CANEPARO ASSOCIATES
Transport Planning & Highway Design

Seaforth Land

20-23 GREVILLE STREET

Transport Assessment

January 2018

Caneparo Associates Limited
21 Little Portland Street
London W1W 8BT
Tel: 020 3617 8200

www.caneparoassociates.com

Registered in England: 9930032

Contents

Appendices

1 INTRODUCTION

1.1 Caneparo Associates are appointed by Seaforth Land ('the Applicant') to provide traffic and transport advice in relation to the planning application for the proposed extension and refurbishment of 20-23 Greville Street, EC1N 8SS ('the Site'), in the London Borough of Camden (LBC).

1.2 The Site forms a five storey building (with ground and lower ground floors) and provides 2,539sqm (GEA) of office floorspace in B1(a) use. The Site is currently provided with an informal parking area (3 spaces) at ground floor accessible from Bleeding Heart Yard. The existing layout plans are included at **Appendix A**.

1.3 The development proposes the extension and refurbishment of the building in order to provide 2,662sqm (GEA) of B1(a), 981sqm (GEA) flexible retail floorspace (Use Class A1/A3). All off-street parking will be removed. The proposed layout plans are included at **Appendix B**.

1.4 This Transport Assessment has been prepared following a detailed site visit as well as pre-application advice received from LBC. The report examines the effects of the development on the local highway network including its impact on accessibility, servicing, refuse collection, parking and trip generation.

1.5 In addition, a Framework Employee Travel Plan, Draft Delivery & Servicing Plan (DSP) and Draft Construction Management Plan (CMP) accompany the application and have been prepared to fully consider and manage the potential transport and highways effects of the proposed development.

1.6 The remainder of this report is structured as follows:

- Section 2 summarises the existing situation;
- Section 3 sets out the site's accessibility;
- Section 4 describes the development proposals;
- Section 5 reviews the relevant transport planning policy;
- Section 6 considers the effects of the development;
- Section 7 outlines mitigation measures; and
- Section 8 presents a summary and conclusion.

2 EXISTING SITUATION

Site Location

2.1 The Site is located within the Holborn and Covent Garden ward, on the southern side of Greville Street, bound by Bleeding Heart Yard to the west and south, and a similar sized office building to the east. The Site is located 180m east (2 minutes walk) of Farringdon Station.

2.2 The Site location with respect to the local highway network and rail connections is shown at **Figure 1**, below.

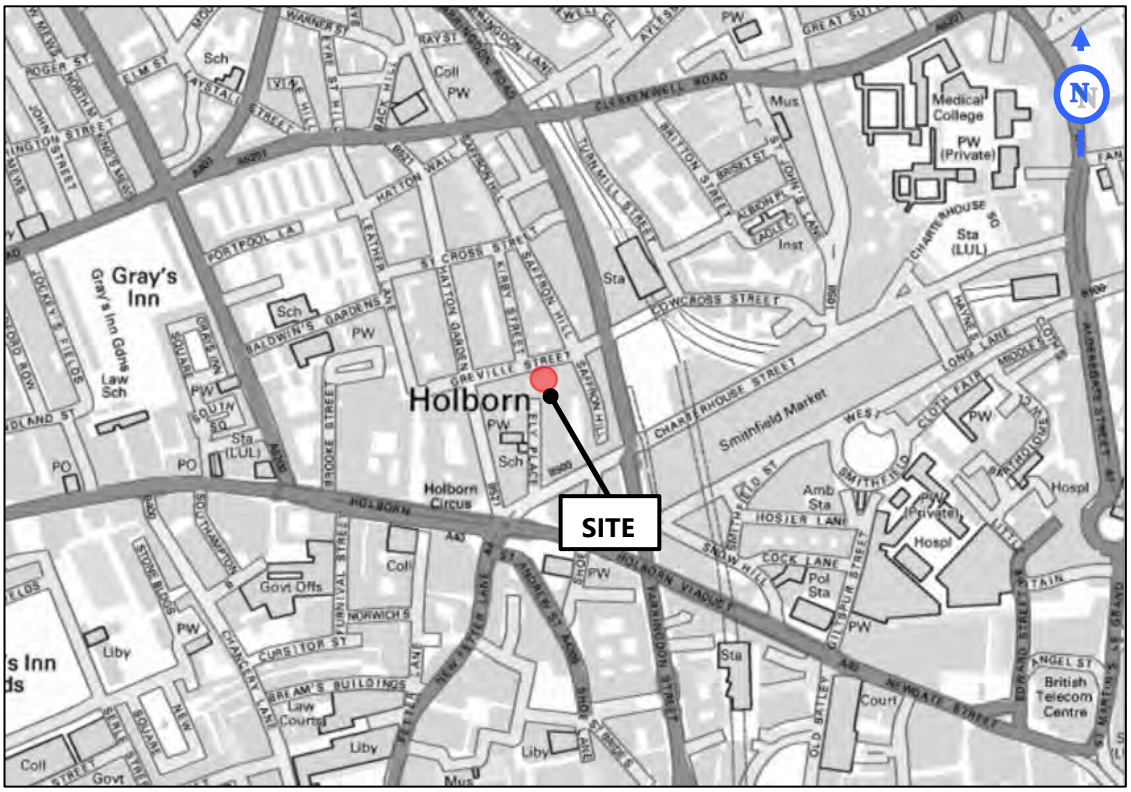


Figure 1: Site Location Plan

2.3 The surrounding area comprises a mix of commercial and retail land uses. The local area offers a wide range of facilities and amenities within a short walking distance owing to the Site's proximity to both Farringdon and Chancery Lane Stations. As such the proposed development is considered to be located within an established area that benefits from many services that can cater to the increased number of employees on-site.

Site Use and Operation

2.4 The existing building provides 2,340sqm of office floorspace across lower ground, ground and five upper floors. The Site is provided with an area of informal parking (3 spaces) to the rear, accessible via Bleeding Heart's Yard.

2.5 Typically, based on TRICS/TRAVL data, the Site currently receives 5-6 deliveries per day when in occupation, comprising general office supplies, deliveries and post.

Local Highway Network

Greville Street

2.6 Greville Street is located along the Site's northern frontage and operates eastbound to the A201 Farringdon Road from Leather Lane. The section of Greville Street which fronts the Site has a length of single yellow line on the northern side of the road with on-street car club bay / resident permit holder bay / short-term parking bay along the southern side. Short lengths of double yellow line are also located on the southern side of the road. The short-term parking is in operation between 08:30 and 18:30 Monday to Friday, 08:30 and 13:30 Saturday, with a maximum stay of 2 hours.

Bleeding Heart Yard

2.7 Bleeding Heart Yard bounds the Site to the west and south and forms a courtyard offering access to a small number of commercial and retail properties. The yard connects to Greville Street via a narrow lane which opens up to the yard itself. The narrow entrance/exit is controlled by double yellow line whilst the remainder of the yard is controlled by single yellow line. Delivery vehicles access the yard to service commercial properties along Greville Street.

Cycle Superhighway 6

2.8 Transport for London (TfL) and LBC have consulted on a new cycle superhighway which involves both pedestrian and cycle improvements on Greville Street. The proposed alterations are detailed in **Appendix C** whilst a summary is included below:

- Pedestrianising the access between Farringdon Road and Greville Street;
- Reversing the one-way direction of Kirby Street to northbound; and
- New traffic islands to the west of the access to Bleeding Heart Yard to form a new loading bay.

Parking and Loading

2.9 The Site falls within Zone CA-D "Kings Cross Area" of Camden's Controlled Parking Zone (CPZ) which operates between 08:30 and 18:30 Monday to Friday, and 08:30 and 13:30 on Saturdays. Loading or unloading is permitted on yellow lines for up to 40 minutes during the hours of control.

Census Data

2.10 The 2011 Census has been examined to establish the method of journey to work for the workplace population in the area, Camden 027. The data is set out in **Table 2.1**, and shows that public transport is responsible for 80% of all trips to work by employees in the area.

Table 2.1: Camden 027 Modal Split - Employees

Mode	Percentage (%)
Underground	31.9
Train	36.7
Bus	11.1
Taxi	0.2
Motorcycle	1.7
Car Driver	5.8
Car Passenger	0.6
Bicycle	6.1
Walking	5.8

3 ACCESSIBILITY

3.1 The Site is highly accessible by all modes with an excellent network of footpaths, cycle facilities and public transport services in the immediate vicinity.

Walking

3.2 It is generally accepted that for journeys of up to 2km walking is an appropriate mode to replace car trips and this is set out in The Chartered Institution of Highways and Transportation (CIHT) Guidelines ("Guidelines for Providing for Journeys on Foot" 2000) which suggests a maximum 'acceptable' walking distance for pedestrians without mobility impairment of 2km.

3.3 The majority of Farringdon, Temple, Clerkenwell and Holborn are within a 2km walking distance from the Site including Farringdon rail station and several underground stations. The roads surrounding the Site provide a wide array of retail and commercial properties including food retailers, cafes and restaurants which are likely used by current/proposed tenants of the building.

Cycling

3.4 It is commonly accepted that cycling has the potential to substitute for driving for distances up to 5 miles (8 kilometres). Most of Central and North London, including Camden Town, Holloway, the City of London, Soho, Westminster, Waterloo and Paddington are within a 5 mile cycle ride from the Site.

3.5 In the vicinity of the Site, the western section of Greville Street as well as Hatton Garden, New Fetter Lane, Turnmill Street and Chancery Lane are designated as '*roads that have been recommended by other cyclists*'. Farringdon Road, Holborn, Charterhouse Street and Fleet Street have been classified as a '*route signed for use by cyclists on a mixture of quiet and busier roads*'.

3.6 A number of "Camden" style cycle stands are located along Greville Street and the surrounding roads including 4 stands (8 spaces) west of the Site on the northern side of Greville Street.

Public Transport

Bus Services

3.7 The nearest northbound and southbound bus stops (Farringdon Stop A and B) are located approximately 100-150m from the Site.

3.8 A summary of bus services available in the locality is provided in **Table 3.1**. The bus route 'spider map' prepared by TfL is included at **Appendix D** and shows interchange opportunities available from these routes.

Table 3.1 Summary of Bus Service Frequency (every 'x' minutes)

No.	Route	Monday – Friday Frequency	Saturday frequency
8	Bow Church – New Oxford Street	4 - 8	5 - 9
17	London Bridge - Archway	6 - 9	10 - 11
25	Ilford – Oxford Circus	5 - 9	5 - 9
45	King's Cross - Clapham	8 - 12	10 - 14
46	Lancaster Gate – City Thameslink Station	10 - 12	9 - 11
55	Leyton – Oxford Circus	5 - 8	6 - 10
56	Whipps Cross – St Bartholomew's Hospital	6 - 9	6 - 10
63	Honor Oak – St Pancras International Station	6 - 10	6 - 10
242	St Paul's Station – Homerton Hospital	6 - 10	7 - 10
243	Wood Green – Wateloo Station	5 - 8	7 - 10
341	Waterloo – Northumberland Park	9 - 12	9 - 12
521	Waterloo – London Bridge	2 - 11	N/A

Source: TfL

Rail and Underground Services

3.9 Farringdon Station, on Crowcross Street, is located circa 180m to the east of the Site (3 minutes' walk). Farringdon Station offers, on average, 18 services an hour on the Thameslink to locations such as Bedford, Three Bridges, Sevenoaks, Luton, Sutton, West Hampstead, Brighton and St. Albans. The Station also provides access to the London Underground network via the Circle, Metropolitan and Hammersmith & City Lines. Crossrail will be operational by December 2018 through central London, and when the route is fully open in December 2019, there will be a service every 2-3 minutes reaching Bond Street in 4 minutes as well as Paddington and Canary Wharf in 8 minutes.

3.10 Finally, Chancery Lane Station is located 450m southwest of the Site on the A40 Holborn. The station provides an access point to the Central line service of the London Underground.

Public Transport Accessibility Level (PTAL) Rating

3.11 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability.

3.12 The PTAL is categorised in six levels, 1 to 6 where 6 represents an excellent level of accessibility and 1 a poor level of accessibility. It is then further sub-sectioned into 'a' and 'b', with 'a' being at the lower end of the spectrum and 'b' at the higher.

3.13 The assessment methodology reflects:

- Walking time from the point of interest to the public transport access points;
- The reliability of the service modes available;
- The number of services available within the catchment; and
- The level of service at the public transport access points – i.e. average waiting time.

3.14 The PTAL rating of the centre of the Site is 6b, meaning the Site has an excellent level of accessibility to public transport, achieving the highest possible rating. **Appendix E** contains the TfL PTAL summary.

Car Clubs

3.15 There are several existing car club vehicles in the vicinity of the site; the closest vehicle is operated by Zipcar and is located in the centre of Greville Street. **Table 3.2** below sets out the local car club vehicles.

Table 3.2 Local Car Club Operators

Operator	Location	Distance from Site
Enterprise Car Club	20 Greville Street, EC1N 8TB (in front of the Site)	0m
Zipcar	38 Hatton Garden, EC1N 8DX	190m
Zipcar	4 St. Cross Street, EC1N 8QP	190m
Zipcar	1 Portpool Lane, EC1N 7UD	620m

4 DEVELOPMENT PROPOSAL

4.1 The proposals seek the change of use of existing Class B1 at ground floor, basement and first floor levels to Class A1/A3 use; demolition of existing fifth floor plant room and construction of rooftop extension at fifth and mezzanine floor level for Class B1 use, rear infill extension to all floors for Class B1 use, external alterations including new façade and glazing, and associated works. This also includes the removal of the informal parking area to the rear of the Site.

4.2 The proposed refurbishment and extension will result in the provision of 981 square metres (GEA) of flexible retail floorspace (Use Class A1/A3) at lower ground, ground and first floors with 2,662 square metres (GEA) of office floorspace (Class B1) across the remaining upper floors, an uplift of circa 123 square metres of floorspace when compared to the existing office use. A copy of the Architect's proposed layout plans have been included at **Appendix B**.

4.3 The flexible retail floorspace (Use Class A1/A3) is illustratively divided into four units as follows:

- Unit A: 441sqm (GEA)
- Unit B: 250sqm (GEA)
- Unit C: 230sqm (GEA)
- Unit D: 60sqm (GEA)

4.4 To provide a realistic scenario, the largest unit (A) and the Bleeding Heart Bistro kitchen extension (D) have been assumed as Café/restaurant (Use Class A3) whilst the remaining smaller units fronting Greville Street (B and C) have been assumed as non-food retail.

