

GURNELL LEISURE CENTRE

FULL PLANNING APPLICATION



DELIVERY AND SERVICING PLAN

DECEMBER 2018

DELIVERY AND SERVICING PLAN



SYSTRA

GURNELL LEISURE CENTRE, EALING

DELIVERY AND SERVICING PLAN

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1. INTRODUCTION

1.1 General

1.1.1 SYSTRA Ltd (SYSTRA) has been commissioned to provide transport and highways advice in relation to a Proposed Development at Gurnell Leisure Centre, Ruislip Road East, London, W13 0AL.

1.1.2 This document has been prepared by SYSTRA Ltd on behalf of BE:HERE EALING LIMITED (“the Applicant”) in support of a Full Planning Application for the demolition of the existing Gurnell Leisure Centre (“the Application Site”) and the construction of a new leisure centre alongside enabling residential uses.

1.1.3 The Local Planning and Highways Authority is the London Borough of Ealing (LBE).

1.1.4 This planning application for the redevelopment of the Application Site seeks full planning permission for:

“Demolition of all existing buildings and re-provision of leisure centre, car and coach parking, BMX track and skate park, alongside enhancements and access to the existing park; and the erection of up to 498 sqm retail floorspace (Class A1-A3) and 615 residential units, with associated landscaping, playspace, cycle and car parking, refuse storage, access and servicing.” (The Proposed Development).

1.1.5 Gurnell Leisure Centre (GLC) opened in 1981 and is now one of London’s busiest leisure centres, providing one of only four indoor 50m swimming pools in London.

1.1.6 The number of users have been increasing in recent years, however the centre is in need of a significant level of repair and investment. Following a review of the options available and with an understanding that the cost of renovating the existing centre was prohibitive, in March 2015 the London Borough of Ealing (LBE) Cabinet made the decision to demolish the existing centre and replace it with a new state-of-the-art facility.

1.1.7 The new leisure centre, designed to be a flagship facility of regional importance is proposed to be re-provided generally on the footprint of the existing leisure centre in order to mitigate impacts on the wider parkland, which is designated as Metropolitan Open Land (MOL). The leisure centre building will be part funded by LBE with the remaining cost to be funded through enabling residential development. These new residential units will be located both above the new leisure centre and generally within the footprint of the current adjacent car park, which is considered Previously Developed Land (PDL).

1.1.8 Alongside the provision of a new flagship leisure centre and residential units, the adjacent open space and amenity provisions to the north will be enhanced for improved public use and access. The proposal therefore represents an opportunity to create a genuinely mixed-use and complementary development for use by not just the local community, but by residents throughout the borough and beyond.

1.2 Existing Site

- 1.2.1 Gurnell Leisure Centre currently occupies the southwest corner of the existing Site with ground level on-site car parking to the southeast. Located further north between the leisure centre and car park is a BMX track, concrete skate park and children's play area; there is a sports field in the north of the existing Site. A public right of way follows the bank of the River Brent within the existing site to the west. Access to the leisure centre and car park is from Ruislip Road East, where a new Quietway has recently been constructed along the northern footway.
- 1.2.2 The existing Gurnell Leisure Centre is approximately 8m high and provides a main swimming pool, recreation pool, exercise studios, gym, changing rooms and staff facilities.
- 1.2.3 All public rights of way will be maintained and incorporated into the design, including those associated with the new Ruislip Road East Quietway.

1.3 Report Scope

- 1.3.1 Following this introduction, the DSP is structured as follows:
- **Section 2: Policy and Guidance** – Outlines national, regional and local policy relevant to the development;
 - **Section 3: Baseline Conditions** – Describes the existing highways and transport conditions in the area surrounding the Site, with a focus on parking, waiting and loading restrictions;
 - **Section 4: Development Overview** – Summarises the land uses, access and parking proposals of the development;
 - **Section 5: Servicing Trip Generation** – Estimates the number of servicing and delivery trips generated by the Proposed Development;
 - **Section 6: Proposed Servicing Strategy** – Describes the strategy for servicing and deliveries, including measures to minimise conflicts with other road users; and
 - **Section 7: Summary and Conclusion** – Summarises the findings of the DSP and concludes regarding the suitability of the Proposed Development.
- 1.3.2 All technical appendices are included at the end of this report, for reference.

2. POLICY ANALYSIS

2.1 General

- 2.1.1 A summary of the key national, regional and local transport policies relevant to the Site is included in the supporting Transport Assessment, dated December 2018 which accompanies this application.
- 2.1.2 This section of the DSP focuses on TfL's requirements, stated in the Making Freight Work for You document and on LBRuT's requirements, as stated in the Storing Waste for Recycling and Disposal SPG and in the LBE Draft Waste Management Guidelines for Architects and Developers.

2.2 TfL Delivery and Servicing Plan Guidance: Making Freight Work for You

- 2.2.1 TfL has produced the Making Freight Work for You document, which provides guidance to best manage deliveries and reduce the negative impacts of delivery-related activities such as emissions, congestion and collisions.
- 2.2.2 Key elements stated in the guidance include:
- The recommendation to begin by recording all the delivery and servicing movements to and from the site;
 - Identifying safe and legal loading and unloading locations;
 - Implementing a delivery booking system, to ensure deliveries will be managed according to the capacity of the loading facilities available and to minimise congestion on site;
 - Move deliveries outside of peak, or normal working, hours;
 - Reduce the time spent on-site by suppliers (for example via the booking system);
 - Reduce delivery, servicing and collection frequencies;
 - Reduce or consolidate the number of suppliers;
 - Centralised location for courier collections;
 - Liaise with consolidation centres;
 - Cooperate with building tenants and your neighbours, for example through area-wide DSPs; and
 - Promote the use of low or no emission vehicles / modes.

