

TRANSPORT STATEMENT

Network Space

Knowsley – Van Storage

January 2022

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1 Introduction

- 1.1 Vectos has been commissioned by Network Space ('the Applicant') to provide highways and transport advice to support a planning application for the proposed development of land at Britonwood Trading Estate, south of Faraday Road in Knowsley, Merseyside.
- 1.2 The proposed scheme concerns the development of the site for van storage associated with a nearby distribution centre situated approximately 600m north, within Britonwood Trading Estate.
- 1.3 These development proposals have therefore been brought forward to accommodate operational van storage associated with the distribution centre. This arrangement will improve the existing operations in order to facilitate a reduction in overall journeys and improve the sustainability of the operation.
- 1.4 As discussed in the planning statement, the site is ancillary to the distribution centre that it serves and therefore should be classified as Use Class B8.

Previous Assessment

- 1.5 An assessment of the site was undertaken as part of application 20/00433/FUL for the same proposed facility but for a larger number of van storage spaces. This application was withdrawn by the client for other reasons not related to transport and highways.
- 1.6 It was understood that, at the time, the application was accepted in principle, as well as its highways impacts. This new application comprises less van storage spaces, albeit for a new distribution centre.
- 1.7 This Transport Assessment (TS) has been prepared to support the submission of the full planning application and the remainder of the report is structured as follows:
 - Section 2 - Existing Conditions;
 - Section 3 - Policy Context;
 - Section 4 - Development Proposals;
 - Section 5 - Trip Generation; and
 - Section 6 - Summary and Conclusion

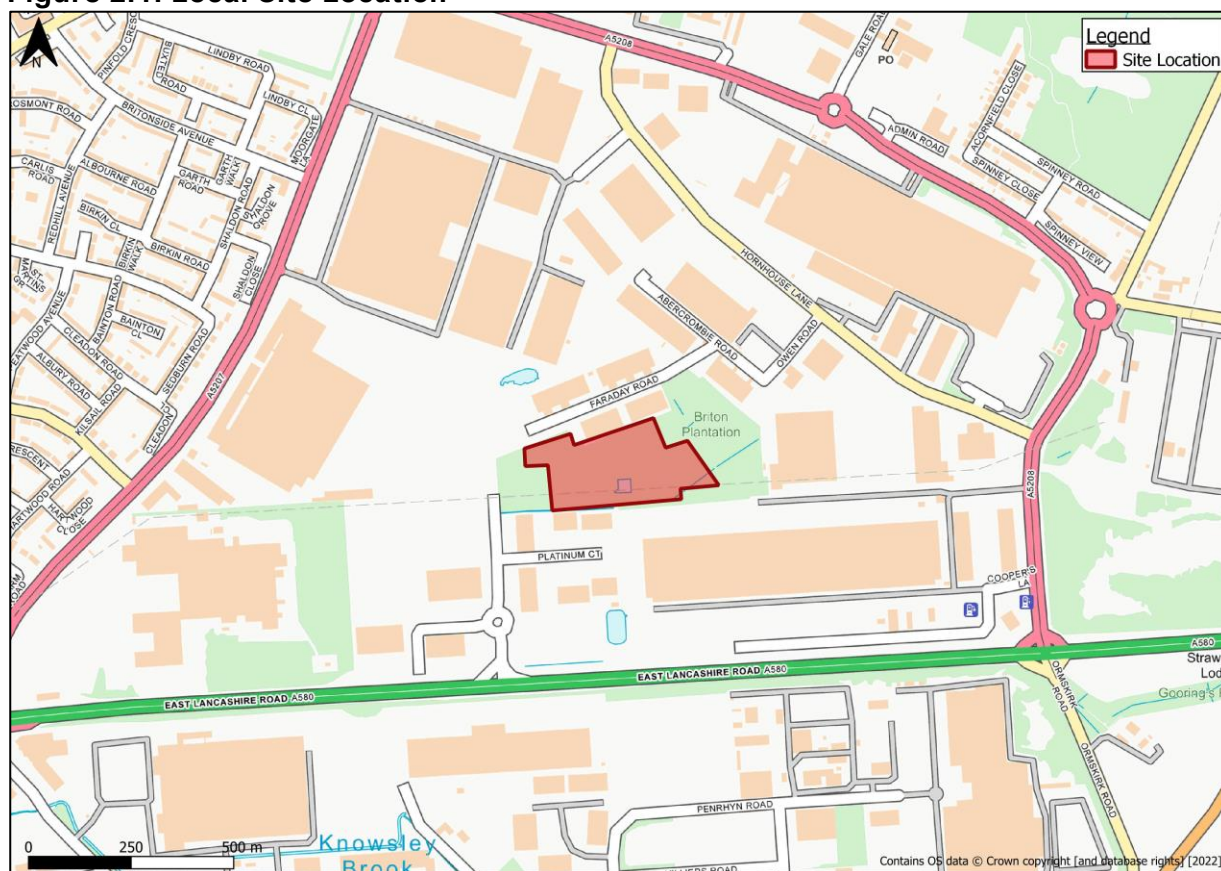
2 Existing Conditions

- 2.1 This section of the TA provides an overview of the current accessibility of the site in terms of sustainable travel, and a high-level review of the local highway network.

Site Location

- 2.2 The site is located within Britonwood Trading Estate in Knowsley, that lies approximately 10km to the north east of Liverpool City Centre. **Figure 2.1** shows the site location within a local context.

Figure 2.1: Local Site Location



Existing Use

- 2.3 As stated, the site lies within Britonwood Trading Estate on currently unoccupied land to the south of Faraday Road.

Accessibility by Non-Car Modes

- 2.4 The site is located within an existing industrial estate, with bus provision and walking/cycling options available to encourage sustainable travel. The following text summarises the existing sustainable transport infrastructure that serves the site.

Walking

- 2.5 Faraday Road provides lit footways along both sides of its carriageway. These connect with a wider network of footways that are located adjacent to the other roads within the wider industrial estate. These allow for uninterrupted pedestrian movement to and from the site.
- 2.6 Dropped kerb crossing points are provided at most junctions within the estate, with tactile paving provided in some of these locations. A signalised crossing point is provided on South Boundary Road, which facilitates crossings in a north to south direction. This crossing point features dropped kerbs, guardrails and a staggered refuge island. This crossing point allows pedestrians to reach the Admin Road bus stops located on the northern side of the carriageway, to the east of the crossing.

Cycling

- 2.7 The site is well located to take advantage of the national cycle network. National cycle route 862 starts near Kirkby train station and then proceeds in a south-east direction, broadly following the M57. The route then terminates in the Stockbridge Village area, circa 2km from route 62, which links with other sections in the wider area.
- 2.8 While not part of the national cycle route, Moorgate Road North, to the west of the site, and South Boundary Road, to the north of the site, provide shared surface routes which can be used by cyclists to connect with route 862. An extract from the Knowsley cycle map shows the local cycle network, in **Figure 2.2**.