Access

4.5 The existing vehicular access (dropped kerb) on Bleeding Heart Yard will be reinstated as footway whilst the informal off-street car parking spaces will be removed.

4.6 Pedestrian access to the three retailers will be taken directly from Greville Street whilst access to the office floorspace, restaurant and long-stay cycle parking will be provided directly from Bleeding Heart Yard.

Parking

Vehicle Parking

4.7 The proposals include no dedicated on-site parking reflecting the Site's excellent accessibility to public transport (PTAL 6b), its location to local amenities and services, and the goals for sustainable development. This falls in line with both the London Plan and Policy T2 of Camden's new Local Plan. This is considered a benefit of the scheme owing to the removal of the existing informal parking arrangement available on Bleeding Heart Yard.

Cycle Parking

4.8 Cycle parking will be provided in accordance with Camden's Planning Guidance 7 – Transport and the London Plan. **Table 4.1** includes the cycle parking provision.

Table 4.1: Cycle Parking Provision

Use Class	Long-stay Cycle Parking	Short-stay Cycle Parking
A1 non-food retail (480sqm)	2	4
A3 Use (501sqm)	3	13
B1 Office (2,662sqm)	30	6

4.9 A dedicated cycle store will be provided at lower ground floor level offering secure, sheltered and accessible cycle parking for employees and office visitors. The store will provide a total of 36 cycle parking spaces (catering for all office long-stay and short-stay spaces) accessible via the reception passenger lift. The building will be provided with shower, lockers and changing facilities. An accessible cycle parking area is included within the store capable of accommodating 2 "recumbent / cargo" style bicycles. Long-stay cycle parking for the retail units will be provided internally to each of the units, where appropriate.

4.10 According to the London Plan (detailed within Section 5), the quantum of development will require 23 short-stay cycle parking spaces. The 6 spaces relating to the office use are located within the lower ground floor level. The remaining 17 spaces (9 Camden stands) are proposed on-street directly on Bleeding Heart Yard. The proposed cycle parking arrangement is included at **Appendix f** and will be secured through the Section 106.

4.11 The proposals include some external space on-site within a covered colonnade. This space is intended to create an improved relationship with and an active frontage to Bleeding Heart Yard with uses spilling out from the proposed restaurant onto a patio open space. In the limited area available, this could not be achieved as well as accommodating cycle parking. The colonnade provides insufficient space to accommodate the required level of short-term cycle parking. Therefore, in order to maintain the area and meet cycle parking standards, it is proposed that 9 stands are located within the yard itself.

Servicing and Refuse Collection

4.12 The proposed servicing and refuse collection arrangement will be as per the existing situation with suitably sized delivery / refuse vehicles accessing Bleeding Heart Yard before making use of the available single yellow line in the vicinity of the Site, which allows for continuous loading / unloading for up to 40 minutes. This is considered an appropriate arrangement which minimises the number of vehicles stopping on Greville Street. It is noted that the large majority of trips will be undertaken by vehicles no larger than 3.5t/4.6t vans based on the proposed uses likely servicing requirements. Any larger deliveries will be expected to stop on Saffron Hill, following the highway amendments as part of the CS6.

4.13 Swept path analysis is included at **Appendix g**.

4.14 The bin store will be located at lower ground floor and will provide space for all commercial uses on-site with clear designation. The bins will be transferred to a ground floor collection point via a lift on collection days, as detailed within **Appendix B**. The collection point is provided with direct access on to the lane leading to Bleeding Heart Yard to minimise the drag distance for waste operatives.

4.15 All refuse collection will be undertaken by private contractors with further detail of refuse collection and storage provided within Section 6 of this report.

5 POLICY CONTEXT

5.1 This section summarises the relevant transport policies at national, regional and local level. It outlines policy directions that should be followed and summarises how the proposed development aligns with these policies.

National Guidance

National Planning Policy Framework

5.2 The National Planning Policy Framework (NPPF) was published on 27th March 2012 and sets out the Government's planning policies for England and how these are expected to be applied.

5.3 Paragraph 32 of Chapter 4 – 'Promoting Sustainable Transport' states:

"All developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- *the opportunities for sustainable transport modes have been taken up depending on the nature and location of the Site, to reduce the need for major transport infrastructure;*
- *safe and suitable access to the Site can be achieved for all people; and*
- *improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*

5.4 The Site is in a highly accessible location and it is considered that there are no significant residual cumulative impacts due to the proposed development.

Regional Guidance

The London Plan

5.5 The London Plan (March 2016) is a Spatial Development Strategy which sets out the framework for the development of London over the next 20-25 years.

5.6 Policy 6.1 sets out a number of strategic aims, key aims include:

a) encouraging patterns and modes of development that reduce the need to travel, especially by car;

b) seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand;

c) supporting measures that encourage shifts to more sustainable modes and appropriate demand management; and

d) promoting walking by ensuring an improved urban realm."

5.7 The excellent public transport accessibility of the Site and the car free nature of the proposed development ensure that the proposals are in line with the aspirations of the London Plan.

5.8 In regards to cycle parking, Table 5.1 below sets out the cycle parking minimum standards.

Table 5.1: Cycle Parking minimum standards

Use Class	Minimum Cycle Parking
A1 non-food retail	Long-stay: from a threshold of 100 sqm: first 1,000 sqm: 1 space per 250 sqm thereafter: 1 space per 1,000 sqm Short-stay: from a threshold of 100 sqm: first 1,000 sqm: 1 space per 125 sqm thereafter: 1 space per 1,000 sqm
A3 Use	Long-stay: from a threshold of 100 sqm: 1 space per 175 sqm Short-stay: from a threshold of 100 sqm: 1 space per 40 sqm
B1 Office	Long-stay: 1 space per 90 sqm Short-stay: first 5,000 sqm: 1 space per 500 sqm thereafter: 1 space per 5,000 sqm

Camden Local Policy

Local Plan (2017)

5.9 The Council's Local Plan was adopted in June 2017. The Local Plan sets the Council's Strategic Vision up to 2031 and is used to make decisions on planning applications. The document itself forms Camden's Development Plan.

5.10 Strategic Objective 8 sets out a transport objective for the borough:

"To promote sustainable transport for all and to make Camden a better place to cycle and walk around, to reduce air pollution, reliance on private cars and congestion and to support and promote new and improved transport links."

5.11 Policy T1 – Prioritising walking, cycling and public transport – states *"The Council will promote sustainable transport by prioritising walking, cycling and public transport in the borough"*. This will promoted in the following ways:

"Walking – In order to promote walking in the borough and improve the pedestrian environment, we will seek to ensure that developments:

***A.** improve the pedestrian environment by supporting high quality public realm improvement works;*

***B.** make improvements to the pedestrian environment including the provision of high quality safe road crossings where needed, seating, signage and landscaping;*

***C.** are easy and safe to walk through ('permeable');*

***D.** are adequately lit;*

***E.** provide high quality footpaths and pavements that are wide enough for the number of people expected to use them. Features should also be included to assist vulnerable road users where appropriate; and*

***F.** contribute towards bridges and water crossings where appropriate.*

Cycling – In order to promote cycling in the borough and ensure a safe and accessible environment for cyclists, the Council will seek to ensure that development:

***G.** provides for and makes contributions towards connected, high quality, convenient and safe cycle routes, in line or exceeding London Cycle Design Standards, including the implementation of the Central London Grid, Quietways Network, Cycle Super Highways and;*

***H.** provides for accessible, secure cycle parking facilities exceeding minimum standards outlined within the London Plan (Table 6.3) and design requirements outlined within our supplementary planning document Camden Planning Guidance on transport. Higher levels of provision may also be required in areas well served by cycle route infrastructure, taking into account the size and location of the development;*

I. *makes provision for high quality facilities that promote cycle usage including changing rooms, showers, dryers and lockers;*

J. *is easy and safe to cycle through ('permeable'); and*

K. *contribute towards bridges and water crossings suitable for cycle use where appropriate.*

Public Transport - In order to safeguard and promote the provision of public transport in the borough we will seek to ensure that development contributes towards improvements to bus network infrastructure including access to bus stops, shelters, passenger seating, waiting areas, signage and timetable information. Contributions will be sought where the demand for bus services generated by the development is likely to exceed existing capacity. Contributions may also be sought towards the improvement of other forms of public transport in major developments where appropriate.

Where appropriate, development will also be required to provide for interchanging between different modes of transport including facilities to make interchange easy and convenient for all users and maintain passenger comfort."

5.12 Policy T2 – Parking and car-free development – states *"The Council will limit the availability of parking and require all new developments in the borough to be car free."* The Council aims to:

A. *not issue on-street or on-site parking permits in connection with new developments and use legal agreements to ensure that future occupants are aware that they are not entitled to on-street parking permits;*

B. *limit on-site parking to: i. spaces designated for disabled people where necessary, and/or ii. essential operational or servicing needs;*

C. *support the redevelopment of existing car parks for alternative uses; and*

D. *resist the development of boundary treatments and gardens to provide vehicle crossovers and on-site parking."*

5.13 Policy T4 – Sustainable movement of goods and material – states the following: *"The Council will promote the sustainable movement of goods and materials and seek to minimise the movement of goods and materials by road. We will:*

A. *encourage the movement of goods and materials by canal, rail and bicycle where possible;*

B. *protect existing facilities for waterborne and rail freight traffic and;*

C. *promote the provision and use of freight consolidation facilities. Developments of over 2,500 sqm likely to generate significant movement of goods or materials by road (both during construction and operation) will be expected to:*

D. *minimise the impact of freight movement via road by prioritising use of the Transport for London Road Network or other major roads;*

E. *accommodate goods vehicles on site; and*

F. *provide Construction Management Plans, Delivery and Servicing Management Plans and Transport Assessments where appropriate."*

Policy Summary

5.14 The location of this proposed development with its existing public transport facilities and real opportunities for the use of active modes of transport means that the Site is highly suited to the proposed use.

6 EFFECTS OF DEVELOPMENT

6.1 This section considers the potential effects of the planning application proposals in relation to trip generation, car parking, cycle parking and servicing.

Trip Generation

6.2 A formal assessment of the predicted level of person trips to and from the Site, through the use of TRICS, is deemed unnecessary. The proposed increase in office floorspace (+208sqm) is negligible and will not result in a material increase in person trips as a result of the development. The existing office floorspace is currently fully occupied which highlights that the proposals are focused on a qualitative upgrade in office space rather than an aim to attract new employees to underutilised office space.

6.3 Though the proposal will result in the provision of new retail floorspace it is not considered that this will result in a material increase in primary trips (dedicated person trips to the retail units) with the majority of trips associated with retail use taking the form of pass-by, diverted or linked trips i.e. a trip on the wider transport network which already exists prior to the development. This is considered an appropriate response to trip generation in an area which benefits from a wide range of similar retail uses a short walking distance from the Site. The proposed retail uses will focus on the existing high footfall experienced along Greville Street to/from Farringdon Station, which is set to become of the busiest stations in the UK, and complementing the existing retail units in the area.

6.4 Regardless, when assessing local Census data (included at **Table 2.1**) and the lack of formal car parking for the proposed development, it is reasonable to suggest that the majority, if not all, employees and visitors will make use of sustainable modes of travel to access the Site. This reflects the Site's location within a highly accessible location within central London (PTAL 6b) and the proximity to Farringdon Station.

Parking

Car Parking

6.5 The proposals include the removal of all off-street parking facilities associated with the Site which currently forms an area of informal parking. Given the excellent accessibility of the Site by foot, bicycle and public transport (PTAL 6b) it is reasonable to assume that the vast majority of trips will be undertaken by non-car modes.

6.6 The removal of all off-street car parking associated with the Site is considered to be a benefit of the scheme which will discourage the use of the car.

6.7 It is acknowledged that in the event access to a wheelchair accessible car parking space is required, employees / visitors will have the option to park in one of the existing on-street spaces in the area, including the following locations:

- Hatton Garden – 140m west of the Site (2 minutes walking distance);
- Saffron Hill – 270m north of the Site (3 minutes walking distance); and
- Hatton Garden – 350m northwest of the Site (4 minutes walking distance).

Cycle Parking

6.8 Sheltered, secure and accessible cycle parking will be provided at lower ground floor level in accordance with the standards included within Camden's Planning Guidance 7 – Transport and the London Plan (2016). **Table 6.1** includes the cycle parking provision.

Table 6.1: Cycle Parking Provision

Use Class	Long-stay Cycle Parking	Short-stay Cycle Parking
A1 non-food retail (480sqm)	2	4
A3 Use (501sqm)	3	13
B1 Office (2,662sqm)	30	6

6.9 This equates to 36 cycle parking spaces (30 long-stay spaces + 6 office short-stay spaces including a single accessible space) within the cycle store, accessible via a passenger lift from the reception. The building will be provided with showers alongside a provision of 1 locker per cycle parking space.

6.10 The Applicant is also willing to provide an additional 18 short-stay cycle parking spaces (9 Camden stand) within Bleeding Heart Yard to cater for all visitor cycle parking demand arising from the retail units. The Applicant is willing to consult with LBC in regards to a suitable on-street arrangement with an initial layout of on-street cycle parking provided at **Appendix F** which details 9 stands located in the carriageway protected by bell bollards on either side. It is confirmed through the swept path analysis (discussed further within this section) that this will not conflict with delivery vehicles. It is anticipated that these will be delivered via an S278 agreement.

6.11 The proposed short-stay cycle parking arrangement offers visitors a convenient location to store bicycles when attending the Site and is located near to the proposed main entrance on Bleeding Heart Yard. As previously discussed, the space in the colonnade is expected to form the frontage associated with the A3 use as a way of reinvigorating the iconic but inactive Bleeding Heart Yard and in fact is not capable of accommodating the level of cycle parking required. Therefore, the proposed arrangement is deemed appropriate in the context of providing both an active frontage and the correct level of cycle parking.

Servicing

Deliveries

6.12 Servicing for the proposed development will be undertaken from the single yellow line available within Bleeding Heart Yard as per the existing situation for the Site as well as via the proposed new loading bay on Greville Street formed as part of the CS6 proposals. This location allows continuous loading / unloading for a maximum of 40 minutes.