2.3 London Borough of Ealing: SPG 4 Storing Waste for Recycling and Disposal

- 2.3.1 The document states that in developments where storage facilities for waste recycling and disposal are proposed, the following design criteria should be met:
1. Stands, containers and enclosures, should be located conveniently to the nearest access point for the collection vehicles. Skips require vehicle access at the location of the skip;
 2. Enclosures for mobile containers should be located where they can be screened from the street and neighbours; either by structures, buildings or landscaping;
 3. Where collection cannot be undertaken from the rear or side of a property, recycling and refuse enclosures should be provided in the forecourt or front garden if there is no alternative, and should be well located in relation to each dwelling. These should

be kept as low as possible; constructed in materials to match the front elevation of the property; provided with a watertight roof and doors; and screened by planting with adequate provision of soil, if appropriate;

4. The provision of recycling and refuse enclosures should be included in the design of buildings or boundary walls where possible.
5. Adequate space should be provided for the appropriate volume of waste for recycling, according to the individual development.
6. Stands and enclosures must be located not more than 25m from the nearest access point for the collection vehicle; and wheeled refuse containers not more than 10m away from the vehicle access point, preferably on a level surface.
7. Access roads and approaches to buildings should be level or have a gradient from the refuse storage area of not greater than 1:12. Drop kerbs should be provided to permit safe transfer of wheeled containers to carriageway level. These dimensions should be allowed for in any scheme requiring Council refuse collection, and are based on British Standard BS 5906:1980.

2.4 London Borough of Ealing: Draft Waste Management Guidelines for Architects and Developers

2.4.1 This document provides guidelines for architects and developers of new residential, commercial and mixed-use units in the London Borough of Ealing, to ensure that the arrangements for storing, collecting and managing waste are appropriate.

2.4.2 Ealing Council will undertake one weekly collection of refuse. Recycling collections will be provided on a weekly or fortnightly basis, but developers should ensure there is sufficient bin storage capacity for the latter collection frequency. Sufficient capacity for waste storage must be provided for each household to allow for extended gaps between collections owing to Bank Holidays, severe winter weather or other operational disruptions.

2.4.3 On vehicle access, the document states:

- Waste collection vehicles should not be required to reverse more than 12m, and then only in exceptional circumstances. If pedestrians also use access routes where waste collection vehicles will be required to reverse, an additional raised footpath must be provided. Waste collection vehicles should never be required to reverse up or down a slope/ramp.
- Where possible, developers should design road layouts so that waste collection vehicles are not required to reverse in from or out to the public highway.
- Vehicles undertaking collections should be able to stop for loading in a safe and legal position where they will not obstruct other traffic, pedestrians or access.
- Appropriate measures must be incorporated into road layouts to control unauthorised parking of vehicles that would prevent access by the waste collection vehicles and staff.
- Developers should ensure that sufficient car parking is provided in order to prevent such problems.

3. BASELINE CONDITIONS

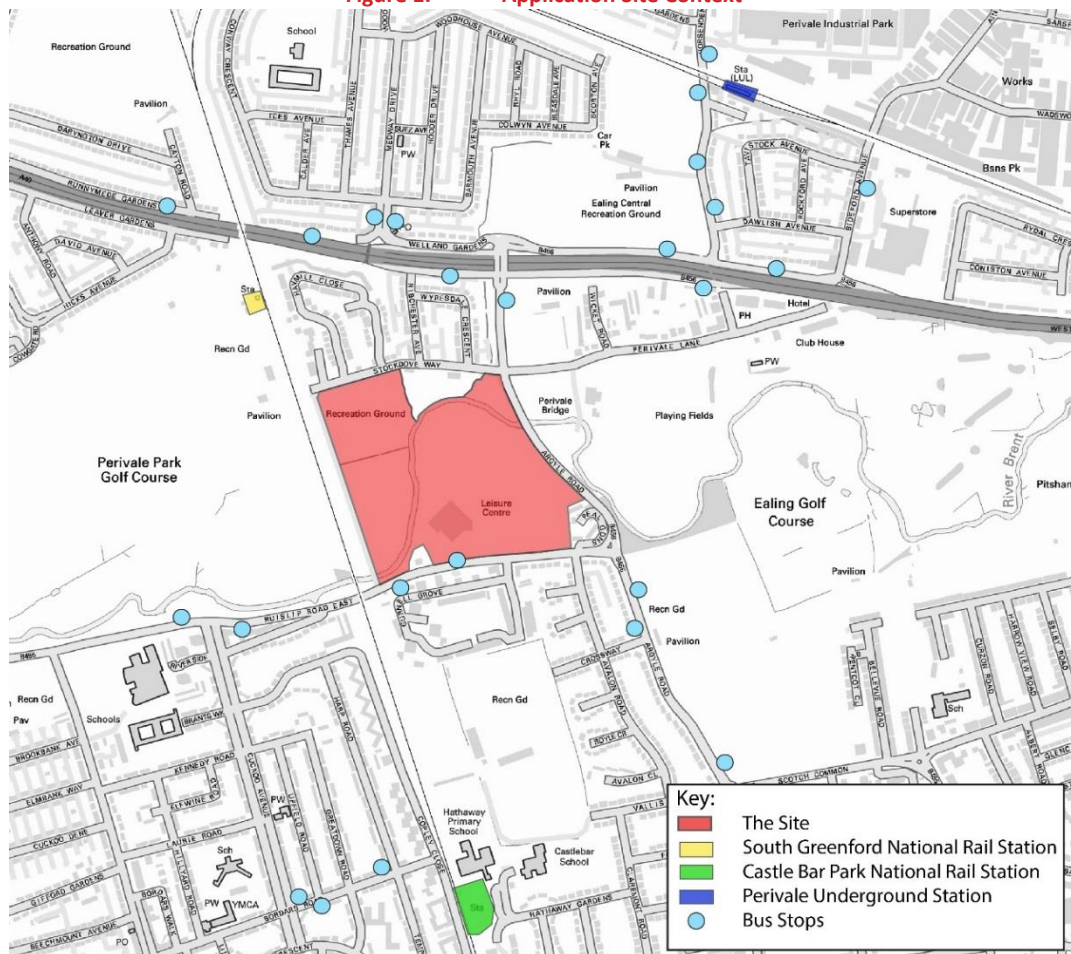
3.1 General

- 3.1.1 This section of the DSP describes the existing or baseline conditions currently prevailing at the Site and in the surrounding area.
- 3.1.2 Baseline Conditions are needed to accurately establish and fully understand the context of the Proposed Redevelopment and associated traffic and transport implications.