Figure 2.2: Local Cycle Network



- 2.9 It is worthy to note that Kirkby railway station is accessible within an approximate 15-minute cycle time of the site. As is demonstrated below, this station is served by ten services an hour and thus there is a real opportunity here for linked cycle-rail trips to be used when travelling to and from the site.

Public Transport

Bus Services

- 2.10 The nearest bus stop is located on Hornhouse Lane, approximately 750m walking distance north of the site and serves the 897 bus service. Additional services are also available from bus stops on South Boundary Road (16-minute walk north-east of the site). A summary of the bus services available at these stops are shown in **Table 2.1**.

Table 2.1: Bus Services Summary

Service	Route	Frequency
Hornhouse Lane		
897	Kirkby Admin – Huyton Industrial Estate	2 per day
	Huyton Industrial Estate – Kirkby Admin	2 per day
South Boundary Road - Bus Stops (Kirkby Admin, QVC, Coopers Lane, Hornhouse Lane)		
14C	Towerhill-Kirkby Admin-Liverpool	1 per day
14x	Liverpool – Kirkby Industrial Estate	4 per day (before 08:00)
17	Liverpool ONE Bus Station - Kirkby Civic Centre	2 per hour (AM and PM Peak), 1 per hour (Inter-Peak)
	Kirkby Civic Centre - Liverpool ONE Bus Station	2 per hour (AM Peak), 1 per hour (Inter-Peak and PM Peak)
19	Mann Island - Kirkby Civic Centre	1 service (06:15) per day
	Kirkby Civic Centre – Mann Island	2 services (05:30-06:30) per day
97 / 97A	Kirkby Station – Knowsley Industrial Park - Kirkby Station	Every 30 minutes (circular)
	Kirkby Station – Knowsley Industrial Park – Kirkby Station	Every 30 minutes (circular)
133	Waterloo - Knowsley Industrial Park	5 per day
	Knowsley Industrial Park - Waterloo	4 per day
217 / 217A	Kirkby Civic Centre - Huyton Bus Station	3 per hour
	Huyton Bus Station – Kirkby Civic Centre	3 per hour
289	Kirkby – St Helens	1 per hour (Saturday)
	St Helens - Kirkby	1 per hour (Saturday)
297	St Helens - Kirkby	Every 2 hours
	Kirkby – St Helens	Every 2 hours
827	Old Swan - Knowsley Industrial Park	1 per day
898	Page Moss – South Boundary Road – Page Moss	1 per hour
	Page Moss – South Boundary Road – Page Moss	1 per hour
899	Page Moss – Kirkby Admin – Page Moss	1 per hour
	Page Moss – Kirkby Admin – Page Moss	1 per hour

- 2.11 Bus services are also available from stops on Coopers Lane (14-minute walk to the east of the site) with routes 14, 217 / 217A, 289, 297, 897 and 898 as set out **Table 2.1** also available from these stops.

Rail Services

- 2.12 Kirkby Station is the nearest station and is located approximately 3.2km north-west of the site. The station is managed by Merseyrail. The station is accessible within 24 minutes via the 97 bus service from the Kirkby Admin bus stop, located on South Boundary Road.
- 2.13 A summary of the destinations reachable from this station and service frequencies are set out in **Table 2.2**.

Table 2.2: Kirkby Railway Station Services Summary

Route	Frequency
Kirkby - Liverpool Central	4 per hour
Liverpool Central - Kirkby	4 per hour
Kirkby - Manchester Victoria	1 per hour
Manchester Victoria – Kirkby	1 per hour

- 2.14 The station is accessible within an approximate 15-minute cycle time of the site.

Local Highway Network

Faraday Road

- 2.15 Faraday Road is a single carriageway road, which provides access to the site and neighbouring warehouse/commercial properties. The street is subject to a 30mph speed limit and is lit at frequent intervals. Footways are provided on both sides of the carriageway of Faraday Road.

Hornhouse Lane

- 2.16 Hornhouse Lane is a single carriageway road, which provides access to various warehousing and commercial properties. It also forms a junction with Owen Road/ Abercrombie Road, which in turn provide access to Faraday Road.
- 2.17 Hornhouse lane is subject to a 30mph speed limit and is lit at frequent intervals. Footways are provided along both sides of the carriageway.

A5208

- 2.18 The A5208 is located to the east and north of the site (as Coopers Lane and South Boundary Road respectively). The road takes the form of a dual carriageway and provides links to the wider area, with the south of Coopers Lane forming a junction with the A580 and Ormskirk Road, while South Boundary Road forms a junction with the A5207.
- 2.19 The route is subject to a 40mph speed limit and is lit at frequent intervals. A shared surface footway/cycleway is provided.

Road Safety

- 2.20 Collision data has been obtained for the latest 5-year period using CrashMap, an online collision records data source. A high-level assessment of the collision data has been undertaken along the local road network to determine if there are any collision clusters that signify a road safety issue.
- 2.21 The data shows that there have been no collisions recorded along Faraday Road. A slight collision has been recorded along Abercrombie Road as shown in **Extract 2.1**. The collision did not involve pedestrians or cyclists.
- 2.22 To conclude, the collision data obtained from CrashMap does not suggest any collisions within the latest 5-year period on the local road network are a result of any highways design flaws, and as such the proposed development is not considered to pose a road safety risk on the local highway network.

Extract 2.1: Personal Injury Collision Data



3 Policy Context

National Policy

National Planning Policy Framework (NPPF, 2021)

- 3.1 The National Planning Policy Framework (NPPF) sets out national planning policies for England and how they should be applied. The NPPF must be taken into account in preparing the development plan and is a material consideration in planning decisions.
- 3.2 Paragraph 11 of the NPPF identifies that “*plans and decisions should apply a presumption in favour of sustainable development*” and for decision-taking this means:
- “*approving development proposals that accord with an up-to-date development plan without delay; or*
 - *where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:*
 - *the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or*
 - *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.*”
- 3.3 In terms of promoting sustainable transport and supporting development proposals, the following paragraphs of the NPPF are considered relevant:
- 3.4 Paragraph 104:
- “*Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*
- *the potential impacts of development on transport networks can be addressed;*
 - *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
 - *opportunities to promote walking, cycling and public transport use are identified and pursued;*
 - *the environmental impacts of traffic and transport infrastructure can be identified, assessed, and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
 - *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.*”

3.5 Paragraph 107:

“If setting local parking standards for residential and non-residential development, policies should take into account:

- the potential impacts of development on transport networks can be addressed;*
- the accessibility of the development;*
- the type, mix and use of development;*
- the availability of and opportunities for public transport;*
- local car ownership levels; and*
- the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.”*

3.6 Paragraph 108:

“Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network [...]”

