ARDENT
CONSULTING ENGINEERS
AN EMPLOYEE OWNED COMPANY

BELLWAY HOMES LIMITED

YARNTON WAY, BELVEDERE

DELIVERY AND SERVICING MANAGEMENT PLAN

REPORT REF.
194180-R09

August 2023

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REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft Client Issue	SR	AG	DRAFT	17.08.23
-	Final Issue	SR	PR 	ATB ATB	25.08.23

Distribution

1. Introduction

1.1. Ardent Consulting Engineers (ACE) has been appointed by Bellway Homes Limited to prepare a Delivery and Servicing Management Plan (DSMP) for a proposed development comprising of 392 residential units and 204.88sqm commercial space and 93.31sqm of private gym use (Use Class E), (hereafter known as 'the site').

1.2. The formal site description is as follows:

"Redevelopment of the site to provide residential units including affordable housing (Use Class C3) and commercial floorspace (Class E) in new buildings ranging between 3 to 5 storeys in height, together with associated car parking and cycle storage, landscaping including new areas of public open space and a reptile retention zone, associated infrastructure including new junctions off Yarnton Way, drainage and land raising".

1.3. This DSMP is prepared for submission to London Borough of Bexley (LBB), the local planning authority.

1.4. This DSMP has been produced to satisfy specific transport comments which arose from pre application consultation with the Local Planning Authority, regarding details of delivery and servicing routes throughout the site, including a refuse strategy plan.

1.5. A Healthy Streets Transport Assessment (TA – report reference 194180-02), Framework Travel Plan (FTP – report reference 194180-08), and Outline Construction Logistic Plan (CLP – report reference 194180-10) have also been prepared by ACE to accompany the planning application for the proposed development.

Benefits of a DSMP

1.6. The DSMP provides a framework to manage all delivery and servicing movements to and from the site, including refuse collection. The benefits of an effective DSMP include minimising environmental impact and the safeguarding of highway users.

1.7. A summary of the benefits of a DSMP are outlined in **Table 1.1**.

Save time and money	Benefit from lower operating costs if deliveries are consolidated into larger, less frequent deliveries Freeing up time staff spend receiving goods and completing activities such as invoice processing Supply chain economies of scale
Improve safety	Fewer deliveries – fewer accidents Compliance with health and safety legislation
Improve reliability	Ensures the supply chain continues to operate effectively during large, planned events or other foreseeable disruption
Reduce environmental impact	Reduced emissions at site Contribute to social responsibility objectives Create a more pleasant environment
Supplier and freight operator benefits	Fuel savings from reduced mileage Increased certainty over delivery times Reduced risk of collisions due to fewer journeys and less likely to unload in an unsafe location Less risk of having to park illegally and attracting penalty charge notices Reduced environmental impact

Table 1.1: Benefits of DSMP

1.8. Implementation of a DSMP can assist in reduction operation costs and help minimise vehicle activity at a site, as well as having wider area benefits associated with more efficient deliveries in terms of emissions on the wider road network.

1.9. This DSMP has been produced in accordance with appropriate policy/guidance, including:

1. London Plan Policy T4: Assessing and mitigating transport impacts

The *London Plan* requires that *impacts on the capacity of the transport network (including impacts on pedestrians and the cycle network), at the local, network-wide and strategic level, are fully assessed.*

Delivery and servicing plans will be required having regard to Transport for London Guidance.

2. London Freight Plan: Delivery and Servicing Plans

The *London Freight Plan*, produced by TfL, is a document that aims to co-ordinate the role of freight in London. It sets out the requirements for new development to produce DSMPs. These should aim to reduce delivery trips (particularly during peak periods), increase loading bay availability and the use of safe and legal loading facilities.

Within Part D of the document ('Project 2 – The Delivery Plan'), paragraph D.27 sets out the main elements of any management plan. These are as follows: -

- A plan to reduce the number of trips, particularly in the peak period, justified by a Transport Assessment that considers the benefits of using consolidation.
- A plan showing when and where deliveries and servicing can take place safely and legally; and
- Details of contractual changes requiring suppliers and servicing companies to reduce the number of trips and to use legal loading facilities. The selection process for supply and servicing contracts will specify Freight Operator Recognition Scheme membership.