3.2 Site Location & Description

- 3.2.1 The Application Site is located within the London Borough of Ealing, between Greenford to the west and Perivale to the east. The Application Site is bound to the north by Stockdove Way and the River Brent, to the west via the footpath adjacent to the Greenford Railway line, to the east via Argyle Road (B456), as well as residential dwellings on Pearl Gardens to the south east. Playing fields and Ealing golf course are located further east. Ruislip Road East (B455) forms the southern boundary of the Application Site with residential dwellings beyond.
- 3.2.2 The Application Site is located within a PTAL area of 2 - 3, with the development itself wholly within PTAL 3 land which is classified as 'Moderate' and reflects the range of public transport services present in the vicinity of the Site
- 3.2.3 A map showing the Site location in context can be seen in **Figure 1** below.

Figure 1. Application Site Context



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3.3 Existing Site

- 3.3.1 The Site is currently occupied by Gurnell Leisure Centre towards the south west with ground level car parking in the south east corner. There is also a BMX track, concrete skate park and children’s play area and sports field to the north of the Site.
- 3.3.2 The Leisure Centre is approximately 8m above existing ground levels and has the provision for a 50m six lane Olympic swimming pool, 25m recreation pool, sauna and steam rooms, exercise studios, gym, changing rooms and staff facilities. There are also three outdoor football pitches, one 11-a-side, one 9-a-side and one 7-a-side. It currently accommodates 45 staff members.
- 3.3.3 The leisure centre is open 06:30-22:00 Monday to Friday and 08:00-20:00 on Saturday and Sunday.

Car Parking

- 3.3.4 There are two car parks present at the existing Site, the main public car park has 175 parking spaces as well as four coach bay spaces. The second private car park, for staff, permit holders

and deliveries only, has 19 car parking spaces as well as two turning areas. This car park is also where deliveries are directed, as seen in **Figure 2**.

Figure 2. Delivery Location



Access

- 3.3.5 Pedestrian and vehicular access to the Site is from the south off Ruislip Road East. There are two vehicular access points, one into the main public car park and one for staff use only. It is noted that the staff only access is shared by a residential dwelling to the west. Surveys were undertaken of the existing access points on the 15th June 2017 to assess the current demand for parking, the results are summarised in the Transport Assessment produced for the Planning Application.

3.4 Highway Network

Ruislip Road East

- 3.4.1 Ruislip Road East (B455) is a single carriageway two way street which provides the main access to the Site. The speed limit is 30mph and there is car parking along the southern edge of the road in front of residential properties.

- 3.4.2 In September 2017 the Ruislip Road East Quietway was installed, narrowing the available carriageway. This is a shared segregated route for pedestrians and cyclists and runs from Clifton Road to Argyle Road.

Argyle Road

- 3.4.3 Argyle Road (B456) is a 30mph, single carriageway road with flares on the approach to the junction with Ruislip Road East.
- 3.4.4 It connects Ruislip Road East with the A40 to the north of the Site. To the south, Argyle Road connects the Site to Ealing Town Centre as well as West Ealing Station and Ealing Broadway.

3.5 On-Street Parking

- 3.5.1 Parking is limited along the stretch of Ruislip Road East directly in front of the Site owing to double yellow lines. The Site is not located within a CPZ and is unrestricted outside residential properties on the south side of the carriageway.

4. DEVELOPMENT OVERVIEW

4.1 General

- 4.1.1 This section of the report sets out the context of the Proposed Development including the landuse, access and parking proposals of the development.
- 4.1.2 It is noted that there are currently several existing public rights of way interacting with the Site most notably, the public footpaths through the Metropolitan Open Land (MoL) and the Ruislip Road East Quietway at the access points. Throughout the design process careful consideration has been given to their retention and, any rights of way associated with this scheme or any future scheme have been considered in the access design.
- 4.1.3 All relevant floors plans, produced by 3D Reid architects, can be found at **Appendix A**.

4.2 Development Proposals

- 4.2.1 The Proposed Development comprises the following:

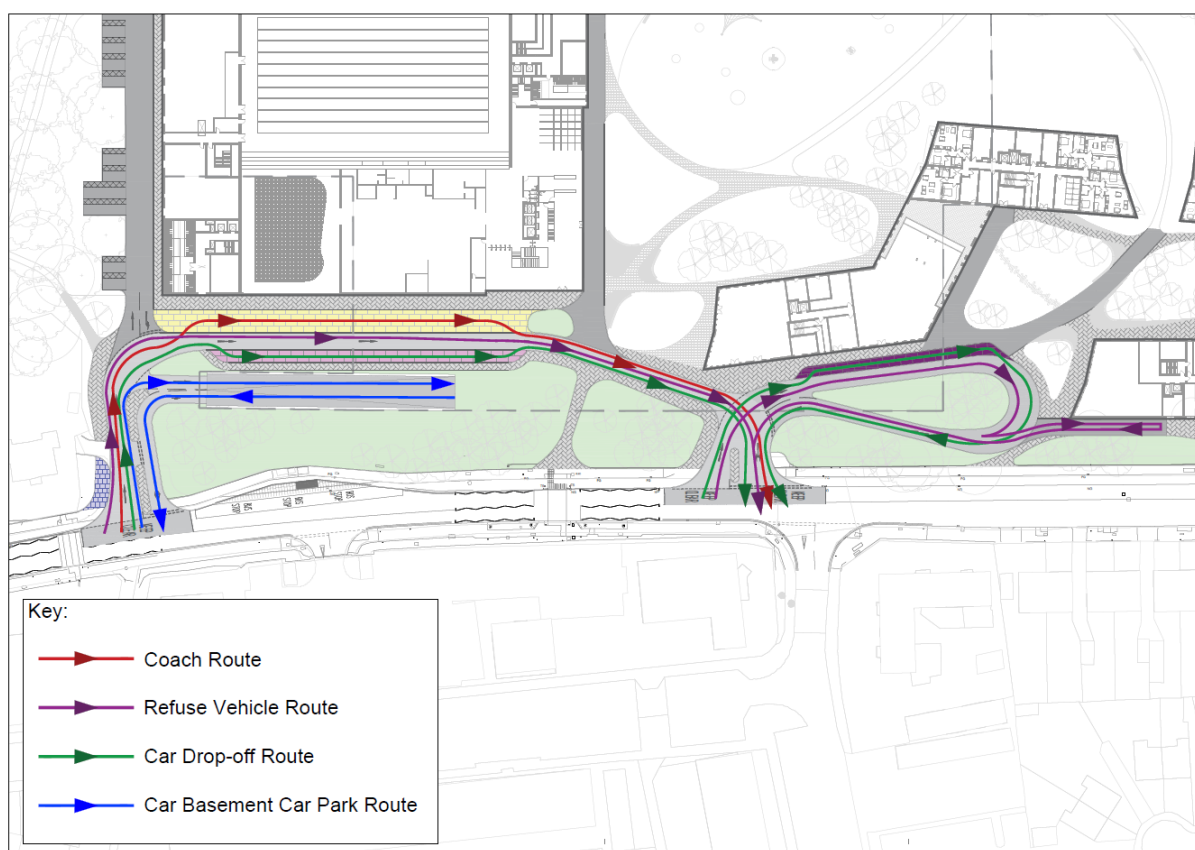
“Demolition of all existing buildings and re-provision of leisure centre, car and coach parking, BMX track and skate park, alongside enhancements and access to the existing park; and the erection of up to 498 sqm retail floorspace (Class A1-A3) and 615 residential units, with associated landscaping, playspace, cycle and car parking, refuse storage, access and servicing.”

4.3 Access Strategy

Vehicular Access

- 4.3.1 The existing vehicular accesses into the Site will be retained in their current locations as part of the development. The eastern access includes some widening to accommodate coach manoeuvres when exiting the Application Site, with the majority of the widening being on the eastern side of the access junction given that coaches only exit from this junction.
- 4.3.2 The western access will be widened to accommodate coach vehicles tuning into the Application Site as well as to allow two-way movement of vehicles through this access junction (coaches are prohibited from exiting via the eastern access). The majority of widening will occur on the eastern side of the access junction to avoid conflict with the existing zebra crossing on the western side of the access junction on Ruislip Road. To accommodate the junction widening there will be a slight realignment to the kerbline of the existing bus stop to the eastern side of the junction. This is required given the geometric constraints of widening to the western side due to the proximity to the existing zebra crossing.
- 4.3.3 The vehicle access and egress movements throughout the Application Site are shown on **Figure 3** below.

Figure 3. Vehicle Access and Egress movements across the Application Site



- 4.3.4 The eastern access junction is two –way operation and will be the main point of entry for the Application Site. This access serves entry and exit from the basement car park serving both the residential and leisure centre land uses. Additionally, coaches enter via the eastern access and exit via the western access via a one-way route through the Application Site, enabling drop-off within the designated drop-off zone. Refuse collection for the leisure centre and deliveries can also occur within the drop-off zone utilising the eastern access junction for entry and the western access junction for exit.
- 4.3.5 The western access junction is two-way operation providing the entry and exit for residential servicing including refuse collection, drop off and deliveries. Additionally, as stated above, coaches exit the Application Site via the western access junction.

4.4 Parking

- 4.4.1 There will be a total of 344 car parking spaces on-site, 175 for staff/visitors and 169 for residents. The basement parking will provide space for 335 parking spaces and 9 are located at ground level. This provision is lower than the maximum residential car parking standards specified in the New Draft London Plan 2018 and is a suitable provision for a leisure centre of this scale in an outer London location. For residential uses a total of 19 disabled parking spaces will be provided from the outset, equating to 3% of total unit numbers, with a future adaption strategy to allow an additional 7% of dwellings to be provided with a disabled parking space in the future if the demand arises. This equates to conversion to an additional 43 disabled parking spaces in the future and is in line with the New Draft London Plan (2018).

- 4.4.2 In line with Sport's England policy, 15 parking spaces for the disabled will be located in the leisure centre basement car park (8%).

5. SERVICING TRIP GENERATION

5.1 General

- 5.1.1 This section of the DSP provides a summary of the delivery and servicing trips generation associated with the Proposed Development.

5.2 Leisure Centre

- 5.2.1 From correspondence with the Leisure Centre, the following deliveries were noted:

- Pool chemicals – twice a month (9am to 5pm, Monday to Friday);
- Waste collection – every Tuesday (before 5am);
- Cleaning supplies – once a month (before 8am);
- PHS services – once a week (before 7am); and
- Vending – four times a week (Monday, Wednesday and Friday, before 7am and Sunday mid-morning).

- 5.2.2 Of the guaranteed minimum deliveries, this equates to five separate deliveries per week with an average of 1-2 vehicles per day. All deliveries are expected to take place from the drop off zone in front of the Leisure centre, entering via the western access and exiting via the eastern access and are not intended to increase as part of the Proposed Development.