3.7 Paragraph 110:

“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- safe and suitable access to the site can be achieved for all users;*
- the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

3.8 Paragraph 111:

“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”

3.9 Paragraph 112:

“Within this context, applications for development should:

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

3.10 Paragraph 113:

“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”

Planning Practice Guidance

3.11 Planning Practice Guidance (PPG), which is available from the Ministry of Housing, Communities and Local Government website, supports the overarching aims of the NPPF. Relevant transport guidance for planning applications is provided in “Travel plans, Transport Assessments and Statements” dated 6 March 2014 which identifies that a planning application should typically consider the following (paragraph 15): information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport);

- information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;
- data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;
- a qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;

- an assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);
- data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;
- an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;
- an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);
- measures to improve the accessibility of the location (such as provision/ enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;
- a description of parking facilities in the area and the parking strategy of the development;
- ways of encouraging environmental sustainability by reducing the need to travel; and,
- measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads).

Local Policy

Knowsley Local Plan Core Strategy (2016)

- 3.12 The Knowsley Local Plan Core Strategy document has been produced to detail the vision, objectives and policies that will be in place to guide development in Knowsley up to 2028.
- 3.13 Policy SD1 relates to Sustainable Development and states that where planning applications accord with the policies within the Core Strategy document, they will be approved without delay, unless there are material considerations which indicate otherwise.
- 3.14 Policy CS4 relates to Economy and Environment and states that sufficient land should be provided to meet employment development needs and that the quality and efficiency of land use within existing employment areas should be enhanced.
- 3.15 It is noted that the development site is identified on the Local Plan Policies map as a location for employment development. In this regard, it is clear that it provides a sustainable location for employment activities.
- 3.16 Policy CS7 relates to the transport network and states that new development should prioritise accessibility and sustainable modes through design. The overall transport strategy also seeks to help

meet the development needs of the borough, improve road safety and to ensure that a choice of sustainable modes are available.

- 3.17 Policy CS11 relates to Knowsley Industrial and Business Parks and states that the Knowsley Industrial Park area is identified as a 'Priority Zone' to promote the production of renewable, low carbon and decentralised energy and that improved facilities for sustainable transport will be supported.

Knowsley Unitary Development Plan (2006)

- 3.18 Policy EC2 (Sites Allocated for Employment) confirms that the Site is allocated on the Proposals Map for development for business (Class B1), industrial (Class B2), or storage and distribution (Class B8) uses (reference E12 Brintonwood).
- 3.19 Policy T8 (Transport Assessments) states that development proposals that would prejudice the primary function of any part of the highway network (i.e. the motorway, trunk road, primary and local highway network) by generating a material increase in traffic, which would overload the access to, or any part of the network, will not be permitted, unless the necessary mitigation measures required are undertaken.

Merseyside Local Transport Plan 3 (2011-2026)

- 3.20 The Merseyside Local Transport Plan 3 outlines the goals and vision for local transport between 2011-2026.
- 3.21 The six goals which are sought in order to achieve the transport vision are as follows:

"One - Help create the right conditions for sustainable economic growth by supporting the priorities of the Liverpool City Region, the Local Enterprise Partnership and the Local Strategic Partnerships.

Two - Provide and promote a clean, low emission transport system which is resilient to changes to climate and oil availability.

Three - Ensure the transport system promotes and enables improved health and wellbeing and road safety.

Four - Ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, other essential services and leisure and recreational opportunities.

Five - Ensure the transport network supports the economic success of the city region by the efficient movement of people and goods.

Six - Maintain our assets to a high standard."

4 Development Proposals

- 4.1 This section of the report sets out the development proposals of the site, which comprise the construction of a:

“Development of site for storage of operational vehicles, including resurfacing, associated parking, guard hut, welfare building, landscaping, and associated development and infrastructure”

Site Layout

- 4.2 The site area covers 2.38ha which includes the provision of 359 van storage bays, a guard hut, drivers welfare block, smoking shelter, cycle shelter and motorcycle parking spaces.
- 4.3 The site layout for the proposed development is shown in **Appendix A**.

Vehicular Access

- 4.4 The site will be accessed via a new vehicular access arm that will connect to Faraday Road to the north west corner of the proposed development. It has been designed to accommodate two-way flows and as such can cater for all arrivals to and departures from the site.
- 4.5 Swept path analysis has been undertaken which shows vans are able to access and exit the site. This is provided in **Appendix B**.

Cycle Parking

- 4.6 There will be 8 cycle parking spaces provided on-site in the form of a secure cycle shelter. This is considered appropriate based on the census travel to work mode split which indicates that circa 2% of employees would commute to site via cycle. As shown in **Table 5.3** below, this equates to 8 employees.

Motorcycle Parking

- 4.7 There will be 18 motorcycle parking spaces provided on-site.

Future Site Operation

Overall Strategy

- 4.8 Before outlining how the Van Storage site will operate, it should be noted that it is not in the interest of the intended operator for drivers to be waiting or queuing at the Distribution Centre as this reduces the efficiency of the use of the vans. By including Van Storage to allow freight consolidation and more tightly manage deliveries within the operation, this reduces the potential for any disruption on the highway network around the Distribution Centre.
- 4.9 The way that this is managed is as follows:

Overarching Principle

- The Van Storage parking is associated with an existing distribution centre within Britonwood Trading Estate. The distribution centre is located approximately 600m to the north. It is to store vans that are already on the network and travelling to the last mile Distribution Centre but are parked in off-site locations.
- Van Storage has been accepted by other highway authorities as being a positive contribution to freight consolidation i.e. ensuring the vans are all used efficiently and ensuring the optimum loading for each van.
- The advantages of the Van Storage area are that the operation of the vans can be controlled more effectively and facilitates the operator introducing their own van fleet and moving towards having an electric van fleet.
- Van Storage allows the whole operation to be managed in a tighter way by linking all van movements to loading slots to avoid any risk of queuing.
- As the Van Storage site is a 4 minute drive to the related Distribution Centre, there is more certainty about when they will arrive and where they will arrive from.

Drivers Arriving

- Drivers are aware of the time they need to pick up their van. They also know which van they will be driving.
- The van drivers either have their van keys or collect them from the security hut when they arrive.
- Those that arrive by car will either park in any empty space (swap spaces) or stop their car in the aisle and then park it in the vacated Van Storage space. This takes a very short time.
- Those that cycle or travel by motorcycle can go straight to their van after they have parked their cycle or motorcycle.
- Those who walk can go straight to their van after they have entered the site.
- If a driver does arrive early to pick up a van, they can wait within the Van Storage site.
- The departures from the Van Storage site are directly related to when the vans are needed at the Distribution Centre.
- Vans do not keep returning to the site to be reloaded throughout the day but make a single delivery run. Each delivery route planned depends on where parcels need to be delivered to and when they need to be delivered to ensure the most efficient delivery pattern. This is to optimise the loading of vans and minimise overall delivery mileage.

- Each driver will know the time their van is scheduled to be loaded at the Distribution Centre and the time it takes to travel there. They can therefore time their departure from the Van Storage area to arrive for their designated loading time.
- The drivers arriving at the Van Storage will be staggered in line with the staggered loading times at the Distribution Centre.

