Great Ormond Street Hospital Children's Cancer Centre (GOSHCCC)
Transport Assessment

20/05/2022

NHS
Great Ormond Street Hospital for Children
NHS Foundation Trust

RSK

RSK GENERAL NOTES

Project No.: 111057-TA (4.1)

Title: Great Ormond Street Hospital, Children's Cancer Centre (GOSHCCC), Transport Assessment

Client: Great Ormond Street Hospital for Children NHS Foundation Trust

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Author	Ian Wickett	**Technical reviewer**	Sarah van de Berg
Signature		Signature	
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1 INTRODUCTION

RSK has been commissioned by the appointed design and build contractor, John Sisk & Son (Holdings) Ltd (referred to hereafter as Sisk) to prepare a Transport Assessment in support of a planning application on behalf of the Applicant, Great Ormond Street Hospital for Children NHS Foundation Trust (referred to hereafter as The Trust), for Phase 4 of their long-term Masterplan to develop a new Children's Cancer Centre (GOSHCCC).

The proposals comprise the redevelopment of the Great Ormond Street Hospital (GOSH) Frontage Building comprising demolition of the existing building and erection of a replacement 8 storey hospital building (Class C2 Use) together with 2 basement floors, roof top, balcony and ground floor landscaped amenity spaces, cycle storage, refuse storage and other ancillary and associated works pursuant to the development.

The hospital is a world-renowned provider of paediatric specialist medical care, treating patients from across the UK. Great Ormond Street Hospital (GOSH) now provides 63 different specialist services to children with over 240,000 patient visits and 63,000 procedures undertaken every year. There are around 5,000 staff at this site and circa 300,000 patients attend every year.

1.1 Background context

This planning application relates to Phase 4 of the five-phase redevelopment programme for Great Ormond Street Hospital which aims to rebuild two thirds of the hospital over a 20-year period, to upgrade and better meet forecast future healthcare needs.

Improving outcomes for cancer is a major priority for the UK and paediatric cancer is assuming increasing importance. The proposed GOSHCCC will create a national resource for children with rare and difficult-to treat cancers. GOSH has a vision for the centre – *to create facilities where our expert clinicians can improve outcomes for children through holistic, personalised and coordinated care across the child's entire cancer journey.*

1.1.1 The site

The majority of the site is currently occupied by the existing GOSH Frontage Building, a five storey building (inclusive of basement) dating from the 1950s that was constructed in two separate phases. The building is currently occupied by a number of GOSH departments including Audiology Department, Clinical Research Facility (CRF), Department of Child and Adolescent Mental Health and Paediatric Psychology Department.

The western most part of the site is occupied by the main GOSH Entrance providing connections to the wider GOSH island site and by a small rear element (external staircase) of the Paul O'Gorman Building that will be demolished to facilitate the proposed development.

The site is bounded by the Paul O'Gorman Building to the west, Octav Botnar Wing to the east, the Variety Club Building and Premier Inn Clinical Building to the north and Great Ormond Street to the south. GOSH is situated on the northern side of Great Ormond Street, within the London Borough of Camden (LBC), approximately 1 km due south of King's Cross Station. The area provides excellent access to a variety of sustainable transport modes.

The proposed development will provide a dedicated cancer care unit and new main entrance to GOSH to give the hospital a greater sense of identity and more welcoming arrival. The current floor area of 5,806 m^2 will be increased to a proposed floor area of 18,303 m^2. The building will provide improved space and facilities for care that GOSH already provides, often spread across a number of buildings in outdated accommodation. Therefore, it is not proposed to increase the number of staff or patients that it can accommodate.

Construction works are currently proposed to start in early 2023 and completion around mid-2026.

The proposals include the promotion of a one-way order (through the Deconstruction and Construction Management Plan) along the site frontage in a westbound direction, reducing the congestion that currently occurs and minimising the risk of delays to emergency services. This is necessary to facilitate deconstruction and construction works in this constrained urban location. The order will initially be temporary during deconstruction and construction works to ensure that delivery vehicles do not cause congestion on the approach routes and facilitate an offloading area.

Following completion of the project all temporary highway adjustments are to be reverted to conditions prior to commencement of deconstruction works. Subject to design progression the potential permanent implementation of a one-way system and/or partial pedestrianisation on Great Ormond Street could be a solution as part of a future phase.

LBC will be responsible for planning and highway matters, although the London Mayor and Transport for London are also relevant statutory bodies in relation to transport matters.

Given the limited changes to staff numbers, patient throughput and servicing arrangements, a detailed Transport Assessment is not considered necessary. However, an assessment of the proposed one-way order has been undertaken to establish the likely effects on traffic flows on the surrounding roads.

1.2 Structure of this report

The following chapters describe the work that has been undertaken as part of this study:

- Chapter 2 reviews the relevant transport policies applicable to the site;
- Chapter 3 describes the local transport context of the site;
- Chapter 4 provides an outline of the proposals, including construction activities;
- Chapter 5 assesses the impact of the development; and
- Chapter 6 provides a summary and our conclusions.

2 POLICY REVIEW

It is necessary to understand the national and local planning policies which relate to the development. Therefore, the following chapter sets out key policies and demonstrates how the development of the site would meet these.

2.1 National policy context

2.1.1 National Planning Policy Framework, 2021

The revised National Planning Policy Framework (NPPF) sets out the current national planning policy and outlines the important role that transport policies have to play in facilitating sustainable development.

Paragraphs 10-11 state that at the heart of the NPPF is a "*presumption in favour of sustainable development"* and that for decision taking this means granting permission for development unless "*the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed*" or "*any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed the policies*."

Paragraph 112 of the NPPF states that plans for new development should:

- *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.*

This assessment will consider the sustainability of the site in relation to the above points and provide an appraisal of the options for development that meet the policies of the NPPF.

2.2 Regional policy and context

2.2.1 London Plan, (2021)

The London Plan covers a range of planning issues. It plans for growth on the basis of its potential to improve the health and quality of life of all Londoners, to reduce inequalities and to make the city a better place to live, work and visit. It uses the opportunities of a rapidly growing city to plan for a better future, using each planning decision to improve London, transforming the city over time. It plans not just for growth, but for Good Growth – sustainable growth that works for everyone, using London's strengths to overcome its weaknesses.

With regard to parking, Policy T6 includes points relating to car-free developments as well as other key factors relating to parking:

- *Car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity.*
- *Car-free development should be the starting point for all development proposals in places that are (or are planned to be) well-connected by public transport, with developments elsewhere designed to provide the minimum necessary parking ('car-lite').*
- *An absence of local on-street parking controls should not be a barrier to new development, and boroughs should look to implement these controls wherever necessary to allow existing residents to maintain safe and efficient use of their streets.*
- *Where car parking is provided in new developments, provision should be made for infrastructure for electric or other Ultra-Low Emission vehicles*
- *Adequate provision should be made for efficient deliveries and servicing and emergency access.*
- *Outer London boroughs wishing to adopt minimum residential parking standards through a Development Plan Document must only do so for parts of London that are PTAL 0-1*

Policy T6.1 of the London Plan goes on to outline the maximum car parking standards which should be adopted by all new developments. For areas within Outer London and a PTAL of 3, the maximum parking provision is 0.75 spaces per unit, with the last bullet point above indicating that there should be no minimum parking requirement.

Notwithstanding, the site has a PTAL score of 6b, indicating that there is excellent accessibility by public transport. There is also excellent access to a range of services within walking and cycling distance, reducing the need to travel by car or public transport.

2.2.2 London Mayor's Transport Strategy

The Mayor of London's Transport Strategy (MTS) states that "car dependency has contributed to an increase in poor public health across our city". The strategy highlights that reducing car dependency is the only way to keep London moving in the future. The central aim of the strategy is for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041. Like the London Plan, the MTS outlines in Proposal 80 that car parking provision will be restricted in new developments with those locations more accessible expected to be car-free.

2.2.3 Healthy Streets

The Healthy Streets for London publication, supported by TfL and the London Mayor, states that *"Car ownership is the greatest factor that influences how often Londoners walk and cycle."* It highlights that more than a third of trips made by car could be walked in under 25 minutes and two thirds of car trips could be cycled in under 20 minutes. It is therefore clear that lower car ownership will increase use of sustainable modes, including walking and cycling, which will improve Londoners' health, reduce carbon emissions and improve air quality.