6.13 It is expected that the vast majority of deliveries to both the office and retail floorspace will be undertaken by light goods vehicles no larger than 4.6t vans, which will not have a material impact on the operation and environmental condition of the public highway.

6.14 In the unlikely event a larger delivery vehicle requires access to the Site it will be expected to service on-street from Saffron Hill where a length of single yellow line will offer restricted loading opportunities. This is deemed the most appropriate location larger deliveries near to the site, when taking into account the highway amendments on Greville Street i.e. the narrowing of the yellow line west of the site to form a new loading bay.

6.15 **Appendix H** includes a swept path analysis of the delivery vehicles likely to be servicing the Site.

6.16 The proposals are likely to result in circa 19-21 delivery trips per day, an increase of 13-14 delivery trips when compared to the existing use of the Site as office floorspace. This is based on best practice estimates of 0.25 trips per 100sqm of office floorspace and 1.35 trips per 100sqm of retail per day. This assumes a worst case scenario for delivery trips.

6.17 A draft Delivery & Servicing Plan (DSP) has been submitted with the application in order to manage deliveries to the Site, including refuse vehicles, and to ensure that no conflict arises between employees, visitors, cyclists and delivery vehicles within the servicing area.

Refuse & Recycling

6.18 Refuse and recycling collection will also be undertaken on-street with vehicles making use of Bleeding Heart Yard in order to gain direct access to refuse stores located along the western boundary of the Site. Refuse vehicles will also have the opportunity in the future to make use of the new loading bay on Greville Street.

6.19 Refuse collection will be undertaken via a private contractor using appropriately sized vehicles and will be collected as often as necessary to ensure the amount of waste does not exceed the capacity of the refuse stores. Swept path analysis highlights that a small refuse vehicle and transit van can access close to the bin store, as detailed within **Appendix G**.

6.20 Refuse and recycling bins will be moved by Site management from the lower ground refuse store to the street via a lift shortly before the pre-arranged collection time. Waste operatives will then transfer the bins to the vehicle before the bins are taken back to the refuse store.

6.21 A Delivery & Servicing Plan will be implemented to ensure all servicing activity, including refuse collection, is managed and coordinated through the Site management team (see Section 7).

7 MITIGATION MEASURES

Travel Plan

7.1 Staff at the proposed development will be encouraged to travel to the site by sustainable modes through the implementation of a Travel Plan. A Framework Employee Travel Plan has been prepared by Caneparo Associates and included as a separate document as part of the planning application.

7.2 The Travel Plan has been produced in accordance with TfL's document *'Travel Planning for New Development in London'*.

Aims and Objectives

7.3 The primary objective of the Travel Plan will be to set out a long term strategy to facilitate and encourage modes of travel to the site by means other than the private car, which reflects current central Government policy. It will also seek to promote a shift from travel by public transport to active modes such as walking and cycling.

7.4 The strategy needs to be long term as changing travel habits takes time and will only occur through a combination of incentives, improved facilities, Government initiatives and changes in individual's attitudes.

Measures and Initiatives

7.5 The initiatives and measures that form part of the Travel Plan will be a mixture of 'hard' and 'soft' measures.

7.6 The 'hard' measures include the provision of facilities such as safe and secure cycle parking, showers and changing rooms.

7.7 The 'soft' measures include initiatives such as cycle training courses and providing information on public transport services.

Delivery and Servicing Plan

7.8 As noted previously, in order to ensure that the impact of servicing (including refuse collection) associated with the site is minimised, the Applicant is willing to provide and agree to the implementation of a Delivery and Servicing Plan (DSP) secured by way of a planning condition or legal agreement. A draft DSP has been prepared by Caneparo Associates and is included within the planning application submission.

7.9 The purpose of the DSP will be to mitigate the potential impacts of servicing activity associated with the development. The key aims and objectives of the DSP are:

- To minimise disruption to the local roads.
- To ensure that the delivery area is continuously and effectively managed to ensure safe access and egress as well as safe manoeuvres within the delivery area itself.
- To manage deliveries, including waste collection, effectively to avoid peaking of deliveries and departures that may have a detrimental impact on the local highway network.
- To manage the number/volume of service vehicle movements during the AM and PM peak periods.

Construction Management Plan

7.10 A Construction Management Plan has been prepared, to be secured via a condition or a legal agreement, to provide details of the proposed construction arrangement, highlighting proposed vehicle movements, working hours, vehicle type, construction programme and storage requirements. The construction process will be carefully managed to ensure safety and minimise disruption to the local road network.

8 SUMMARY AND CONCLUSION

Summary

8.1 Caneparo Associates are retained by Seaforth Land ('The Applicant') to provide traffic and transport advice in relation to the proposed extension and refurbishment of 20-23 Greville Street ('the Site'), in the London Borough of Camden (LBC).

8.2 In summary:

- The Site is located within a highly accessible London location, achieving a PTAL rating of 6b, the highest score possible. As such the majority of trips associated with the proposals can be expected to be made by sustainable modes of travel.

- The proposed development will not provide any off-street parking, removing the existing 3 spaces on-site which is therefore considered a benefit in terms of sustainability. A number of disabled parking spaces are located within the immediate vicinity of the Site.

- Cycle parking will be provided at lower ground floor level in accordance with local policy standards. The provision will offer secure, sheltered and accessible cycle parking facilities. Short-stay cycle parking can be accommodated within Bleeding Heart Yard.

- Deliveries, including refuse collection, will continue to make use of Bleeding Heart Yard for servicing, as per the existing situation, as well as the new loading bay on Greville Street, and yellow line restrictions on Saffron Hill for large deliveries. Swept path analysis highlights that this arrangement is achievable.

- The Site's existing public transport facilities and access to walking and cycling routes combined with the absence of general car parking provision will maximise the sustainability of the Site in accordance with local, regional and national policy and will promote a sustainable form of development.

- The proposals include a Framework Employee Travel Plan which will encourage trips to be undertaken by sustainable modes of travel.

- A draft Delivery & Servicing Plan has been prepared for the Site to manage and coordinate servicing activity.

- A draft Construction Management Plan has been prepared and accompanies this application.

Conclusion

8.3 In light of the above, we conclude that the proposed extension and refurbishment will not result in a material impact in highways and transportation terms. Furthermore, in accordance with NPPF paragraph 32, the residual cumulative impacts of the development are not considered severe, and, as such, should not be prevented or refused on transport grounds.

Appendix A

1 EXISTING LOWER GROUND FLOOR PLAN

REVISION:	PURPOSE:	DATE:
A	ISSUED FOR COMMENT – SECOND DESIGN TEAM MEETING	26.04.17

Notes:
1. Contractors are not to directly scale off this drawing. Dimensions should be obtained from the Engineer or Architect, site checked and any discrepancy between drawings reported.
2. The design and these drawings are the sole copyright of Amin Taha Architects, 15 Clerkenwell Close, London EC1R 0AA T. 020 7253 9444 F. 020 7253 9555.

Purpose of Issue:
I=Information,
C=Comment,
P=Planning,
T=Tender,
B=Construction

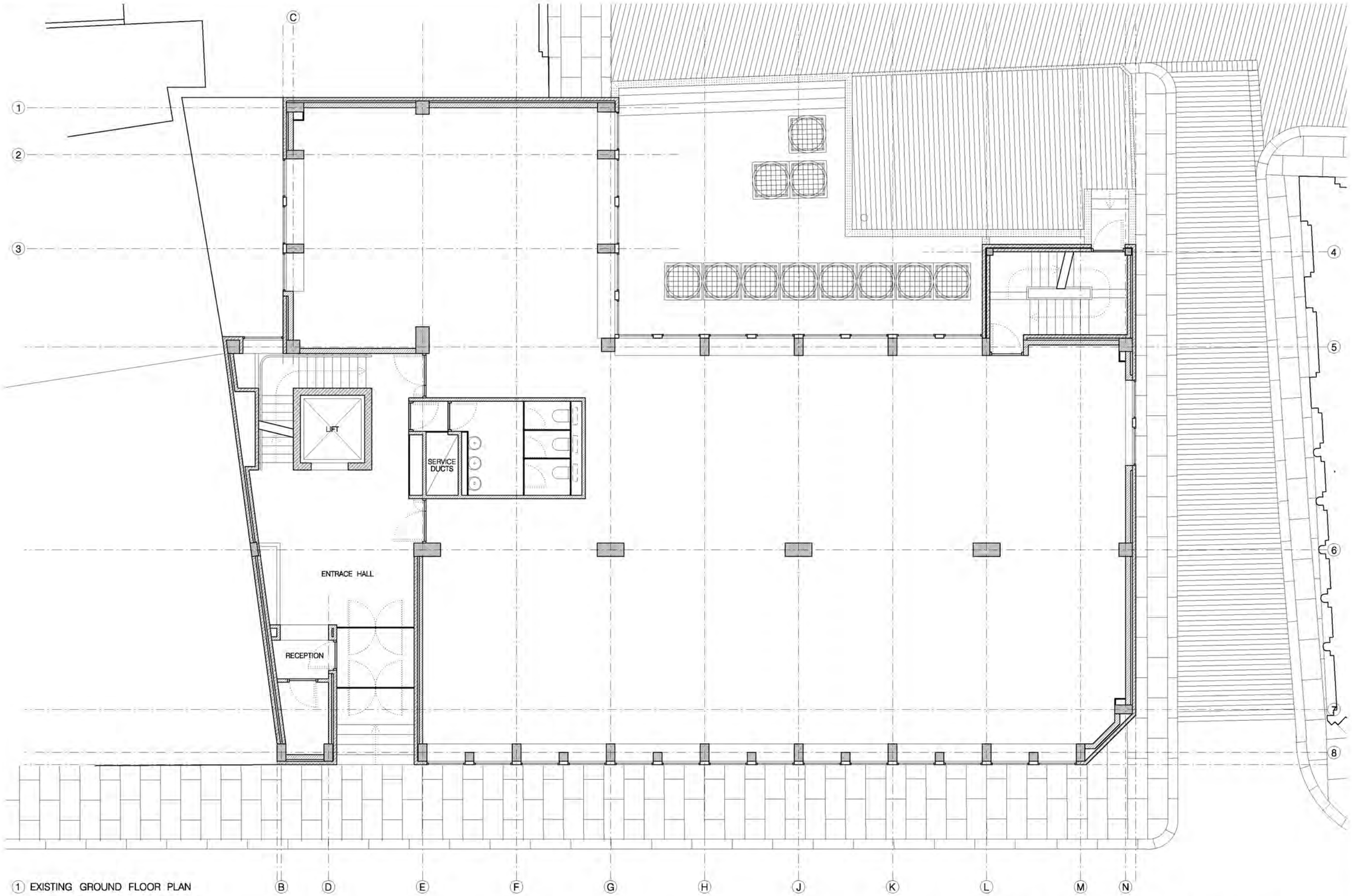
GROUPWORK
12–13 CLERKENWELL GREEN, LONDON, EC1R 0QJ

CLIENT: SEAFORTH LAND HOLDINGS LTD

PROJECT: 20 – 23 GREVILLE STREET, LONDON, EC1N 8SS

DWG TITLE: EXISTING LOWER GROUND FLOOR PLAN

REVISION:	DATE:	SCALE:	
A	JULY 2017	@ A1 1:50	@ A3 1:100
DWG No: 248 – 100	PURPOSE OF ISSUE: P	DB: AC	CB: AT



1 EXISTING GROUND FLOOR PLAN

REVISION:	PURPOSE:	DATE:
A	ISSUED FOR COMMENT – SECOND DESIGN TEAM MEETING	26.04.17

Notes:
1. Contractors are not to directly scale off this drawing. Dimensions should be obtained from the Engineer or Architect, who checked and any discrepancy between drawings reported.
2. The design and these drawings are the sole copyright of Amin Taha Architects, 15 Clerkenwell Close, London EC1R 0AA T. 020 7253 9444 F. 020 7253 9665

Purpose of Issue:
I=Information
C=Comment
P=Planning
T=Tender
B=Construction

GROUPWORK
12-13 CLERKENWELL GREEN, LONDON, EC1R 0QJ

CLIENT: SEAFORTH LAND HOLDINGS LTD

PROJECT: 20 – 23 GREVILLE STREET, LONDON, EC1N 8SS

DWG TITLE: EXISTING GROUND FLOOR PLAN

REVISION:	DATE:	SCALE:	
A	JULY 2017	@ A1 1:50	@ A3 1:100
DWG No: 248 – 101	PURPOSE OF ISSUE: P	DB: AC	CB: AT

Appendix B

1 PROPOSED LOWER GROUND FLOOR PLAN

B D E F G H J K L M N

REVISION:	PURPOSE:	DATE:
I	ISSUED FOR PLANNING – FOR PRE-PLANNING SUBMISSION CONSERVATION OFFICER COMMENT	14.11.17
J	ISSUED FOR PLANNING – PRIOR TO FULL APPLICATION SUBMISSION	08.12.17
K	–	–

Notes:
1. Contractors are not to directly scale off this drawing. Dimensions should be obtained from the Engineer or Architect, site checked and any discrepancy between drawings reported.
2. The design and these drawings are the sole copyright of Amin Taha Architects, 15 Clerkenwell Close, London EC1R 0AA T. 020 7253 9444 F. 020 7253 9555