Drivers Leaving

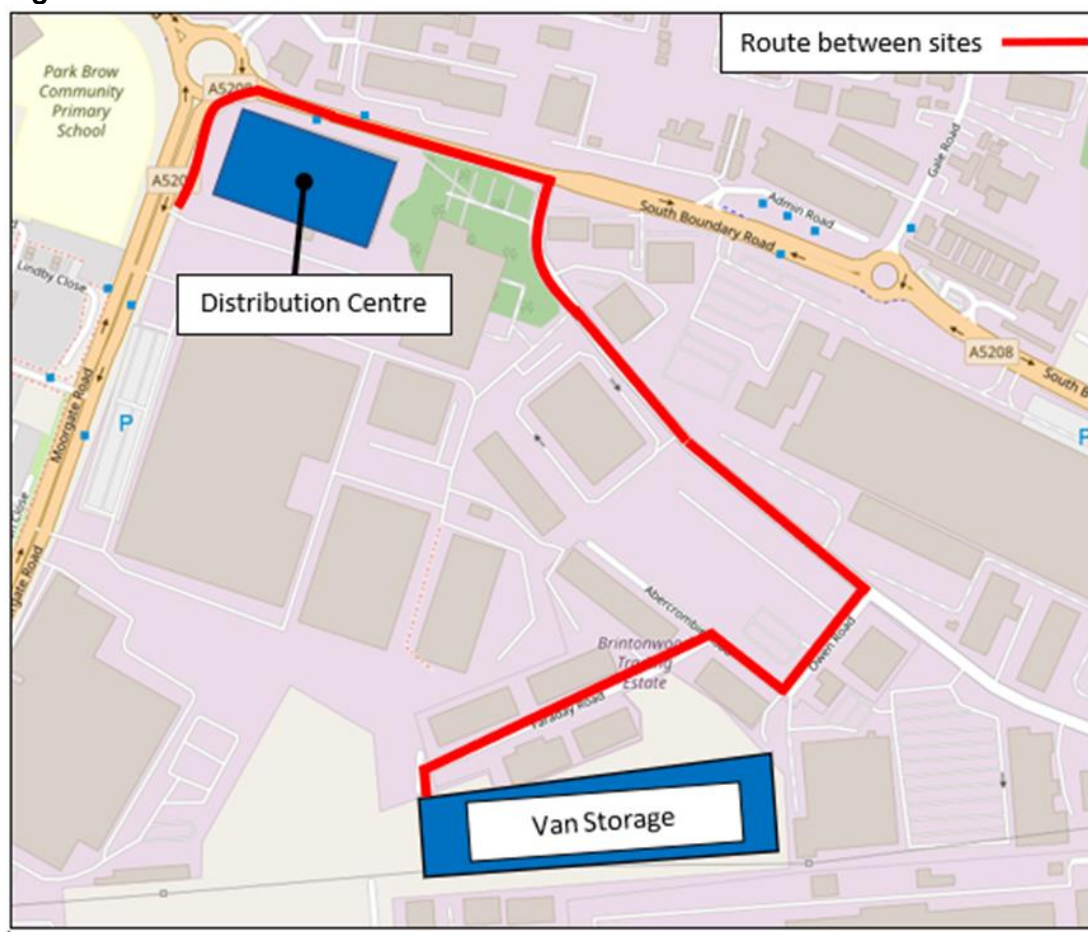
- This is the reverse of the above. When drivers have finished their daily delivery run, they return their van to the storage area and if they have driven, they then pick up their car. This is staggered as drivers will finish their delivery runs at different times which relate to the time their delivery run started.

- 4.10 As such, staff working at the Distribution Centre (in the warehouse) are unrelated to the Van Storage site. Staff at the Distribution Centre working in the Warehouse will continue to travel to and from the Distribution Centre by various modes and park at the Distribution Centre. Staff working within the Warehouse would not increase because of the Van Storage site.
- 4.11 It is also important to note that the vehicles associated with the proposed development are already present on the highway network. The one key difference being these vehicles being private and/or owned by a contractor. In this regard, there will not be a net increase in activity on the wider network, rather there is a redistribution of traffic at the local level.

Inter-site Travel

- 4.12 Journeys to the distribution centre from the van storage site are proposed to be made by travelling east from the site along Faraday Road, continuing south on Abercrombie Road, travelling north along Owen Road, heading northbound on Hornhouse Lane and then south on Moorgate Road North. This equates to a journey time of approximately 4 minutes.
- 4.13 The route between the van storage site and distribution centre is shown in **Figure 4.1**.
- 4.14 **Figure 4.1** shows that due to the closeness of the van storage to the distribution centre, the impact of re-distributed vehicles would only affect the immediate local vicinity surrounding the site.