5.3 Residential Servicing

- 5.3.1 To obtain an accurate residential servicing estimate, a first principles analysis was undertaken based on SYSTRA's experience on similar sites. The proposed servicing area has space for approximately three delivery vehicles (assuming 7.5t vans) at any one time. If it is assumed that vehicles dwell for 10 minutes, this equates to 18 delivery vehicles per hour accommodated on Site or 216 vehicle slots over 12 hours (07:00-19:00).

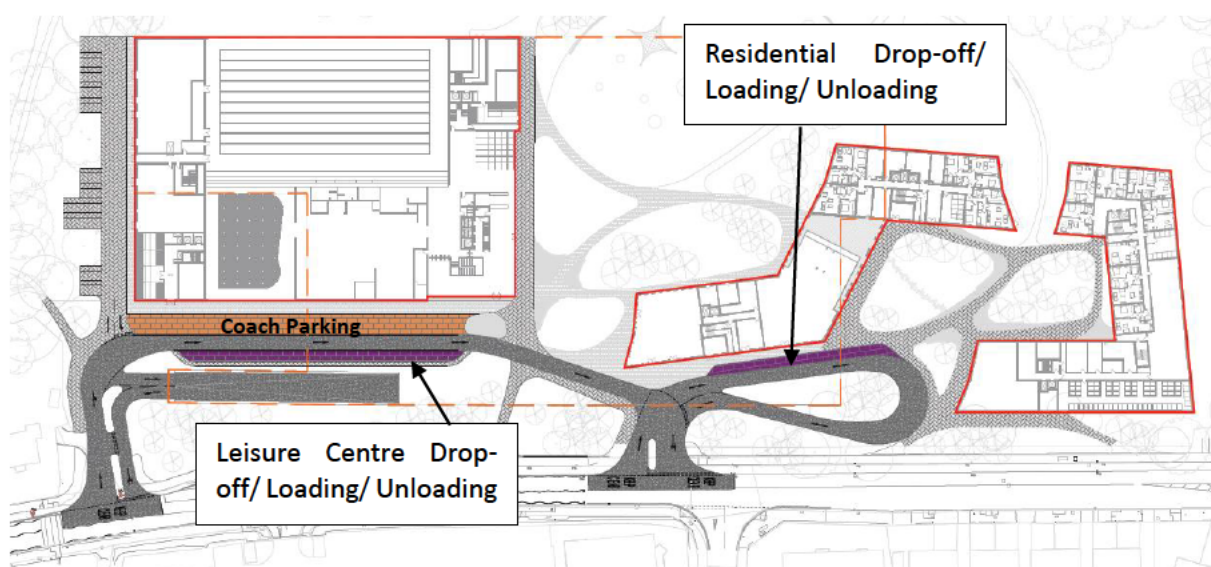
- 5.3.2 It can be assumed that up to one in six flats will receive a delivery on any given day. Applying this to the calculation in paragraph 5.3.1 results in 103 delivery vehicles will need to be accommodated on Site. Over 12 hours this equates to approximately 48% of the total capacity, with 52% spare capacity over the course of an average weekday.

- 5.3.3 This is a worst case scenario as it does not fully allow for consolidated deliveries. For example, Royal Mail may deliver multiple parcels for the development once a day. This calculation assumes that each vehicle as a maximum carries only six parcels, when in reality, for a development of this size, they are likely to carry more.

6. PROPOSED SERVICING STRATEGY

- 6.1.1 All delivery and servicing activity will be accommodated on-site via the western access for the leisure centre and via the eastern access for residential land uses. The internal roads have been designed to a sufficient width to enable these movements to occur.
- 6.1.2 Deliveries for the leisure centre can occur within the drop-off zone outside the leisure centre. Residential deliveries will occur via the drop-off zone in proximity to residential entrances. The zones will allow for multiple small delivery vehicles (3.5t) or 3 larger rigid delivery vehicles (7.5t) to service the development simultaneously. Both of these zones are marked in purple on Figure 4 below.

Figure 4. Drop-off Zones - Leisure Centre and Residential



6.2 Coach Deliveries

- 6.2.1 Coaches will enter the Site via the western access point where four drop off bays will be provided in front of the leisure centre. Coaches will have adequate room to manoeuvre and park in front of the leisure centre before driving out in a forward gear at exiting via the eastern access junction. No coach parking will be provided in the basement car park. The swept path analysis of the coaches can be seen at Appendix B. The pedestrian footway is located through the centre of the Site to minimise the interaction between pedestrians and coach manoeuvres.

6.3 Refuse Strategy

- 6.3.1 Ealing's SPG 4 Storing Waste for Recycling and Disposal states that "stands and enclosures must be located not more than 25m from the nearest access point for the collection vehicle, and wheeled refuse containers not more than 10m away from the vehicle access point, preferably on a level surface". Part H of the Building Regulations (2000) states that residents should not be required to carry waste more than 30m horizontally and waste collection vehicles should be able to get within 25m of the storage point.

- 6.3.2 All refuse activity will take place off-street, with refuse collection for the leisure centre taking place on the western loop within the coach parking bays.
- 6.3.3 Refuse collection for the residential uses will take place on the eastern loop with the refuse vehicle entering via the eastern access. A managed solution will be in place to move the bins on collection day from individual refuse stores within each block to the larger bin store located within Block E in order to ensure that the distances in paragraphs 5.4.2 remain true. To ensure the refuse collection can occur within 10m of the main bin store at Block E, the refuse vehicle will reverse to the southern side of Block E, as shown in **Figure 5** below. As the route to the south side of Block E is not a primary vehicle route, no conflict with other vehicles will occur. This area is of level gradient hence assisting with this strategy.

Figure 5. Refuse Collection – Block E Bin Store 10m isochrone



- 6.3.4 Swept path analysis of the residential refuse vehicle accessing the Application Site can be seen at **Appendix B**.