2.3 Local policy context

2.3.1 LB Camden Transport Strategy 2019-2041

The Camden Transport Strategy (CTS) sets out the future direction for transport in Camden and describes the context of traffic and transport in the borough. The transport challenges it identifies include:

- **Objective 1**: To transform our streets and places to enable an increase in walking and cycling';
- **Objective 2**: To reduce car ownership and use, and motor traffic levels in Camden;
- **Objective 3**: To deliver a sustainable transport system and streets that are accessible and inclusive for all;
- **Objective 4**: To substantially reduce all road casualties in Camden and progress towards zero killed and seriously injured (KSI) casualties;
- **Objective 5**: To reduce and mitigate the impact of transport-based emissions and noise in Camden;
- **Objective 6**: To deliver an efficient, well-maintained highways network and kerb-side space that prioritises the sustainable movement of goods and people; and
- **Objective 7**: To ensure economic growth and regeneration is supported by, and supports, a sustainable transport network.

2.3.2 Camden Planning Guidance – Transport

This guidance, adopted in March 2019, explains the circumstances under which transport assessments are sought, what they should assess and how they should be prepared.

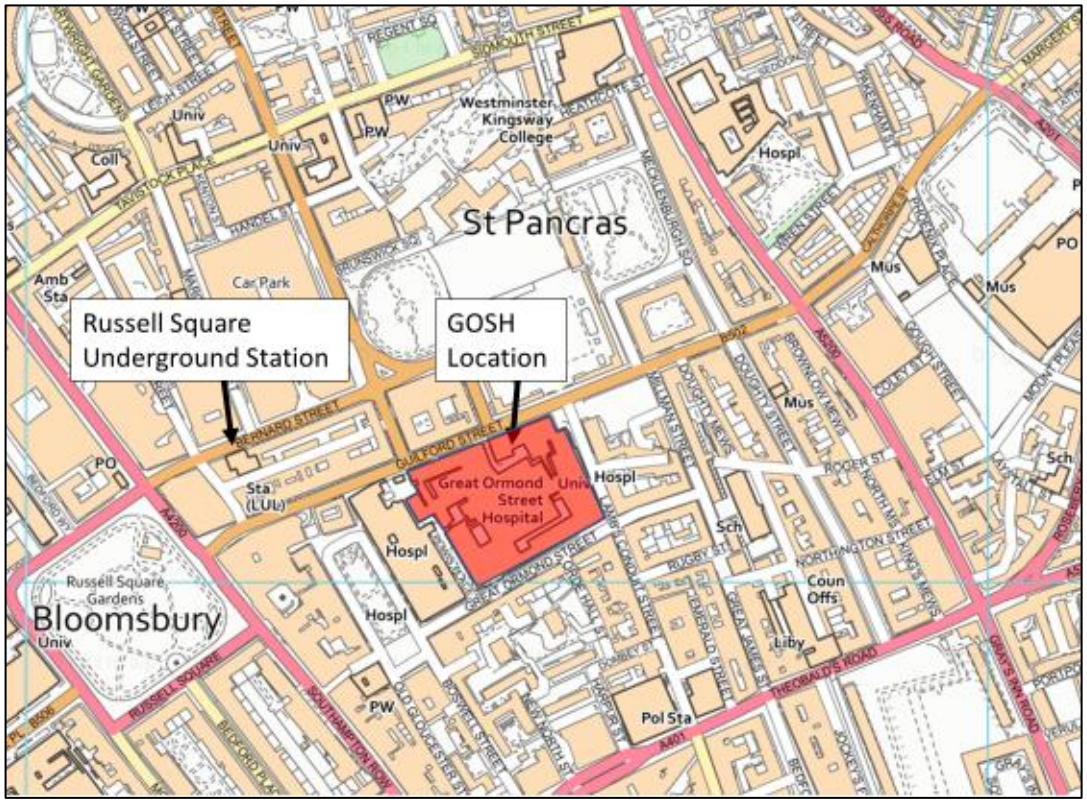
The guidance states that “a Transport Assessment, Statement or Note is required for all applications that involve a change in the way that a site is accessed from the highway.” In addition, “these documents must clearly demonstrate what measures will be required in order to mitigate the transport impact of the development.”

3 EXISTING TRANSPORT CONTEXT

3.1 Site location

The site is located within Bloomsbury, 1 km south of King's Cross / St Pancras and Euston Stations and 1.5 km north of Waterloo Bridge across the River Thames. The site is situated along the north side of Great Ormond Street which is linked by Queen Square to the west with Lamb's Conduit Street to the east, as illustrated in Figure 3.1 below.

Figure 3.1 Site Location



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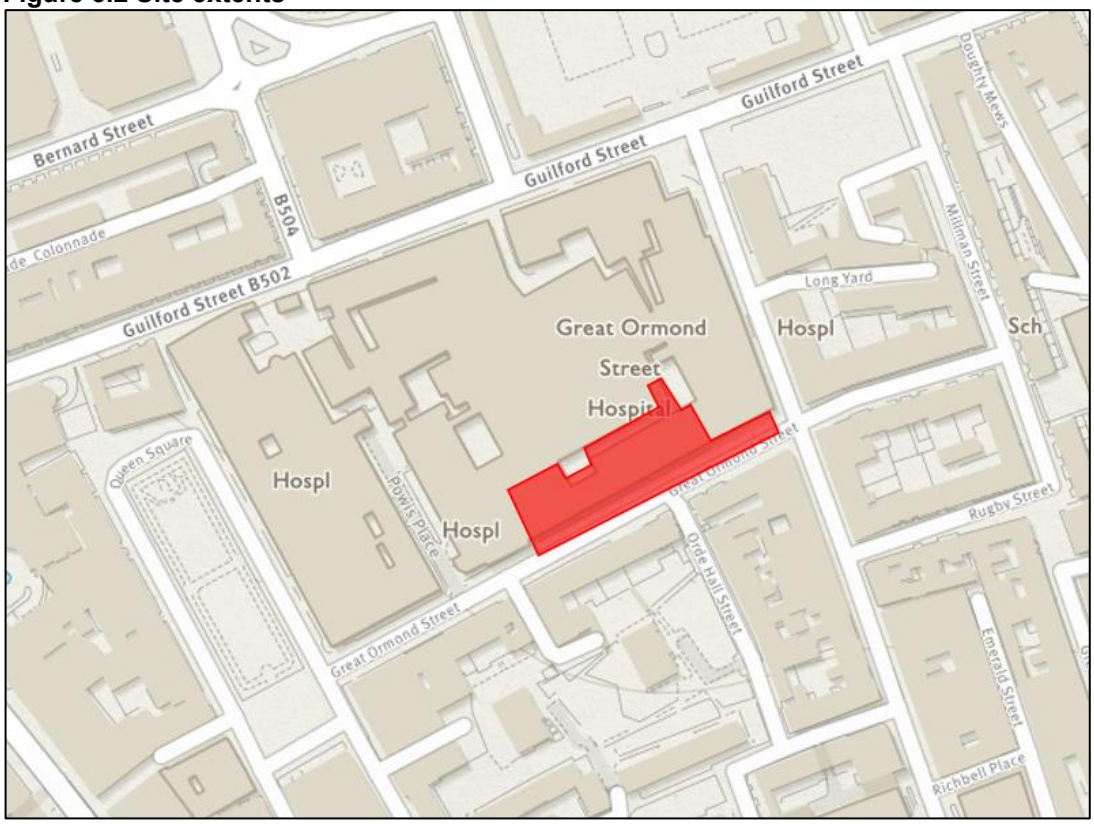
The proposed development is surrounded on three sides by the existing hospital with residential properties along the southern side of Great Ormond Street. It is located within a few minutes walk of Russell Square Underground Station to the north west, while the hsopital is surrounded by a mixture of offices, residential and retail premises.

Figure 3.2 below illustrates the extents of the proposed site development, shaded in red.

Figure 3.2 Site extents



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3.2 Local access

GOSH provides clinical care to children from across the UK, not just London, and therefore results in around 50% of inpatients travelling from outside of London for treatment. This may involve air, rail, coach or bus travel as well as by car. This section describes the transport context of the site within the local area, particularly transport interchanges. GOSH is situated within a PTAL zone of 6b, which is the highest level of accessibility achievable in London.