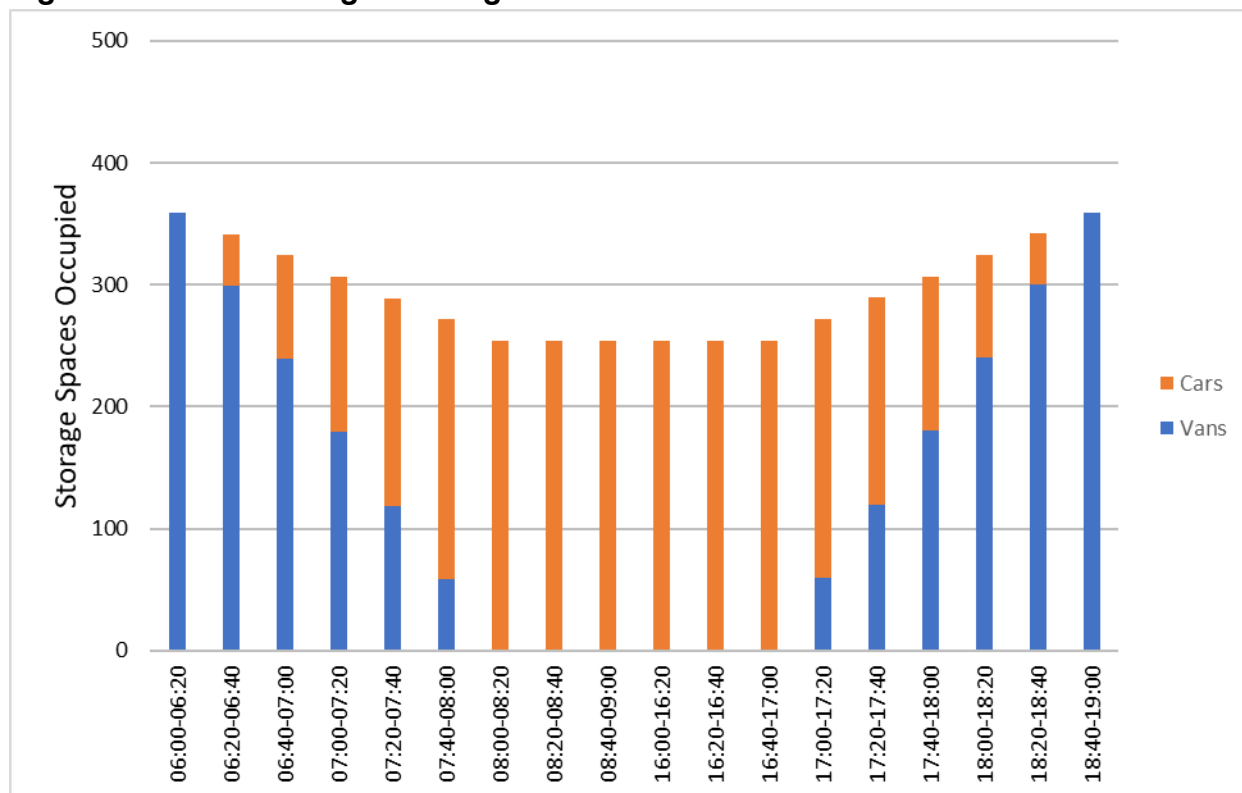
Figure 4.1: Inter-site Travel



Staff Parking Accumulation

- 4.15 As noted above, all van drivers commuting to the site by car would park in a Van Storage space once vans are removed for use, so all car parking requirements will be accommodated on-site. In order to demonstrate there will be no overspill onto surrounding roads, an assessment has been undertaken to consider the cumulative operation of the combined van storage site.
- 4.16 The accumulation graph provided at **Figure 4.2**, overleaf clearly shows there will be no overspill of car parking onto surrounding roads. As each Van Storage space becomes available, car parking spaces increase.

Figure 4.2 – Van Storage Parking Accumulation



Reduce Emissions

Zero Carbon Emissions

- 4.17 The occupier is committed to driving sustainability across its operations, from utilising renewable energy sources, responsibly sourcing goods/materials, to switching to reusable packaging.
- 4.18 The proposals will align with the occupier's ambitions to utilise 100% renewable energy across its operations and ensure at least 50% of all its shipments achieve net zero carbon emissions by 2030.

Euro 6

- 4.19 Euro 6 is the latest standards introduced by the European Commission to regulate the level of pollutants released from the tailpipes of vehicle engines. Euro 6 aims to reduce the levels of harmful emissions including nitrogen oxide (NOx), carbon monoxide, and particulate matter i.e. soot from diesel engines.
- 4.20 Different emissions standards have been set for petrol and diesel engines. The permitted level of NOx emitted from a diesel engine has been drastically reduced by 55% from 180mg/km to just 80mg/km. In contrast, the NOx limit for petrol engines has not been altered from the Euro 5 standards and remains at 60mg/km.
- 4.21 The occupier will operate their own fleet of vans at the site and this allows them to control the standard of the vehicles being used. As stated above, the Occupier is committed to reducing the

emissions from their own fleet and is working towards all vans being compliant with the Euro 6 standards for emissions.

Promoting Sustainable Transport

4.22 The Applicant is committed to encouraging a reduction in single occupancy vehicle trips as part of its wider sustainability strategy outlined above with respect to its vehicle fleet. As part of this strategy, it will be possible for drivers of the vans, that will be stored on-site, to be offered and benefit from the measures that are already offered to on-site employees of the distribution centre that the vans will serve. This includes:

- Welcome Packs and Information Boards that include:
 - Information on the health benefits of using active modes of transport;
 - Promotion of Public Transport through the inclusion of bus route maps and timetables and any other public transport information;
 - Promotion of walking and cycling through the inclusion of maps showing walking and cycling routes close to the site; and
 - Details of any cycle discounts and local schemes
- Physical walking and cycling measures, such as:
 - Showers and changing facilities within the distribution centre for all workers to use; and,
 - Lockers for the safe storage of personal items (incl. cycling equipment) whilst at work.
- A cycle to work scheme, which is available to all permanent employees.
- Encouraging car sharing.
- Measures to raise travel awareness are promoted, including national events such as those listed below
 - National Liftshare Week;
 - Walk to Work Day; and
 - National Bike Week

4.23 It is worthy to note that these measures have been found to be successful at ensuring single occupancy vehicle trips are generally in the region of 40% to 50% at other depots of the distribution centre that the vans will serve.

5 Trip Generation

5.1 This section sets out the anticipated traffic generation of the proposed development.

Background

- 5.2 As mentioned in the introduction, an assessment of the site was undertaken as part of application 20/00433/FUL for the same proposed facility but for a larger number of van storage spaces (501 spaces).
- 5.3 It was understood that the application was accepted in principle, without prejudice, as well as its highways impacts.
- 5.4 This new application comprises fewer van storage spaces (359 spaces, 142 fewer spaces), albeit serving a new distribution centre. The new van storage site does not cover all the vans storage needs of the new site and this may be sought via a different application at a future date.
- 5.5 The trip generation within the withdrawn application comprised 287 and 288 two-way movements over the AM and PM development peak hours respectively. This was based on the hours of operation and the number of launch bays at the previous distribution centre, which was 60.
- 5.6 This new distribution centre to be served also comprises 60 launch bays and as such the maximum trip generation per hour would be the same as application 20/00433/FUL.
- 5.7 For clarity we have explained the parameters that control the trip generation and how this produces our peak hour trip generation below.