3. TfL's Kerbside Loading Guidance: Freight Unit technical advice note FU5/08

This document provides information on kerbside loading facilities on London's Road network, addressing relevant freight and delivery issues, to

aid decision making and to influence everyone involved with the streetscape.

4. **London Borough of Bexley Design for Living: Residential Design Guide (2006)**

   This document provides practical guidance about design for new residential developments as part of a planning application, and on the appearance of buildings, their style and construction materials.

Scope of Report

1.10. This DSMP sets out the anticipated site operation, considering management measures required to minimise the impact of delivery and servicing arrangements associated with the site, responding to pre application consultation comments.

1.11. The remainder of this report is structured as follows:

- **Section 2.0** provides a description of the proposed redevelopment scheme and surroundings.
- **Section 3.0** considers the delivery and servicing arrangements.
- **Section 4.0** considers the anticipated delivery and servicing trips.
- **Section 5.0** outlines the objectives and mitigation measures for delivery and servicing trips.
- **Section 6.0** outlines the monitoring and management strategies and action plan for deliveries on the site.

2. Proposed Redevelopment

2.1. This section outlines the nature of the surrounding area and describes the proposed redevelopment.

Site Location

2.2. The site is located to the south of Yarnton Way within the northern extents of Belvedere. The site boundary and surrounding highway network are shown in **Figure 2.1** below.

Figure 2.1: Site Location

2.3. The site comprises of the former SGN Gas Holder Station and is bound by Yarnton Way to the north, a railway line to the south, residential properties to the east, and commercial/industrial units to the west.

Access

2.4. There are two existing vehicular access points to the site, one off Yarnton Way to the north and the other at the western end of Sutherland Road to the east. The existing vehicle access point onto Yarnton Way is in the form of a gated access priority-controlled T-junction and does not benefit from a turning lane for traffic

turning right into the site approaching from the west. It does however have a break in the carriageway central reservation that allows right turns into and out of the site.

Yarnton Way

2.5. Yarnton Way is a classified highway and is defined as a Borough Distributor Road in the Council UDP road hierarchy. It is a street-lit dual carriageway and is subject to a 30mph speed limit. Yarnton Way is a dual carriageway road with east-west alignment along the northern site boundary. It has two 3.5m wide lanes each direction and a 4.5m central reserve.

2.6. Yarnton Way connects to the wider highway network via the A2041, linking to Eastern Way (A2016), linking the site to Plumstead, Greenwich and Woolwich in the west via the A206. To the west the A206 provides access to Dartford and northeast Kent.

Maida and Sutherland Road

2.7. Maida Road and Sutherland Road are both residential cul-de-sacs located to the east of the development running on a roughly east-west alignment. Both roads are part of the adopted highway network and benefit from footways and street lighting. Parking is unrestricted on both roads, aside from spaces specifically designated for disabled parking.

Redevelopment

2.8. The redevelopment of the site will result in the construct 392 residential units, 204.88sqm of commercial floor space and 93.31sqm of private gym use.

2.9. The development will be served by a priority T-junction via Yarnton Way, including a ghost-island right-turn lane. Cycle / pedestrian routes will be provided to the east via Maida Road, and via Sutherland Road to the east.

2.10. As shown on the plans, it is proposed that there will be 157 on-site parking spaces, of which 12 shall be marked disabled bays. It is envisaged that these spaces will be monitored by the on-site management company to ensure that no illegal car parking occurs.

2.11. The site has been designed in accordance with the principles highlighted in the Bexley Council, Design for Living, Bexley's Residential Design Guide SPD, 2006. Suitable widths have been provided for a refuse vehicle to satisfactorily manoeuvre and turn within the proposed development site and sufficient parking management has been implemented to ensure that there is no blocking of key accesses by residents.

2.12. The internal arrangement enables a Fire Tender to enter and exit the site in forward gear. As highlighted within the Bexley Design Guide, and under Building Regulation B5 (2010), the arrangement has been designed to achieve access for a fire tender within 45m from all parts of the ground floor of any residential building on site.