3.2.1 Highway network

The site is located in the congestion charging zone and low emission zone. Car parking facilities are available in the nearby Bloomsbury Square NCP for staff, offering a limited number of dedicated spaces. Patients and visitors generally use the on-street parking available in the surrounding area. The Trust manages a dispensation scheme, which allows members of the public accompanying patients to park in a specified area of on-street spaces in Queen Square and Guilford Street on single yellow lines.

Great Ormond Street

The site's primary connection is gained along Great Ormond Street, which serves the hospital along the northern side and residential properties opposite. In the vicinity of the site, the single carriageway road is around 8 m wide with street lighting, footways and dropped kerbs on both sides of the carriageway.

Great Ormond Street is subject to a posted speed limit of 20 mph and there are parking restrictions offering a mixture of both resident permit holder parking and pay and display public parking on the south side, available Monday to Friday 8:30 am to 18:30 pm and Saturdays 8:30 am to 13:30 pm. The north side offers minimal public parking and a reasonable extent of ambulance and doctor parking. A plan illustrating the various parking restrictions is enclosed at Appendix 1.

Queen Square

Queen Square is a public space with a road around its perimeter of the same name at the western end of Great Ormond Street. It is a one-way road in a clockwise direction around the square, meeting Great Ormond Street at a give-way as the main route turns southwards into Boswell Street as a one-way southbound road to the A401. Old Gloucester Street runs parallel to Boswell Street in a northbound only direction from the A40/A401.

Queen Square provides on-street car parking around its perimeter on both sides of the road with some ambulance parking outside the hospital on the eastern side.

Lamb's Conduit Street/ Guilford Place

Lamb's Conduit Street connects the A401 at its southern end with Guilford Street (B502) at its northern end. The southern section is initially two-way, turning one-way northbound through a semi-pedestrianised retail area to meet Great Ormond Street at a give-way. The priority movement is from Great Ormond Street as the western arm to Lamb's Conduit Street as the northern arm, passing further retail premises, and turns into Guilford Place at its northern junction with Guilford Street. Great Ormond Street continues eastwards from Lamb's Conduit Street serving residential properties as minor road.

B502 Guilford Street

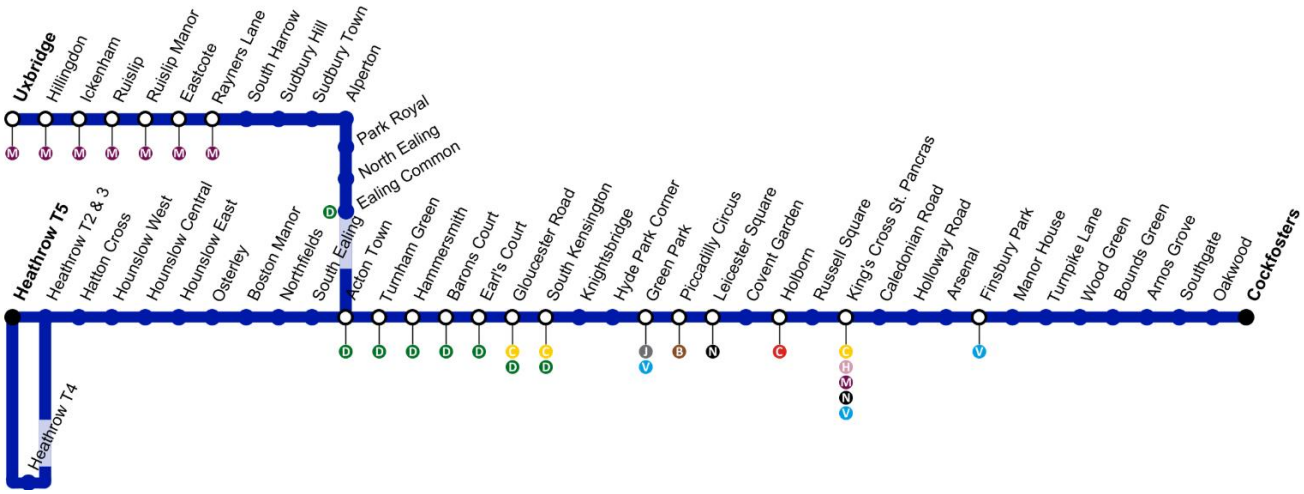
B502 Guilford Street serves a mixture of residential, office and hotel accommodation, connecting Gray's Inn Road to the east with Russell Square to the west. The westernmost section on the approach to Russell Square is one-way in a westerly direction.

Brunswick Square Gardens are located opposite the junction with Guilford Place, resulting in a high pedestrian demand across the road where a zebra crossing facility is provided on the eastern side of the junction.

3.2.2 Rail services

The closest station, Russell Square, is 500m north-west from the site. The underground station is on the Piccadilly line between Holborn and King's Cross St Pancras. Train frequency is generally every 4-7 minutes between 6am and midnight in both directions and runs from Heathrow/Uxbridge to Cockfosters Station. Figure 3.3 provides a route map of the Piccadilly London Underground line.

Figure 3.3 Underground route map: Piccadilly Line



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Three mainline rail stations are located around 1 km to the north of GOSH. Euston station is on the West Coast Main Line network, connecting London with Birmingham and Manchester, along with regional services to Milton Keynes, Watford and Northampton. King's Cross station is on the East Coast Main Line network, connecting to Leeds, York and Newcastle along with regional services to Luton, Cambridge, Brighton and Bedford. St Pancras station provides connections across south-east England and International Eurostar services to continental Europe along with services to East Midlands.

3.2.3 Bus Services

The closest bus stop to the site is 300m to the west on Southampton Row, covering a 5-minute walkable distance via Cosmo Place. The stop offers access to a range of bus services, offering several routes, including access to Euston station, Trafalgar Square and West Croydon. The closest stop in the alternate direction is a further 200m south. Both stops provide seating, shelter and timetable information. Further services may also be accessed at the stop 400m south of the site, with the stop in the alternate direction just a few metres apart on the opposite side of the road. Further details of routing and timetable information can be found in Table 3.1 below.

Table 3.1 Local bus services

Service	Route	Operating times & typical weekday frequency
59	Telford Avenue – Euston Bus Station	First Bus: 04:44 Last Bus: 01:14 Every 5-10 minutes
68	St Julian's Farm Road – Euston Bus Station	First Bus: 05:39 Last Bus: 00:09 Every 5-10 minutes
91	Tottenham Lane Y M C A – Whitehall/ Trafalgar Square	First Bus: 05:29 Last Bus: 00:39 Every 5-10 minutes
188	North Greenwich Station – Russel Square	24 Hours Every 5-10 minutes
N91	Cockfosters Station – Whitehall/Trafalgar Square	First Bus: 00:09 Last Bus: 05:39 Every 30 minutes
X68	West Croydon – Russell Square	First Bus: 15:51 Last Bus: 18:52 Every 15 minutes
19	Finsbury Park Interchange – Parkgate Road	First Bus: 05:44 Last Bus: 00:45 Every 5-10 minutes
38	Clapton Pond – Victoria Bus Station	First Bus: 05:47 Last Bus: 23:53 Every 5 minutes
55	Walthamstow Bus Station – Great Titchfield Street/ Oxford Circus Station	First Bus: 04:29 Last Bus: 00:40
243	Redvers Road – Waterloo Station/ Mepham Street	24 Hours Every 10 minutes
N19	Finsbury Park Interchange – Clapham Junction Station	First Bus: 00:59 Last Bus: 05:27 Every 30 minutes
N38	Walthamstow Bus Station – Victoria Bus Station	First Bus: 00:03 Last Bus: 05:38 Every 20 minutes
N41	Trafalgar Square/ Charing Cross Station – Tottenham Hale Bus Station	First Bus: 00:44 Last Bus: 04:44 Every 30 minutes
N55	St Thomas of Canterbury Church – Great Titchfield Street/ Oxford Circus Station	First Bus: 00:52 Last Bus: 05:20 Every 30 minutes

These services offer a high-frequency provision within central London, including connections to major transport interchanges such as main line rail stations, Victoria coach station and a number of bus stations.

3.2.4 Cycling

There are a large range of dedicated lanes and bicycle friendly roads within the vicinity of the site. Bicycle friendly roads connect to several stations near to the site, including Holborn underground to the south and Farringdon rail station to the south-east, providing important connections to Central London and the Greater London area. Routes also connect to several green spaces within the site vicinity, as well as a large range of food and retail services. Figure 3.4 illustrates the network of cycle routes within the site vicinity.