6.4 Emergency Vehicles

- 6.4.1 For emergency vehicles there should be a vehicle access for a pump appliance to blocks of flats to within 45m of all points within each dwelling. Blocks of flats not able to comply with the requirements for access to within 45m of all points within each dwelling will be provided with a firefighting main and access for a pumping appliance to within 18m of each fire main inlet connection point (London Fire Brigade: Fire Safety Guidance Note GN29). Direct access to the dry riser locations in Blocks A-D and F are provided via internal roads and footpaths through the landscaped area. Block E is served directly from Ruislip road, as this is within the required distance thresholds.

- 6.4.2 All emergency vehicles will be able to utilise either vehicular access point to reach the buildings, and the affected area, and have adequate room to manoeuvre on the internal road network.
- 6.4.3 Swept path of a fire pumping appliance manoeuvring around the internal road network of the Site (to demonstrate the principles described above) can be seen at **Appendix B**.

7. SUMMARY AND CONCLUSION

7.1.1 This document has been prepared by SYSTRA Ltd on behalf of BE:HERE EALING LIMITED (“the Applicant”) in support of a Full Planning Application for the demolition of the existing Gurnell Leisure Centre (“the Application Site”) and the construction of a new leisure centre alongside enabling residential uses.

7.1.2 The Proposed Development comprises:

“Demolition of all existing buildings and re-provision of leisure centre, car and coach parking, BMX track and skate park, alongside enhancements and access to the existing park; and the erection of up to 510 sqm retail floorspace (Class A1-A3) and 615 residential units, with associated landscaping, playspace, cycle and car parking, refuse storage, access and servicing.” (The Proposed Development).

7.1.3 The Delivery and Servicing Plan (‘DSP’) accompanies the planning application submitted to LBE, who act as the Local Planning and Highway Authority. The development proposals have been informed by a review of national, regional and local policy including TfL’s Delivery and Servicing Plan Guidance, LBE’s SPG4 Storing Waste for Recycling and Disposal and Draft Waste Management Guidelines for Architects and Developers.

7.1.4 The Application Site is located within the London Borough of Ealing, between Greenford to the west and Perivale to the east. The Application Site is bound to the north by Stockdove Way and the River Brent, to the west via the footpath adjacent to the Greenford Railway line, to the east via Argyle Road (B456), as well as residential dwellings on Pearl Gardens to the south east. Playing fields and Ealing golf course are located further east. Ruislip Road East (B455) forms the southern boundary of the Application Site with residential dwellings beyond.

7.1.5 The leisure centre provided information relating to existing delivery trips, which equate to approximately 1-2 servicing trips per day. This is expected to remain constant as part of the Proposed Development. A first principles analysis was undertaken to estimate the number of residential servicing trips, based on the size of the loading bay and the available delivery times. This equates to approximately 103 delivery trips per day, which is 48% of the total daily capacity.

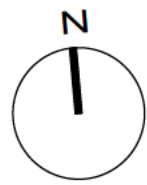
7.1.6 The eastern access junction is two –way operation and will be the main point of entry for the Application Site. This access serves entry and exit from the basement car park serving both the residential and leisure centre land uses. Additionally, coaches enter via the eastern access and exit via the western access via a one-way route through the Application Site, enabling drop-off within the designated drop-off zone. Refuse collection for the leisure centre and deliveries can also occur within the drop-off zone utilising the eastern access junction for entry and the western access junction for exit.

7.1.7 The western access junction is two-way operation providing the entry and exit for residential servicing including refuse collection, drop off and deliveries.

7.1.8 In summary, the servicing and delivery arrangements for the Proposed Developments aim to resolve existing drop off arrangements and manage any conflict with non-motorised users,

creating an environment that can meet delivery and servicing operational requirements as well as ensuring that the Application Site is appealing to visitors.

Appendix A – Proposed Floor Plans



Refer to Sheet:
180237-3DF-LC-E-DF-00199

Refer to Sheet:
180237-3DF-CC-E-DF-00199

Refer to Sheet:
180237-3DF-CC-E-DF-00199



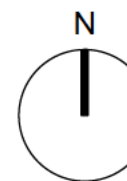
Level 0 Ground
1 : 500

Notes

Do not scale from this drawing.

All dimensions are to be checked prior to construction and any discrepancies are to be identified to the Architect.

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S2 05/11/18 Stage 2 Issue

Revisions

Status

STAGE 2 ISSUE

Client

EcoWorld

Project

Eco Park

Title

Proposed Ground Floor
Plan L00

Scale	Size	Date	Drawn	Checked
1 : 500	A1	19/10/18	AV	MB

3DReid
www.3DReid.com
Architecture Interiors Masterplanning

3D
REID

Drawing No.

180237-3DR-XX-DR-00200

Rev.