Purpose of issue:
I=Information
C=Comment
P=Planning
T=Tender
B=Construction

GROUPWORK
19-23 CLERKENWELL GREEN, LONDON, EC1R 0QJ

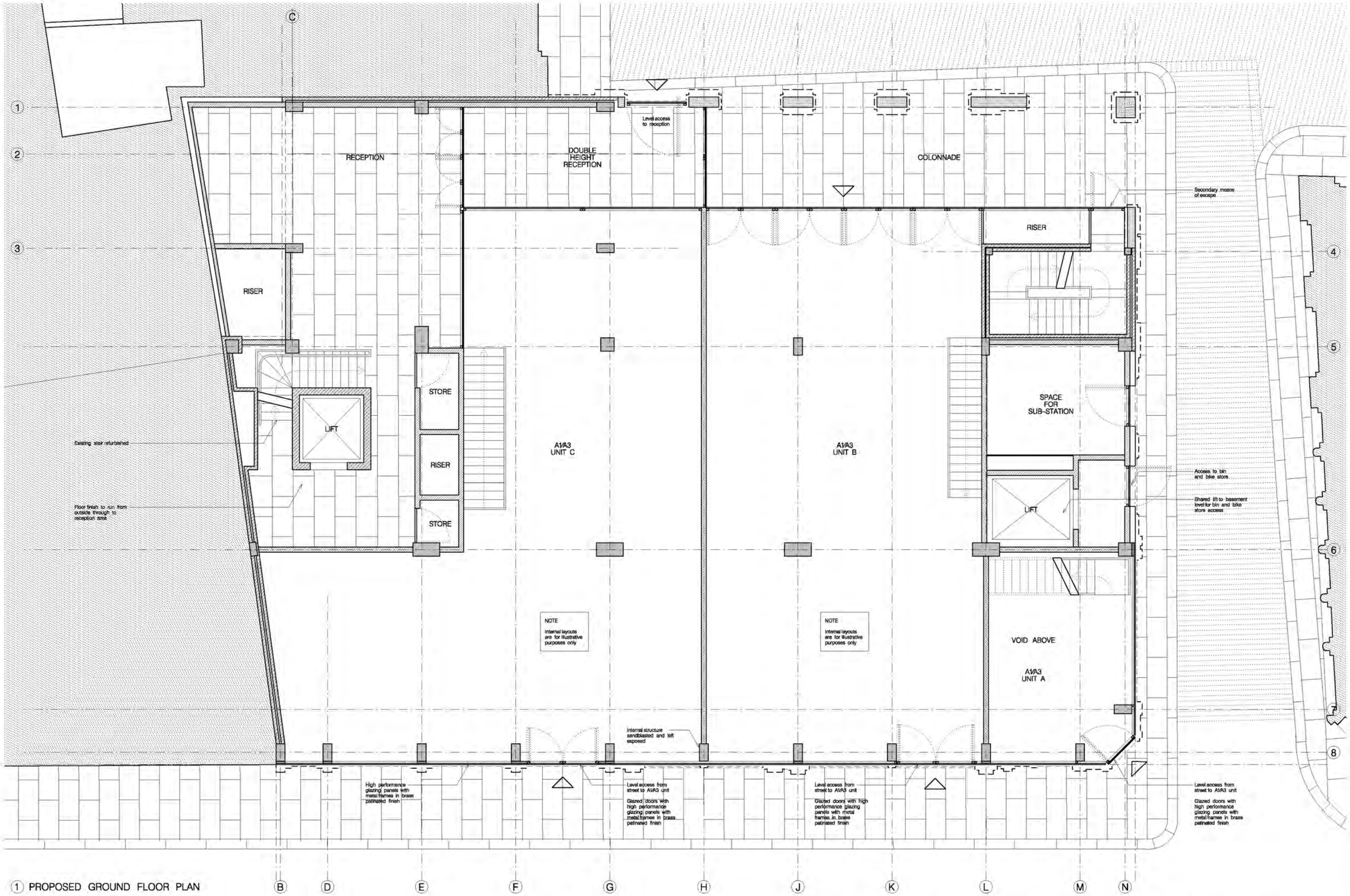
CLIENT: SEAFORTH LAND HOLDINGS LTD

PROJECT: 20 – 23 GREVILLE STREET, LONDON, EC1N 8SS

DWG TITLE: PROPOSED LOWER GROUND FLOOR PLAN

REVISION:	DATE:	SCALE:
K	JAN 2018	@ A1 1:50 @ A3 1:100

DWG No:	PURPOSE OF ISSUE:	DB:	CB:
248 – 500	P	AC	AT



1 PROPOSED GROUND FLOOR PLAN

REVISION:	PURPOSE:	DATE:
J	ISSUED FOR PLANNING – FOR PRE-PLANNING SUBMISSION CONSERVATION OFFICER COMMENT	14.11.17
K	ISSUED FOR PLANNING – FOLLOWING VALUE ENGINEERING EXERCISE	08.12.17
L	-	-

Notes:

1. Contractors are not to directly scale off this drawing. Dimensions should be obtained from the Engineer or Architect, who checked and any discrepancy between drawings reported.

Purpose of issue:
I=Information
C=Comment
P=Planning
T=Tender
B=Construction

GROUPWORK
12-13 CLERKENWELL GREEN, LONDON, EC1R 0QJ

CLIENT: SEAFORTH LAND HOLDINGS LTD

PROJECT: 20 – 23 GREVILLE STREET, LONDON, EC1N 8SS

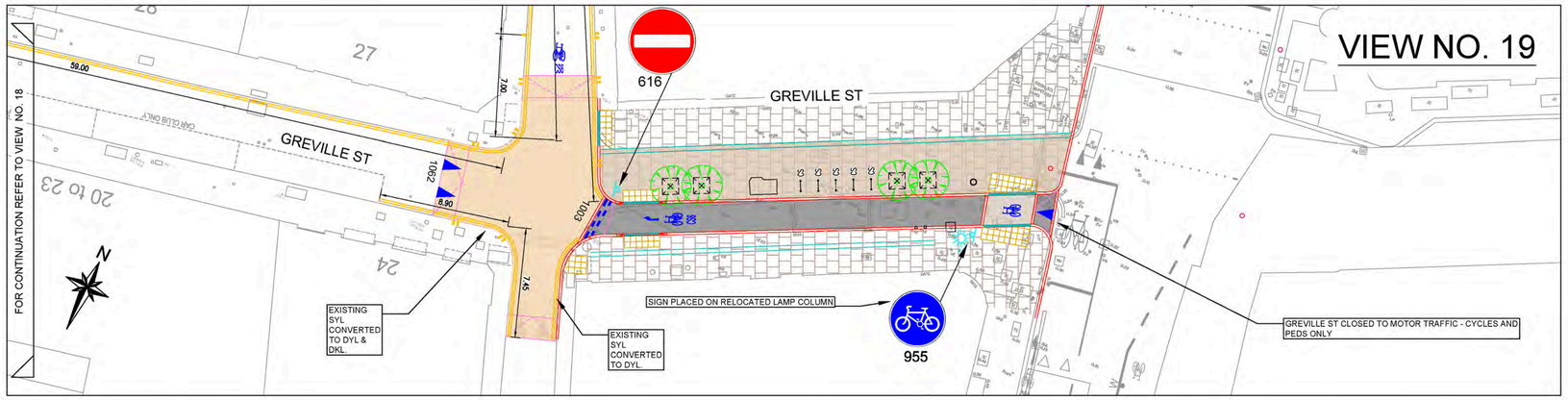
DWG TITLE: PROPOSED GROUND FLOOR PLAN

REVISION:	DATE:	SCALE:
L	JAN 2018	@ A1 1:50 @ A3 1:100

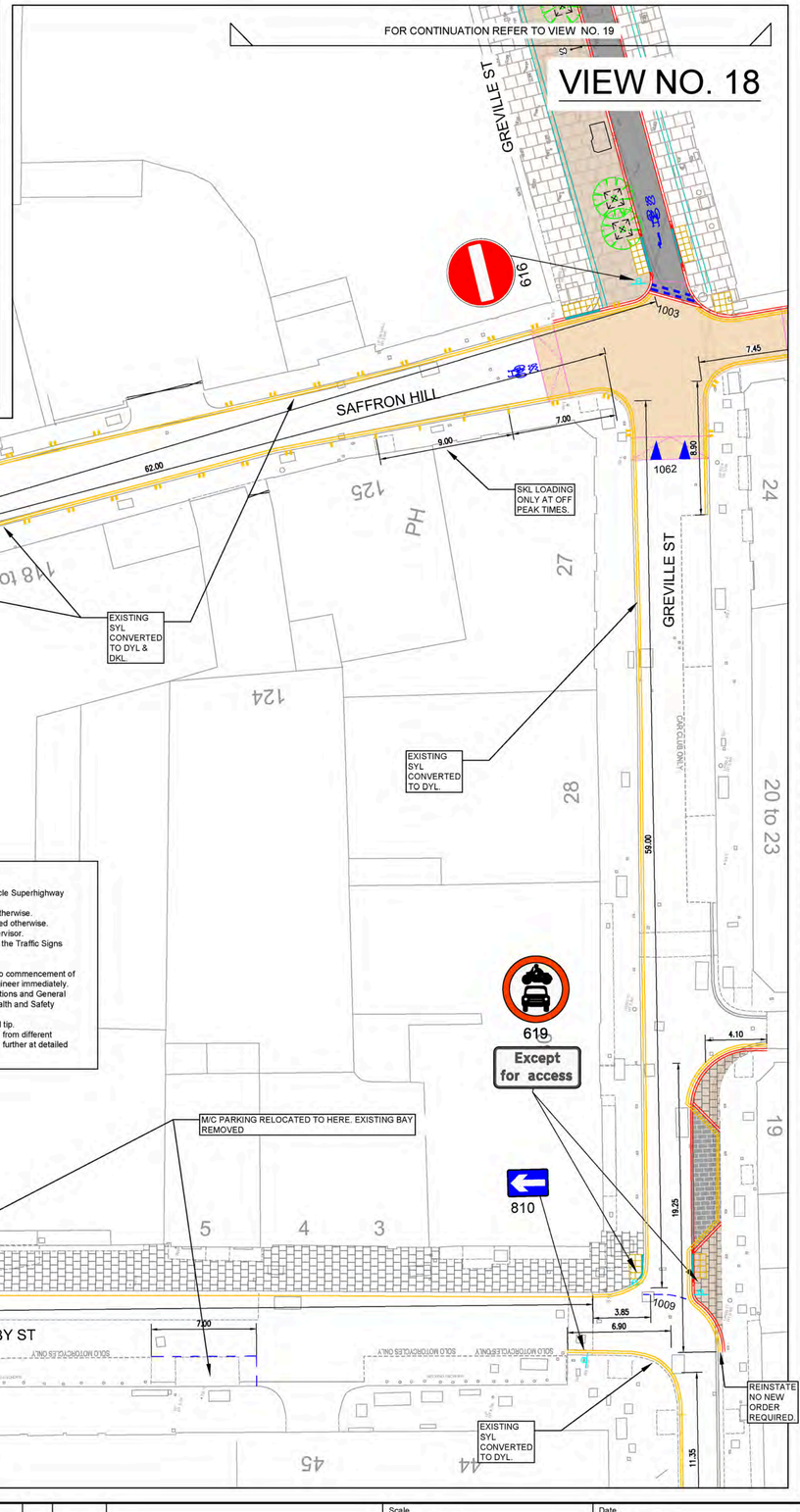
DWG No:	PURPOSE OF ISSUE:	DB:	CB:
248 – 501	P	AC	AT

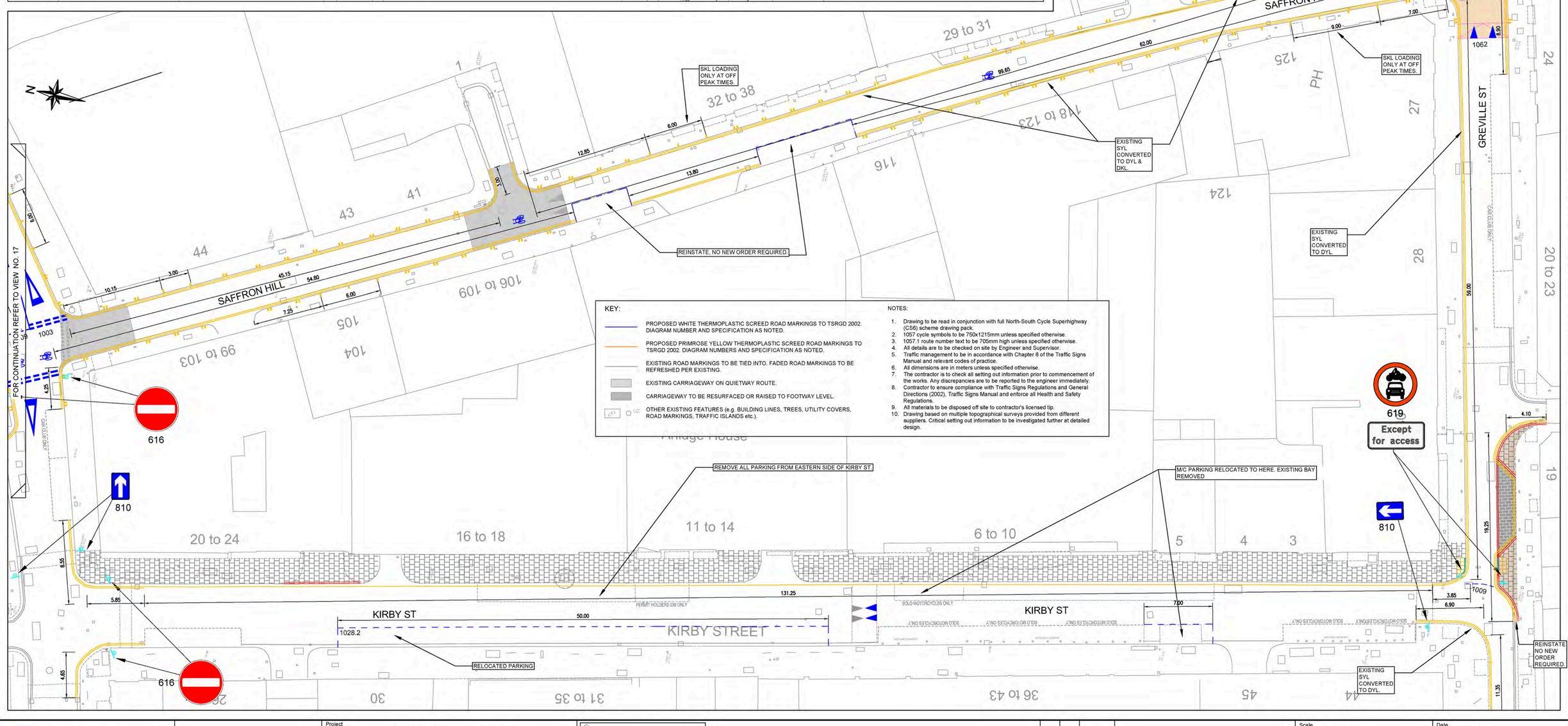
Appendix C

VIEW NO. 19



VIEW NO. 18





KEY:

- PROPOSED WHITE THERMOPLASTIC SCREED ROAD MARKINGS TO TSRGD 2002. DIAGRAM NUMBER AND SPECIFICATION AS NOTED.
- PROPOSED PRIMROSE YELLOW THERMOPLASTIC SCREED ROAD MARKINGS TO TSRGD 2002. DIAGRAM NUMBERS AND SPECIFICATION AS NOTED.
- EXISTING ROAD MARKINGS TO BE TIED INTO. FADED ROAD MARKINGS TO BE REFRESHED PER EXISTING.
- EXISTING CARRIAGEWAY ON QUIETWAY ROUTE.
- CARRIAGEWAY TO BE RESURFACED OR RAISED TO FOOTWAY LEVEL.
- OTHER EXISTING FEATURES (e.g. BUILDING LINES, TREES, UTILITY COVERS, ROAD MARKINGS, TRAFFIC ISLANDS etc.).

