



CBO
TRANSPORT

Project: Proposed Industrial Unit
Nexus Site, Gellings Road, Knowsley Industrial Park

Client: Tilstone Industrial Ltd

Document: Addendum to Transport Statement



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1 Introduction

General

- 1.1 CBO Transport Ltd [CBO] has been commissioned by Tilstone Industrial Ltd to undertake an assessment of the transport matters associated with a proposed Industrial Unit development at the Nexus Site, Gellings Road, Knowsley Industrial Park.

Background

- 1.2 The proposed site is located to the west of Gellings Road and is bound by the B5194 School Lane to the north, a car park to the south, Gellings Road to the east and the existing Nexus building to the west. The location of the site is shown in **Figure 1.1**.
- 1.3 As part of planning application 19/00243/OUT, which was submitted in April 2019 and subsequently granted planning permission in April 2020, the proposed site already benefits from outline consent for up to 3,827sq.m of B2/B8 use (with ancillary B1 office uses being acceptable). At the time of the submission of planning application 19/00243/OUT, and as shown on the Masterplan that supported the application, it was envisaged that this floor area would be provided across a number of units.
- 1.4 Although the development was applied for in outline, the above application did seek approval for access. As a result, two accesses were approved from Gellings Road to serve the B2/B8 use to the west of Gellings Road; a northern access located 33 metres to the south of the B5194 School Lane / Gellings Road junction and a southern access located 70 metres north of the Randles Road / Gellings Road junction.
- 1.5 In addition to the above B2/B8 use on the land to the west of Gellings Road, planning application 19/00243/OUT also applied for a Petrol Filling Station (including retail) and Drive-Thru unit on a parcel of land to the west of the Nexus building bound by the B5194 School Lane to the north, the Nexus building car park to the east and the M57 Junction 4 to the south and west.
- 1.6 Access to this parcel of land was proposed (and approved) via a new junction from School Lane.
- 1.7 The above planning application 19/00243/OUT was supported by a Transport Statement and Travel Plan Framework. A copy of the Transport Statement is included at **Appendix 1**.

Current Proposals

- 1.8 The current proposals relate solely to the B2/B8 use referred to above on the parcel of land to the west of Gellings Road. They do not include the proposals for the parcel of land to the west of the Nexus building.
- 1.9 Under the current proposals, the scheme would change to a single B2 use unit of circa 3,060sq.m. This unit would be an extension to the existing TuffX operation in the existing Nexus building and include a covered pedestrian link between the new unit and the Nexus buildings. The service yard for the proposed unit would also extend into the existing Nexus building service yard.
- 1.10 With regard to access, the previously approved northern access to the site would be retained, but the previously approved southern access would be relocated slightly further south.
- 1.11 Given the above, the current scheme is for a slightly different redline area than the approved scheme. As a result, the scheme is being proposed through a new full planning application and not a reserved matters application under the outline consent.

Discussions with Knowsley Council

- 1.12 CBO has held discussions with Knowsley Council [KC] highways based on the above history and current proposals. As a result of these discussions, and on the basis that the application is for an extension to the existing TuffX operation in the Nexus building, it has been agreed that the approach of supporting the application with an addendum to the previous Transport Statement, which describes the revised proposal and includes the previous Transport Statement as an appendix, would be acceptable.
- 1.13 Under this approach, it was agreed that the addendum would provide:

- A refresh of the accessibility of the site by the sustainable modes to ensure it has not materially changed;
- Details of the amended access arrangement from Gellings Road at the southern end of the site;
- Details of the amended service yard access arrangement at the northern access from Gellings Road, including swept path analysis of the service yard;
- Details of the proposed parking provision in the amended scheme and its accordance with standards, including disabled parking and cycle storage;
- Reference to traffic generation and how this would change.

- 1.14 With regard to a Travel Plan, KC highways indicated that one would still be required. However, again on the basis that the application is for an extension to the existing TuffX operation, KC highways are content that the Travel Plan requirement could be covered by a condition requiring its completion / update prior to occupation of the extension and that one would not be required to support the application.

Scope of Report

- 1.15 In light of the above, the purpose of this Addendum to the Transport Statement is to provide KC with the necessary information to support the proposals and consider their transport implications. In order to provide this information, this report has been produced in 8 sections including this introduction.
- 1.16 Section 2 reviews existing conditions and provides details of the study area from a highways perspective, whilst Section 3 considers the accessibility of the site by the sustainable modes and linkage to the surrounding area.
- 1.17 Section 4 then details the development proposals, whilst Section 5 considers the traffic generations and impact associated with the scheme.
- 1.18 The conclusions and recommendations of this Addendum to the Transport Statement are included in Section 6.