S2

Appendix B – Swept Path Analysis

Gurnell Leisure Centre, Ealing

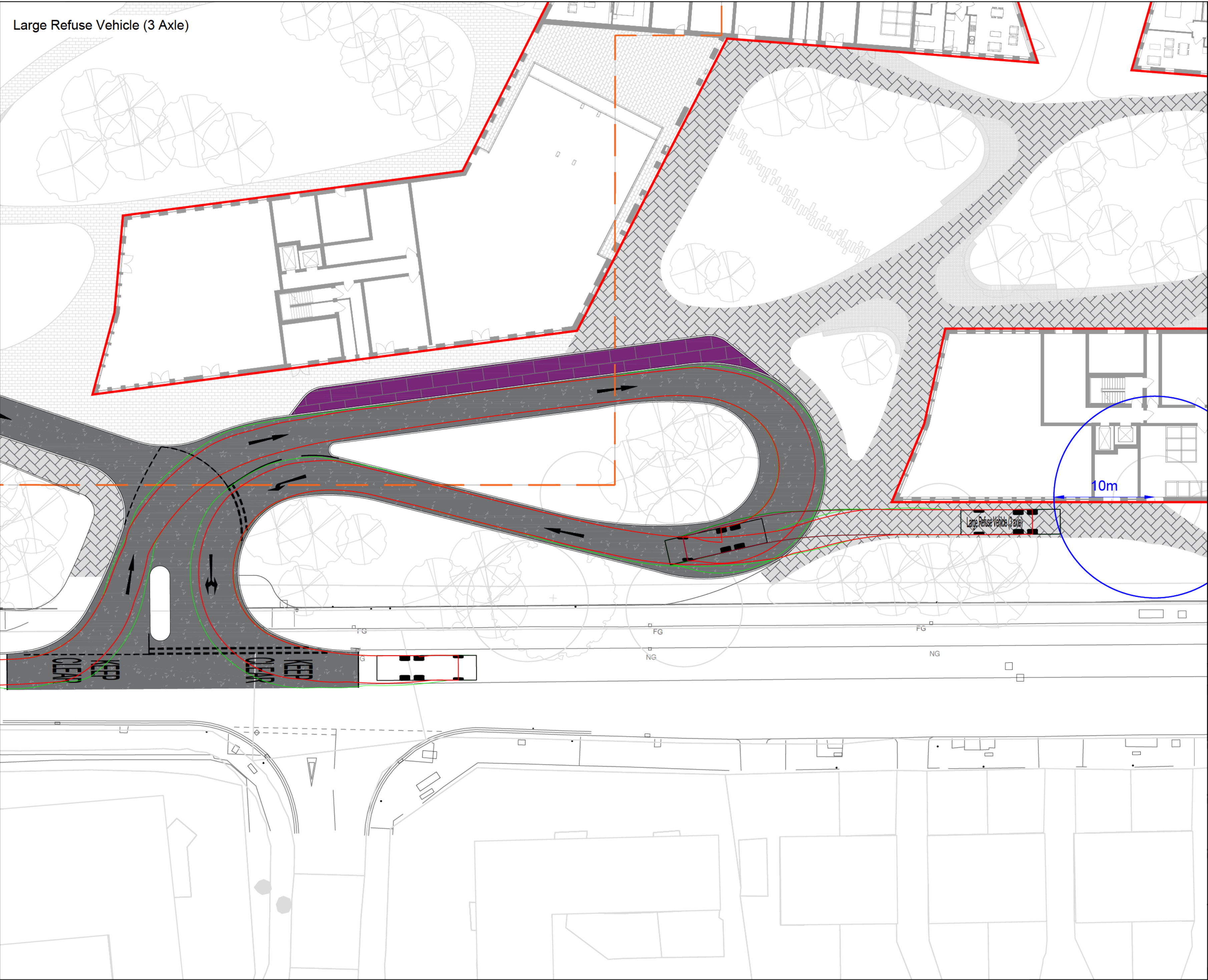
Delivery and Servicing Plan

GB01T18D37-003

Final Report

14/12/2018

Large Refuse Vehicle (3 Axle)



- Notes:
- 1. Do not scale from this drawing. If in doubt refer to the project manager for clarification.
 - 2. Please note that this drawing is Preliminary and not for Construction.
 - 3. These drawings have been produced under CDM 2015 Regulations. The client is directed to its duties under Regulation 4 of CDM 2015.
 - 4. Vehicle forward speed is 5.0 kph.
 - 5. Vehicle reverse speed is 2.5 kph.
 - 6. No dry steering has been used.

Key:

- Proposed Kerb
- Proposed Carriageway
- Proposed Block Paved Area
- Proposed Car Drop-Off
- Building Outline
- Underground Car park Outline
- 10m Distance From Bin Store Entrance

Large Refuse Vehicle (3 axle)

Overall Length	9.860m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

- Vehicle wheel outline (forward movement)
- Vehicle body outline (forward movement)
- Vehicle wheel outline (reverse movement)
- Vehicle body outline (reverse movement)

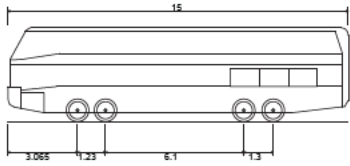
Rev		Date		Revision details		Drawn		Check		Approv.	
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Project											
<div>Gurnell Leisure Centre</div>											
Title											
<div>Access Arrangement Option 2C Swept Path Analysis Large Refuse Vehicle (3 Axle)</div>											
Drawn			Checked			Approved					
<div><div></div></div>			<div><div></div></div>			<div><div></div></div>					
Original drg. size			Date of Issue			Scale					
A2			06/11/2018			1:250					
Drawing Status				Drawing Number				Rev.			
Preliminary				107696-TR-02				-			

15m Luxury Coach

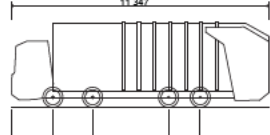
Large Refuse Vehicle (4 Axle)

- Notes:
1. Do not scale from this drawing. If in doubt refer to the project manager for clarification.
 2. Please note that this drawing is Preliminary and not for Construction.
 3. These drawings have been produced under CDM 2015 Regulations. The client is directed to its duties under Regulation 4 of CDM 2015.
 4. Vehicle forward speed is 5kph
 5. Vehicle reverse speed is 2.5kph
 6. No dry steering has been used
- Key:

- Proposed Kerb
- Proposed Carriageway
- Proposed Block Paved Area
- Proposed Block Paved Area to Take Vehicle Weight
- Proposed Footway Paving to Match Existing Adjoining Footway
- Proposed Coach Drop-Off
- Proposed Car Drop-Off
- Proposed Landscaped Area
- Chamber (Source: Topo Survey)
- Advanced Parking Indicator (API)
- Utility Asset (exact location to be confirmed)
- Building Outline
- Underground Car park Outline



15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 5.00s
Wall to Wall Turning Radius 12.450m