Figure 3.4 Local cycle routes

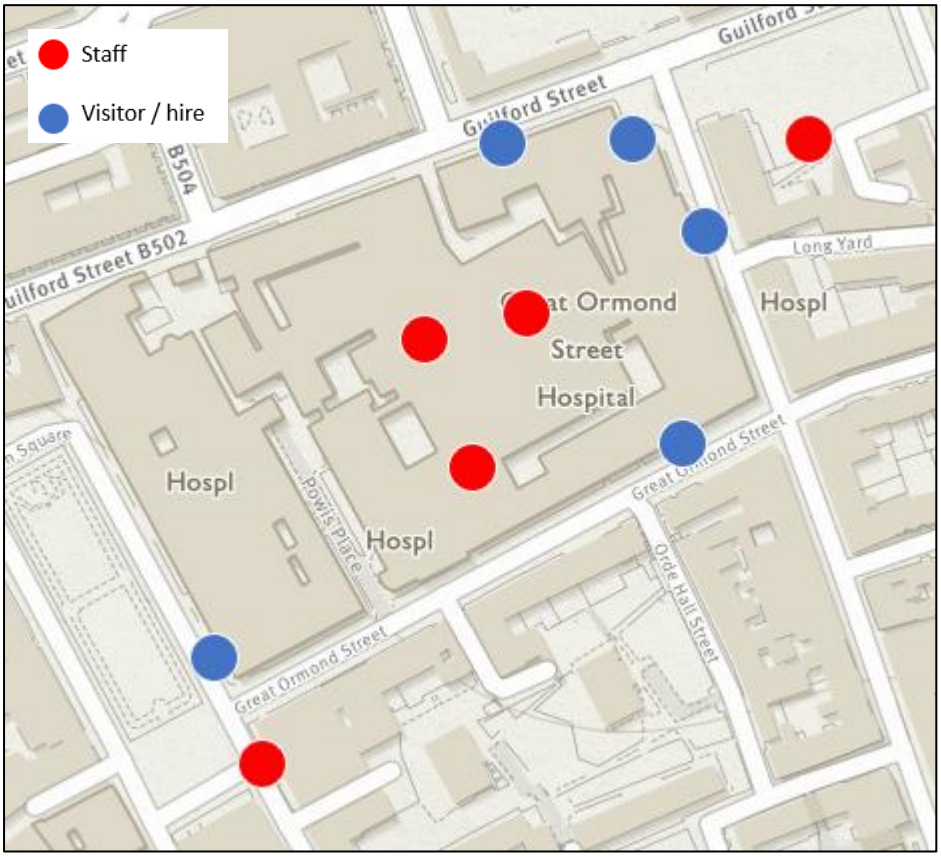
Cycle hire is available from a number of docking stations within a few minutes' walk of GOSH, the closest being on Guilford Street and in Queen Square, offering easy access by cycle across central London. In addition, GOSH provides on-site cycle parking in the form of 299 long stay spaces and 29 short stay, located around the wider GOSH site, as indicated in Figure 3.5.

The majority of the long-stay (staff) cycle parking is either covered or somewhat sheltered with a varied level of provision including semi-vertical stands; two-tier racks; and Sheffield stands.

With regard to this application, it is noted that the existing provision within the Variety Club Building (VCB) is 93 long-stay spaces, provided via 37 semi-vertical stands and 28 Sheffield stands accommodating 56 bikes.

The Morgan Stanley Clinical Building currently provides a total of 88 spaces with 44 semi-vertical stands and 22 two-tier racks accommodating 44 bikes.

Figure 3.5 Cycle parking locations



Staff showers and changing rooms are available for the wider GOSH site in the basement of the Morgan Stanley Clinical Building Additional facilities are located across the hospital offering lockers and changing facilities.

3.3 Pedestrians

Due to the site's location in a built-up area, the existing footway network is well established, connecting the site to several local facilities and public transport.

A street-lit footway is provided on both sides of Great Ormond Street, including dropped kerbs and tactile paving at crossing points, speed bumps and double yellow line parking restrictions along several sections of the road, limiting vehicular access.

Such accessibility is consistent within the rest of the site vicinity, providing safe access to Russell Square Station, bus stops and several services/amenities, including food outlets and coffee shops, all of which are approximately a 5-minute walkable distance from the site. There are a number of shortcut routes for pedestrians that do not follow the traffic routes, particularly from Queen Square to key destinations in the surrounding area.

3.4 Overall accessibility

GOSH is ideally located for access to sustainable modes of travel facilitating travel on foot, by cycle and by public transport across London while benefiting from connections by train across the UK. Given the long distances that many patients travel, it is served well by three main line rail stations with the Underground network providing convenient connections to all major stations across central London. The site's PTAL rating of 6b demonstrates the site's ability for staff and patients to reach the site by non-car modes.

3.5 Current staff and patient travel patterns

The Trust operates a Travel Plan that promotes the use of sustainable transport to reach the hospital for staff and patients. This has been established over a number of years and is monitored regularly through surveys. The last survey was undertaken in 2018, which collected 321 responses from staff and 227 responses from patients and visitors.

Figure 3.6 illustrates the modal split for staff, highlighting that over three quarters travel by rail and Underground services and only 1% travel by car. This reflects the excellent accessibility that the site affords including unsociable hours and weekends when shifts will inevitably be changing over.

Figure 3.6 Staff travel survey results

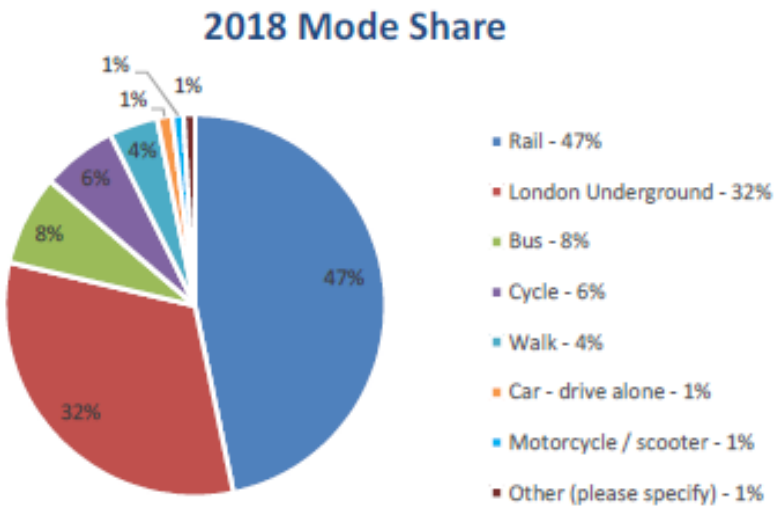
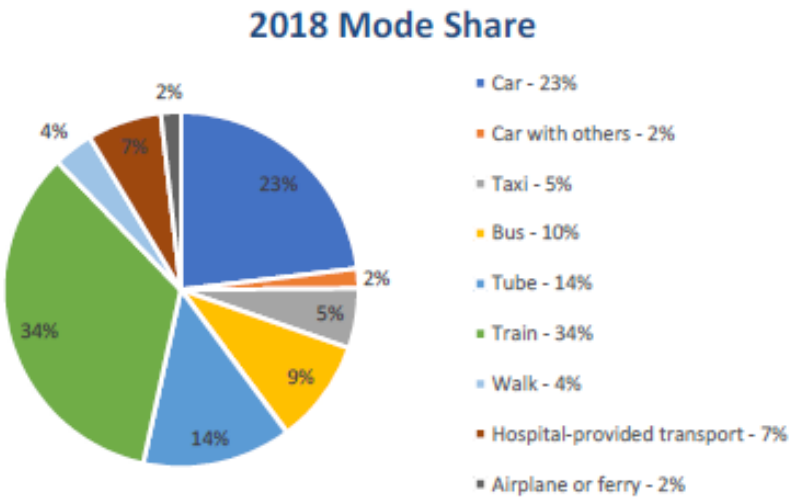


Figure 3.7 illustrates the modal split for patients and visitors, highlighting that a quarter travel by car to GOSH while almost a half travel by rail and Underground services. This reflects the longer distances, travelling with others and that a proportion of patients will be unable to travel easily by public transport due to their condition.

Figure 3.7 Patient and visitor travel survey results



The Trust are currently in the process of updating the Travel Plan, taking into account changes that may have occurred as a result of the Covid-19 pandemic, either through different travel patterns or operational purposes, such as video appointments and some staff being able to work from home for part of their duties.