2 Existing Conditions and Study Area

Site Description

- 2.1 The proposed site is located to the west of Gellings Road and is bound by the B5194 School Lane to the north, a car park to the south, Gellings Road to the east and the existing Nexus building to the west. The location of the site is shown in **Figure 1.1**.
- 2.2 As was the case in 2019 when considering the consented development, there is currently no vehicular access to the site directly from the adjoining highways.

Highway Network

- 2.3 In highway terms, there has been little change in the area since 2019 when the consented development was assessed, with the highway network layout being largely unaltered.
- 2.4 Gellings Road is approximately 9 metres in width and heads south from the simple priority B5194 School Lane / Gellings Road junction and past the site frontage. The route is approximately 155 metres in length, lit and joins Randles Road at its southern end as the minor arm of a simple priority junction. Approximately midway along its length, Gellings Road includes a circa 30 metre long lay-by on its eastern side.
- 2.5 The B5194 School Lane effectively runs on a straight alignment past the north of the site / through its junction with Gellings Road. Heading west from its junction with Gellings Road, the B5194 School Lane continues for a distance of approximately 340 metres where it joins the M57 Junction 4 roundabout. Heading east, the B5194 School Lane travels through Knowsley Industrial Estate, before joining the B5202.
- 2.6 In the vicinity of the site, the B5194 School Lane is a lit single carriageway road of approximately 7 metres in width. Approximately 30 metres from its junction with the M57 Junction 4 roundabout and heading east, the route is subject to a 40mph speed limit. Instead of a dotted centreline, the route includes a circa 1 metre wide central hatched area from the M57 Junction 4 roundabout, together with 40mph speed limit roundel and 'slow' road markings.
- 2.7 Approximately 195 metres from the M57 Junction 4 roundabout, the B5194 School Lane is joined by School Lane to the north via a simple priority junction arrangement.
- 2.8 With regard to the M57 Junction 4 roundabout to the west, this is a large 5 arm grade separated roundabout. The M57 northbound off slip arm is signal controlled, as is the Moorgate Road South arm, which is a circa 185 metre long dual carriageway link which continues north to the A580. All other arms, including the M57 southbound off slip, are priority controlled.

Personal Injury Accident Record

- 2.9 Considering accident data that is freely available on the internet, this shows that there have been no personal injury accidents recorded on Gellings Road or at the B5194 School Lane / Gelling Road junction during the three year period between January 2017 and December 2019.
- 2.10 Considering the section of the B5194 School Lane between the B5194 School Lane / Gelling Road junction and the M54 Junction 4 roundabout, there have been three personal injury accidents recorded during the identified three year period.
- 2.11 Two of these accidents occurred at the B5194 School Lane / School Lane junction. The first occurred in March 2018 and was a slight injury accident. The second occurred in July 2019 and was a serious injury accident. Neither accident involved a pedestrian or cyclist.
- 2.12 The third accident occurred in January 2018 at the B5194 School Lane's junction with the M57 Junction 4 roundabout and was serious in nature. The accident did not involve a pedestrian or cyclist.
- 2.13 Considering the M57 Junction 4 roundabout, and excluding the accident referred to above, there have been six more personal injury accidents recorded at this roundabout. One occurred at the northbound off slip's junction with the roundabout, two at the A580 link's junction with the roundabout arm, two at the northbound on slip's junction with the roundabout and one Moorgate Road South's junction with the roundabout. All accidents were slight in nature, with none involving a pedestrian or cyclist.

- 2.14 Based on the above and as was the case in 2109 when considering the consented development, it is considered that there are no notable accident issues in the immediate vicinity of the site related to the existing highway layout which traffic from the proposed development would materially exacerbate.

3 Accessibility by the Sustainable Modes

Accessibility for Pedestrians

Infrastructure

- 3.1 As was the case in April 2019 when considering the consented development, pedestrian infrastructure in the vicinity of the site is of a good standard.
- 3.2 There is a continuous footway running along the length of Gellings Road and past the site frontage. There is also a footway running along the full length of the eastern side of Gellings Road. To the south, these footways link to footways running along both sides of Randles Road. To the north, there are dropped crossings with tactile paving across Gellings Road. From here, pedestrians can continue round onto a footway running along the south side of the B5194 School Lane which continues east through Knowsley Industrial Estate and provides access to a westbound bus stop on the B5194 School Lane.
- 3.3 Heading west from Gellings Road, there is a footway provided on the south side of the B5194 School Lane for a distance of approximately 90 metres to the east side of the B5194 School Lane / School Lane junction. At this point, the footway ends, with pedestrians being required to cross to the north side of the B5194 School Lane via a dropped crossing with tactile paving arrangement. There is then no footway on the south side from this point to the M57 Junction 4 roundabout.
- 3.4 On the north side of the B5194 School Lane, there is a combined footway / cycleway running between the B5194 School Lane / School Lane junction and the B5194 School Lane / Unity Grove junction. The footway then continues east from Unity Grove along the north side of the B5194 School Lane through Knowsley Industrial Estate. At its western end, there is again no footway provided on the north side of the B5194 School Lane past the B5194 School Lane / School Lane junction. However, from the termination of the combined footway / cycleway, a footway runs along School Lane. This footway heads north west to the A580 / A5207 Moorgate Road North junction, which includes controlled pedestrian crossings and provides links to the surrounding pedestrian network.

