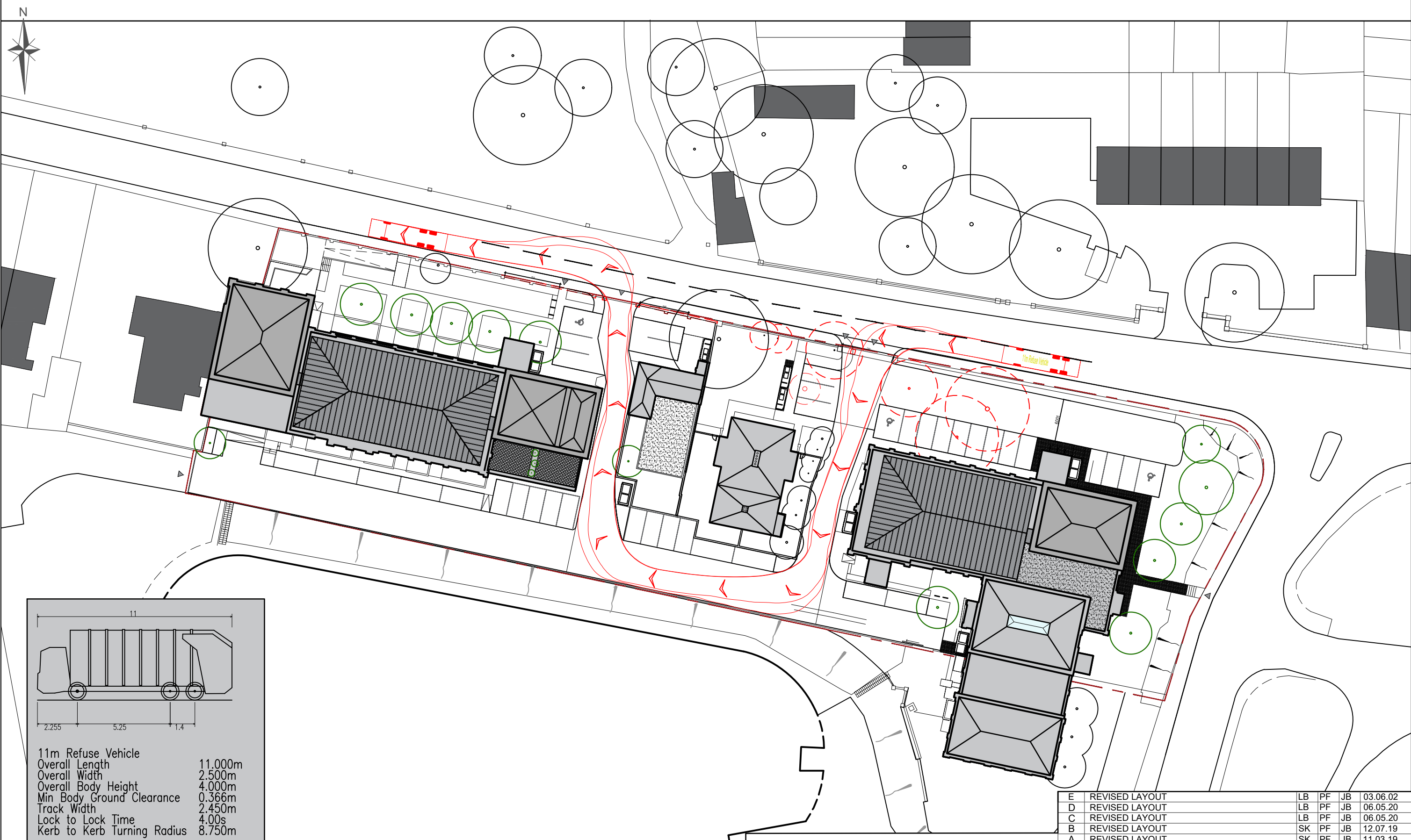
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Telephone: 0207 442 2225
E: enquiries@markidesassociates.co.uk
W: www.markidesassociates.co.uk

Job Title	HAMPTON WATER TREATMENT
Drawing Title	10m RIGID AUTOTRACK ANALYSIS

Client	WATERFALL PLANNING LTD
--------	------------------------

Scale	1:500@A3	Date	JUNE 20	Designed	SK
Drawn	SK	Checked	PF	Approved	EJ
Job No	17200-01	Drawing No	17200-01-102	Rev	D



E	REVISED LAYOUT	LB	PF	JB	03.06.02
D	REVISED LAYOUT	LB	PF	JB	06.05.20
C	REVISED LAYOUT	LB	PF	JB	06.05.20
B	REVISED LAYOUT	SK	PF	JB	12.07.19
A	REVISED LAYOUT	SK	PF	JB	11.03.19
Rev	Amendments	Drn	Chk	App	Date

FOR INFORMATION ONLY

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Job Title
HAMPTON WATER TREATMENT

Drawing Title
11m Refuse AUTOTRACK ANALYSIS

Client
WATERFALL PLANNING LTD

Scale	Date	Designed
1:500@A3	JUNE 20	SK
Drawn	Checked	Approved
SK	PF	EJ
Job No	Drawing No	Rev
17200-01	17200-01-103	E