University College London Hospitals NHS
NHS Foundation Trust

Demolition of the existing buildings and redevelopment for a building of 6 storeys in height including ground and 3 storeys basement, for use as a specialist head and neck facility (Class D1)

Former University College London (UCL) Student Union and Royal Ear Hospital, Huntley Street, Bloomsbury

Framework Waste and Servicing Management Plan

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Contents

Important note about your report

The sole purpose of this report and the associated services performed by Jacobs is to provide details on the waste management and servicing arrangements at the proposed University College London Hospital (UCLH) development at the former University College London (UCL) Student Union and Royal Ear Hospital, Huntley Street, Bloomsbury. The report has been produced in accordance with the scope of services set out in the contract between Jacobs and the Client. That scope of services, as described in this report, was developed with the Client.

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1. Introduction

This Framework Waste Management and Servicing Plan, has been prepared on behalf of the University College London NHS Foundation Trust (UCLH) to accompany their planning application to the London Borough of Camden (LBC) for redevelopment of 43-49 Huntley Street, London Borough of Camden. The proposals are for the relocation of the Royal National Throat, Nose and Ear Hospital and the Eastman Dental Hospital from their existing locations at Gray's Inn Road to a modern combined facility at the proposed site.

The purpose of this document is to describe the waste management and servicing arrangements for the proposed Development.

1.1 Development proposals

The proposals are summarised below in Table 1.1 below.

Table 1.1 - Schedule of floor use

Floor	Activity
Basement -3	Plant
Basement -2	Imaging
Basement -1	Minor procedures
Ground floor	Entrance
1st Floor	Consultation/Examination Area – Ear, nose and throat
2nd Floor	Paediatrics
3rd Floor	Dental
4th Floor	Dental
5th Floor	Consultation/Examination Area – Ear, nose and throat

1.2 Waste management arrangements

The key focus of this document is the management of waste produced during the Development's operations, the document sets out the following:

- the policy and legislative framework which supports the development of this Waste Management and Servicing Plan;
- the waste management arrangements for the Development, including;
  - the estimated number of waste containers required in order to service the Development when operational;
  - the design considerations of the Central Waste Store and Waste Disposal Holds on each floor of the Development; and
  - how waste management logistics will be managed when the Development is in use.

1.3 Delivery and servicing arrangements

This document also sets out the delivery and servicing arrangements and sets out the following:

- The delivery and servicing vehicle access strategy;
- The anticipated type of vehicle that will access Shropshire Place to serve the site and the estimated daily frequency of vehicle movements; and

- Management strategies that UCLH will be encouraged to implement to achieve reduced delivery and servicing pressures and reduce the impact on adjacent residential and commercial land uses.

This document has been prepared in consultation with the NHS Facilities Management team, who will operate an entirely private service for waste, deliveries and servicing at the proposed site. The proposed delivery and service vehicle access strategy has been identified within pre-application discussion with LBC highways development control officers.

1.4 Document scope

It should be noted that this document considers the scope of waste management and servicing arrangements for the Development once it is operational, it does not consider waste management or servicing arrangements during the Development's demolition or construction phases. Additionally this document does not detail those elements of facility management required to support the Development including cleaners requirements and FM storage.

2. Policy, Strategy and Legislation Review

2.1 Introduction

This section provides summaries of the waste policy, legislative requirements and guidance that are most relevant to the waste management design and operational requirements for the Development.

2.2 European and National Waste Policy, Strategy and Legislation

2.2.1 EU Waste Framework Directive

The Directive1 outlines the principles for managing waste through the adoption of the waste hierarchy, as well as encouraging the application of the "self-sufficiency" and "proximity" principles when treating waste where appropriate and sustainable to do so. These principles have been adopted within various regulations in EU Member States. The relevant Regulations for England and Wales are detailed below.

2.2.2 The Waste (England and Wales) Regulations 2011[2]

The Waste (England and Wales) Regulations 2012 transpose the requirements of the European Waste Framework Directive within UK legislation. It sets out the requirements for the collection, transporting, recovery and disposal of waste and makes some changes to the way waste is managed in England and Wales. In summary, the Regulations:

- Require businesses to confirm that they have applied the waste management hierarchy when transferring waste and to include a declaration on their waste transfer note or consignment note;
- Require waste producers to ensure that waste management contractors collecting and/or managing wastes are registered with the Environment Agency as Waste Carriers; and
- Require the separate collection of waste paper, metal, plastic and glass from 1 January 2015 for all commercial properties.

2.2.3 Waste Strategy for England 2007 and Waste Review 2011

Waste Strategy 2007 takes forward the principles of the internationally accepted waste hierarchy and addresses the key challenges for future waste management. The Strategy also identifies that all parts of society (individuals, communities and organisations) are responsible for their own waste. In order to encourage the application of waste management options which are higher up the waste hierarchy, the Strategy has set targets for recycling, composting and reducing household waste. The targets are:

- Recycling and composting of household waste, at least:
  - 40% by 2010
  - 45% by 2015
  - 50% by 2020
- Reduction of household residual waste from 2000 levels:
  - 2010: 29% reduction
  - 2015: 35% reduction
  - 2020: 45% reduction

[1] Waste Framework Directive 2008/98/EC http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:EN:PDF
[2] The Waste (England and Wales) Regulations 2011 http://www.legislation.gov.uk/uksi/2011/988/made

The Government reviewed Waste Policy in England in 2011[3], the Policy Review also included commitments for the promotion of business waste recycling from small and medium sized enterprises, as well as measures to improve the regulation of business waste producers as to how they report waste management activities.

In December 2013 the Government published a Waste Prevention Programme for England. This Programme contains measures to help businesses identify where costs can be saved through introducing waste reduction initiatives, as well as increase awareness on measures which could be implemented to efficiently use resources and prevent waste.

2.3 Regional Policy and Strategy

2.3.1 The London Plan 2011

The London Plan is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20–25 years. The Plan proposes a target to exceed recycling/composting levels for commercial and industrial (C&I) waste of 70% by 2020. The London Plan also states that suitable waste and recycling storage facilities are required in new developments.

2.3.2 The Mayor's Business Waste Strategy 2011[4]

The Mayor's Business Waste Strategy 2011 sets out the Mayor's strategy for meeting the commercial and industrial (C&I) targets set out in the London Plan. The primary focus of the strategy is the promotion of resource efficiency as a means of waste prevention.

A policy proposal to improve storage capacity and collection access arrangements to business premises is also detailed in the Strategy. The Mayor states that he will make use of the planning process, through the London Plan and the Supplementary Planning Guidance on sustainable design and construction, to ensure the provision of appropriate waste storage space in new developments. Local planning authorities will be required to ensure that all planning applications for new developments have provided sufficient space for waste storage space. In addition, an Operational Waste Strategy for new developments should be submitted to show how the potential types and quantities of waste that may be generated can be managed on-site in such a way as to achieve 70% recycling of C&I waste.

The waste management provision requirements for new Developments detailed in the Mayor's Business Waste Strategy are applicable to the new UCLH Development. Therefore, waste storage requirements have been considered as part of the design proposals. This document details how waste produced by the Development will be managed. Provision for separate recycling and non-recyclable waste containers has been made at the Development.

2.4 Local Policy

2.4.1 North London Waste Plan proposed submission version May 2011, North London Boroughs (2011)[5]

The London Borough of Camden (LBC) is a member of the North London Waste Authority. A draft Waste Plan for the Authority was produced in 2011, however in 2013 it was announced that a new version of this document was to be consulted on, following the recommendation by the Inspector that the previous Plan was not to be adopted. The North London Waste Plan (2011 version) suggests that the area's one clinical waste incinerator at Edmonton is currently operating under capacity. Additionally it suggests that due to the expensive nature of

[3] Government review of Waste Policy in England 2011 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69401/pb13540-waste-policy-review110614.pdf
[4] Mayor of London 2011 The Mayor's Business Waste Strategy – Making Business Sense of Waste http://www.london.gov.uk/sites/default/files/Business%20Waste_FINAL.pdf
[5] North London Waste Plan Proposed Submission Version 2011 http://www.nlwp.net/downloads/submission-docs/nlwp_submission.pdf

disposing of hazardous healthcare (clinical) wastes, measures are likely to increase over time to reduce the amount of waste which is sent for hazardous waste disposal.