Proposed infrastructure

- 3.5 As part of the proposed development and as set out in detail in Section 4, and as with the consented development, it is proposed to provide additional crossing facilities on the B5194 School Lane just west of its junction with Gellings Road. These provisions will link the site to the existing pedestrian infrastructure referred to above.

Accessibility

- 3.6 Considering the walking catchment accessible by the above routes, it is commonly accepted that walking has the greatest potential to replace short car trips, particularly those under two kilometres, whilst the Institution of Highways and Transportation "Guidelines for Providing for Journeys on Foot" includes a table which suggests that 2km is an acceptable maximum distance for commuter journeys on foot.
- 3.7 In the context of the above, **Figure 3.1** shows the 2km walking catchment from the site.
- 3.8 Based on the catchment shown in **Figure 3.1**, the northern part of Knowsley is within 2km of the proposed site, as are the southern and eastern parts of the Southdene area of Kirkby. Whilst over 2km, the remainder of Knowsley and the Southdene area are around 2 to 3.2km from the proposed site. At up to around a 40 minute walk time, some of these areas could also be accessible to some on foot. These areas include a number of households from where future employees could potentially walk.
- 3.9 In light of the above and as was the case in April 2019 when considering the consented development, the site offers the opportunity for some journeys on foot by future employees travelling directly to and from home. The local infrastructure also allows pedestrians to walk to and from the local bus stops.

Accessibility for Cyclists

Infrastructure / routes

- 3.10 With regard to cycling infrastructure and as referred to above and shown in **Figure 3.1**, there is a combined footway / cycleway running along the north side of the B5194 School Lane between School Lane and Unity Grove. As was the case in April 2019 when considering the consented development, this forms part of National Cycle Route 862 which, as also shown in **Figure 3.1**, runs north along School Lane and into Kirkby and south under the M57 (via Gellings Lane) to Stockbridge village.
- 3.11 As shown in **Figure 3.1** and via National Cycle Route 862, and as was the case in April 2019 when considering the consented development, cyclists can also access off road cycle routes along the A580 and to the north and east sides of Kirkby.

Proposed infrastructure

- 3.12 As part of the proposed development and as set out in detail in Section 4, and as with the consented development, it is proposed to provide additional crossing facilities on the B5194 School Lane just west of its junction with Gellings Road, together with a widened footway / cycleway on the west side of Gellings Road. These provisions would enhance the linkage to National Cycle Route 862.

Accessibility

- 3.13 Considering the accessibility of the site by bicycle via these routes, it is commonly accepted that cycling has the potential to substitute for short car trips, particularly those under five kilometres, and to form part of a longer journey by public transport.
- 3.14 In this context all of Knowsley village and Kirkby, together with places such as Stocksbridge village, Gillmoss, Croxteth and the east sides of Norris Green and West Derby, are within a 5km cycle ride and accessible by bicycle. In addition, Huyton and Prescot are around a 7 to 8km ride from the site. Whilst outside the 5km distance referred to, it is considered that these areas will also be accessible to some employees by bicycle.
- 3.15 In light of the above and as was the case in April 2019 when considering the consented development, the site is considered to offer the opportunity for employees at the site to travel by bicycle directly to and from home.

Accessibility by Public Transport

Bus

- 3.16 As was the case in April 2019 when considering the consented development and as shown in **Figure 3.1**, the nearest bus stops to the site are located on the B5194 School Lane just to the north east of the site and east of Gellings Road. These stops are located approximately 180 metres from the pedestrian entrance to the proposed unit and are therefore within the 400 metre distance referred to in guidance.
- 3.17 In addition to the above and as also shown in **Figure 3.1**, there are bus stops located on the A580, Moorgate Road North and Ribblers Lane to the north west of the site. These stops are around 880 to 980 metres from the proposed unit and are therefore outside the 400 metre distance referred to in guidance. However, even at 950 metres, they are around a 10 minute walk from the site and, given the services they provide access to as set out below, this walk distance / time is highly unlikely to deter future employees from using the stops. They are therefore considered accessible to future employees.
- 3.18 Based on the above, Table 3.1 below shows the buses serving the site.