Proposed Trip Generation

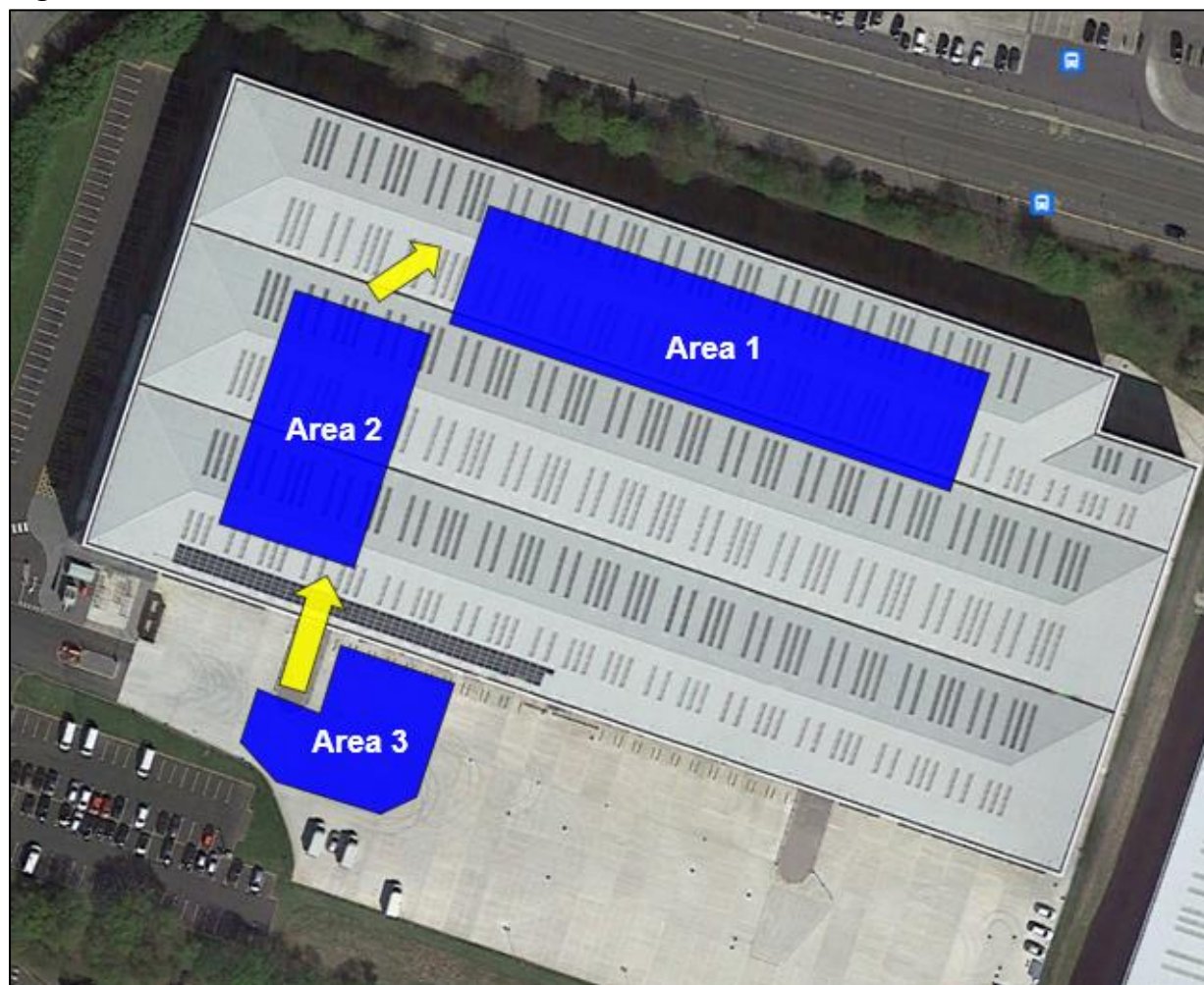
Methodology

- 5.8 For the purposes of this assessment, a first principles approach has been taken to trip generation based on the site operation as described in Section 4, having regard to journey to work statistics for the local area. This is a worst-case theoretical exercise that shows how the van storage site and associated last mile delivery warehouse could operate at full capacity. In reality there will be daily variations that occur that mean the flows presented will not always reach this level. Our assessment should thus be viewed as a worst-case assessment.
- 5.9 It is important to recognise that the proposed development does not include any amendments to the floor area of the warehouse within Britonwood Trading Estate and/or the throughput of parcels therefrom. Given that these points are the main parameters that dictate trip generation, the proposals will not increase vehicle trips associated with the operations of the intended user.
- 5.10 In this regard, the proposals will, in effect, result in a redistribution of existing vehicle movements rather than generate new trips in their own right.

Operational Movements

- 5.11 To understand the operation trip generation of the van storage site it is first important to understand the movements from the distribution centre.
- 5.12 The distribution centre releases vans in circa 20-minute waves out for deliveries. The number of vans that can be released at a time is dependent on how many can be loaded simultaneously and how many can be launched in one go.
- 5.13 This distribution centre has space for 60 vans to be launched within a 20-minute period. This therefore means that there is capacity currently for 180 vans to depart in one hour. These are existing movements reflective of what could occur at the existing distribution centre.
- 5.14 **Figure 5.1** below depicts three different areas to where vans arrive, wait and are loaded within the existing distribution centre.
- Area 1: comprises 60 spaces. This is where vans are loaded and then sent on their deliveries, termed as launch bays.
 - Area 2: comprises 60 spaces. This is where vans come to wait before moving into the loading area.
 - Area 3: comprises 46 spaces. This is an overspill area to accommodate any vans that arrive a couple of minutes early for their waiting area slot.

Figure 5.1: Distribution Centre Movements



- 5.15 Working backwards, delivery drivers are provided a departure time slot, for example 08:40-09:00. On this basis, vans must be fully loaded by 08:40 and as it takes 20 minutes to load vans, vans are loaded between 08:20-08:40 within Area 1.
- 5.16 To ensure drivers arrive to Area 1 on time, they must be waiting in Area 2, 20 minutes before this, and therefore should arrive at Area 2 between 08:00-08:20.
- 5.17 As the van storage site is located a circa 4-minute drive from the site, vans would depart between 08:00-08:20 from the van storage site.
- 5.18 Area 3 is provided in case drivers arrive early to ensure no overspill parking.
- 5.19 In summary, there are a total of 359 van storage spaces which at a maximum, could depart in batches of 60 every 20 minutes to arrive at the distribution centre for their allotted time. It would therefore take 2 hours (60 launch bays multiplied by six 20-minute waves) for the entire vans storage fleet to be depleted. This relationship is shown within **Table 5.1**, overleaf.

Table 5.1: Departures from the van storage site into the distribution centre

Time Period	Depart Van Storage Site	Arrive to Waiting Area	Move to be Loaded	Depart Distribution Centre
06:00-06:20	0	0	0	0
06:20-06:40	60	60	0	0
06:40-07:00	60	60	60	0
07:00-07:20	60	60	60	60
07:20-07:40	60	60	60	60
07:40-08:00	60	60	60	60
08:00-08:20	59	59	60	60
08:20-08:40	0	0	59	60
08:40-09:00	0	0	0	59
Total	359	359	359	359

- 5.20 It should be noted that usually 10-15% of van storage spaces are reserved for fleet management i.e. for breakdowns, spare van or empty spaces to speed up van movements. As such 359 should be viewed as a worst-case scenario that is unlikely to be realised.
- 5.21 In the latter half of the day all vans would return to the van storage site, with some routing via the distribution centre first to drop-off return deliveries. The arrival profile to the van storage site is assumed to be the reverse of when it departed as all vans are loaded to carry out a full day of deliveries before returning. This profile of vans returning is provided in **Tabel 5.2** below.

Table 5.2: Arrivals from deliveries and the distribution centre to the van storage site

Time Period	Arriving via the distribution centre	Arrive direct from deliveries	Total Arrivals
16:00-16:20	0	0	0
16:20-16:40	0	0	0
16:40-17:00	0	0	0
17:00-17:20	12	48	60
17:20-17:40	12	48	60
17:40-18:00	12	48	60
18:00-18:20	12	48	60
18:20-18:40	12	48	60
18:40-19:00	12	47	59
Total	72	287	359

Worker Trip Generation

- 5.22 The staff trips associated with the van storage site are directly related to the number of vans being used on a given day. Based on 60 vans departing every 20 minutes, 60 van drivers would need to arrive every 20 minutes via various modes.
- 5.23 Modal split data of workers travelling to and from the proposed site area, has been derived using the 2011 census data “WU03EW – Location of usual residence and place of work by method of travel to

work”. This has been calculated for the surrounding area in which the site is contained (Knowsley 005 (2011 super output area - middle layer)).