NOTES:

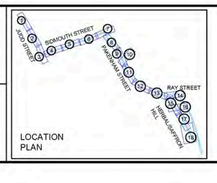
1. Drawing to be read in conjunction with full North-South Cycle Superhighway (CS6) scheme drawing pack.
2. 1057 cycle symbols to be 750x1215mm unless specified otherwise.
3. 1057.1 route number text to be 705mm high unless specified otherwise.
4. All details are to be checked on site by Engineer and Supervisor.
5. Traffic management to be in accordance with Chapter 8 of the Traffic Signs Manual and relevant codes of practice.
6. All dimensions are in meters unless specified otherwise.
7. The contractor is to check all setting out information prior to commencement of the works. Any discrepancies are to be reported to the engineer immediately.
8. Contractor to ensure compliance with Traffic Signs Regulations and General Directions (2002), Traffic Signs Manual and enforce all Health and Safety Regulations.
9. All materials to be disposed off site to contractor's licensed tip.
10. Drawing based on multiple topographical surveys provided from different suppliers. Critical setting out information to be investigated further at detailed design.

Camden

Design Team
Transport Strategy Service
London Borough of Camden
Town Hall, Argyle Street
London WC1H 8EQ
Tel 020 7278 4444, Fax 020 7974 6952
DX 2106 Euston, Minicom 020 7974 6866

Project
NS CYCLE SUPERHIGHWAY
BOROUGH ROADS

Drawing Title
DETAILED DESIGN
ROAD MARKINGS AND SIGNAGE
SHEET 10 OF 10



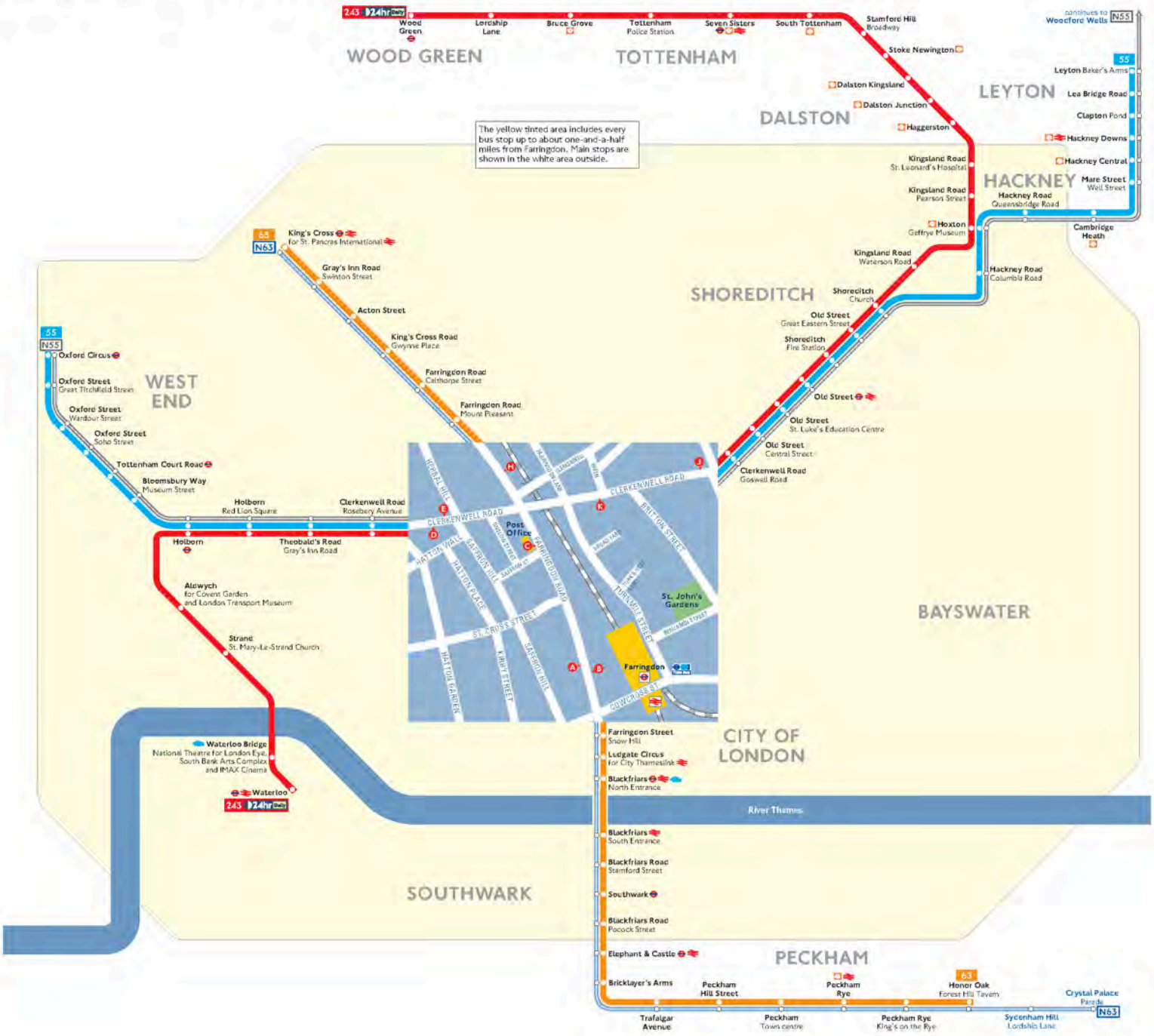
Rev	By	Date	Amendments

Scale: 1 : 200 @ A1	Date: February 2016
Drawn By: D.T.	File Ref: TS1405/03/2016
Checked By	Dwg Name: TS1405_NS_1200.dwg
Drawing Location: P:\TE***	
Drawing Number: TS1405_NS_1209	Rev.: -

\\camden\teams\TrafficEngineering\Cpt_Schms\2014-15\CN\Cycle S.H. North South Route TS\XXX\Drawings\Detailed Design

Appendix D

Buses from Farringdon



Route finder

Bus route	Towards	Bus stops
55	Leyton	E J
	Oxford Circus	D K
63	Honor Oak	B H
	King's Cross	A C
243 24hr Daily	Waterloo	D K
	Wood Green	E J

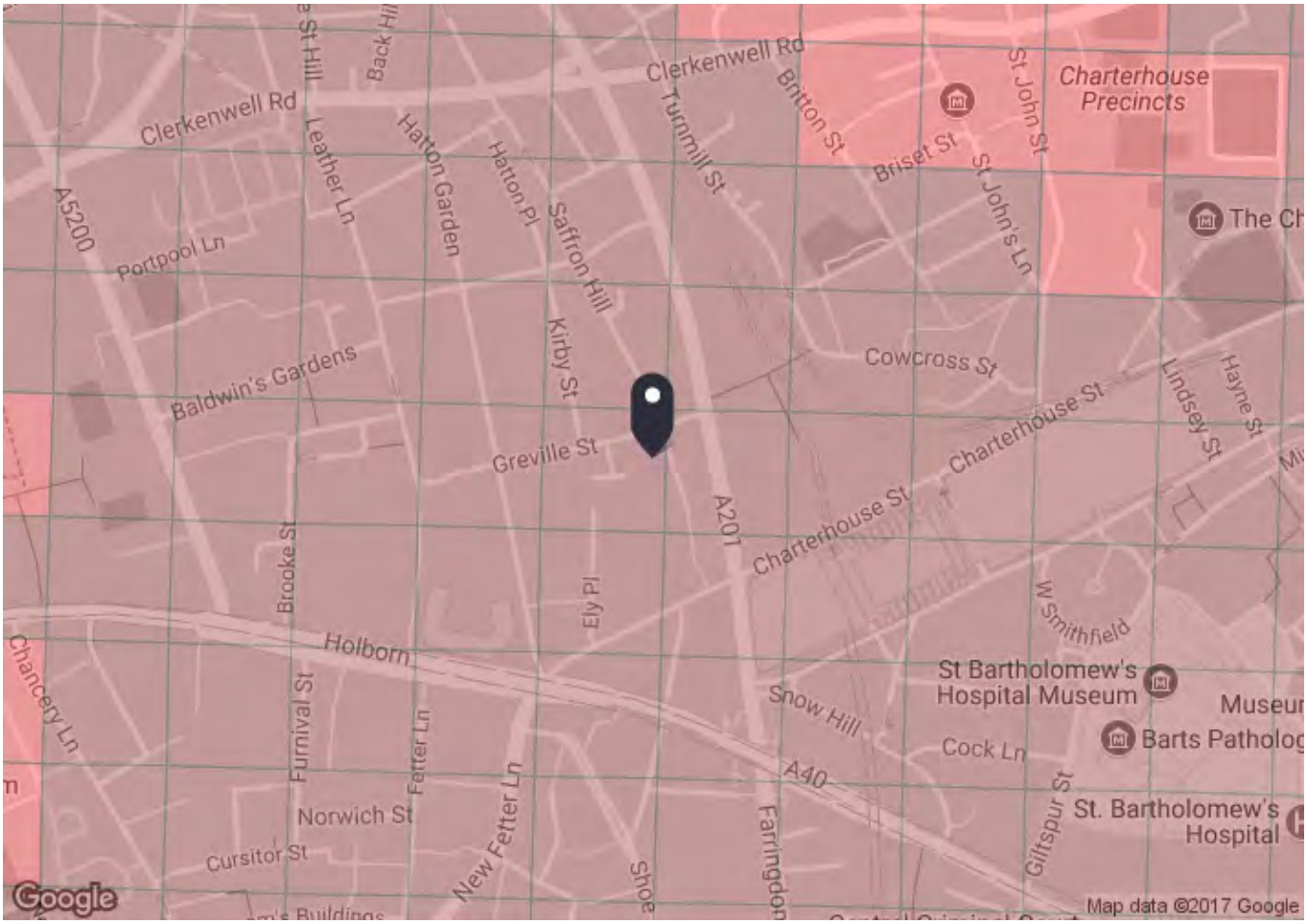
Night buses

Bus route	Towards	Bus stops
N55	Oxford Circus	D K
	Woodford Wells	E J
N63	Crystal Palace	B H
	King's Cross	A C

Information correct from 28 April 2016

Appendix E

TRANSPORT FOR LONDON



PTAL output for Base Year
6b

EC1N 8SS
Greville St, London EC1N 8SS, UK
Easting: 531486, Northing: 181752

Grid Cell: 86876

Report generated: 23/10/2017

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

PTAL (cell size: 100m)