Table 3.1: Local Bus Services (Monday to Saturday and Sunday)

No.	Route	AM Peak	Off Peak	PM Peak	Saturday	Sunday
B5194 School Lane						
14B	Queens Square Bus Station – Broadway – Croxteth – Knowsley Ind Est – Knowsley Village – Kirkby – Kirkby Ind Est	7:51, 17:55, 18:23 & 18:50			No service	No service
14B	Knowsley Village – Knowsley Ind Est – Kirkby – Croxteth – Broadway – Queens Square Bus Station	6:50, 7:08, 7:26 & 8:02			No service	No service
14C	Kirkby – Knowsley Village – Knowsley Ind Est – Kirkby – Croxteth – Broadway – Queens Square Bus Station	7:35			No service	No service
227	Huyton – Page Moss – Knowsley Village – Knowsley Ind Est – Southdene – Kirkby	Every 30mins	Every 30mins	Every 30mins	Hourly	Hourly
898	Page Moss – Croxteth – Kirkby Ind Est – Kirkby – Knowsley Ind Est – Knowsley Village – Croxteth – Page Moss	Hourly	Hourly	Hourly	Hourly	Hourly
899	Page Moss – Croxteth – Knowsley Village – Knowsley Ind Est – Kirkby – Kirkby Ind Est – Croxteth – Page Moss	Hourly	Hourly	Hourly	No service	No service
A580 / A5207 Moorgate Road North						
14 / 14A	Queens Square Bus Station – Broadway – Croxteth – Kirkby Moorgate Rd – Knowsley Village – Kirkby – Tower Hill	Every 30mins	Every 30mins	Every 30mins	2 buses per hour	2 buses per hour
19	Liverpool City Centre – Queen Sq. Bus Stat – Everton – Anfield – Gillmoss – Croxteth – Kirkby	Every 10mins	Every 10mins	Every 10mins	Every 10-15mins	Every 15mins
97/ 97A	Kirkby Circular	Every 30mins	Every 30mins	Every 35-40mins	Every 30mins	No service
Ribblers Lane						
97/ 97A	As above					

- 3.19 The above services and timetables are almost identical to those that were available in April 2019 when the consented scheme was being considered. Consequently, there continues to be a number of bus services operating in the area throughout the day, together with some which look to be aimed at people who work on Knowsley Industrial Estate. These local services therefore continue to offer the opportunity for future staff at the proposed site to travel bus.

Rail

- 3.20 Kirkby Railway Station is the closest station to the site but, at around 5km, any journey by rail would need to be completed by bike, bus or taxi.
- 3.21 As was the case in April 2019 when considering the consented development, this station provides access to a frequent service on the Merseytravel Northern Line between Kirkby and Liverpool Central, with trains running from just before 6:00 to just before midnight in both directions. Intermediate stations include Fazakerley, Rice Lane, Kirkdale, Sandhills and Moorfields.
- 3.22 As was also the case in April 2019, there is an hourly service between Manchester Victoria and Kirkby which calls at Wigan and Salford. Services to and from Manchester run throughout the day.

4 Development Proposals

Development Proposals

- 4.1 The proposals include the development of the site to provide a single B2 use unit with a total floor area of circa 3,060sq.m. This unit would be an extension to the existing TuffX operation in the existing Nexus building and include a covered pedestrian link between the new unit and the Nexus buildings. The service yard for the proposed unit would also extend into the existing Nexus building service yard.
- 4.2 The circa 3,060sq.m of total floor area would be split between circa 2,790sq.m at ground floor level and a first floor of circa 270sq.m. This circa 270sq.m of floor space would accommodate circa 170sq.m of office and a circa 100sq.m canteen. At circa 3% of the total floor space, this office use is considered ancillary to the B2/B8 use, as is the canteen. The proposals are therefore in accordance with the consented scheme uses.
- 4.3 With regard to access, the previously approved northern access to the site would be retained and would provide access to the service yard, an area where an HGV can wait for loading areas to be clear and 22 car parking spaces.
- 4.4 In addition to the above, the previously approved southern access would be relocated approximately 25 metres further south and would serve a 40 space car park, 5 motorcycle parking spaces and an enclosed cycle store for 8 bicycles.
- 4.5 A copy of the proposed site layout is provided at **Appendix 2**.

Site Access

- 4.6 As shown in the site layout plan at Appendix 2 and set out above, access to the proposed unit would be taken via two dedicated accesses from Gellings Road. These accesses are discussed below.

Northern access

- 4.7 The northern access would be as that approved as part of planning application 19/00243/OUT in April 2020. It would therefore continue to provide a dedicated access located 33 metres to the south of the B5194 School Lane / Gellings Road junction. The access would take the form of kerbed radii access of approximately 13.2 metres in width.
- 4.8 With regard to visibility provision **Figure 4.1** shows that, in the southern direction, a 2.4 x 59 metres splay is achievable, which is sufficient for a design speed of 37mph based on the use of Manual for Streets.
- 4.9 Looking north from the northern access, **Figure 4.1** shows that a splay of 2.4 x 33m is achievable. Again based on Manual for Streets, this is sufficient for a design speed of 25mph. Given the proximity of the access to the B5194 School Lane / Gellings Road junction and that vehicle speeds will consequently be low heading south on Gellings Road towards the access, this level of provision continues to be considered sufficient.
- 4.10 In light of the above and as with the consented development, the achievable visibility plays are considered acceptable at the northern access.