The Development has included provision for the segregation of different types of clinical wastes, as detailed in Section 2.6.1 below.

2.4.2 The LBC - Core Strategy 2010[6]

The Core Strategy for the LBC was adopted in 2010 and forms part of the Council's Local Development Framework. The Core Strategy aims to influence planning decisions and shape development within the borough up to 2025.

In terms of waste, Policy CS18 states:

"The Council will seek to make Camden a low waste borough. We will:

a) aim to reduce the amount of waste produced in the borough and increase recycling and the re-use of materials to meet our targets of 40% of household waste recycled by 2010, 45% by 2015 and 50% by 2020;

b) make sure that developments include facilities for the storage and collection of waste and recycling;

c) deal with North London's waste by working with our partner boroughs in the North London Waste Authority to produce a North London Waste Plan, which will ensure that facilities are provided to meet the amount of waste allocated to the area in the London Plan;

d) safeguard Camden's existing waste site at Regis Road."

In terms of policy compliance, the Development includes dedicated recycling storage which corresponds with the local recycling collection services offered in the LBC area.

2.4.3 LBC Development Policies 2010-2025[7]

The LBC Development Policies[7] document forms part of the Council's Local Development Framework (LDF), the group of documents setting out planning strategy and policies. The lead Local Development Framework document is the Core Strategy, which sets out the key elements of the Council's planning vision and strategy for the borough and contains strategic policies.

In terms of waste, Policy DP26 – managing the impact of development on occupiers and neighbours states:

"We will also require developments to provide:

a facilities for the storage, recycling and disposal of waste"

In terms of compliance with Policy DP26, details of the storage facilities for waste and recycling for the Development are provided in Section 4.2.3 of this document.

[6] LBC Core Strategy 2010 http://www.camden.gov.uk/ccm/navigation/environment/planning-and-builtenvironment/planning-policy/local-development-framework--ldf-/core-strategy/

[7] LBC Development Policies 2010-2025 http://www.camden.gov.uk/ccm/content/environment/planning-and-builtenvironment/two/planning-policy/local-development-framework/development-policies.en

2.4.4 LBC Planning Guidance – CPG 1 Design 2011[8]

LBC Planning Guidance[8] supports the policies in the Local Development Framework (LDF). This guidance is therefore consistent with the Core Strategy and the Development Policies, and forms a Supplementary Planning Document (SPD) which is an additional "material consideration" in planning decisions. Within the guidance, Section 10 provides information on the appropriate storage for waste and recycling in all developments in the LBC. There are some key messages that developments should accommodate when planning for waste recycling and storage:

a) *"adequate space (designed) for the storage of waste and recyclables;*

b) *safe location - accessible for all users and collectors and minimises nuisance to occupiers and neighbours (and their amenity space) e.g. noise, obstruction, odours, pests, etc;*

c) *refuse collection by any waste contractor (and allow for reasonable changes to collection services in the future);*

d) *containers should have designated storage areas; and*

e) *sensitively designed/located, especially in conservation areas/or listed buildings.*

The guidance applies to:

a) *all new build development;*

b) *development that significantly increases the amount of floor space and on-site waste; and*

c) *other activities that significantly increase the amount of waste generated on-site."*

The Development proposals have been produced in accordance with LBC Planning Guidance – CPG 1 Design. Details of storage capacity for waste and recycling containers are detailed in Section 4.2.3 and 4.2.4 of this document. A storage area for waste containers is provided on level 0 (ground floor), of the Development.

2.4.5 The LBC's Waste Storage Requirements 2011

The LBC have developed a 'Waste Storage Requirements' guide that provides basic information for architects and others with regards to providing waste storage facilities for premises within the LBC. It describes the methods of storage available and the LBC's general requirements.

The document states that:

"waste management issues can have a major impact on the layout of any residential or non-residential development. To ensure that storage space for the efficient management of waste and recyclable material is incorporated into the final layout it is essential that liaison between planning authorities and architects, as well as collection authorities, takes place. The developer or his agent should reach agreement with all appropriate authorities, particularly upon the following points:

a) *the methods of storage, collection of waste, including recyclable material, to be used for the form of layout and building density adopted;*

b) *a designated location for waste including recyclable material storage areas to be provided and means of access to them for waste collection staff and vehicles;*

[8] LBC Planning Guidance – CPG Design 2011 http://camden.gov.uk/ccm/content/environment/planning-andbuilt-environment/two/planning-policy/supplementary-planning-documents/camden-planning-guidance.en

c) *the storage capacity to be provided with allowance for the frequency of collection specified by the collection authority, the volume and nature of waste including recyclable material expected and the size and type of containers to be used;*

d) *the responsibility for cleaning and maintenance of storage facilities;*

e) *environmental aspects, e.g. air pollution, indoor air quality, noise control, and litter abatement;*

f) *means of escape and fire-fighting arrangements in waste & recyclable material storage and collection areas; and*

g) *appropriate arrangements for older persons and persons with disabilities."*

The Development proposals have been produced in accordance with the LBC's Waste Storage Requirements document and details on how each of these requirements is met are provided in Section 4.2.3 and 4.2.4 of this document.

2.4.6 Fitzrovia Area Action Plan

Fitzrovia is an area where an established residential community lives alongside activities including commercial, university and health uses. LBC has prepared an Area Action Plan (AAP) for Fitzrovia in response to continued significant pressure for development in the area. Principal 9 of the Fitzrovia Area Action Plan states:

"The Council will have regard to the particular impacts on residential amenity that arise from the dense mix of land uses in Fitzrovia, and will seek:

to prevent cumulative harm to residential amenity from noise, mechanical ventilation, light pollution, deliveries and waste collection.

Offices and educational, medical and research institutions can cause disturbance to residents through servicing, mechanical ventilation and lighting, particularly where these activities take place 24 hours a day or when ambient noise levels are low."

Consideration will be given to this principle when scheduling waste container collections at the Development so that activities do not generate noise at nuisance levels to local residential properties.

2.5 Other Development Guidance

2.5.1 The Building Regulations 2010

The Building Regulations 2010 require the following:

"*Solid waste storage – Part H6*

(1) Adequate provision shall be made for the storage of solid waste.

(2) Adequate means of access shall be provided:

For people in the building to the place of storage and;

From the place of storage to a collection point"

In the Secretary of State's view the requirements of H6 (above) will be met if the solid waste storage area is:

Designed and sited so as not to be prejudicial to health;

Of sufficient area having regard to the requirements of the waste collection authority for the number and size of receptacles under Sections 46 and 47 of the Environmental Protection Act 1990;

Sited so as to be accessible for use by people in the building and of ready access for removal to the collection point specified by the waste collection authority under Sections 46 and 47 of the Environmental Protection Act 1990."

Section H6 sets out the general requirements for solid waste storage for domestic and non-domestic developments. The Development proposals have been produced in accordance with the Building Regulations and details on the provision for waste and recycling storage is detailed in Section 4.2.3 and 4.2.4 of this document.

2.5.2 British Standard 5906:2005 Waste Management in Buildings – Code of Practice

This British Standard (BS) document details the codes of practice for methods of storage, collection, segregation for recycling and recovery of waste from residential and non-residential buildings. The standard is applicable to all new developments including but not limited to retail premises and offices. It details a number of considerations which are required to be made when designing new developments to ensure that waste management storage provision and accessibility, for collection and removal, is appropriate. The waste container store at the proposed development will comply with the requirements of BS5906:2005.