Calculation Parameters

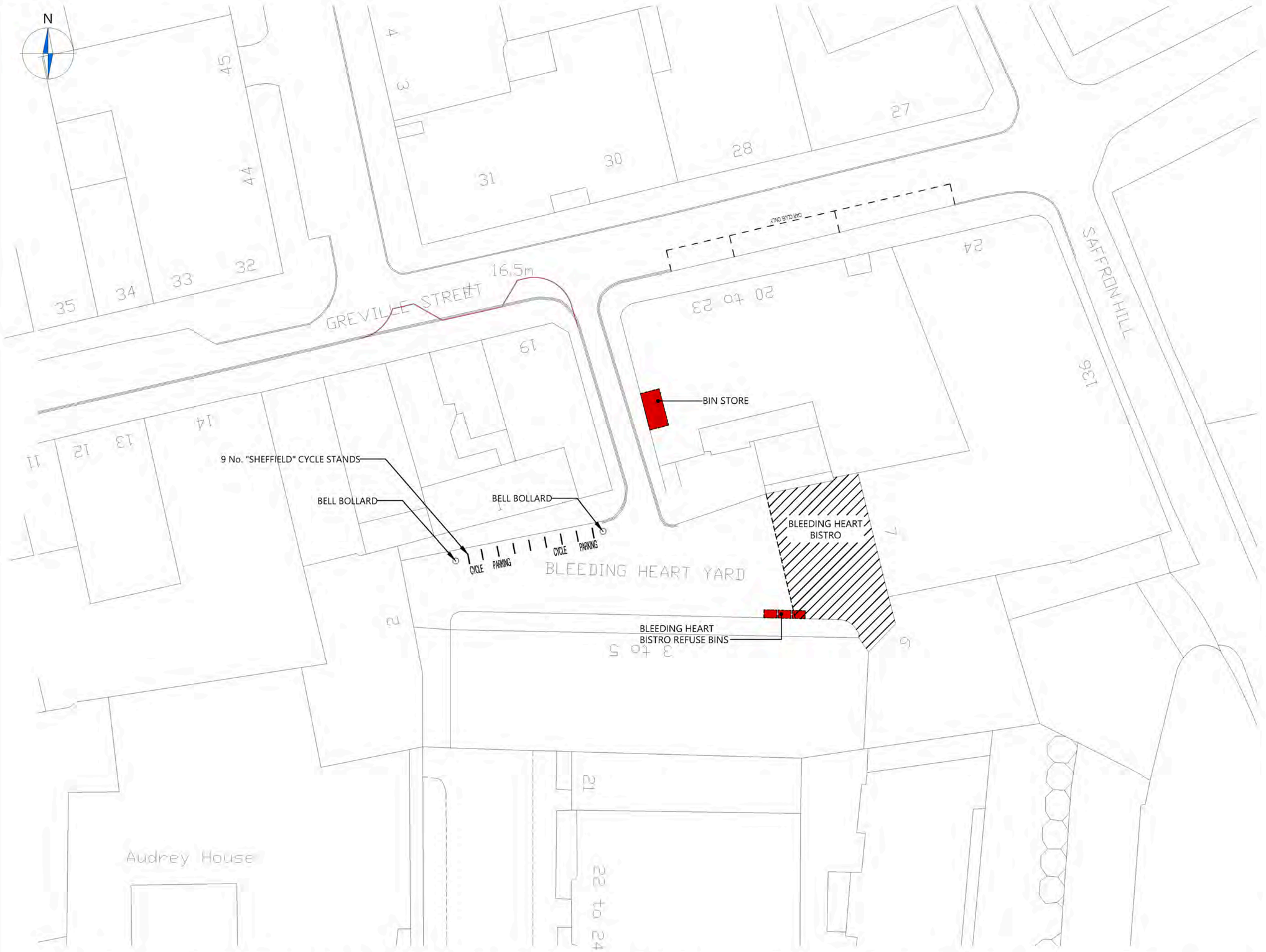
Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	HOLBORN CIRCUS	341	416.2	6	5.2	7	12.2	2.46	0.5	1.23
Bus	HOLBORN CIRCUS EAST	8	390.85	10	4.89	5	9.89	3.03	0.5	1.52
Bus	HOLBORN CIRCUS EAST	521	390.85	27	4.89	3.11	8	3.75	0.5	1.88
Bus	HOLBORN CIRCUS EAST	242	390.85	6.5	4.89	6.62	11.5	2.61	0.5	1.3
Bus	HOLBORN CIRCUS EAST	46	390.85	6	4.89	7	11.89	2.52	0.5	1.26
Bus	HOLBORN CIRCUS EAST	25	390.85	8	4.89	5.75	10.64	2.82	0.5	1.41
Bus	FARRINGDON ST SMITHFIELD	17	317.7	7.5	3.97	6	9.97	3.01	0.5	1.5
Bus	FARRINGDON ST SMITHFIELD	45	317.7	7	3.97	6.29	10.26	2.92	0.5	1.46
Bus	ST BARTS WEST SMITHFIELD	56	616.19	9	7.7	5.33	13.04	2.3	0.5	1.15
Bus	HATTON GARDEN	243	405.37	11	5.07	4.73	9.79	3.06	0.5	1.53
Bus	HATTON GARDEN	55	405.37	10	5.07	5	10.07	2.98	0.5	1.49
Bus	FARRINGDON STATION	63	160.19	12	2	4.5	6.5	4.61	1	4.61
Rail	Farringdon	'BEDFDM-SVNOAKS 1E62'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-BROMLYS 1E83'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-ORPNGTN 1L60'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-SUTTON 1O13'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-KENTHOS 1S85'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-BRGHTN 1T11'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-BRGHTN 1T15'	183.02	0.67	2.29	45.53	47.81	0.63	0.5	0.31
Rail	Farringdon	'BRGHTN-BEDFDM 1T83'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-SUTTON 1V23'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-SUTTON 1V82'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 1W06'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 1W81'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-BRGHTN 1W84'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-BRGHTN 1W86'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'STALBCY-SVNOAKS 2E11'	183.02	1	2.29	30.75	33.04	0.91	1	0.91
Rail	Farringdon	'BEDFDM-SVNOAKS 2E19'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'LUTON-SVNOAKS 2E21'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'STALBCY-SVNOAKS 2E95'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-LUTON 2O00'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-BEDFDM 2O04'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-STALBCY 2O06'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-LUTON 2O10'	183.02	1	2.29	30.75	33.04	0.91	0.5	0.45
Rail	Farringdon	'LUTON-SUTTON 2O17'	183.02	0.67	2.29	45.53	47.81	0.63	0.5	0.31
Rail	Farringdon	'STALBCY-SUTTON 2O21'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'STALBCY-SUTTON 2O29'	183.02	0.67	2.29	45.53	47.81	0.63	0.5	0.31
Rail	Farringdon	'LUTON-BCKNHMJ 2S91'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'STALBCY-BROMLYS 2S93'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 2T02'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 2T04'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-BRGHTN 2T15'	183.02	1	2.29	30.75	33.04	0.91	0.5	0.45
Rail	Farringdon	'BEDFDM-BRGHTN 2T25'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-LUTON 2T99'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-STALBCY 2V02'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-STALBCY 2V08'	183.02	0.67	2.29	45.53	47.81	0.63	0.5	0.31
Rail	Farringdon	'BEDFDM-SUTTON 2V15'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-BEDFDM 2V16'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'LUTON-SUTTON 2V19'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SUTTON-KNTSHTN 2V20'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'STALBCY-SUTTON 2V27'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'LUTON-SUTTON 2V31'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 2W08'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 2W12'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BRGHTN-BEDFDM 2W16'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'ASHFKY-BEDFDM 1E61'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'ASHFKY-BEDFDM 1E63'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'RCHT-BEDFDM 1E67'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Rail	Farringdon	'SVNOAKS-BEDFDM 1E69'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BROMLYS-BEDFDM 1E82'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BCKNHMJ-BEDFDM 1G65'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'KENTHOS-BEDFDM 1G71'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'ORPNGTN-STALBCY 2D93'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'ORPNGTN-LUTON 2D95'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SVNOAKS-STALBCY 2E59'	183.02	0.67	2.29	45.53	47.81	0.63	0.5	0.31
Rail	Farringdon	'SVNOAKS-LUTON 2E61'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SVNOAKS-WHMPSTM 2E63'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SVNOAKS-KNTSHTN 2E65'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'SVNOAKS-KNTSHTN 2E67'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BROMLYS-LUTON 2E93'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'ORPNGTN-LUTON 2L59'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'ORPNGTN-KNTSHTN 2L65'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-ELPHNAC 1J87'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
Rail	Farringdon	'BEDFDM-ELPHNAC 1J88'	183.02	0.33	2.29	91.66	93.95	0.32	0.5	0.16
LUL	Farringdon	'Edgware-Hammersmith'	183.02	6	2.29	5.75	8.04	3.73	0.5	1.87
LUL	Farringdon	'Barking-Hammersmith'	183.02	6.34	2.29	5.48	7.77	3.86	1	3.86
LUL	Farringdon	'Hammersmith-Plaistow'	183.02	1	2.29	30.75	33.04	0.91	0.5	0.45
LUL	Farringdon	'Aldgate-AmerFast'	183.02	1	2.29	30.75	33.04	0.91	0.5	0.45
LUL	Farringdon	'Ches-AldgateFast'	183.02	2	2.29	15.75	18.04	1.66	0.5	0.83
LUL	Farringdon	'Uxbridge-AldSlow'	183.02	5.33	2.29	6.38	8.67	3.46	0.5	1.73
LUL	Farringdon	'Watford-AldSfast'	183.02	3.67	2.29	8.92	11.21	2.68	0.5	1.34
LUL	Farringdon	'Aldg-WatfordSlow'	183.02	3.67	2.29	8.92	11.21	2.68	0.5	1.34
LUL	Farringdon	'Ald-HarrowHill'	183.02	1.33	2.29	23.31	25.59	1.17	0.5	0.59
LUL	Chancery Lane	'Epping-Ealing'	567.7	3	7.1	10.75	17.85	1.68	0.5	0.84
LUL	Chancery Lane	'WRuislip-Epping'	567.7	3	7.1	10.75	17.85	1.68	0.5	0.84
LUL	Chancery Lane	'RuislipGar-Epping'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'WhiteCity-Epping'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'Epping-NActon'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'Northolt-Epping'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'Debden-WRuislip'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'WhiteCity-Debden'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'Debden-Northolt'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'RuislipGdns-Debden'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'Loughton-WRuislip'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'NActon-Loughton'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'RuislipGdns-Loughton'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'Loughton-WhiteCity'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'Loughton-Northolt'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'Ealing-Loughton'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'Ealing-NewburyPark'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'WRuislip-NewburyPark'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'NActon-NewburyPark'	567.7	0.33	7.1	91.66	98.76	0.3	0.5	0.15
LUL	Chancery Lane	'Hainault-Ealing'	567.7	5.33	7.1	6.38	13.47	2.23	0.5	1.11
LUL	Chancery Lane	'Hainault-Nacton'	567.7	1.33	7.1	23.31	30.4	0.99	0.5	0.49
LUL	Chancery Lane	'Hainault-WRuislip'	567.7	3.33	7.1	9.76	16.86	1.78	0.5	0.89
LUL	Chancery Lane	'Hain-NP-RuislipGdns'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'WhiteCity-Hainault'	567.7	1.67	7.1	18.71	25.81	1.16	0.5	0.58
LUL	Chancery Lane	'Hainault-NP-Northolt'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'GrangeHill-WD-Eal'	567.7	1	7.1	30.75	37.85	0.79	0.5	0.4
LUL	Chancery Lane	'GrangeHill-Wdfd-Whit'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
LUL	Chancery Lane	'GrangeHill-Wdfd-WRsp'	567.7	0.67	7.1	45.53	52.62	0.57	0.5	0.29
									Total Grid Cell AI:	**55.73**

Appendix F



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

Rev.	Details	REVISION HISTORY	Drawn	Checked	Date

Status:
- [x] Preliminary
- [ ] For Approval
- [ ] For Construction
- [x] For Information
- [ ] For Tender
- [ ] As Built

Client:

Seaforth Land

Project:

20-23 Greville Street

Drawing Title:

Proposed Visitor Cycle Parking Arrangement

Scale:	Size:
1:250	A2

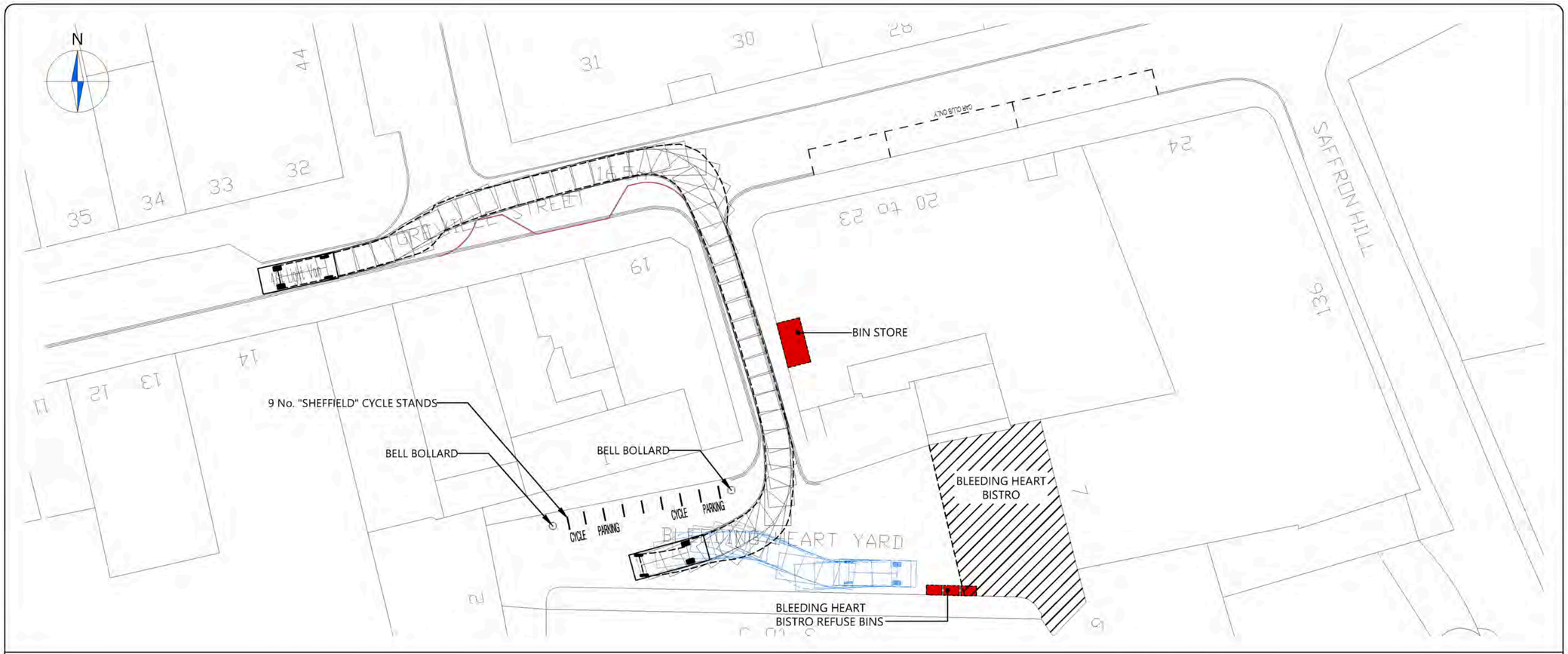
Drawn by:	Checked by:	Date:
RB	DP	13.11.17

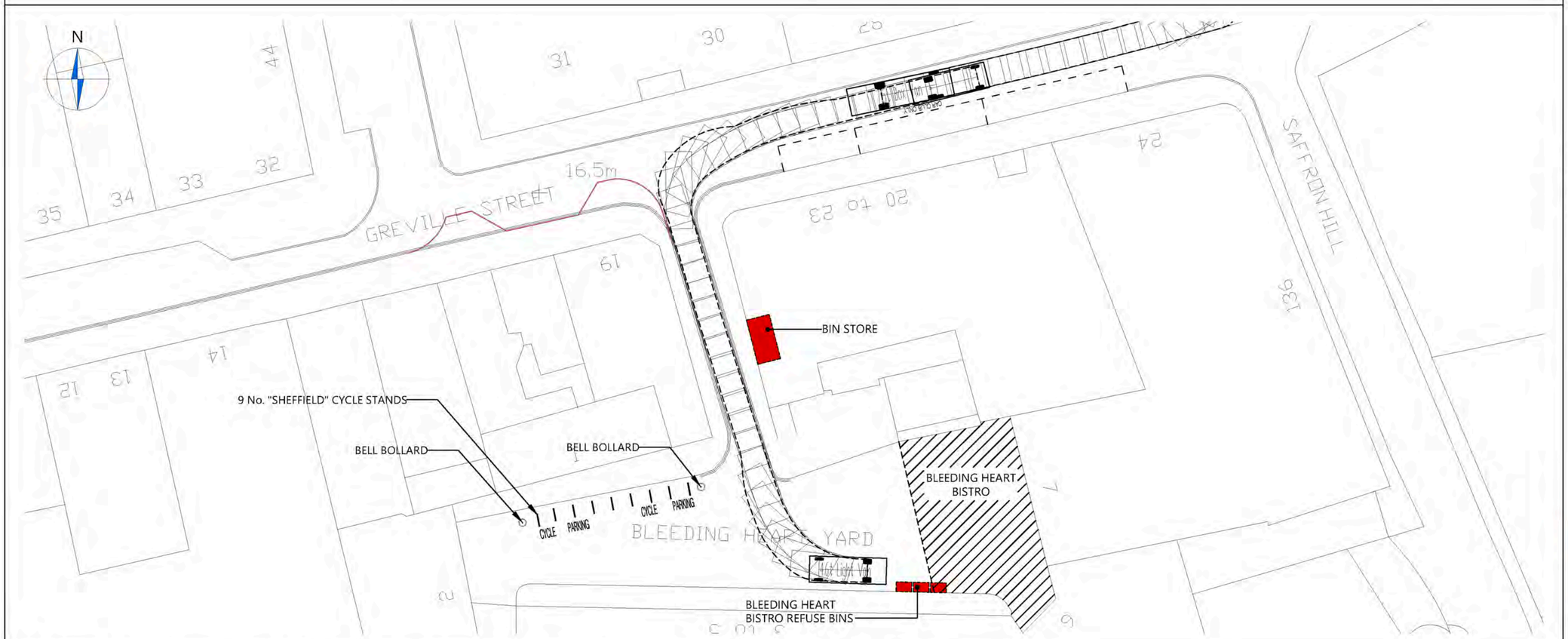
CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
3555	002	1 of 1	-