Southern access

- 4.11 As set out above, the southern access would be relocated approximately 25 metres further south than that of the access approved as part of planning application 19/00243/OUT in April 2020. It would therefore be located 45 metres to the north of the Randles Road / Gellings Road junction. It would continue to provide a dedicated access and would take the form of kerbed radii access of approximately 6 metres in width.
- 4.12 With regard to visibility provision **Figure 4.1** shows that, in the northern direction, a 2.4 x 59 metres splay is achievable, which is sufficient for a design speed of 37mph based on the use of Manual for Streets.
- 4.13 Looking south from the southern access, **Figure 4.1** shows that a splay of 2.4 x 43m is achievable. Again based on Manual for Streets, this is sufficient for a design speed of 30mph. Given the proximity of the access to the Randles Road / Gellings Road junction and that vehicle speeds will consequently be low heading north on Gellings Road towards the access, this level of provision is considered sufficient.

Summary

- 4.14 In light of the above and as was the case in April 2019 when considering the consented development, the proposed accesses from Gellings Road are considered acceptable and appropriate from a design and safety perspective.

Internal Site Layout

Southern parking area

- 4.15 As set to above, the southern access would serve a 40 space car park, 5 motorcycle parking spaces and an enclosed cycle store for 8 bicycles. This parking would be provided either side of, and at the end of, a 6 metre wide access aisle. This arrangement is suitable to serve the parking area.

Service yard / northern parking area

- 4.16 As set out above, the northern access would serve the service yard and 22 car parking spaces.
- 4.17 The service yard would provide access to 2 loading doors located on the northern elevation of the proposed unit. **Figure 4.2** therefore shows an articulated HGV entering the site in a forward gear, reversing to the eastern loading door, and then leaving in a forward gear. **Figure 4.3** shows the same manoeuvres for an articulated HGV accessing the western loading door.
- 4.18 Both of these figures show these manoeuvres can be undertaken within the available service yard area and at the same time as a vehicle is loading at the adjacent loading door.
- 4.19 In addition to the above, an area has been provided at the northwest corner of the service yard to allow an HGV to wait on site if both loading doors are in use. **Figure 4.4** therefore shows an HGV entering the site and driving to this area in a forward gear whilst vehicles are parked at the loading doors. From this point, the vehicle can undertake the reversing manoeuvres to either door as shown in Figures 4.2 and 4.3.

Summary

- 4.20 Based on the above, the internal site layout is considered suitable to serve the site and ensure all vehicles enter and exit the public highway in a forward gear.

Pedestrian and Cycle Provision

- 4.21 When reviewing planning application 19/00243/OUT, KC raised concerns regarding cyclist accessing the combined footway / cycleway on the north side of the B5194 School Lane given that this provision, and Gellings Road, sit on National Cycle Route 862. As a result, improvements were proposed, and then conditioned, around the B5194 School Lane / Gellings Road junction to assist pedestrians crossing the B5194 School Lane and cyclists wishing to join the combined footway / cycleway.
- 4.22 These improvements, which are shown on **Drawing number CBO-0504-002 Rev A** at **Appendix C** of the Transport Statement at **Appendix 1** included:
- The widening of the existing footway on the west side of Gellings Road to 3 metres from the north side of the northern Gellings Road site access around onto the B5194 School Lane to provide a section of combined footway/ cycleway; and
 - The provision of a new dropped crossing with tactile paving for pedestrians and cyclists across the B5194 School Lane on the west side of Gellings Road.
- 4.23 These improvements are again being proposed as part of this submission and are shown on the proposed site layout plan at **Appendix 2**.

Parking Provision

- 4.24 KC's current parking standards are set out in "Supplementary Planning Document: Ensuring a Choice of Travel". Appendix A of this document refers to the proposed B2 use providing:
- a maximum of 1 space car parking space per 45sq.m;
 - a minimum of 1 cycle parking space per 450sq.m; and
 - a minimum of 1 motorcycle parking space per 1,000sq.m.