5.24 The mode split and resultant split of workers by mode is displayed in **Table 5.3**.

Table 5.3: Worker Modal Split

Mode	Percentage	Worker numbers
Rail	2%	6
Bus, minibus or coach	9%	32
Taxi	1%	5
Motorcycle, scooter or moped	1%	3
Driving a car or van	71%	255
Passenger in a car or van	9%	33
Bicycle	2%	8
On foot	5%	16
Other	0%	1
Total	100%	359

- 5.25 The above data demonstrates that 71% of people currently travelling to work in this area drive to work. It should be noted that surveys undertaken at other sites across the UK, operated by the occupier of the distribution centre, show lower levels of car use for commuting purposes. Indeed, this is typically in the range of 40% to 50%.
- 5.26 Notwithstanding this, the 2011 Census Data mode split of 71% has been used for robustness. It must be noted however that this is worst-case, and we anticipate that the percentage of trips made by car to the site will be lower.
- 5.27 Assuming all vans are used in a day, and applying the 71% car driver mode share, equates to circa 255 van drivers arriving by car. The remaining workers are anticipated to arrive to the site by other modes of travel and will pick up a van.
- 5.28 The profile of staff reflects the van movements. As such the based on 60 vans departing every 20 minutes, 60 van drivers would need to arrive every 20 minutes via various modes, this is, as stated above, based on census mode share.
- 5.29 The resultant movement of vans from **Table 5.1** are provided below with the associated staff movements in **Table 5.4** below.

Table 5.4: Van Storage Trip Generation Summary (Morning)

Time Period	Staff (in cars) arrive to the Van Storage site	Staff (via sustainable modes) arrive to the Van Storage site	Vans departing van storage site (Table 5.1)
06:00-06:20	0	0	0
06:20-06:40	43	17	60
06:40-07:00	43	17	60
07:00-07:20	43	17	60
07:20-07:40	43	17	60
07:40-08:00	43	17	60
08:00-08:20	42	17	59
08:20-08:40	0	0	0
08:40-09:00	0	0	0
Total	255	104	359

5.30 The resultant movement of vans from **Table 5.2** are provided below with the associated staff movements in **Table 5.5** below.

Table 5.5: Van Storage Trip Generation Summary (Evening)

Time Period	Vans arriving at van storage site (Table 5.2)	Staff (in cars) depart the Van Storage site	Staff (via sustainable modes) depart the Van Storage site
16:00-16:20	0	0	0
16:20-16:40	0	0	0
16:40-17:00	0	0	0
17:00-17:20	60	43	17
17:20-17:40	60	43	17
17:40-18:00	60	43	17
18:00-18:20	60	43	17
18:20-18:40	60	43	17
18:40-19:00	59	42	17
Total	359	255	104

5.31 The total vehicle trip generation is provided in **Table 5.6**, overleaf.

Table 5.6: Van Storage Vehicle Trip Generation Summary

Time Period	Staff Arrive (in cars)	Vans Depart	Vans Arrive	Staff Depart (in cars)
06:00-06:20	0	0	0	0
06:20-06:40	43	60	0	0
06:40-07:00	43	60	0	0
07:00-07:20	43	60	0	0
07:20-07:40	43	60	0	0
07:40-08:00	43	60	0	0
08:00-08:20	42	59	0	0
08:20-08:40	0	0	0	0
08:40-09:00	0	0	0	0
Morning Total	255	359	0	0
16:00-16:20	0	0	0	0
16:20-16:40	0	0	0	0
16:40-17:00	0	0	0	0
17:00-17:20	0	0	60	43
17:20-17:40	0	0	60	43
17:40-18:00	0	0	60	43
18:00-18:20	0	0	60	43
18:20-18:40	0	0	60	43
18:40-19:00	0	0	59	42
Evening Total	0	0	359	255

5.32 This would equate to the following peak hour flows.

Table 5.7: Van Storage Vehicle Trip Generation Summary

Time Period	Arrive	Depart	Two-way
05:00-06:00	0	0	0
06:00-07:00	85	120	205
07:00-08:00	128	180	308
08:00-09:00	42	59	101
16:00-17:00	0	0	0
17:00-18:00	180	128	308
18:00-19:00	179	127	306
24hr Daily	614	614	1227

5.33 **Table 5.7** shows that the application site could generate a maximum of 308 two-way hourly vehicle movements between the period of 05:00 – 09:00, and a maximum of 308 two-way hourly vehicle movements between 16:00 – 19:00. Due to fewer van storage spaces, the daily total movements are less than the withdrawn application.

5.34 As stated above, these movements comprise a redistribution of vehicles already on the wider network. Notwithstanding this, given the location of the site it is not considered that these additional

vehicle movements will have a material impact on the surrounding road network during the specified time periods.

- 5.35 This is particularly evident given that the purpose of this scheme is to provide ancillary van storage that accommodates part of the operational requirements of the existing distribution centre within the trading estate. In this regard, and given the capacity of the distribution centre will not be increased as a result of these proposals, the traffic flows presented at **Table 5.7** will already be present on the wider network and thus do not constitute new trips in their own right. In effect the proposed development will result in a redistribution of existing trips.
- 5.36 It is also important to note that the analysis that has been undertaken is based on Census data for the local area and that the proportion of single occupancy car driving trips are significantly higher than what is typically associated with the intended end user of the site. In this regard, the analyses are considered to represent a worst-case scenario that is unlikely to be realised in practice.

6 Summary and Conclusions

- 6.1 Vectos has been commissioned by Network Space ('the Applicant') to provide highways and transport advice to support a planning application for the proposed development of land at Britonwood Trading Estate, south of Faraday Road in Knowsley, Merseyside.
- 6.2 The proposed scheme concerns the development of a 359-space van storage site associated with a nearby distribution centre situated approximately 600m north, within Britonwood Trading Estate.
- 6.3 These development proposals have therefore been brought forward to accommodate operational van storage associated with the distribution centre. This arrangement will improve the existing operations in order to consolidate freight movements and improve the sustainability of the operation.
- 6.4 The development location is well served by a network of existing cycle routes, 10 bus services an hour and within cycling distance of Kirby Railway Station. The provision of this site will allow the transfer of van trips onto sustainable modes.
- 6.5 The trip generation of the proposed development has been calculated based on the modal split of the surrounding area, the number of launch bays at the distribution centre and the number of van storage bays being provided. It is anticipated that the proposed development could generate a maximum of 308 two-way hourly vehicle movements between the period of 05:00 – 09:00, and a maximum of 308 two-way hourly vehicle movements between 16:00 – 19:00.
- 6.6 However, the purpose of this scheme is to provide ancillary van storage that accommodates existing operational requirements of an existing distribution centre. In this regard, and given the capacity of the distribution centre will not be increased as a result of these proposals, the traffic flows presented will already be present on the wider network and thus do not constitute new trips in their own right.
- 6.7 The proposed development will therefore result in a redistribution of existing trips, rather than generate entirely 'new' trips. The scheme will thus not have a material impact upon the highway network.
- 6.8 In summary, this TS confirms the proposed development:
- provides opportunities for sustainable transport modes to be taken up;
 - ensures safe and suitable access to the site can be achieved for all users; and
 - there would not be an unacceptable impact on highway safety, and the level of the residual cumulative impacts on the road network would not be severe.
- 6.9 As such, it is concluded that there is no transport or highways related reason why the proposals should not be granted planning permission.