2.6 Hospital Specific Guidance

2.6.1 Health Technical Memorandum 07-01: Safe Management of Health Care Waste[9]

This document, first published in 2006 and updated in 2013, provides: "advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare."

With regard to designing waste management storage and collection, the guidance recommends that:

"Healthcare waste receptacles may need to be stored before being transported to treatment/disposal sites. They should not be allowed to accumulate in corridors, wards or other places accessible to unauthorised personnel or members of the public.

Arrangements should be made to routinely transport waste from ward level, treatment room or department to a storage area pending collection by a waste contractor."

The guidance also provides guidance on the specification of bulk waste storage areas, used for the holding of waste receptacles prior to their collection by waste contractors. It recommends that such storage areas should be:

- reserved for healthcare waste only;
- well-lit and ventilated;
- close to any on-site incineration or other disposal facility;
- sited away from food preparation and general storage areas, and from routes used by the public;
- totally enclosed and secure;

[9] Department of Health – HTM:07-01, 2013
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/167976/HTM_07-01_Final.pdf

- provided with separate storage for sharps receptacles, anatomical and waste medicines, which may need a higher degree of security to prevent unauthorised access;
- sited on a well-drained, impervious hardstanding;
- readily accessible but only to authorised people;
- kept locked when not in use;
- secure from entry by animals and free from insect or rodent infestations;
- provided with wash-down facilities;
- provided with washing facilities for employees;
- clearly marked with warning signs;
- provided with separate, clearly-labelled areas for waste that requires, rather than is destined for, different treatment/disposal options;
- provided with access to first-aid facilities;
- appropriately drained to a sewer (with discharge consent).

Furthermore, with regard to the sizing of these areas:

> *"All bulk stores should have storage capacity to match the proposed frequency of collection. Bank (or other) holidays need to be taken into account and a margin provided for any interruption in the disposal system."*

During the design phase of the Development, those recommendations detailed in the HTM 07:01 document have been used to inform the waste management storage requirements.

HTM 07:01 provides recommendations for the segregation and separate collection of healthcare waste types based on their properties. Segregation of wastes will facilitate the different treatment requirements of the waste material, based on their infectious or hazardous properties. The Development will adopt the recommended approach for waste segregation during its operational phase, further details of which are detailed in Section 2.2.6 below.

2.6.2 Royal College of Nursing: Safe Management of Health Care Waste

In 2007, the Royal College of Nursing issued a guidance document on the appropriate separation and segregation of medical wastes. The information in this document re-iterates that which was originally produced in the original version of HTM 07:01. The document identifies two types of medical wastes: hazardous and non-hazardous wastes. These waste types should then be further separated and placed in colour coded receptacles. The reasoning behind segregation of these wastes types is to minimise the quantity of waste being sent for costly incineration or treatment. This can be achieved by reducing the amount of non-infections wastes, which are more appropriate to be treated through less costly measures such as recycling or landfill, being sent for costly treatment.

The waste management measures detailed in this document apply these good practice waste segregation measures. In addition to these measures, the Development will further apply the waste hierarchy contained within EU, UK, regional and local Government policy by the provision of waste receptacles for recyclate collection.

2.6.3 UCLH Waste Management Policy

The UCLH Waste Management Policy details the measures which are to be implemented at UCLH buildings to achieve reductions in waste generated. It identifies a number of different waste streams which are expected to be produced by the Trust and how those waste streams should be stored, collected and disposed of. The Policy details how for those wastes collected in colour coded bags at the ward/clinic level, these collections will occur at least once a day or when the containers are at least three quarters full. The colour coding of bags relate to the types of waste material which should be disposed of in these bags, and this is in accordance with NHS Guidance document HTM07-01. For those waste types not collected in bags but containers, the Policy details how often these waste types will be collected and how they will be disposed of. The Policy will apply to the waste management practices and operations within the new Development.

2.7 Policies Impacting Delivery and Servicing

This Framework Waste and Servicing Management Plan has also been produced with reference to:

- LB Camden Core Strategy
- The London Freight Plan
- TfL guidance on Delivery and Servicing Plans
- DfT guidance on Delivery Plans

2.7.1 LBC Core Strategy

LBC's Core Strategy Policy CS11 – 'Promoting sustainable and efficient travel' details a requirement for development to promote the sustainable movement of freight and minimise the impact of freight movement on local amenity traffic and the environment through consolidation in particular. This is reinforced within LBC's Development Management Policy DP20 Movement of goods and materials, which states that the council will attempt to minimise the movement of goods and materials by road, by:

- expect development that would generate significant movement of goods or materials both during construction and in operation to minimise the movement of goods and materials by road, and consider the use of more sustainable alternatives such as rail and canal links;
- promote the development and use of freight consolidation facilities and other initiatives with potential to reduce the impact of goods vehicles, and encourage the use of cycle courier services for local deliveries; and
- seek to promote and protect facilities for the movement of goods by rail and water, including facilities for transfer between road, rail and canal.

Policy DP20 also states the council will attempt to minimise the impact of the movement of goods and materials by road by expecting developments to:

- be located close to the Transport for London Road Network or other Major Roads;
- avoid any additional need for movement of vehicles over 7.5 tonnes in predominantly residential areas;
- accommodate goods vehicles on site; and
- seek opportunities to minimise disruption for local communities through effective management, including through the optimisation of collection and delivery timings and the use of low emission vehicles for deliveries.

2.7.2 TfL Guidance on Servicing and Delivery Plans

This document has also been produced in accordance with, The London Freight Plan, Transport for London (TfL) guidance on DSPs and DfT guidance on Delivery Plans, with TfL guidance stating that implementing a delivery and servicing strategy can help organisations:

- Manage deliveries to reduce the number of trips, particularly during the morning peak, thereby reducing congestion;
- Identify where safe and legal loading can take place to reduce the potential risk of accidents;
- Commission delivery companies who can demonstrate their commitment to best practice and allow the site to achieve environmental goals including reducing CO2 emissions; and
- Save money by reducing the unit cost of travel through consolidation.

3. Delivery and Servicing

3.1.1 Existing Delivery and Servicing

Shropshire Place borders the west of the site and is an access route for vehicles to the existing service bay to the rear of the site, which is associated with the current site operation. Shropshire Place also provides vehicular access to the land uses in Queen's Yard. As the road is only 3m wide, large vehicles are only able to access these locations by reversing down Shropshire Place from Capper Street. Small vehicles can drive in in a forward gear from Capper Street and turn in the entrance to Queen's Yard. This is explained in more detail later in this report. The service bay accommodates up to 6 ambulances.

Shropshire Place has single yellow line restrictions (without blips) along the extent of its western and eastern sides.

3.1.2 Existing Shropshire Place Loading Survey

A loading occupancy survey was undertaken on Shropshire Place between Wednesday 18th June to Friday 20th June 2014. The survey recorded the servicing activityon Shropshire Place over the 72 hour period. It also identified the buildings being served. The survey determined the only locations being serviced by vehicles accessing Shropshire Place were 43-49 Huntley Street (the site), Shropshire House and the businesses along Queen's Yard.

Table 3.1 displays the results of the survey based on an average day.

Table 3.1: Existing Shropshire Place Loading Survey Results , average day.

Building being served	43-49 Huntley St (the site)	Queen's Yard	Shropshire House	Total
Car	1	2		3
Ambulance (to access the service bay to the rear of the site)	6			6
LGV	1	4		5
MGV	1	3	1	5
Total	**9**	**9**	**1**	**19**

Table 3.1 shows that, on average, 9 vehicles access the site via Shropshire Place, per day. Six of these vehicles were ambulances.

The survey also identified an average of 9 vehicles access Queen's Yard with just 1 accessing Shropshire House. In total, 19 vehicles access Shropshire Place on an average day.