Proposed Delivery, Refuse Storage and Collection Arrangement

2.13. The majority of delivery / servicing movements associated with the site will comprise postal deliveries on a daily basis. Any deliveries for the commercial units will be undertaken during hours where predicted footfall through the core of the site is expected to be low (i.e. outside of peak hours).

2.14. In terms of refuse collections, the layout has been designed with due regard being given to LBB document 'SPD Design for Living' (2006).

2.15. Refuse vehicles will be required to route through the site. The development has been designed to ensure that the vehicle would be able to satisfactorily position itself within an acceptable carry distance of the refuse holding areas. Suitable widths have been provided for a refuse vehicle to satisfactorily manoeuvre within the proposed development site.

3. Delivery and Servicing Arrangements

3.1. This section outlines the delivery and servicing arrangements of the proposed redevelopment.

Deliveries

3.2. Deliveries will occur within the carriageway on the internal roads, with opportunities for delivery vehicles to stop on street, noting there will be several convenient areas to stop that are clear of parking spaces.

3.3. As mentioned previously, the majority of delivery / servicing movements associated with the Site will comprise postal and small parcel deliveries on a daily basis, with the occasional infrequent delivery of bulky items such as furniture and white goods, alongside potential internet shopping deliveries e.g., Tesco / Ocado etc for residents.

3.4. There will also be delivery movements undertaken by bicycle and motorcycle, which will also occur on an ad hoc basis. It is not anticipated that these movements would be particularly frequent, nor cause a detrimental impact on highway safety or capacity.

3.5. Operators and residents will be informed about the delivery strategy, and site management will enforce it.

Refuse Collection

3.6. The site has been designed to ensure that refuse collection vehicles can park at the kerbside within 10 metres walking distance of collection points and/or holding areas and that drivers have to reverse no more than 20 metres anywhere within the site.

3.7. The site has been designed to ensure that residents carry distance does not exceed 30 metres.

3.8. Refuse vehicles would enter and egress from the site using the central proposed access point, exiting onto Yarnton Way, as shown **Drawing Number 194180-D015A.**

3.9. The site layout includes a suitable internal turning area to accommodate the relevant refuse collection vehicles required to service the site, this has been tested using swept paths of typical vehicles as shown in **Drawing Number 194180-D015A.**

3.10. Collections for the residential units are anticipated to be weekly recycling food waste collection and alternate fortnightly between paper and cardboard collection and garden waste collection.

3.11. With the above strategy in place, refuse and recycling collections at the development will be satisfactorily achieved without adversely affecting the existing highway network.

Routing

3.12. This section outlines a potential route for vehicles. This section does not identify the sole access route for servicing and delivery vehicles to the site. The surrounding area is of an industrial and commercial nature, which is designed to accommodate a high proportion of delivery and servicing vehicles and therefore will be able to support the minimal increase in OGVs/LGVs associated with servicing the site.

3.13. Vehicles accessing from the strategic road network would route from the Eastern Way A2016 junction, from either Eastern Way (A2016) to the west or Bronze Age Way (A2016), from the south. Vehicles would egress the roundabout to the south, onto Yarnton Way. Vehicles would travel down Yarnton Way, a dual carriageway, with a central reservation between running lanes, which is subject to a 30mph speed limit. There is a signalised pedestrian crossing point 350m to the east of the proposed site access. Yarnton Way is a bus route and is a key access road to Bexley Industrial Estate to the east of the site and already accommodates large vehicles. Vehicles would turn left to access the site.

3.14. It is possible for vehicles exiting the site to follow the reverse of the above route, or exit the site to the west via Yarnton Way, and turn right onto the northbound A406, allowing for access to the Eastern Way A2016.

3.15. The route outlined above is appropriate for all anticipated vehicles associated with the development site.

4. Trip Rates

Servicing Vehicle Trip Attraction

4.1. The number of delivery movements associated with the site is anticipated to be low and so the servicing demand of the site is expected to have a negligible impact on the local highway network.