Appendix A

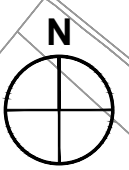
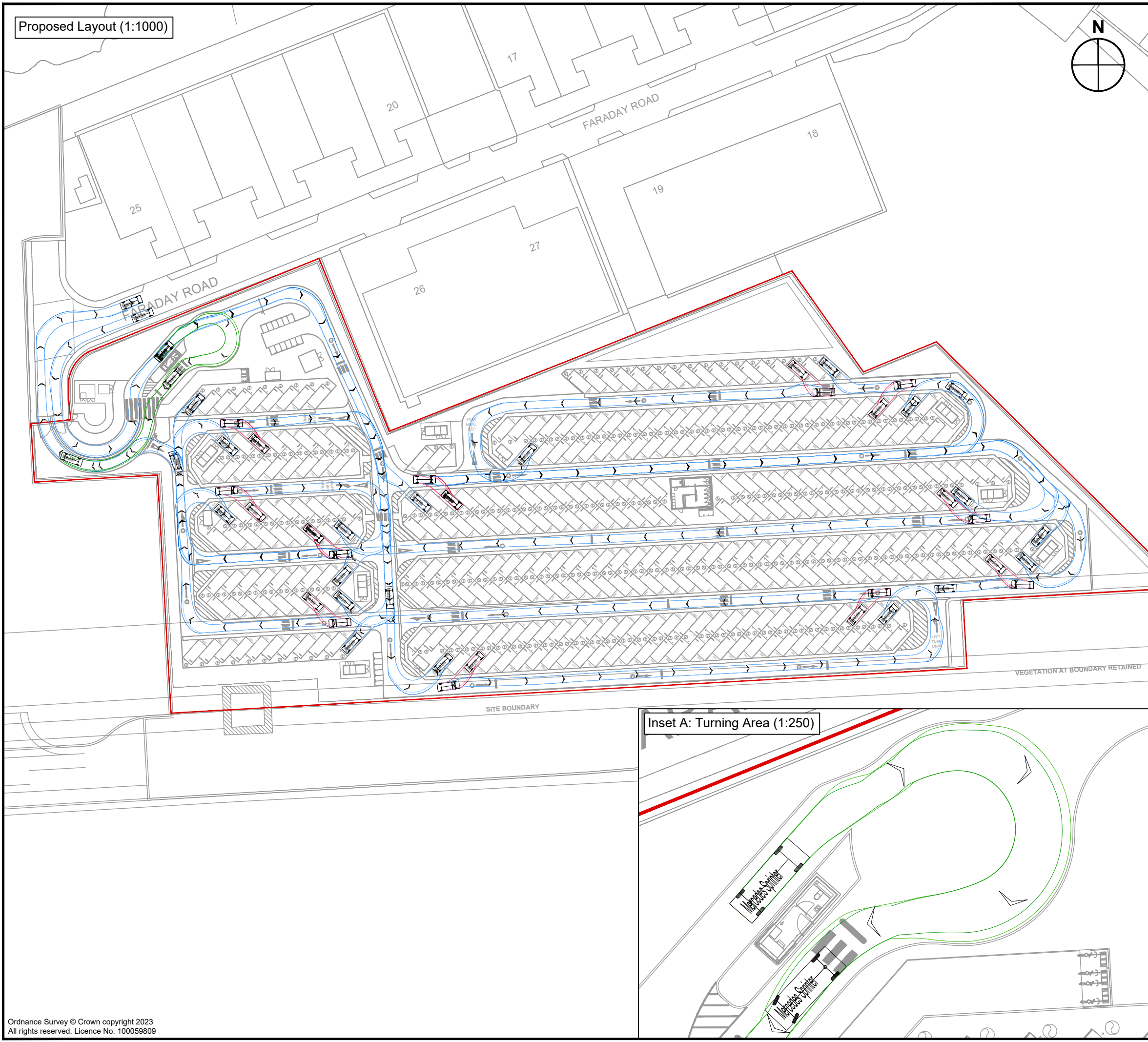


PRO
1:500

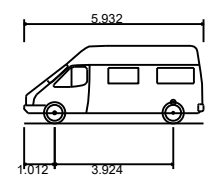
JOB NO. 23013

Appendix B

Proposed Layout (1:1000)



- Notes:
- 1. This is not a construction drawing and is intended for illustrative purposes only
 - 2. White lining is indicative only.
 - 3. Based on ASA layout: 23013-ASA-00-EX-SI-D-A-P03_(S2 - P1)



Mercedes Sprinter	
Overall Length	5.932m
Overall Width	2.020m
Overall Body Height	2.567m
Min Body Ground Clearance	0.339m
Track Width	1.996m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.600m

A	Masterplan Updated	LJ	JM	31.01.23
REV.	DETAILS	DRAWN	CHECKED	DATE

STATUS:

INFORMATION ONLY

CLIENT:

Network Space

PROJECT:

Knowsley

DRAWING TITLE:

Swept Path Analysis
Servicing
Mercedes Sprinter

SCALES:

As Shown at A3

DRAWN:	PP	CHECKED:	JB	DATE:	24.01.2023
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PART OF



The Cursitor, 38 Chancery Lane, London, WC2A 1EN
020 7580 7373
vectos@vectos.co.uk

DRAWING NUMBER:	194663-69/AT/B01	REVISION:	A
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Contact

London

Network Building,
97 Tottenham Court Road,
London W1T 4TP.
Tel: 020 7580 7373

Bristol

5th Floor, 4 Colston Avenue,
Bristol BS1 4ST
Tel: 0117 203 5240

Cardiff

Helmont House, Churchill Way,
Cardiff CF10 2HE
Tel: 029 2072 0860

Exeter

6 Victory House,
Dean Clarke Gardens,
Exeter EX2 4AA
Tel: 01392 422 315

Birmingham

Great Charles Street,
Birmingham B3 3JY
Tel: 0121 2895 624

Manchester

Oxford Place, 61 Oxford Street,
Manchester M1 6EQ.
Tel: 0161 228 1008

Leeds

7 Park Row, Leeds LS1 5HD
Tel: 0113 512 0293

Bonn

Stockenstrasse 5, 53113,
Bonn, Germany
Tel: +49 176 8609 1360
www.vectos.eu

Registered Office

Vectos (South) Limited
Network Building,
97 Tottenham Court Road,
London W1T 4TP
Company no. 7591661