A total of 56% of all vehicles accessing Shropshire Place reversed into the road from Capper Street and departed in forward gear. An additional 28% entered Shropshire Place in forward gear and departed in forward gear. These were typically the LGVs and ambulances. Only 18% entered Shropshire Place in forward gear and reversed out onto Capper Street.

On an average day, all Shropshire Place servicing and ambulance activity specifically for vehicles accessing the 43-49 Huntley Street takes place between 05.00 and 19.00.

3.1.3 Proposed Servicing and Delivery Strategy

The development proposal will generate a demand for a range of goods and materials, including clinical and pharmacy, medical gases cleaning, catering, linen, laundry and stationary, as well as waste collection.

As a health care related land use, service and delivery movements are anticipated to occur 24 hours a day, reflecting a just-in-time delivery strategy. Most servicing will occur via a redesigned Shropshire Place. A dedicated loading bay is proposed to the rear of the site, within the site boundary, accessed off Shropshire Place.

As many movements as possible will occur at night to minimise the effect of these vehicles on the proposed pedestrian dominated spaces on Shropshire Place. The internal loading bay will be the only area used during the night and is provided for bulk deliveries and clinical waste collections, which require more time to unload / load. The loading bay will be enclosed and a shutter will be provided which will be operated manually as required. The dedicated loading bay would minimise any noise impact associated with loading or waste collection. Gas cylinder delivery trucks who would wait in front of the loading bay doors without impeding access to Queen's Yard.

All delivery / service vehicles accessing Shropshire Place would be required to enter Capper Street via Huntley Street and reverse into Shropshire Place via Capper Street. Vehicles would be required to exit east onto Capper Street. A qualified supervisor would oversee any manoeuver involving development related vehicles reversing down Shropshire Place.

As at present, due to the restricted width of Shropshire Place and Capper Street the maximum sized vehicle which could access Shropshire Place is a 8m long HGV. Furthermore, there is a height restriction of 5m at the internal loading bay (vehicles would be no more than 4.5m in height to allow for clearance).

Swept Path drawings shown in Appendix A display the anticipated manoeuvre of delivery / service vehicles to the loading bay. The swept path drawings show that restrictions preventing parking or loading at any time will be required on sections of single line on Capper Street, to allow the proposed access manoeuvre to / from Shropshire Place to be undertaken. No parking bays will be lost as a result of the proposed servicing access strategy. Table 3.2 displays the likely level of servicing at the site.

Table 3.2: Proposed Site Deliveries / Servicing

Delivery Type	Anticipated number of deliveries / collections per day	Anticipated time of delivery	Anticipated Location for delivery	Anticipated delivery vehicle size (8m long veh max)
Boc gas cylinder vehicle	1 per day	PM daytime	Shropshire Place	Max 6m long MGV
Café supplies	1 per day	AM daytime	Shropshire Place	LGV
Water cooler deliveries	1 per week	Night time	Shropshire Place, LB	Max 6m long MGV
Pharmacy deliveries	1 per day	Night time	Shropshire Place, LB	LGV
Catering deliveries	1 per day	AM daytime	Shropshire Place	LGV
Linen deliveries & collection	1 per day	Night time	Shropshire Place, LB	Max 6m long MGV
Medical consumables for doctors and patients	1 per day	Night time	Shropshire Place, LB	Max 6m long MGV
Mail vehicle delivery	Various courier deliveries	daytime	Huntley Street / local roads	Motorcycles / Max LGV
Clinical waste	2 per day	Night time	Shropshire Place, LB	Max 8m long specialist clinical waste vehicle
Recycling waste	2 per day	PM daytime	Shropshire Place	Max 8m long medium refuse vehicle
General waste	2 per day	PM daytime	Shropshire Place	Max 8m long medium refuse vehicle

Table 3.2 shows that 5 night time deliveries / collections are expected on an average night, with an additional occasional water cooler delivery one night per week. All night time deliveries will take place via the loading bay on Shropshire Place.

Table 3.2 also shows there to be a total of 7 delivery / service vehicles accessing Shropshire Place during the daytime. All daytime deliveries and servicing operations will be managed so that only one development related vehicle will be present on Shropshire Place at any one time.

As previously identified, 9 vehicles currently access 43-49 Huntley Street via Shropshire Place during the daytime. Therefore, the anticipated daytime level of site servicing via Shropshire Place will decrease by 2 vehicles from current levels.

3.1.4 Proposed Delivery and Servicing Management Strategies

Travel Plan incorporation

It is envisaged that the UCLH wide travel plan will include a survey of service vehicle movements to the site, conducted at the end of the 3rd and 5th year after occupation of the proposed healthcare and commercial land uses.

The survey will record the following information:

- The number of deliveries to the site.
- The classification of the delivery service vehicle.
- The arrival time of the delivery service vehicle.
- The length of stay of the delivery service vehicle.
- The set down area from which the delivery/collection is made.
- The purpose of the trip including item description and if there is on-going deliveries to other UCLH sites.
- The building that was being serviced, be it the site, Queen's Yard or Shropshire House.

Subsequent targets in terms of trip reduction, time of arrivals, consolidating similar trips will be based on the results of this survey and set out in the site's Travel Plan update.

The responsibility for implementing the travel plan management strategies will fall within the remit of the Travel Plan Coordinator, which is likely to be a position included within either UCLH's Sustainability team or Procurement Team.

Consolidation and Backloading

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 done across departments within a single organisation or between different commercial organisations who are aiming to reduce their delivery vehicle impact and gain economic benefits by reducing the unit cost of transportation. Reducing the number of vehicle movements similarly reduces associated emissions and congestion.

Consolidation is the central theme that is being promoted as part of the NHS Neutral Vendor Scheme and should continue, being reliant on effective communication and collaboration with suppliers, between internal departments within UCLH, the wider UCLH estate and other Trusts.

It is an aspiration of UCLH to serve its portfolio of buildings via an expanded dedicated consolidation centre which combines various types of goods delivery into one single delivery, thus reducing the number of deliveries to their sites. However, this is a long term aspiration which may not be implemented in the short term.

An effective communication strategy will be established between administrators who are responsible for ordering goods that are common across departments.

Goods which generate a return demand will be identified to strengthen the potential for backloading by liaising with suppliers.

Safe Loading Strategy

The proposed Loading Bay will be managed by on-site UCLH staff over a 24 hour period to ensure there is no abuse in terms of visitors or staff parking in the area and that delivery vehicles are appropriately parked. Designated site management will also ensure that no two site related vehicles arrive at the same time during the day.

Inform suppliers of delivery location

All suppliers will be made aware of the proposed loading location via Shropshire Place location and the access strategy, prior to occupation.

Reduce the time spent by on-site by suppliers

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 and the department awaiting delivery ensures a representative is available at the specified time for collection or equally has organised the good that needs to be collected so that the supplier can depart quickly.

The potential for the introduction of a dedicated booking system for departments will be investigated.

Encourage best practice amongst suppliers

The Travel Plan coordinator will encourage regular suppliers to join a best practice scheme such as TfL's Freight Operator 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.

Using suppliers that are members of such an organization helps the Trust to establish green credentials and assist in carbon reduction targets, which can be marketed to the local community.

The Travel Plan Coordinator will contact regular suppliers and establish whether they are members of FORS.

Courier collections

Couriers often account for a large proportion of visits to a site each day, which is often due to departments requesting that orders are delivered before a certain time each day, often unnecessarily.

Adopting a policy of open delivery times allows a courier to consolidate deliveries into fewer visits a day. It is anticipated that all courier deliveries will occur away from Shropshire Place to free up available space for essential Shropshire Place users. Huntley Street would be the typical location for courier drop offs at the site.

The Travel Plan Coordinator will review courier delivery practices in an effort to set up a consolidation process where a single courier can deliver/collect multiple packages in one visit.