-
- 4.25 Applying the above standards to the proposed circa 3,060sq.m unit, parking requirements are as follows:
- a maximum of 68 car parking spaces;
 - a minimum of 7 cycle parking spaces; and
 - a minimum of 3 motorcycle parking spaces.
- 4.26 The 8 cycle parking spaces shown on the proposed site layout at **Appendix 2**, which would be provided in a covered and secure store, are in excess of these minimum requirements. The 8 motorcycle parking spaces shown on the proposed site layout at **Appendix 2** also exceed these minimum requirements.
- 4.27 With regard to the car parking, the proposed provision of 62 spaces is 6 short of the 68 referred to above based on the application of KC's standards. However, it is the case that the standards refer to maximum provisions, whilst the end user is content that the level of provision shown is sufficient for their needs.
- 4.28 Based on the above, the proposed site layout is considered to provide parking that broadly accords with KC standards and is sufficient to serve the end user.

5 Traffic Generation and Impact

Consented Scheme

TRICS Derived Trip Rates

- 5.1 In order to determine the trip rates associated with the B2/B8 development on the proposed site, the Transport Statement at **Appendix 1** which supported the consented scheme included an interrogation of the TRICS database for the sub land uses of 'Industrial Estate'. The trip rates resulting from this interrogation on are reproduced below in Table 5.1.

Table 5.1: Consented Development Trip Rates

	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Ind unit (per 100sq.m)	0.805	0.429	1.234	0.302	0.699	1.001

Resultant Traffic Generation

- 5.2 Applying the above trip rates to the proposed B2/B8 industrial units, Section 5 of the Transport Statement at **Appendix 1** identified the traffic generations associated with the consented scheme to be as those set out below in Table 5.2.

Table 5.2: Consented Development Traffic Generations

Traffic Generation	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Industrial estate	26	14	40	10	23	33

Proposed Development

- 5.3 It was envisaged when preparing the scheme submitted in April 2019 with planning application 19/00243/OUT that the floor areas associated with the proposed B2/B8 use would be provided across a number of units. As a result, the above traffic generations were derived based on the sub land use of 'Industrial Estate' in the TRICS database.
- 5.4 However, on the basis that the current proposals are for an individual industrial unit, it is considered appropriate to interrogate the TRICS database again using the sub land uses of 'Industrial Unit'. The trip rates resulting from this interrogation, which adopt the same methodology as for the previous application, are set out below in Table 5.3. The full TRICS outputs are provide at **Appendix 3**.

Table 5.3: Proposed Industrial Unit Trip Rates

	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Ind unit (per 100sq.m)	0.506	0.066	0.572	0.027	0.446	0.473

- 5.5 Applying these trip rates to the proposed circa 3,060sq.m industrial unit, Table 5.4 below sets out the resultant traffic generations.

Table 5.4: Proposed Development Traffic Generations

Traffic Generation	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Industrial unit	15	2	17	1	14	15

Traffic Generation Comparison

- 5.6 Based on the figures set out above for the consented and proposed industrial uses, Table 5.5 below shows the traffic generation associated with the proposed development compared to that assumed when assessing the consented development.

Table 5.5: Traffic Generation Comparison

Traffic Generation	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Consented Industrial	26	14	40	10	23	33
Proposed Industrial	15	2	17	1	14	15
Comparison	-11	-12	-23	-9	-9	-18

- 5.7 As can be seen from the above table, the proposed single industrial unit would result in a reduction in peak hour flows compared to the multiple units considered as part of the consented scheme.

Traffic Impact

- 5.8 Based on the above, it is concluded that the current proposals would generate less traffic than the consented scheme and that the impact would therefore also be reduced. On the basis that the previous impacts must have been considered acceptable in order for the scheme to be consented, it must be the case that these lesser impacts would also be acceptable.