The Trust has launched a travel survey in March 2022 that will feed into the new travel plan and seek to understand these changes. the Trust has also created a Safe, Active & Sustainable Travel working group that has made multiple interventions across GOSH:

- Created cycling champions,
- Supported groups/resources
- Introduced cycle repair and training
- Achieved a 'Cycle Friendly Employer' Gold Award.

The travel plan will provide a strategy for The Trust that brings together these existing groups and initiatives under a single umbrella. It will incorporate joint working, such as the support and advocacy of active travel in Camden and The Play Street Programme (in partnership with the London Borough of Camden) which has demonstrated how Great Ormond Street could evolve in the future alongside the hospital. This potential future public realm work could provide wide-ranging benefits to users of the site, easing the transition between the north and south side of Great Ormond Street; improving air quality; and increasing the overall amenity of the street.

The travel plan will also have links to associated strategies such as the Clean Air Hospital Framework and consider how measures can be introduced and monitored to meet objectives surrounding air quality.

4 PROPOSED DEVELOPMENT

GOSH is a world leading provider of specialist healthcare to children in the UK, referred for care from hospitals and health practitioners across the country. The site currently employs around 5,000 staff while attracting around 300,000 patient visits and undertaking around 63,000 procedures every year.

The proposals represent Phase 4 of a long-term redevelopment programme for The Trust, involving replacement and/or refurbishment of many of the buildings that the hospital occupies. The new modern facilities will meet the future needs of the hospital, ensuring it can deliver the care to patients for many years to come.

As outlined in Chapter 1, this phase will involve the deconstruction of the Frontage Building that faces onto Great Ormond Street and construction of an eight storey building (with two basement levels) Children's Cancer Centre (GOSHCCC) to provide clinical services for cancer care, while a new main entrance will also be created.

The new building will encompass 18,303 m^2. This proposed floor space will ensure that the current overcrowding will be relieved and offer better wards and facilities to assist the treatment and care services that GOSH provides. The new building will allow for a variety of services to co-locate to improve the efficiency of the hospital.

4.1 Construction stage

To assist the construction of the new building, there will be the requirement for site offices, welfare unit and storage space for equipment and materials, as well as space to load and offload vehicles.

The northern half of Great Ormond Street including the footway alongside, will be closed to traffic and pedestrians with hoarding and appropriate vehicle protection. Gates will be provided at either end for vehicles to enter and exit in forward gear and loaded / offloaded in between. This will also require a temporary one-way (westbound) order to be implemented on Great Ormond Street and suspend parking on both sides between the junctions of Lamb's Conduit Street and Queen Square. The impact of the one-way order on traffic flows has been assessed in chapter 5.

As a result of the temporary suspension, a Traffic & Pedestrian Survey Report (WSP, 2019) outlines how parking will be reallocated. In summary, this describes that ambulance bays on Great Ormond Street will be relocated to Powis Place and that pay-by-phone bays would be accommodated within existing provision around Queen Square.

The main pedestrian entrance to GOSH will be temporarily relocated to Powis Place, which runs along the western side of the hospital and emergency access will be retained. For those approaching from Lamb's Conduit Street during construction, the footway on the southern side of Great Ormond Street will remain available with the exception of any full road closure events.

To provide sufficient segregation between construction phase operations and ongoing GOSH operations Sisk site project offices will be erected on the eastern corner of Great Ormond Street and remain there throughout the duration of the project. Further details of the construction stage proposals can be found within Sisk Demolition and Construction Management Plan submitted with the planning application.

4.2 Future proposals

4.2.1 Traffic management

To provide for the long-term future of the operation of Great Ormond Street, LBC are developing options to reduce traffic flows along the frontage of GOSH. Consultation is ongoing and includes options for a permanent one-way order with alternatives that restrict all through movement except for emergency vehicles.

Similar one-way arrangements are proposed for the construction stage to facilitate closure of half of the road to secure a compound for deliveries. Retention of these arrangements or alternative proposals post-completion will reduce the conflicts and congestion that frequently occur at either end of Great Ormond Street. These options do not form part of this planning application.

4.2.2 Parking provision

The hospital does not provide any on-site car parking. However, there are spaces dedicated to staff in the nearby Bloomsbury Square NCP car park. There are no proposed long-term changes to car parking provision in or around the hospital, including disabled parking as part of this application.

4.2.2.1 Cycle parking

GOSH also provides a large number of cycle parking stands for staff and visitors across the hospital site. The proposed development will displace 93 long stay cycle spaces that currently sit within the footprint of the new building. In the short-term, it is proposed to relocate 88 of these spaces to the Morgan Stanley Clinical Building (MSCB) in the heart of the hospital, close to the main lockers and showers.

Cycle parking beat surveys were undertaken over a period of six weekdays in Autumn 2021. This involved observations of utilisation in the mornings (between 08:00 and 10:00) and afternoons (14:00). The surveys established the average demand for cycle parking which for the staff (long-stay) parking occupancy was 57%.

Further observations were undertaken during a site visit in January 2022 between 12:30 and 13:30 with an observed occupancy for long-stay parking during winter at around 43%. The use of different types of provision was also noted and it was found that those provided at ground level – i.e. Sheffield stands and the lower tiers of two-tier racks were most well-utilised.

Cycle parking requirements, as set out in the London Plan, require 1 long-stay space per 5 staff plus 1 short-stay space per 30 staff for hospitals. For the current staff of 4,962, taking into account that the site operates 24/7 and therefore only 20% of staff are on site on any given shift, the cycle parking requirement would be for 198 long-stay and 33 short-stay spaces.

With the loss of 93 spaces in the VCB (56 Sheffield spaces and 37 semi-vertical spaces) the remaining long-stay spaces (206) are broadly comparable to the requirement of 198 spaces under the local parking standards. This provision would likely accommodate the existing demand for staff cycle parking as observed through the beat surveys as well as the reported level of cycling within the staff travel survey.

Notwithstanding, given that the VCB cycle parking is a large and well-utilised provision, the proposals will relocate the vast majority of these spaces prior to the commencement of construction of the CCC.

The proposals comprise the removal of underutilised semi-vertical stands and standard two-tier racks within the MSCB, retaining 10 of the semi-vertical spaces. New two-tier racks will be introduced which will provide 80 spaces with a gas strut mechanism to the top troughs and a further 80 spaces to the lower tier via 40 Sheffield Stands. A further three Sheffield stands will accommodate six more bicycles resulting in a net increase of 30 Sheffield stand spaces over the existing VCB provision, as detailed in Appendix 2.

To support the relocation of spaces, a suite of measures will be put in place to ensure the spaces at the MSCB are used to their full potential and is a positive experience for staff. This will include:

- Assessment of and any required improvements to lighting quality within the MSCB cycle parking area;
- Ingress/egress assessment and necessary improvements including the automation of doors to aid accessibility;

- Plan for pigeon deterrent and associated cleaning within cycle parking area;
- Plan for improvements to the general amenity of the cycle parking area, such as notice board, paint, planters/hanging garden;
- A communications plan covering access, route, and how to safely use the two tier racks, encouraging the use of higher racks; and
- Permanent waymarking signage;

To supplement the net loss of five spaces from the relocation of 88 of the 93 VCB parking spaces, a further five spaces will be provided at the Premier Inn Clinical Building, adjacent to the service yard, as shown in Appendix 2. These will accommodate larger bikes such as cargo bikes and trikes to encourage more inclusive cycling and the take up of cycling by those that use a larger cycle. The handrail in this area will be reduced in order to improve access for users of these bikes.

A further improvement will be made to the cycle parking access at Barclay House: Following the recent replacement of the decking in this area, the existing padlock will be removed and replaced with ID access control to enable ease of use.

The total number of spaces provided at GOSH will accommodate the existing demand for cycle parking and continues to provide in excess of the required cycle parking for staff, allowing for growth during construction of the CCC. Furthermore, The Trust is continuing to develop and extend cycle parking to meet the needs of the staff and whilst not part of this application, investigations are being made for a scheme to accommodate future growth in cycling, following the completion of the CCC.

4.2.3 Pedestrian access

The main entrance will be retained broadly in its current position, centrally on Great Ormond Street. The footway along the frontage of the site will be reinstated post-completion. Future public realm proposals by The Trust and LBC will deliver an improved environment of trees and seating, offering a wide route for people to gather, wait and enjoy the streetscene.