4. Waste Management Operational Plan

This section details the provision for waste management storage which has been included within the new Development and provides an overview as to how waste will be managed in the building once operational.

4.1 Waste types

In line with UCLH waste management practices and guidance as detailed in Section 2 above; the Development will separate the majority of waste in to the following primary waste streams:

- Infectious clinical wastes;
- Offensive clinical wastes;
- Sharps;
- General waste; and
- Recyclable waste[10]

In addition to these primary waste streams there will be secondary waste streams, which will be produced in smaller quantities.

- Confidential wastes; and
- Ad Hoc wastes;

4.2 Waste assumptions and container estimates

4.2.1 Operational assumptions

The Development will consist of outpatient services, offices and staff areas. The function of each floor is provided in; Table 4.1 below.

Table 4.1: Schedule of floor use

Floor	Activity
Basement -3	Plant
Basement -2	Imaging
Basement -1	Minor procedures
Ground floor	Entrance
1st Floor	Consultation/Examination Area – Ear, nose and throat
2nd Floor	Paediatrics
3rd Floor	Dental
4th Floor	Dental
5th Floor	Consultation/Examination Area – Ear, nose and throat

Waste will be generated from various sources throughout the Development including:

- Consultation / Examination rooms; and
- Non-medical functions i.e. café area;

[10] Recyclable waste will include dry recyclables such as paper, cans, plastic bottles, and cardboard. A full list of items appropriate to be collected for recycling will be determined by the recycling waste collection contractor and UCLH

It has been assumed that all x-rays carried out the hospital would be digital. It is also assumed that amalgam traps will be placed where required in the dentistry consultation rooms.

4.2.2 Waste containers

It has been assumed that general and recyclable waste will be contained within 1,100ltr containers and infectious and offensive clinical wastes will be contained within 770ltr waste containers. Sharps will be placed in containers which meet British Standard 7320:1990 and then stored in a designated 770ltr waste container. This is currently in line with other UCLH operations.

An appropriate level of signage will be provided informing the user of the waste type which is to be placed within each waste container. This is in order to limit contamination of waste streams in accordance with best practice outlined in Section 2 above.

Within the Waste Disposal Holds (see Section 4.2.3), bagged general waste and recyclable waste will be placed in separate 1,100ltr waste containers. Bagged clinical wastes, both offensive and infectious, will be placed in separate 770ltr waste containers also located within the Waste Disposal Holds. These waste containers will be provided by the waste contractor and will meet British Standard EN 840:2004 design. They will be maintained by the waste contractor and UCLH staff so that they are kept clean and operationally fit for use.

Waste container dimensions are detailed in Table 3. These dimensions were provided by SRCL the contractor currently providing clinical waste management services to the UCLH Phase 3 building.

Table 3.2: Waste container dimensions

Waste container capacity (litres)	Height (mm)	Width (mm)	Depth (mm)	Height Lid open (mm)
770	1,370	1,370	800	2,170
1,100[11]	1,370	1,250	980	2,350

Sharps will be collected in smaller containers within clinical areas. Once full, the containers will be collected and placed in a designated 770ltr waste container located in the Central Waste Store for removal by the waste contractor.

4.2.3 Waste Disposal Holds

Internal space for waste and recycling containers within the consultation / examination rooms, public and staff areas has been included within the new Development. These containers will be regularly emptied or replaced by facility management staff and the bagged waste will be taken to a Waste Disposal Hold. The bagged waste will be placed within the correct waste container located in the Waste Disposal Hold. As required, facility management staff will remove full containers from each Waste Disposal Hold and replace them with empty ones.

Clinical waste containers will be removed and replaced daily or more frequently if required. General and recyclable waste containers may be removed less frequently from the Waste Disposal Holds, depending on whether they are full or not. The locations of Waste Disposal Holds are shown within the floor plans for the Development included within this application's submission. Provision of Waste Disposal Holds within the Development's design has been determined in conjunction with UCLH facility management staff.

[11] http://www.taylorbins.co.uk/documents/product-spec-sheets/Taylor-Continental-1100-Trade-Tech-Sheet.pdf

Based on the floor layout designs provided, there will be:

- 1 x Waste Disposal Hold on floors -02,-01, 01, 02, 03 ,04 and 05
- No Waste Disposal Holds on -03 and 0.

Details of the number of Waste Disposal Holds and waste containers required per floor are detailed in Table 4.3 below.

Table 4.3: Summary of the number of Waste Disposal Holds per floor and the number of waste containers required

Details of the floor	Floor number	Number of Waste Disposal Holds per floor	Number of waste containers (in the Waste Disposal Holds) per floor
Plant	Basement -3	0	
Imaging	Basement -2	1	4
Minor procedures	Basement -1	1	4
Entrance	Ground floor	0	0
Consultation/Examination – Ear, nose and throat	1st Floor	1	4
Paediatrics	2nd Floor	1	4
Dental	3rd Floor	1	4
Dental	4th Floor	1	4
Consultation/Examination – Ear, nose and throat	5th Floor	1	4

Each Waste Disposal Hold has been designed to accommodate the following waste containers:

- 1 x 1,100ltr General waste container;
- 1 x 1,100ltr Recycling waste container;
- 1 x 770ltr Offensive clinical waste container;
- 1 x 770ltr Infectious clinical waste container; and
- 1 x Dirty linen cage.

Using standard designs for waste containers and linen cages, each Waste Disposal Hold will be on average 23.2m^2 in size. This includes an additional footprint to allow a person to pass between the waste containers and the wall and also enables each waste container to be removed from the Waste Disposal Hold. Each Waste Disposal Hold is designed to allow the waste container lids to be opened and closed without touching the ceiling.

The door(s) to each Waste Disposal Hold are sized to allow a 1,100ltr waste container to enter and exit, and will also be lockable to prevent unauthorised access. Each Waste Disposal Hold will have an appropriate level of wall protection, to avoid structural damage.

4.2.4 Central Waste Store

Waste containers will be collected regularly by the designated facility management staff from the Waste Disposal Holds throughout the Development and transferred to the Central Waste Store. The Central Waste Store is located on level 0 (ground floor) of the Development, close the loading bay.

The Central Waste Store will contain both full and empty waste containers for storage either before they are collected by the waste contractor or prior to being distributed to the Waste Disposal Holds.

The Central Waste Store will hold waste containers in demarcated areas, according to the waste type. Demarcation could be in the form of a separating structure or painted lines on the floor, the latter being more flexible to any future changes to operational requirements. A container washing facility will be provided and located in a safe operating area.

Doors on the Central Waste Store will be sized to allow the largest waste container to pass through. Access will be restricted to those persons approved by UCLH. The Central Waste Store will have an appropriate level of wall protection to avoid structural damage caused by the movement of waste containers.

The Central Waste Store is located on level 0 (ground floor). It has been sized to accommodate 15 waste containers:

- 8 x 770ltr separate infectious and offensive waste containers. One of these 770ltr waste containers will be allocated for the collection of sharps containers;
- 4 x 1,100ltr general waste containers; and
- 3 x 1,100ltr recyclable waste containers

The Central Waste Store will be approximately 34m^2 in size. The Central Waste Store will be cleaned regularly and any detritus will be removed to prevent accumulation. In times of contingency, where additional capacity is required for the storage of waste containers as a result of missed collections, Bank Holidays or significant increases in waste arisings, waste containers can be temporarily stored in the loading bay also on level 0 (ground floor).

4.2.5 Waste movements in the Development

On each relevant floor of the Development, the Waste Disposal Hold is located in close proximity to the lift core. This was designed to limit the distance the waste containers will be required to travel between lifts and Waste Disposal Holds. The Central Waste Store is located in the back of house area of the Development on level 0 (ground floor).