4.2. As a robust assessment, every LGV and OGV recorded as part of the TRICS assessment within the TA has been assumed to be a servicing vehicle. **Table 3.1** shows the appropriate trip rates, and calculated trip generation for the proposed 387 units. Whilst servicing and delivery vehicles will be encouraged to avoid the peak hours, the potential number of servicing vehicles has been shown to demonstrate the potential low volume associated with the site.

	Arr		Dep		Total	
	08:00-09:00	17:00-18:00	08:00 - 09:00	17:00-18:00	08:00 - 09:00	17:00-18:00
Trip Rate (Per Unit)	0.004	0.0025	0.0045	0.0025	0.0085	0.005
Total Trips (392 Units)	2	1	2	1	3	2

Table 3.1: Servicing Vehicle Trips

Note – any errors due to rounding.

4.3. **Table 3.1** shows that 3 two-way 'servicing' vehicles are predicted to access the site at the AM peak and 2 two-way trips during the PM peak, which will have a negligible impact on the local highway network.

4.4. The servicing trips are not additional trips to the network, rather trips already accounted for in the original Transport Assessment.

5. Objectives and Mitigation Measures

Objectives

5.1. One of the key objectives of this DSMP is to ensure deliveries are effectively managed at the site and to help reduce possible negative impacts associated with delivery and servicing activity as a result of the development.

5.2. Sub-objectives of this Framework DSMP include:

- To promote use of low or zero emission vehicles for delivery and servicing, and in turn reduce CO_2 and air pollutant emissions from deliveries and servicing;
- To reduce the number of delivery and servicing trips; and
- To provide a reduction of local traffic levels / congestion as a consequence of delivery and servicing activities.

5.3. To minimise the potential impact of service vehicles on the local highway network, the following measures should be considered for use at the Site once occupied and a management process has been established. It is anticipated that such measures will be co-ordinated by the site management company and / or the residents / staff as part of the wider servicing strategy.

Targets

5.4. In order to achieve measurable outputs from the DSMP process, it is important to establish targets from the outset, against which progress can be measured.

5.5. As the development is yet to be occupied, the targets set out in this DSMP are provisional. However, it is important that the DSMP actively seeks to ensure that delivery and servicing trips remain as low as possible and are carried out with minimal effect on the local area.

5.6. Targets for this DSMP include:

- Maintaining the low volume of delivery and servicing trips against a baseline over a 5-year period; and

- An increase to the proportion of low or no emission vehicles using the Site.

5.7. The targets as set out above are considered to be "SMART":

- **Specific:** A target to reduce the level of delivery trips.
- **Measurable:** The number of delivery and servicing trips will be measured and monitored using the travel surveys outlined later in this section. This will include details on travel times and type of vehicle.
- **Achievable:** It is considered that given the nature of the site the number of deliveries are expected to be low.
- **Realistic:** It is considered that a target to reduce the level of delivery trips by 10% is realistic given the measures contained within this DSMP.
- **Time-bound:** The targets are to be met within five years of initial occupation of the development.

5.8. The objectives of the DSMP are to detail the anticipated operation of the site to allow deliveries to be well managed and to help reduce the negative impacts of delivery and servicing activities.

Commercial

5.9. To minimise the potential impact of servicing vehicles on the local highway network the following measures are being taken. This will require staff to coordinate with delivery companies when placing goods orders and when setting up regular supplies (such as office stationery for example) to ensure they are aware of the best practice measures that should be adopted when serving the site.

5.10. To reduce the impact of delivery trips and improve the efficiency of freight movement, delivery companies that are committed to following best practice such as the Freight Operator Recognition Scheme (FORS) will be selected where possible.

5.11. Suppliers will be encouraged to use low or no emission vehicles/modes where possible such as when making smaller deliveries e.g. by motorcycle, bicycle or on-foot. It is envisaged that goods and services will be locally sourced where possible to help maintain the sustainable nature of the development and reduce the distances of deliveries.

5.12. Where possible, deliveries will be limited to outside of the traditional peak hours (7:30am to 09:30am, and 4:30pm to 6:30pm), and the site operational peaks to minimise the impact on the surrounding area.