4.2.4 Drop off facilities and ambulance parking

Ambulances currently drop-off on Great Ormond Street and take patients through the main entrance. The proposed development will not alter this arrangement. There are ambulance stands provided on Great Ormond Street, which will remain. The taxi drop-off facilities and public parking spaces along Great Ormond Street will also remain following

the completion of the proposed development, which are illustrated on the plan enclosed at Appendix 1.

4.2.5 Servicing and refuse collection

The wider GOSH site benefits from two servicing areas. The main service yard is located to the north-west of the hospital with separate entry and exit points to Guilford Street. A second yard is located to the north-east of the hospital and is accessed via a narrow entrance from Guilford Street and is typically suitable for smaller vehicles. The main entrance on Great Ormond Street is only used for small deliveries by couriers who do not have pre-arranged delivery slots. The two service yards are illustrated in Figure 4.1 below.

Figure 4.1 Service yard locations

These arrangements will remain unaltered following the proposed development. It is not anticipated that the number of deliveries will increase as a result of the proposals with less than five additional deliveries per day associated with the proposed development.

5 TRAFFIC ASSESSMENT

5.1 Development proposals

The proposed development will not affect the current levels of staff or patient visits, but provide improved facilities in modern buildings, co-located from other areas within GOSH as part of the long-term programme of redevelopment. On this basis, it not expected that the trip generation of the hospital will be affected by these works.

5.2 Traffic management proposals

The construction stage will result in proposed changes to the flow of traffic along Great Ormond Street by introducing a one-way order, allowing only westbound traffic to pass along it. This will reduce the potential for conflict and congestion along the frontage of GOSH and ensure that emergency access is unhindered at all times.

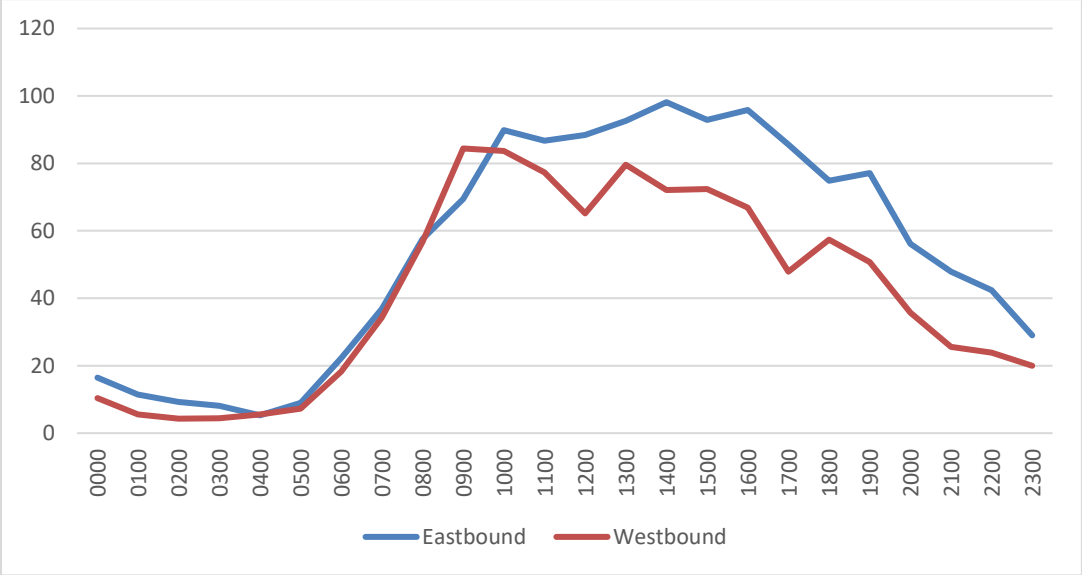
Details of the scheme will be agreed with LBC in advance of construction and will aim to minimise impacts on other road users, while ensuring that construction traffic movements do not affect the operation of GOSH.

5.2.1 Traffic surveys

An automatic traffic counter (ATC) was installed along Great Ormond Street, just to the east of the junction with Orde Hall Street to record vehicle volumes and speeds in both directions. Data was collected over a seven day period between 4th and 10th February 2020.

The data indicates that weekday traffic volumes are around 1,600 vehicles in an eastbound direction and 1,300 in a westbound direction per day, with HGVs representing around 15% of all traffic. Hourly volumes are less than 100 movements in either direction at any given time of day. Figure 5.1 below illustrates the weekly average volume and profile of traffic throughout the day for each direction.

Figure 5.1 ATC traffic flow summary



Traffic flowing eastbound along Great Ormond Street has the potential to be generated through a number of routes, all of which would be affected by the proposed restriction, as follows:

A. Visitors to Queen Square, exiting to the east

B. Visitors to GOSH, exiting to the east

C. People travelling to eastern section of Great Ormond Street

D. General through traffic between A40 and Guilford Street.

Each of these routes will be affected in a different way and will result in a diversion that will lead to either a reduction or an increase in traffic on other routes. Traffic flowing in a westbound direction will be unaffected by the proposals. The diverted routes are expected to be as follows, as illustrated in Figure 5.2 below:

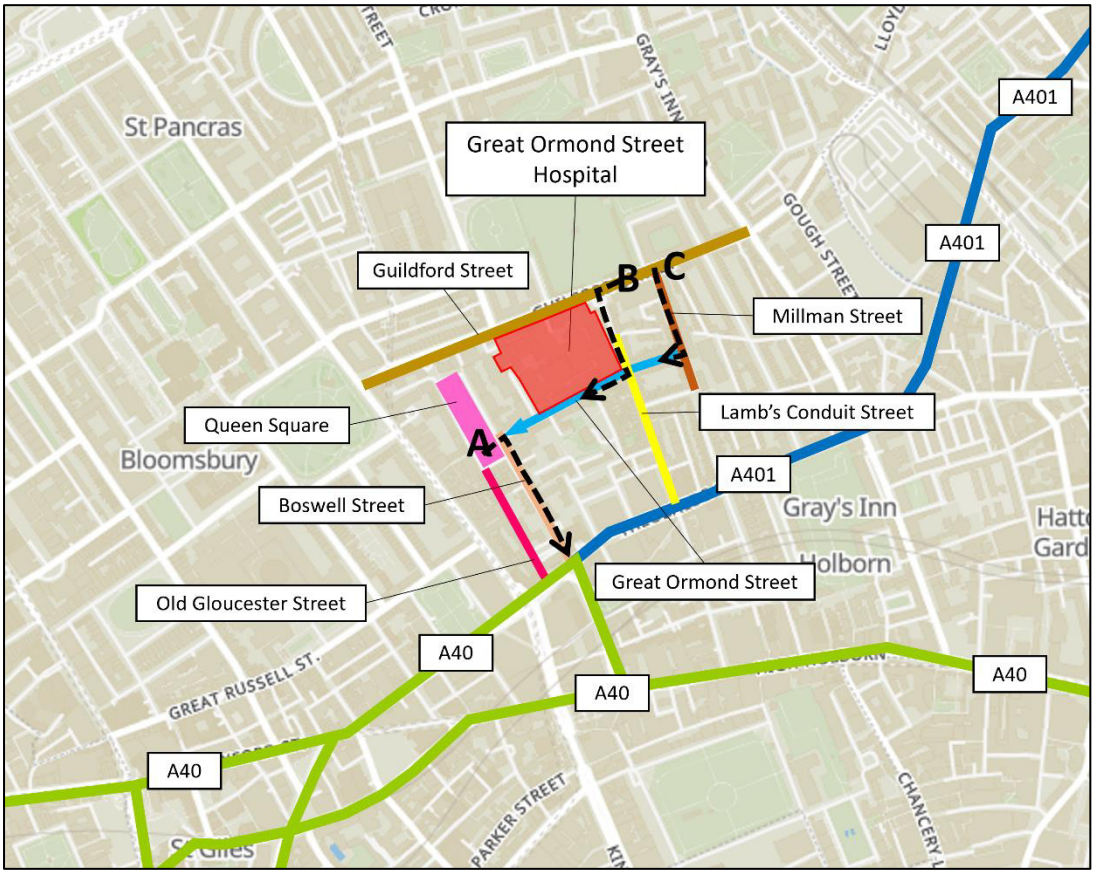
A. Exit to A401 via Boswell Street

B. Enter Great Ormond Street via Guilford Street and Lamb's Conduit Street, exit to A401 via Boswell Street

C. Re-route via Guilford Street and Millman Street

D. Re-route in local area.

Figure 5.2 Rerouted traffic



The above diversion routes are therefore likely to result in an increase in traffic on Boswell Street, while reducing traffic on Old Gloucester Street. The net change on Lamb's Conduit Street will be a reduction in northbound flow and an increase in southbound flow.