Large Refuse Vehicle (4 axle)
Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 6.00s
Wall to Wall Turning Radius 11.350m

- Tyre of Vehicle
- Vehicle Overhang

Rev	Date	Revision details	Drawn	Check	Approv.
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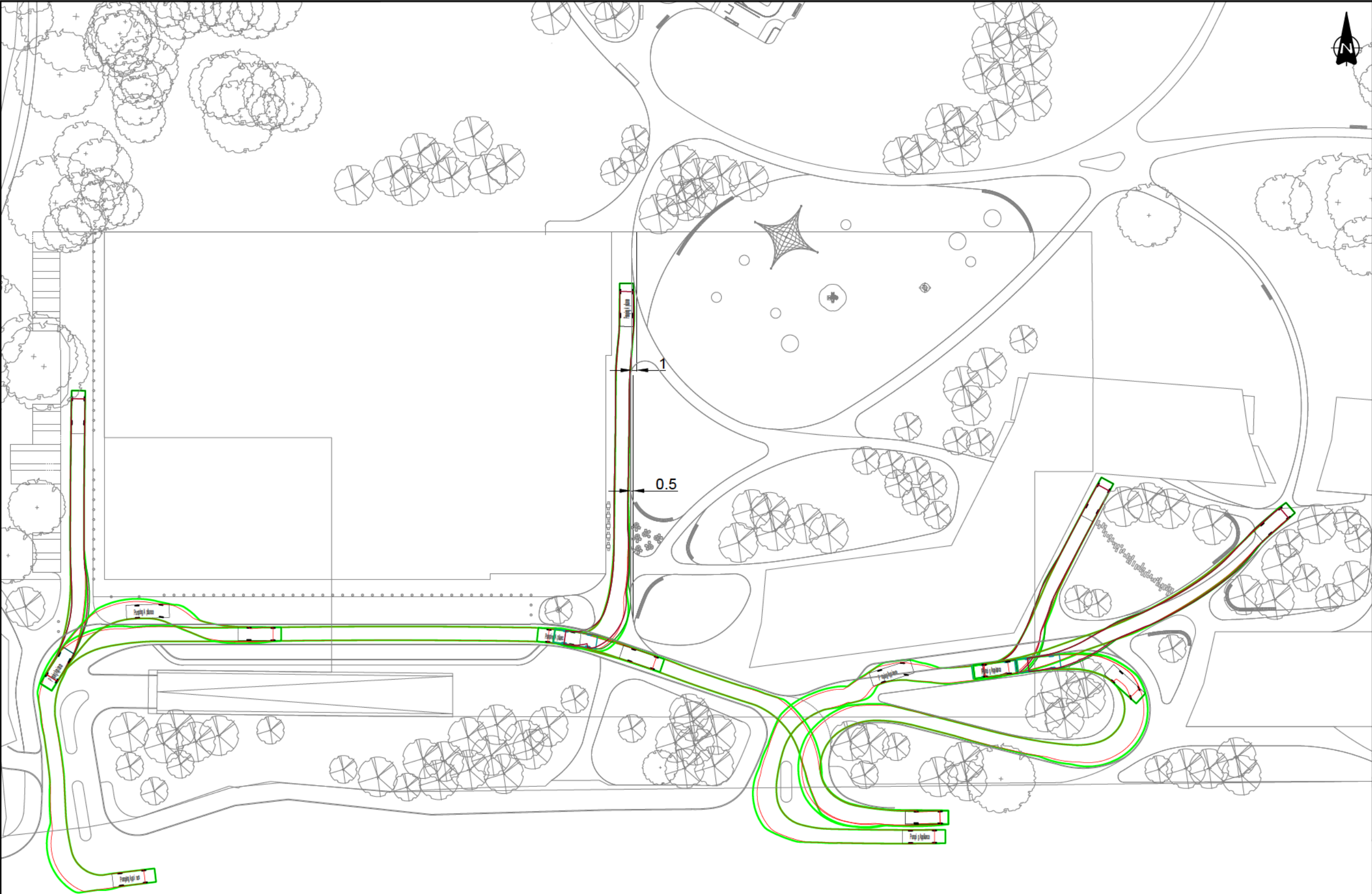
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Client
Eco World London Development Company Ltd

Project
Gurnell Leisure Centre

Title
**Access Arrangement Option 2C
Swept Path Analysis**

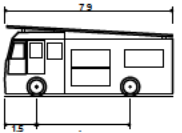
Drawn	Checked	Approved
Original drg. size A2	Date of Issue 15/11/2018	Scale 1:500
Drawing Status Preliminary	Drawing Number 107696-SP-Opt2C	Rev. -



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 2. Please note that this drawing is Preliminary and not for Construction.
 3. These drawings have been produced under CDM 2015 Regulations. The client is directed to its duties under Regulation 4 of CDM 2015.

Key:

— Indicative kerb location



Pumping Appliance

Overall Length	7.900m
Overall Width	2.500m
Overall Body Height	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.750m

— Vehicle wheel outline

— Vehicle body outline

B	06/11/2018	Updated vehicle paths to reach block F	DH	EJ	JS
A	31/10/2018	Updated to include block E & F	DH	EJ	JS
Rev	Date	Revision details	Drawn	Check	Approv.

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Client

**Eco World London
Development Company Ltd**

Project

Gurnell Leisure Centre

Title

**Indicative Dry Riser Locations
Swept Path Analysis
Pumping Appliance**

Drawn	Checked	Approved
Original drg. size	Date	Scale
A2	16/10/2018	Not to Scale
Drawing Status	Drawing Number	Rev.
Preliminary	107696-SP-01	B

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The SYSTRA logo is rendered in a bold, red, sans-serif typeface. The letters are thick and closely spaced, with a modern, slightly geometric feel. The 'S' and 'Y' are particularly prominent due to their size and the way they connect to the following letters.