When the waste container is full, or prior to collection, whichever occurs soonest, the waste container will be removed from the Waste Disposal Hold and transferred by staff via the lift. The lift is specified so that they are sized to accommodate two 1,100ltr waste containers with adequate space for a person. Waste containers will be transported in the lifts to level 0 (ground floor) where they will be stored in the Central Waste Store.

Infection prevention and control measures will be implemented in the Development so that food, clean linen or clinical items which are required to be kept in a clean environment would not be distributed throughout the building using the same lifts in which waste containers are transported.

During waste collection contractor visits, the facility management staff will assist the waste contractor in moving full and empty waste containers between the vehicle and the Central Waste Store. Once all waste has been collected, the facility management staff will transfer the empty waste containers to the Central Waste Store.

In the case of confidential waste, the contractor will empty the receptacles containing confidential waste from their locations throughout the Development.

4.2.6 Waste collection frequency

Given the space constraints at the Development the collection of all wastes will need to be more than once a day. Offensive and infectious clinical waste containers will be collected twice a day, seven days a week. It is assumed that all clinical waste containers will be collected and replaced with another empty clinical waste container from the Central Waste Store.

A waste container containing collected sharps bins will be collected for removal on an ad hoc basis when there is an appropriate amount to warrant scheduling a collection.

It is assumed that all general and recycling waste containers will be collected and replaced with another empty waste container from the Central Waste Store as and when this is required. every 2 to 3 days (this will be managed by the facility management staff). However for the purposes of this application it has been assumed in the traffic assessment modelling that general and recycling waste containers will be collected twice a day, seven days a week.

Waste collections will, where possible, be arranged with the selected waste contractor to occur outside of peak delivery times. In practice this would be before 9am, and after 5pm.

The collection frequency of other secondary waste streams will be scheduled by the Development's facility management staff and will be determined by:

- the levels of waste generation; and
- the amount of time that materials can be stored prior to removal without causing an environmental nuisance.

4.2.7 Other wastes

Dental waste

During the dental procedures that will be carried out in the hospital, amalgam waste will be generated; this contains mercury so needs to be dealt with separately from other wastes. It is unlikely that this waste will be generated in large quantities however small containers will need to be placed in each of the dental procedure rooms for this waste to be collected.

Amalgam traps will also need to be placed on the sinks within the dental procedure rooms to ensure that the waste amalgam does not go into the drainage system.

Food waste

Food waste produced from plate scrapings and food preparation areas has the potential to be collected separately. Currently UCLH is examining the potential for the separate collection of this waste stream to be sent for recycling or recovery.

When and if required space for an additional food waste collection container may need to be provided in the Central Waste Store.

If food waste were to be collected separately it is likely that kitchen caddies, similar in size to those widely distributed to households for food waste collections, will be placed in areas where food waste is produced or collected. At the end of the meals, these full caddies would be transferred and emptied in to a larger container within the Central Waste Store. If a food waste scheme was introduced in the Development it would be collected on a daily basis, given the potentially odorous nature of the waste.

Ad Hoc waste

An area for storing 'Ad Hoc' waste streams, including but not limited to Waste Electrical and Electronic Equipment (WEEE), furniture, or fluorescent tubes will be provided.

4.2.8 Waste management contractors

All waste will be collected for disposal/recycling by a licenced waste management contractor and taken to a suitably permitted waste management facility. This will be put in place by UCLH prior to the building becoming operational.

5. Summary

This Framework Waste Management and Servicing Plan, has been prepared on behalf of the University College London NHS Foundation Trust (UCLH) to accompany their planning application to the London Borough of Camden (LBC) for redevelopment of 43-49 Huntley Street, London Borough of Camden. The development will have a dedicated internal service yard accessed from Shropshire Place.

The document has explained the waste management and servicing arrangements for the proposed Development. The document sets out a strategy that will ensure effective and well managed servicing that would actually reduce vehicle trips on Shropshire Place.

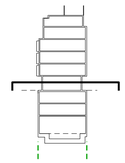
Appendix A. SWEPT PATH DRAWINGS

Rev.	Date	Description	By
1	07/01/15	Planning App Draft	SRP
2	13/02/15	Planning App Draft	SRP
3	20/02/15	Planning App Draft	LM
4	25/02/15	Planning Application	LM

Notes

- Boundary line above ground
- Boundary line below ground
- Facade line above
- PTS Area

Key Plan



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Project Number	Scale
8219.0000	1:100 @ A1

Client
UCLH

Project
Phase 5 Project

Title
Ground Floor

Drawing No
SBA-DRW-A2024-REV6

Revisions

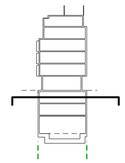
Date	Drawn	Checked	Approved
25/02/15	SRP	PT	PT

Rev.	Date	Description	By
1	07/01/15	Planning App Draft	SRP
2	13/02/15	Planning App Draft	SRP
3	20/02/15	Planning App Draft	LM
4	25/02/15	Planning Application	LM

Notes

- Boundary line above ground
- Boundary line below ground

Key Plan



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Project Number	Scale
8219.0000	1:100 @ A1

Client
UCLH

Project
Phase 5 Project

Title
Basement B1

Drawing No
SBA-DRW-A2023-REV4

Revisions

Date	Drawn	Checked	Approved
19/02/15	SRP	PT	PT

LEVEL -01

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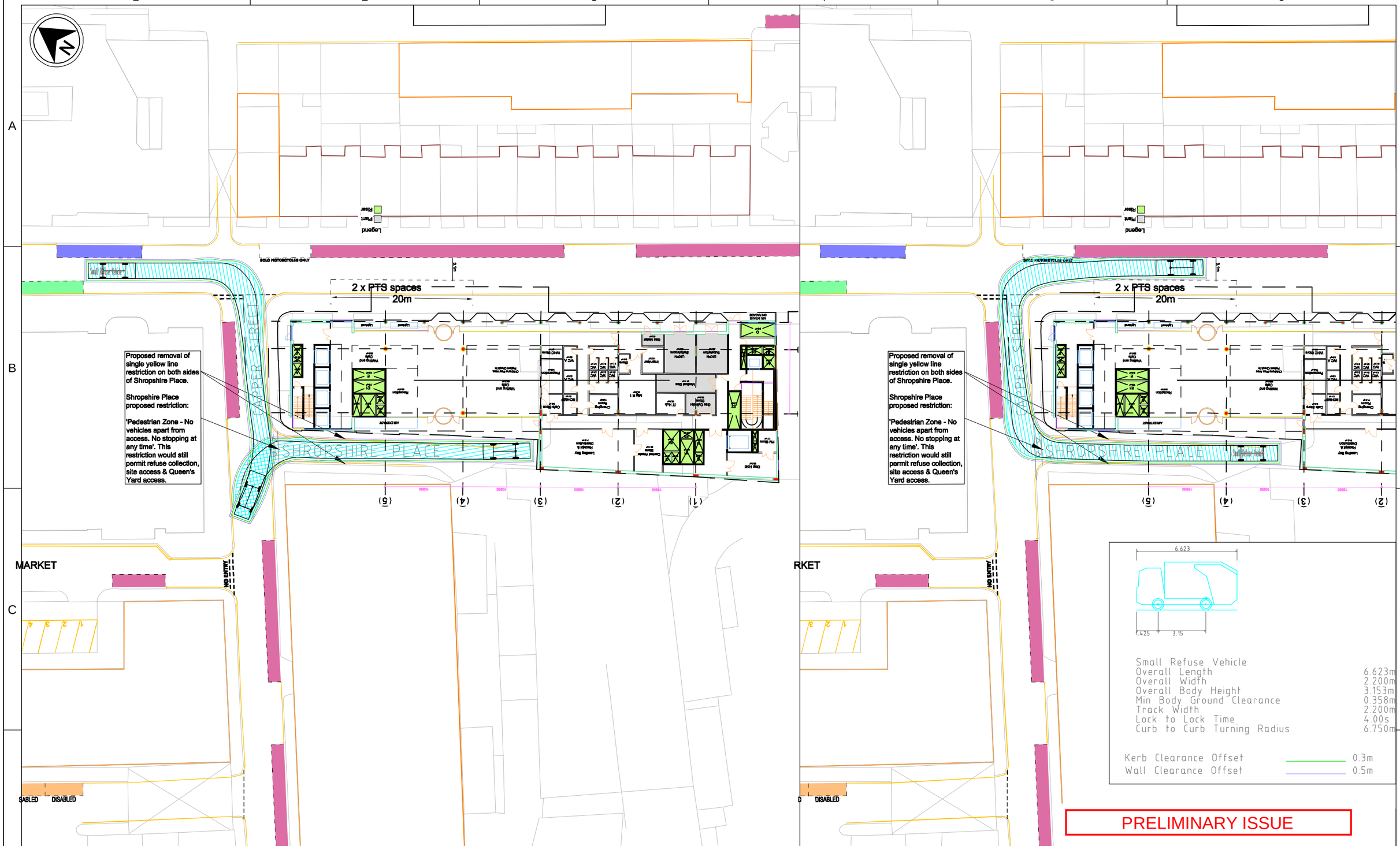
0 1 5 10