Using broad assumptions around the origin and destination of traffic using Great Ormond Street, the total traffic flows along Great Ormond Street and Lamb's Conduit Street is expected to reduce by around 25% while the net change on a combination of Old Gloucester Street and Boswell Street will also lead to a reduction in traffic volumes. The equivalent hourly change in traffic volumes on Great Ormond Street will be around 45 vehicles an hour, which is less than one additional westbound vehicle per minute.

Although the westbound traffic flow along Great Ormond Street will increase, this is comfortably within the capacity of the road and will be travelling in a single direction without conflict of oncoming traffic. Therefore, the traffic will flow more consistently along the road, reducing congestion and therefore improving air quality in the area, while creating a more attractive environment for pedestrians and cyclists.

6 SUMMARY AND CONCLUSIONS

6.1 Summary

RSK has been commissioned by John Sisk & Son (Holdings) Ltd to prepare a Transport Assessment in support of a planning application on behalf of the Applicant, Great Ormond Street Hospital for Children NHS Foundation Trust for a new Children's Cancer Centre. The current proposals represent Phase 4 of their long-term Masterplan.

The proposed development includes the demolition of the existing Frontage Building fronting onto Great Ormond Street. A new eight storey building (together with two basement levels) will be constructed to provide a dedicated Children's Cancer Centre and new main entrance to GOSH to give the hospital a greater sense of identity and more welcoming arrival.

The proposals include the promotion of a one-way order along the site frontage in a westbound direction, reducing the congestion that currently occurs and minimise the risk of delays to emergency services. The order will initially be temporary during construction to ensure that delivery vehicles do not cause congestion on the approach routes and facilitate an offloading area. Following completion of the project, all temporary highway adjustments are to revert back to the environment as was prior to commencement of the construction phase. As the design develops there is the potential possibility of maintaining the temporary one-way route through Great Ormond Street as a permanent solution.

This Transport Assessment has considered the potential traffic and transport impacts of the proposals on the surrounding transport and highway network.

GOSH is centrally located for access to sustainable modes of travel facilitating travel on foot, by cycle and by public transport across London while benefiting from connections by train across the UK. Given the long distances that many patients travel, it is served well by three main line rail stations with the Underground network providing convenient connections to all major stations across central London. The site's PTAL rating of 6b demonstrates the site's ability for staff and patients to reach the site by non-car modes.

Travel surveys undertaken in 2018 indicate that almost all staff already travel using sustainable modes of transport while only a quarter of patients and visitors travel to GOSH by car.

There are no long-term proposed changes to parking provision, pedestrian access or servicing arrangements in and around the hospital as part of the proposed development.

The proposed temporary one-way order for Great Ormond Street is predicted to reduce total traffic flows on local roads by around 25% with some directional increases offset by significant reductions in the opposite direction. However, removing eastbound traffic travelling along Great Ormond Street will reduce conflict and congestion while minimising the risk of obstructing the emergency access route during construction.

6.2 Conclusion

The proposed development is not expected to affect the trip volumes or travel patterns of existing staff and patient visits to the hospital. The proposals will provide much needed improvements to the facilities and their co-location within GOSH to maintain the high standards of treatment and care of children.

The site is already highly accessible by public transport across London and via main line rail stations for access beyond. The provision for pedestrians and cyclists is adequate for staff and visitors and commensurate with the local setting, making active travel attractive even as part of a longer journey by public transport. Notwithstanding, future public realm proposals for Great Ormond Street will deliver an improved environment with a wider route for those accessing the site on foot or by bike.

Overall, the proposed development is acceptable from a transport perspective.

APPENDIX 1
CURRENT PARKING RESTRICTIONS

N

Legend

- Ambulance Only
- Parking
  Mon-Fri 8:30am-6:30pm
  Sat 8:30am-1:30pm
- Resident Parking
  Mon-Fri 8:30am-6:30pm
  Sat 8:30am-1:30pm
- Single Yellow
- Double Yellow
- Motorcycle Parking
- Taxi Stands
- Disabled Bay
- Doctors Bay

Rev.	Date	Amendment	Drawn	Chkd.	Appd.
—	—	—	—	—	—

RSK

Fourways House
57 Hilton Street
Manchester
M1 2EJ

Tel: +44 (0) 161 236 2757
Email: communications@rsk.co.uk
Web: www.rsk.co.uk

Client

Great Ormond Street Hospital NHS Foundation Trust

Project Title

Children's Cancer Centre (Phase 4)

Drawing Title

Current parking restrictions

Drawn	Date	Checked	Date	Approved	Date
SF	12/02/20	IW	12/02/20	—	—

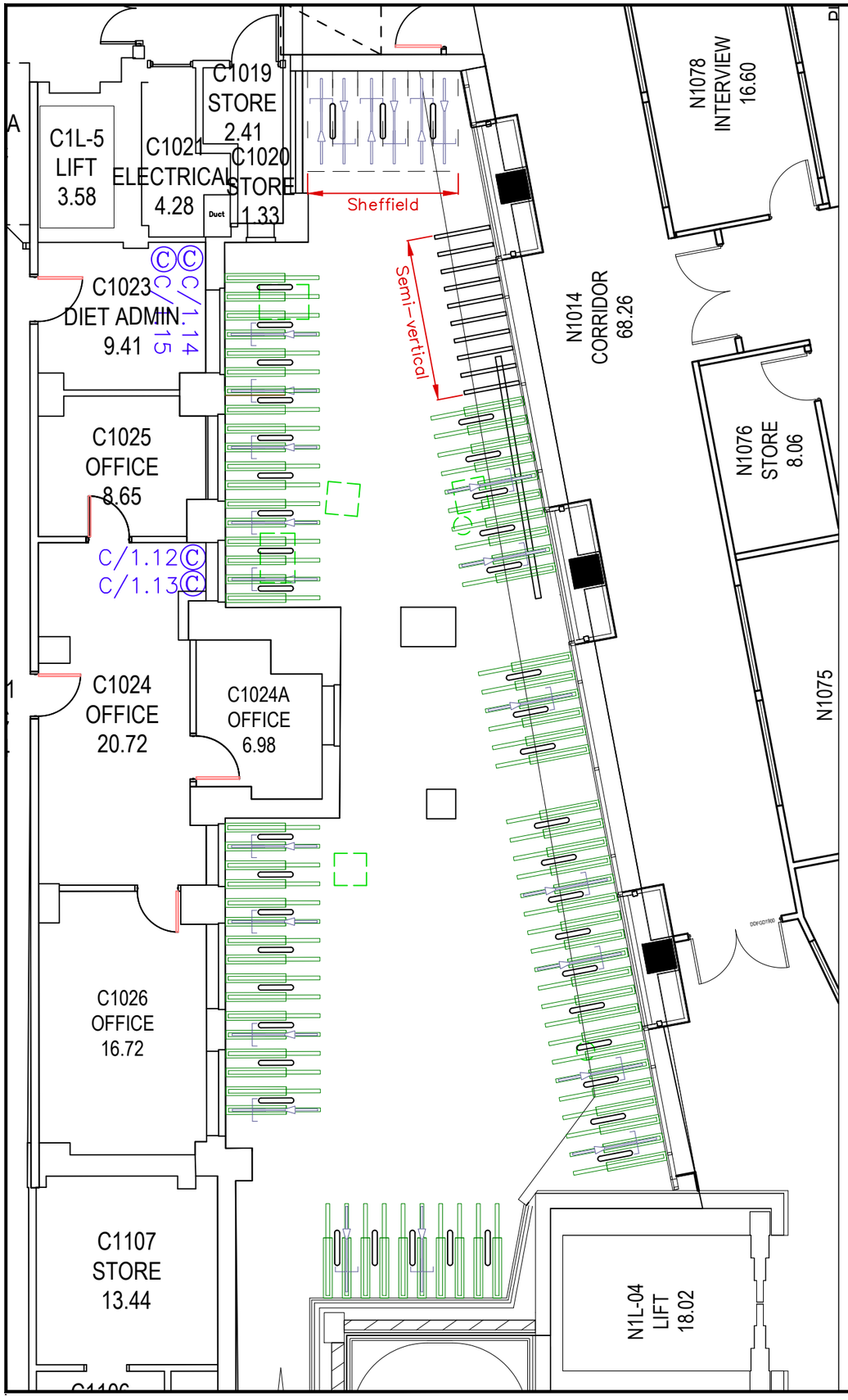
Scale	Orig Size	Dimensions
1:1000	A3	METRES