6 Conclusions and Recommendations

Conclusions

6.1 Based on the findings of this report it is concluded that:

- Under planning application 19/00243/OUT, the proposed site gained outline consent in April 2020 for up to 3,827sq.m of B2/B8 use (with ancillary B1 office uses being acceptable). At the time of the submission, it was envisaged that this floor area would be provided across a number of units;
- As in 2019 when the above consented scheme was considered, the proposed site continues to offer the opportunity for some journeys on foot by future employees travelling directly to and from home, whilst the local infrastructure continues to allow pedestrians to walk to and from the local bus stops. The site also continues to offer the opportunity for employees at the site to travel by bicycle directly to and from home, whilst the local bus services continue to offer the opportunity for future staff at the proposed site to travel by this mode. The accessibility of the site by the sustainable modes has not therefore materially changed since the site was granted planning consent in April 2020;
- In order to enhance the linkage of the site to the surrounding network, it was proposed as part of the 2019 scheme to implement a pedestrian / cycle improvement around the B5194 School Lane / Gellings Road junction that included the widening of the footway on the west side of the junction and the provision of a new dropped crossing with tactile paving across the B5194 School Lane. These improvements are again being proposed as part of this submission;
- Permission was granted under the consented scheme for the provision of two accesses to the site from Gellings Road. The previously approved northern access to the site would be retained under the current proposals, whilst the previously approved southern access would be relocated approximately 25 metres further south. Both of these accesses continue to be of a suitable arrangement and provide appropriate levels of visibility provision. As a result and as was the case in April 2019 when considering the consented development, the proposed accesses from Gellings Road are considered acceptable and appropriate from a design and safety perspective;
- The internal site layout is suitable to serve the site and ensure all vehicles enter and exit the public highway in a forward gear. Furthermore and as requested by KC highways, an area has been provided at the northwest corner of the service yard to allow an HGV to wait on site if both loading doors are in use;
- The proposed cycle and motorcycle parking provision is in excess of the minimum requirements set out in KC's standards;
- The proposed car parking is 6 spaces short of the 68 calculated based on standards. However, it is the case that the standards refer to maximum provisions, whilst the end user is content that the level of provision shown is sufficient for their needs. The proposal is therefore considered to provide parking that broadly accords with KC standards and is sufficient to serve the end user;
- The proposed single industrial unit would result in a reduction in peak hour flows compared to the multiple units considered as part of the consented scheme. As a result, it is concluded that the current proposals would generate less traffic than the consented scheme and that the impact would therefore also be reduced;
- On the basis that the previous impacts must have been considered acceptable in order for the scheme to be consented, it must be the case that these lesser impacts would also be acceptable.

Recommendations

6.2 In light of the above it is the recommendation of CBO Transport that there are no traffic or transportation grounds on which to refuse the application for the proposed development.