2017-3555-TR05 - PROPOSED VISITOR CYCLE ARRANGEMENT.DWG

Appendix G

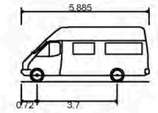




NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

4.6T LIGHT VAN



Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.299m
Track Width	1.765m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.000m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev | Details | REVISION HISTORY | Drawn | Checked | Date

Status: ☑ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client: Seaforth Land

Project: 20-23 Greville Street

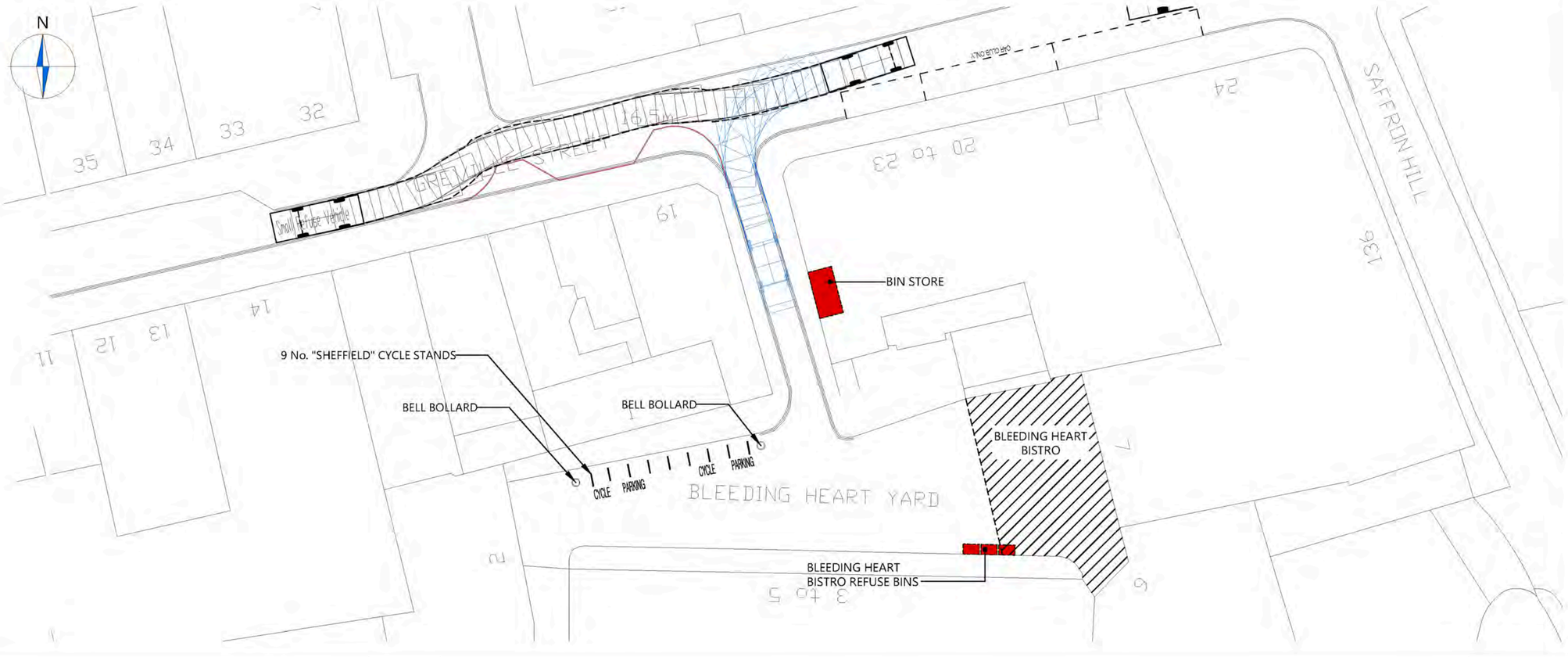
Drawing Title: Swept Path Analysis showing 4.6t Van on Proposed Visitor Cycle Parking Arrangement

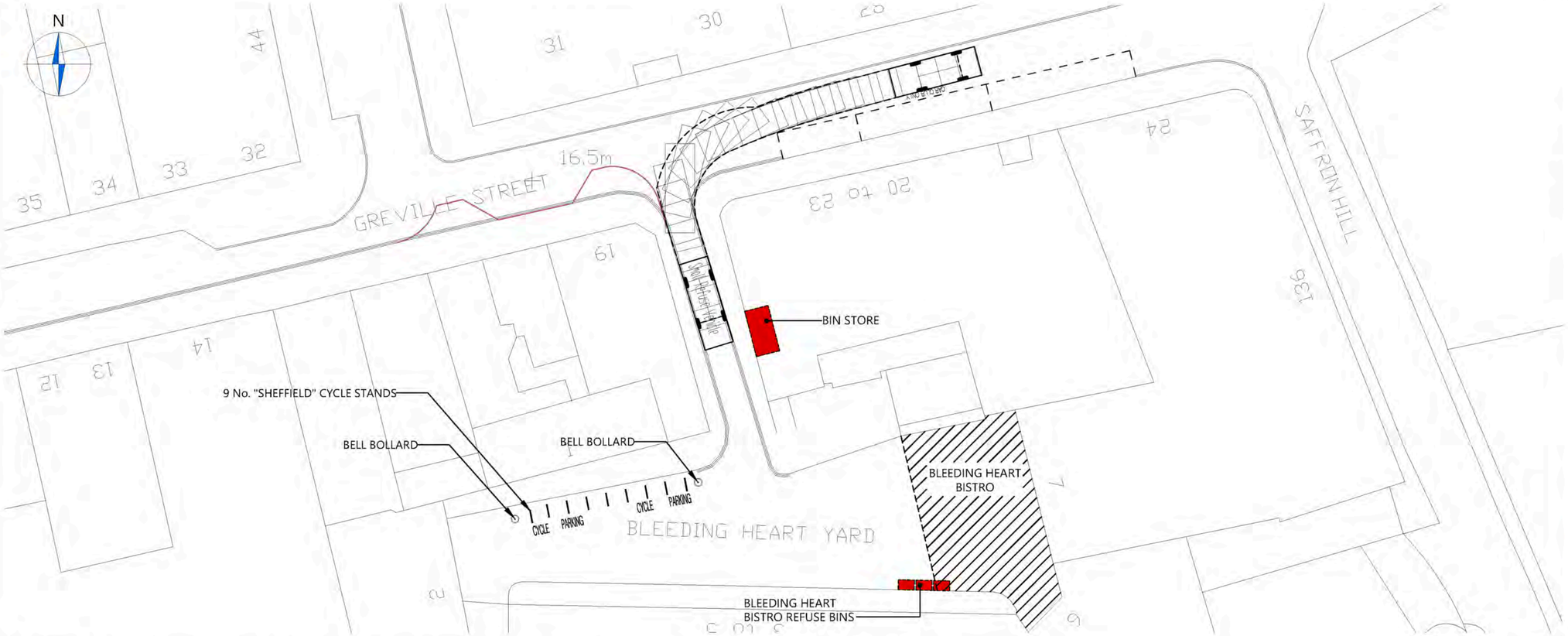
Scale:	Size:		
1:250	A2		
Drawn by: RB	Checked by: DP	Date: 13.11.17	

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
3555	TR 05	1 of 1	-

2017-3555-TR05 - PROPOSED VISITOR CYCLE ARRANGEMENT.DWG

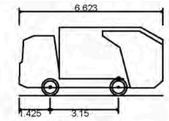




NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

SMALL REFUSE VEHICLE



Overall Length	6.623m
Overall Width	2.200m
Overall Body Height	3.153m
Min Body Ground Clearance	0.358m
Track Width	2.200m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.750m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev | Details | REVISION HISTORY | Drawn | Checked | Date

Status: ☑ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client:

Seaforth Land

Project:

20-23 Greville Street

Drawing Title:

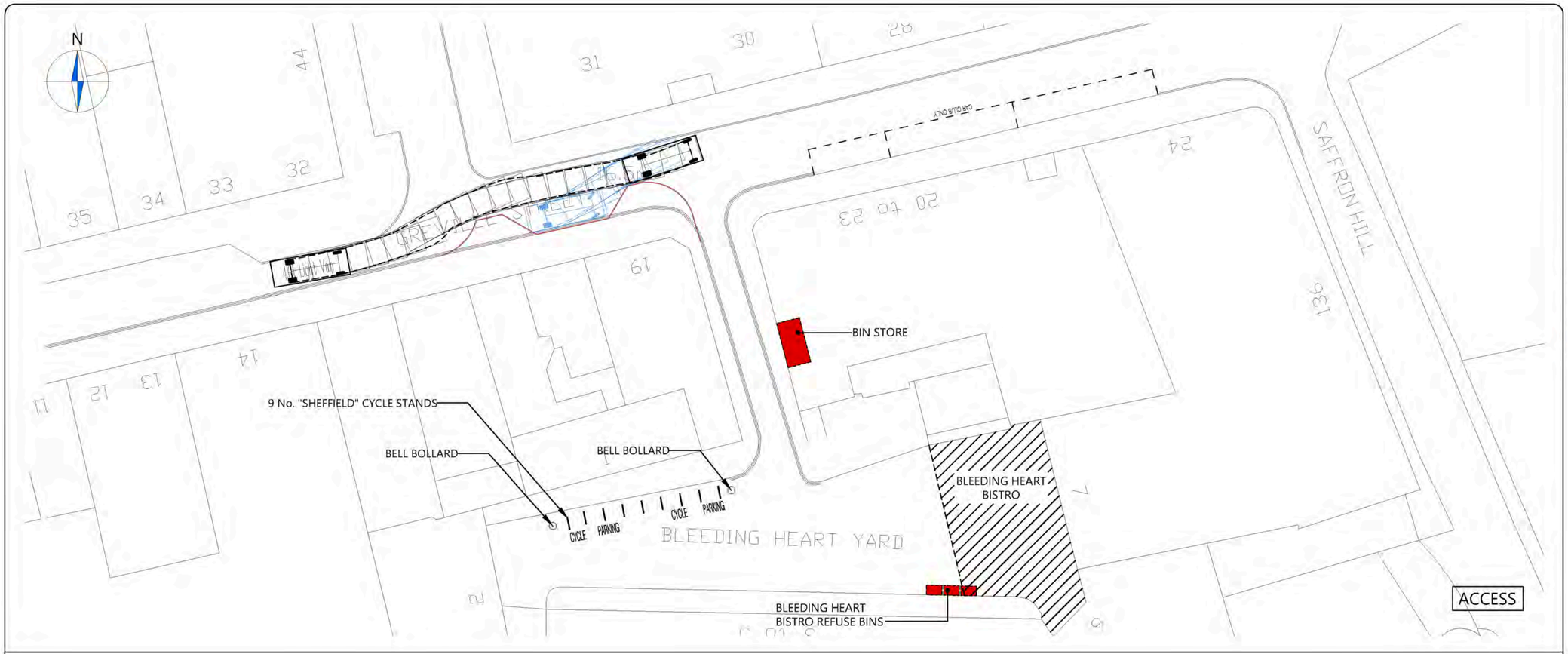
Swept Path Analysis showing Small Refuse on Proposed Visitor Cycle Parking Arrangement