Project No.	Drawing File
111057	

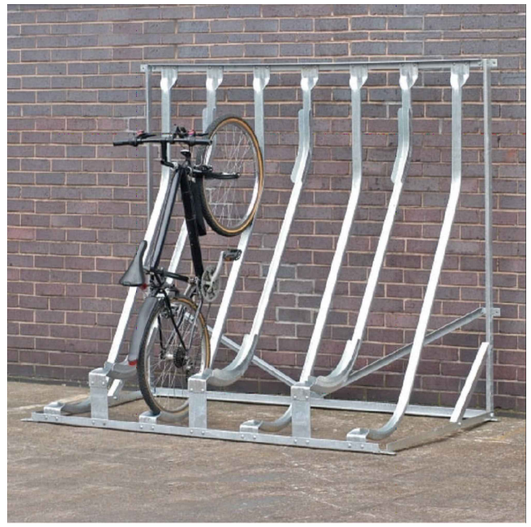
Drawing No.	Rev.
111057-10-01	—

Scale
0 10 20 40 60

APPENDIX 2
RELOCATED CYCLE PARKING PROPOSALS



Semi-vertical cycle parking



Two-tier cycle parking

Cycle Parking

Existing: 88 spaces (mix of two-tier and semi-vertical)

Proposed:
Two-tier racks - 160 spaces
(80 top tier gas power assisted, 40 Sheffield stands below)
Semi-vertical racks - 10 spaces
Sheffield stands - 6 spaces

Total Provision = 176 spaces
(increase of 88 spaces)

Rev.	Date	Amendment	Drawn	Chkd.	Appd.
—	—	—	—	—	—

RSK
Fourways House
57 Hilton Street
Manchester
M1 2EJ
Tel: +44 (0) 161 236 2757
Email: communications@rsk.co.uk
Web: www.rsk.co.uk

Client
Great Ormond Street Hospital
NHS Foundation Trust

Project Title
Children's Cancer Centre
(Phase 4)

Drawing Title
Proposed Cycle Parking:
Morgan Stanley Building
(Lullaby Factory)

Drawn	Date	Checked	Date	Approved	Date
MQ	IW	—	—	—	—

Scale	Orig Size	Dimensions
1:100	A3	METRES

Project No.	Drawing File
111057	

Drawing No.	Rev.
111057-20-01	A

Scale
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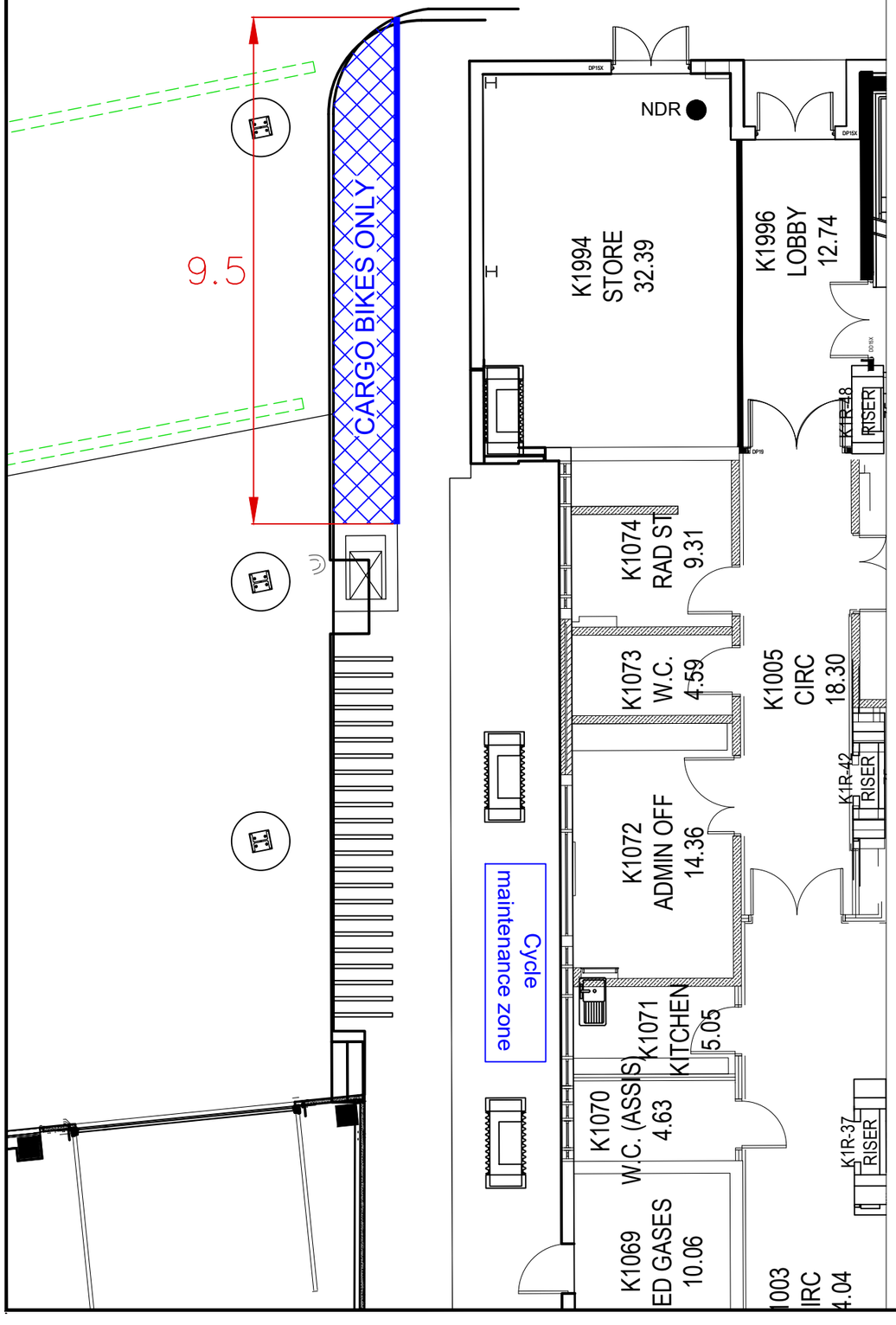
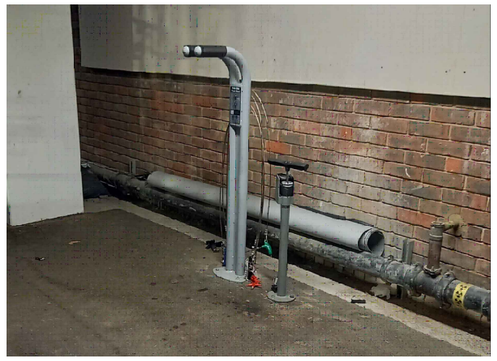


Cycle maintenance zone



Semi-vertical cycle parking

Cycle Parking

Existing: 23 spaces (semi-vertical) plus informal along railings

Proposed:
Semi-vertical racks - 23 spaces
Cargo and larger bikes - 5 spaces

Total Provision = 28 spaces (increase of 5 spaces)

Rev.	Date	Amendment	Drawn	Chkd.	Appd.
—	—	—	—	—	—

RSK
Fourways House
57 Hilton Street
Manchester
M1 2EJ
Tel: +44 (0) 161 236 2757
Email: communications@rsk.co.uk
Web: www.rsk.co.uk

Client
Great Ormond Street Hospital
NHS Foundation Trust

Project Title
Children's Cancer Centre
(Phase 4)

Drawing Title
Proposed Cycle Parking:
Premier Inn Clinical Building
(adjacent to service yard)

Drawn	Date	Checked	Date	Approved	Date
MQ	IW	—	—	—	—

Scale	Orig Size	Dimensions
1:100	A3	METRES

Project No.	Drawing File
111057	

Drawing No.	Rev.
111057-20-02	_

Scale
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