PRELIMINARY ISSUE

REV	DATE	DRAWN	REV'D	APP'D	REVISION

JACOBS

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CLIENT: UCLH NHS FOUNDATION TRUST

PROJECT: REDEVELOPMENT OF UCLH STUDENT UNION AND ROYAL EAR HOSPITAL, HUNTLEY STREET

DRAWN	DRAWING CHECK	REVIEWED	APPROVED
IG	AKS	IG	MF
DESIGNED	DESIGN REVIEW	DATE	DATE
IG	IG	Oct '14	Oct '14

TITLE: MOVEMENT OF A SMALL REFUSE VEH

SCALE	DRAWING No	REV
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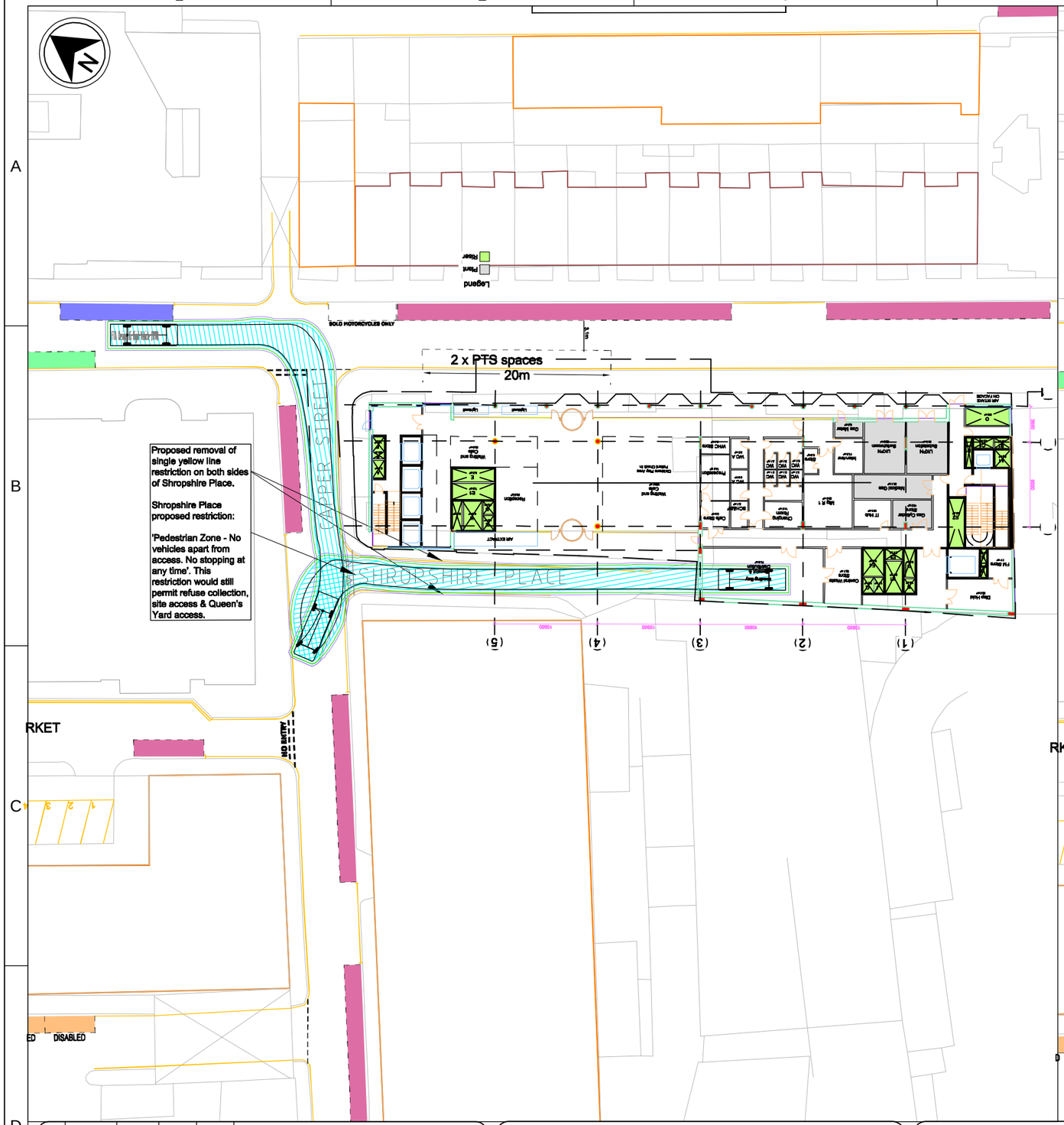