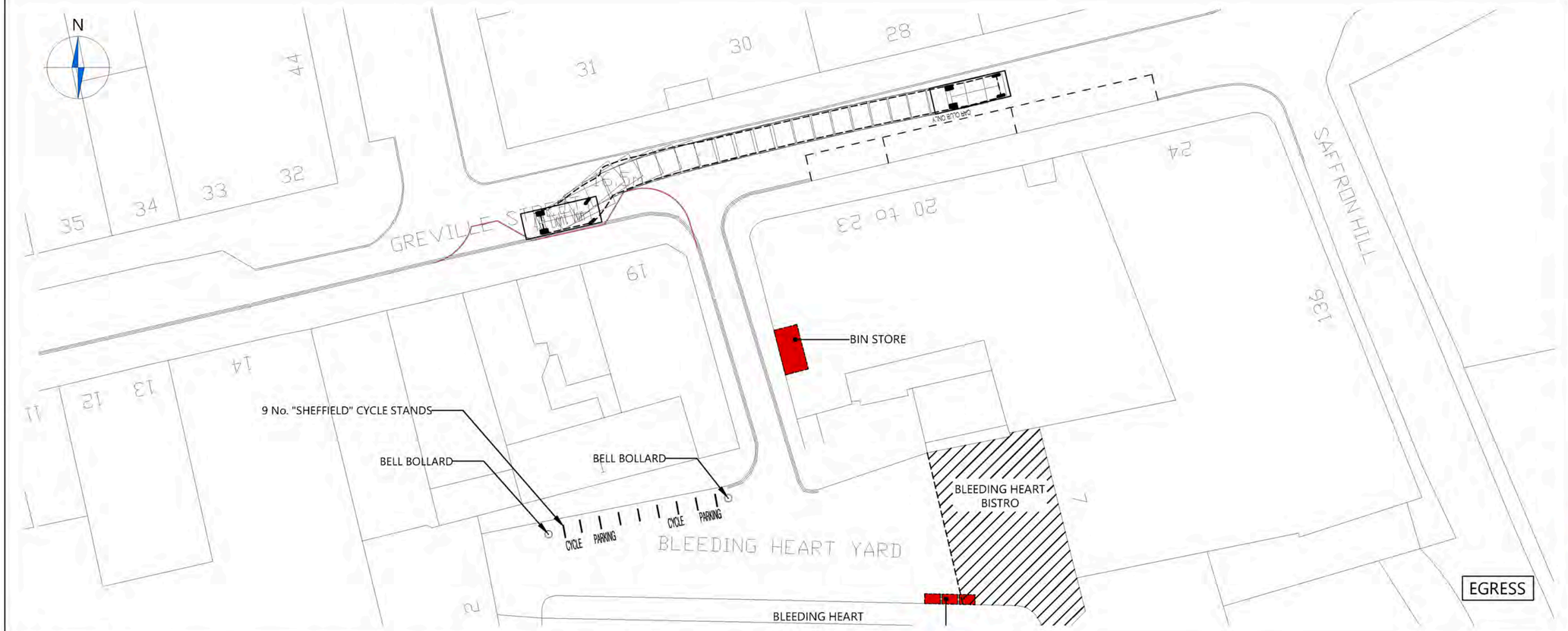
Scale:	Size:	
1:250	A2	
Drawn by:	Checked by:	Date:
RB	DP	13.11.17

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
3555	TR 06	1 of 1	

2017-3555-TR05 - PROPOSED VISITOR CYCLE ARRANGEMENT.DWG

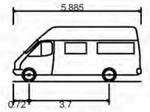




NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

4.6T LIGHT VAN



Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.299m
Track Width	1.765m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.000m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev | Details | REVISION HISTORY | Drawn | Checked | Date

Status: ☑ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client: Seaforth Land

Project: 20-23 Greville Street

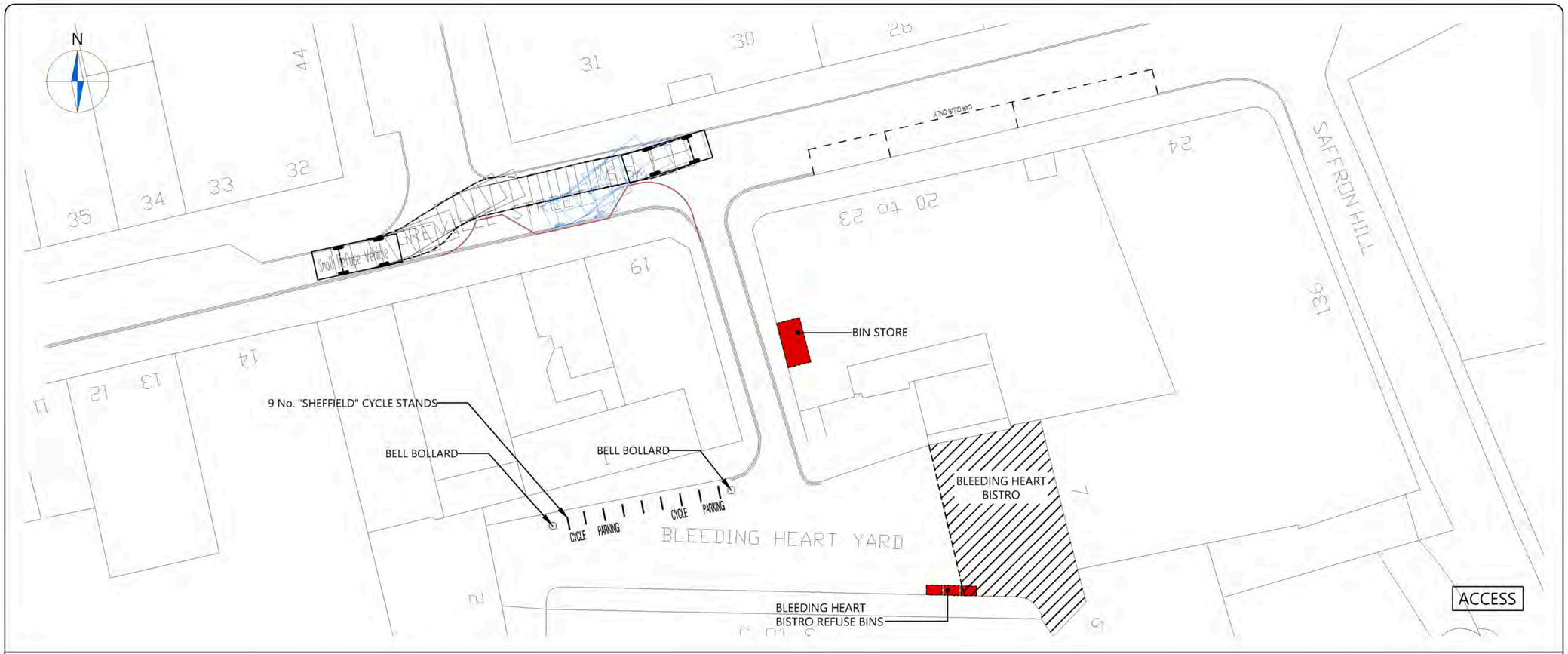
Drawing Title: Swept Path Analysis Showing 4.6t Van Access to Layby

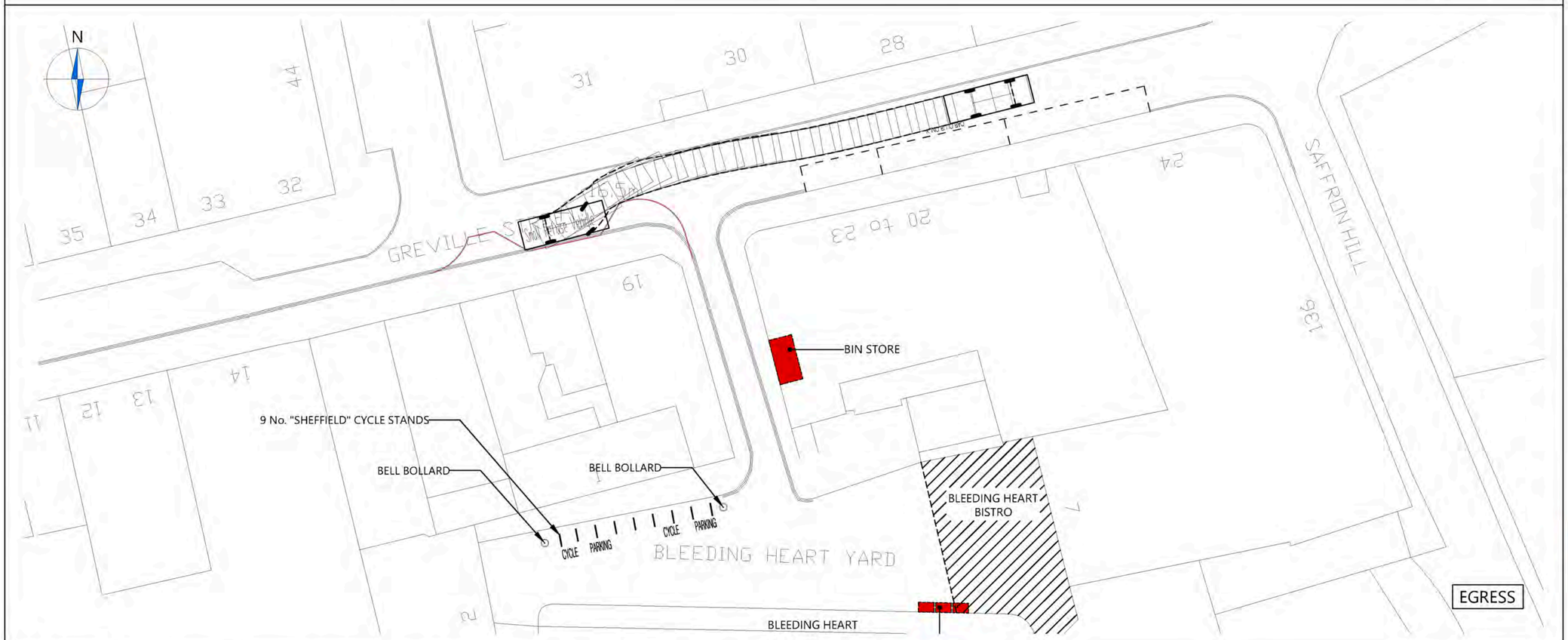
Scale:	Size:	Drawn by:	Checked by:	Date:
1:250	A2	RB	DP	13.11.17

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
3555	TR 08	1 of 1	

2017-3555-TR05 - PROPOSED VISITOR CYCLE ARRANGEMENT.DWG

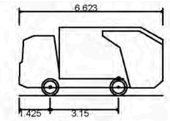




NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

SMALL REFUSE VEHICLE



Overall Length	6.623m
Overall Width	2.200m
Overall Body Height	3.153m
Min Body Ground Clearance	0.358m
Track Width	2.200m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.750m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

REVISION HISTORY

Rev	Details	Drawn	Checked	Date

Status: ☑ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client: Seaforth Land

Project: 20-23 Greville Street

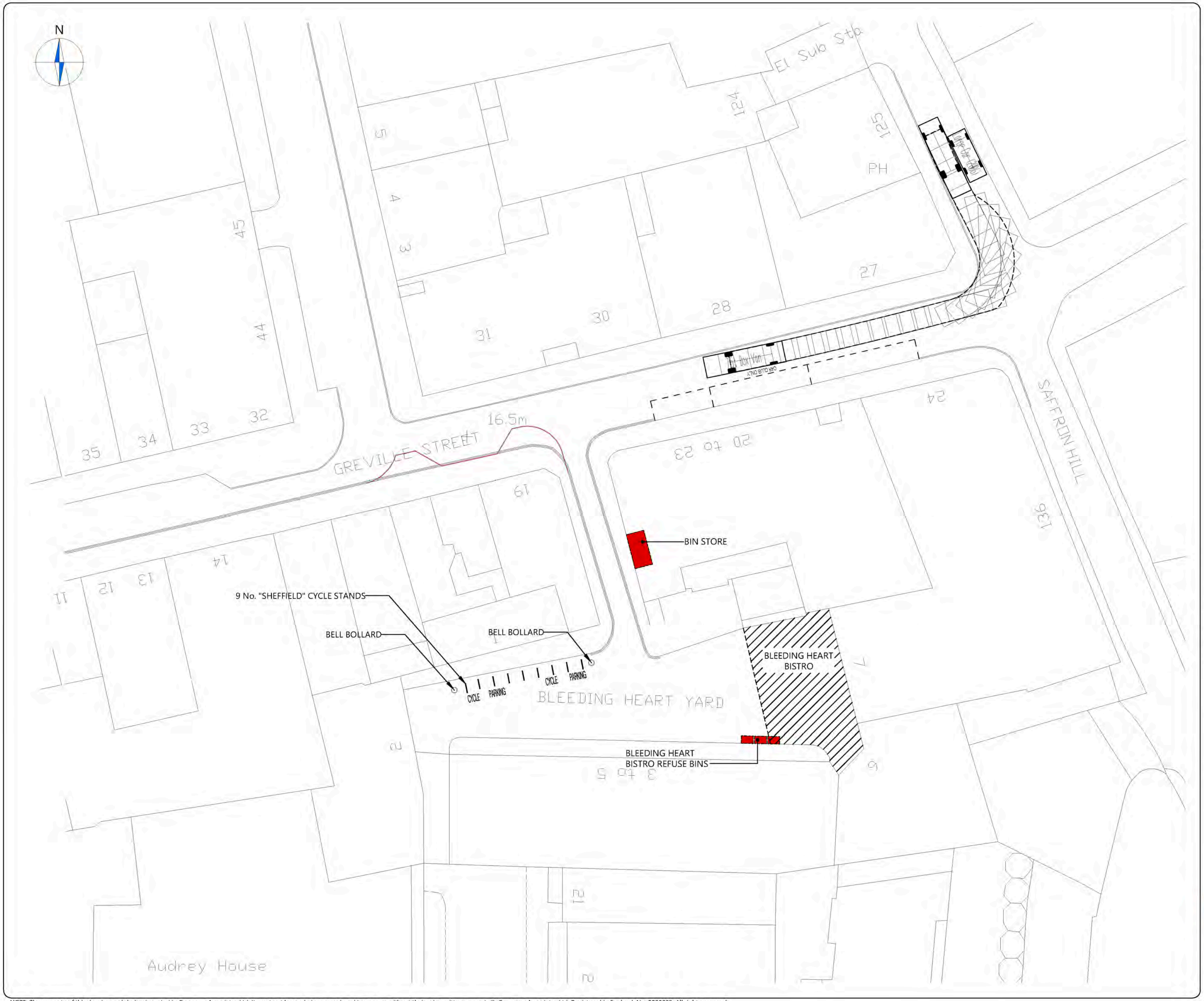
Drawing Title: Swept Path Analysis showing Small Refuse Access to Layby

Scale:	Size:	Drawn by:	Checked by:	Date:
1:250	A2	RB	DP	13.11.17

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
3555	TR 07	1 of 1	

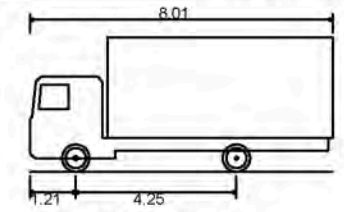
2017-3555-TR05 - PROPOSED VISITOR CYCLE ARRANGEMENT.DWG



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

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
Kerb to Kerb Turning Radius	7.400m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev	Details	Drawn	Checked	Date

REVISION HISTORY

Status: ☑ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client: Seaforth Land

Project: 20-23 Greville Street

Drawing Title: Swept Path Analysis Showing 7.5T Box Van stopping on Saffron Road

Scale: 1:250	Size: A2

Drawn by: RB	Checked by: DP	Date: 13.11.17

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
3555	TR 09	1 of 1	

2017-3555-TR05 - PROPOSED VISITOR CYCLE ARRANGEMENT.DWG