5.13. Should it be necessary for large vehicles to serve the site, these will be arranged to arrive within 'daytime' hours (10am to 4pm) in order to reduce the noise impact on the site and the surrounding areas.

5.14. The above measures will help improve operations at the site by managing and efficiently accommodating the required deliveries and servicing trips, thereby minimising the impact of the site operation on the surrounding highway network.

Residential

5.15. Residents will be encouraged to arrange planned deliveries so that they occur when someone is available to receive them. This advice will be detailed in residential material such as welcome packs, newsletters, emails, etc. They could, for example, work from home to assist with this, and high-speed internet infrastructure will be provided within the development to help facilitate this.

5.16. If this does not prove viable, then residents will be encouraged to arrange for deliveries to be made to an alternative address such as to their workplace or to a friend or family member. This will reduce the frequency of attempted / failed deliveries at the site and will alleviate the requirement for additional delivery trips to be made.

5.17. Where known servicing or maintenance works are required, wherever possible these will be arranged to occur outside of peak periods.

5.18. Residents will be made aware of the refuse store locations and calendar of collections so that they can make the necessary arrangements for their waste to be collected. This will reduce the potential for large amounts of waste to build up on-site that may otherwise not be able to be held within the refuse bins once they reach capacity.

6. Monitoring and Management

6.1. The purpose of the DSMP is to help mitigate any negative impacts of delivery / servicing activities at the proposed development Site. This will be achieved by making use of the previously used delivery and waste collection arrangements and by implementing the mitigation measures outlined in **Section 5.0**.

Monitoring

6.2. The site management company will monitor deliveries and servicing activities associated with the Site. This will include a number of observations including on-street parking availability and possible issues / conflicts which arise as a result of servicing or deliveries at the Site.

6.3. An initial (baseline) survey can be undertaken within the first three months of occupancy to help address any concerns raised, if deemed necessary.

6.4. The record would provide details of the frequency, times and types of deliveries undertaken and would allow opportunities to better manage deliveries to be identified.

Management

6.5. The site management company will take responsibility for developing and managing the DSMP. It may be necessary for additional measures to be implemented to help achieve the objectives of the DSMP, such as to:-

- Communicate with suppliers (where necessary) and encourage them to follow best practice guidance such as the FORS;
- Ensure delivery drivers are aware of the appropriate delivery and parking arrangements around the site which should be used, where possible;
- Monitor the availability of on-street parking around the Site on a more frequent basis to understand the extent of and fluctuations in their usage across the day / week; and

- Take action where required to address any issues highlighted within the monitoring process.

Action Plan

6.6. An Action Plan could be developed to help implement the measures outlined within **Section 5.0** and provide the appropriate timescales for delivering these.

6.7. The Action Plan should cover short, medium and long term actions. These could include but not be restricted to the following:-

- Ensure residents and key stakeholders are able to access a version and are aware of the measures;
- Monitor delivery vehicle parking habits;
- Encourage residents to arrange deliveries and servicing / maintenance visits to avoid the peak times where possible;
- Monitor delivery activities and record any issues; and
- Implement additional measures if deliveries are not aligned with the pre-determined baseline and start to increase.

Drawings

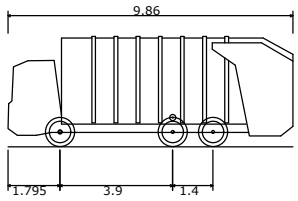
N

KEY

SITE BOUNDARY

DISTANCE FROM REFUSE VEHICLE TO BIN STORE

LOCATION OF RESIDENTIAL BIN STORES



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

FOR INFORMATION ONLY

Rev	Description	Drn	Chk	App	Date
A	SITE LAYOUT UPDATED	JE	PR	ATB	23.08.2023

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Client

BELLWAY HOMES LIMITED

Project Title:

YARNTON WAY, BELVEDERE

Drawing Title:

REFUSE VEHICLE SWEPT PATH ANALYSIS

A3 Scale	Date	Designed by
1:1000	17.08.23	GL
Drawn by	**Checked by**	**Approved by**
GL	AG	ATB

Drawing Number 194180-D015 Rev A