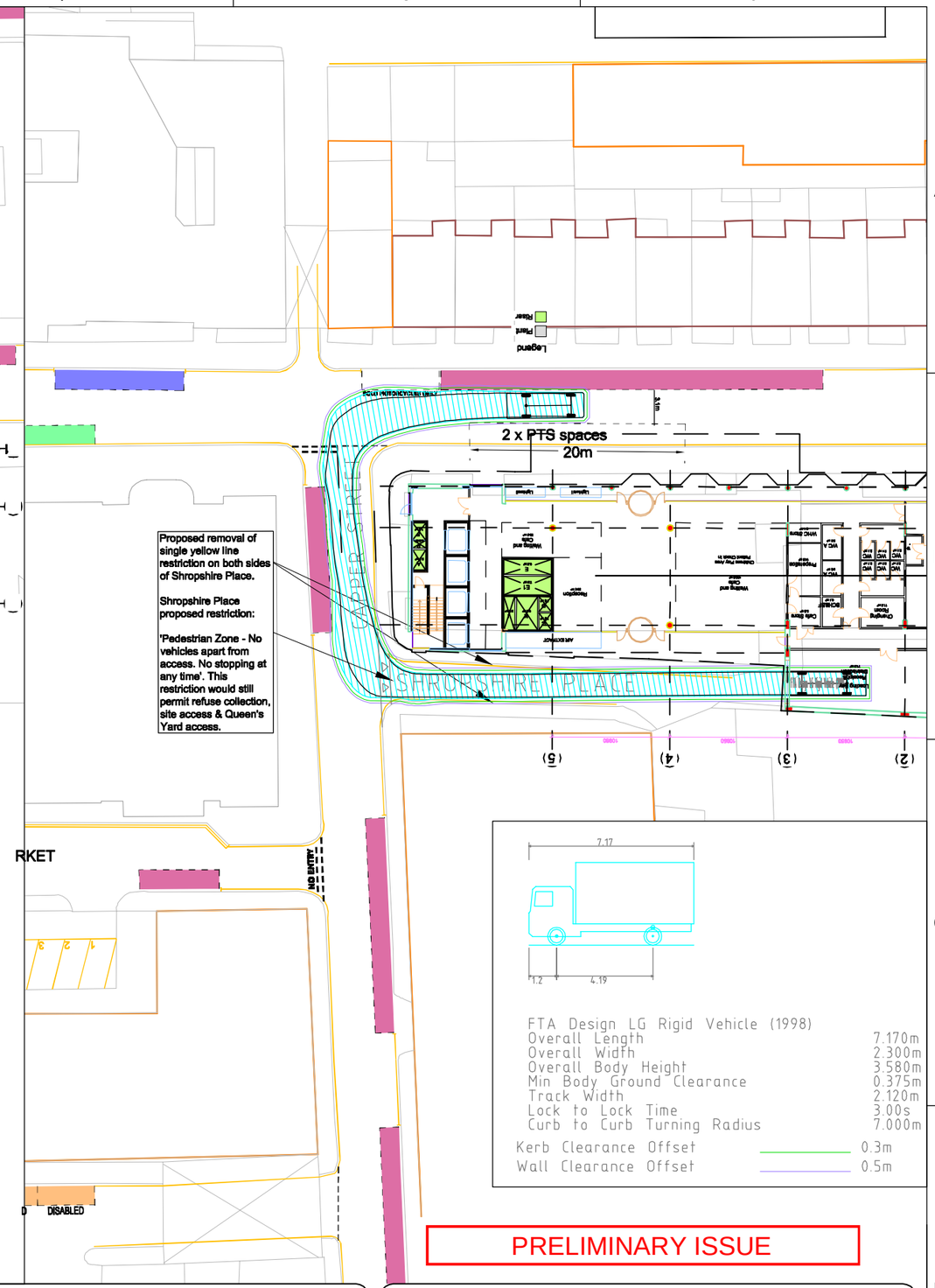

PRELIMINARY ISSUE

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DRAWN	DRAWING CHECK	REVIEWED	APPROVED
IG	AKS	IG	MF
DESIGNED	DESIGN REVIEW	DATE Oct '14	DATE Oct '14
IG	IG		

TITLE: MOVEMENT OF A 7.2m MEDIUM RIGID VEHICLE

SCALE	DRAWING No	REV
1:500	VN50118.14-ECC-TR-001-8	A

Proposed removal of single yellow line restriction on both sides of Shropshire Place.

Shropshire Place proposed restriction:

'Pedestrian Zone - No vehicles apart from access. No stopping at any time'. This restriction would still permit refuse collection, site access & Queen's Yard access.

2 x PTS spaces
20m

SHROPSHIRE PLACE

UPPER STREET

RKET

NO ENTRY

DISABLED

Legend
Plant
Floor

8.01
1.21
4.25

7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to Lock Time	4.00s
Curb to Curb Turning Radius	7.400m
Kerb Clearance Offset	0.3m
Wall Clearance Offset	0.5m

PRELIMINARY ISSUE

REV	DATE	DRAWN	REV'D	APP'D	REVISION

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DRAWN	DRAWING CHECK	REVIEWED	APPROVED
IG	AKS	IG	MF
DESIGNED	DESIGN REVIEW	DATE Oct '14	DATE Oct '14
IG	IG		

TITLE: MOVEMENT OF A 8m CLINICAL WASTE VEHICLE

SCALE	DRAWING No	REV
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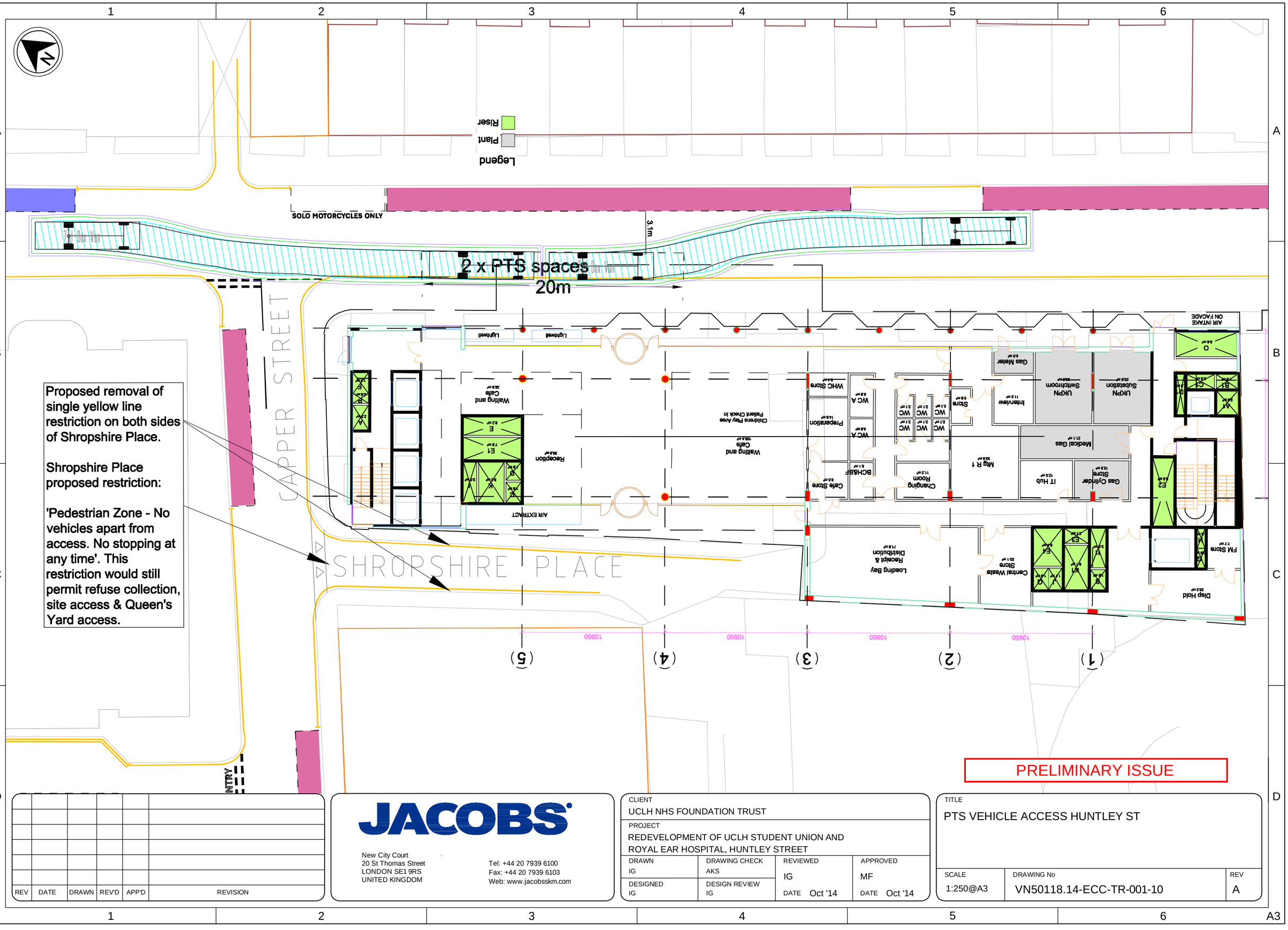

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CLIENT
UCLH NHS FOUNDATION TRUST

PROJECT
REDEVELOPMENT OF UCLH STUDENT UNION AND ROYAL EAR HOSPITAL, HUNTLEY STREET

DRAWN	DRAWING CHECK	REVIEWED	APPROVED
IG	AKS	IG	MF
DESIGNED	DESIGN REVIEW	DATE Oct '14	DATE Oct '14
IG	IG		

TITLE
PTS VEHICLE ACCESS HUNTLEY ST

SCALE	DRAWING No	REV
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A3

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