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Figure 1.1 Site Location

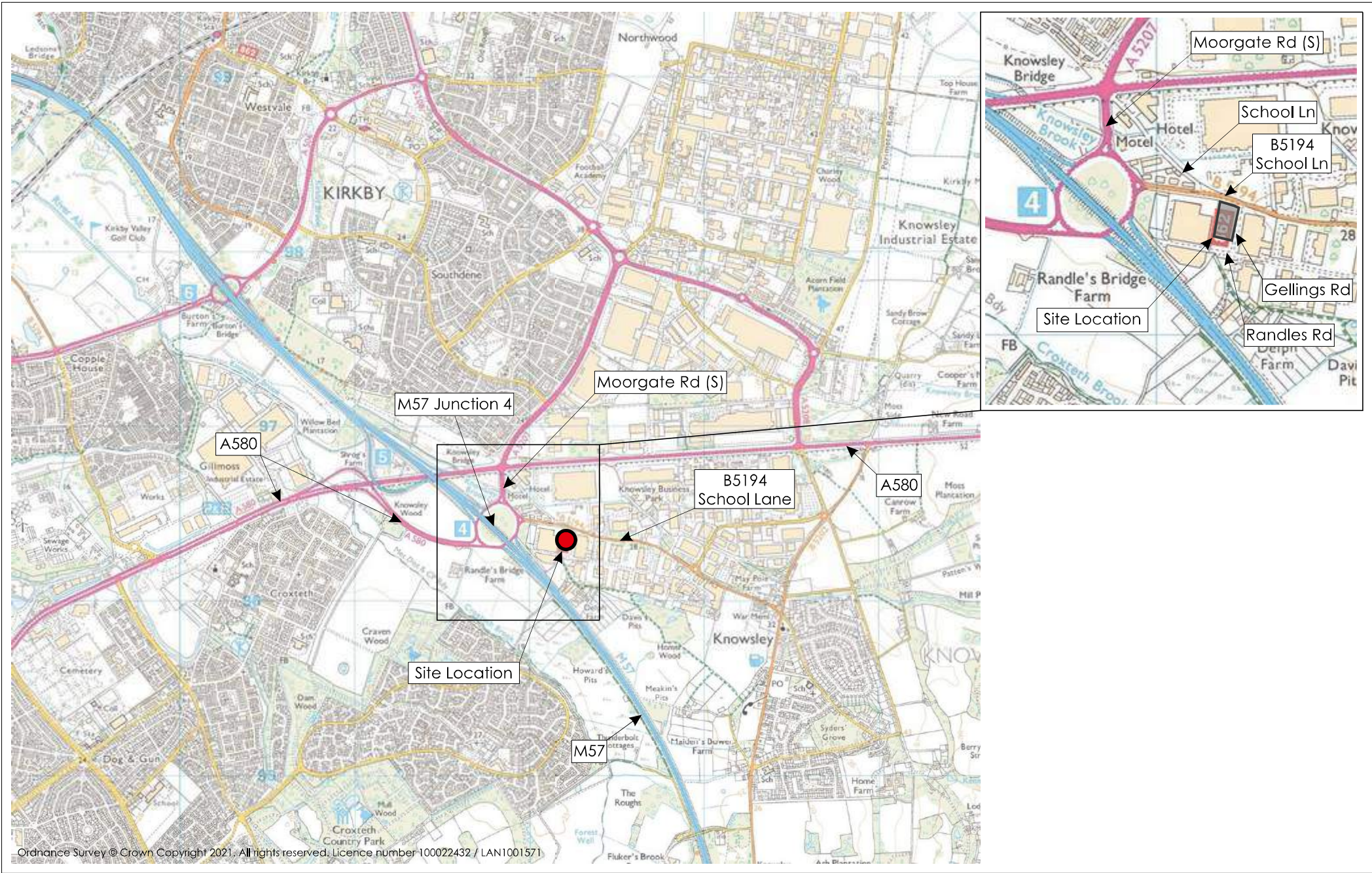


Figure 3.1 Walking Catchment and Site Accessibility

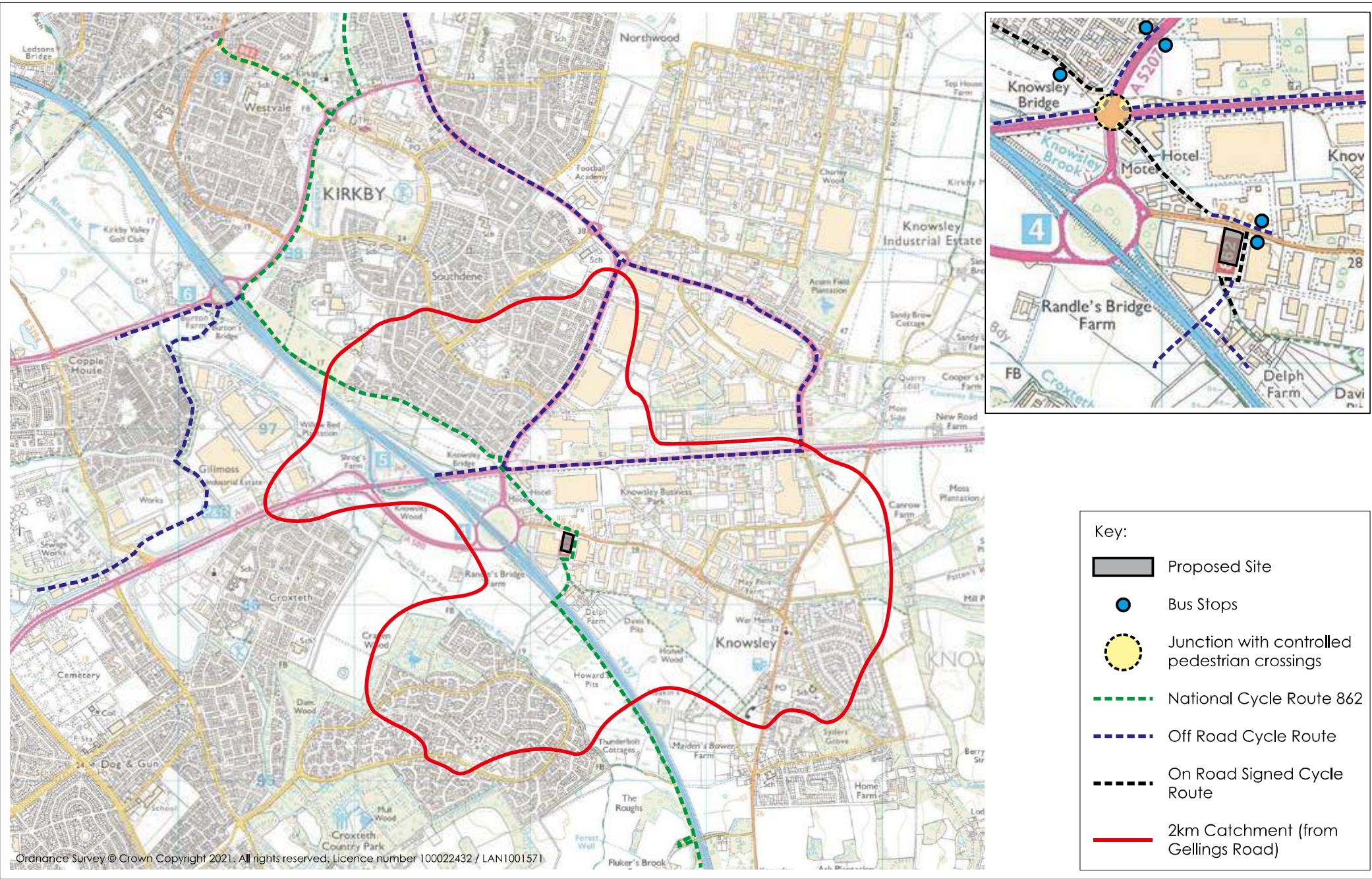


Figure 4.1 Site Access Visibility Splays
(1:500 @ A3)

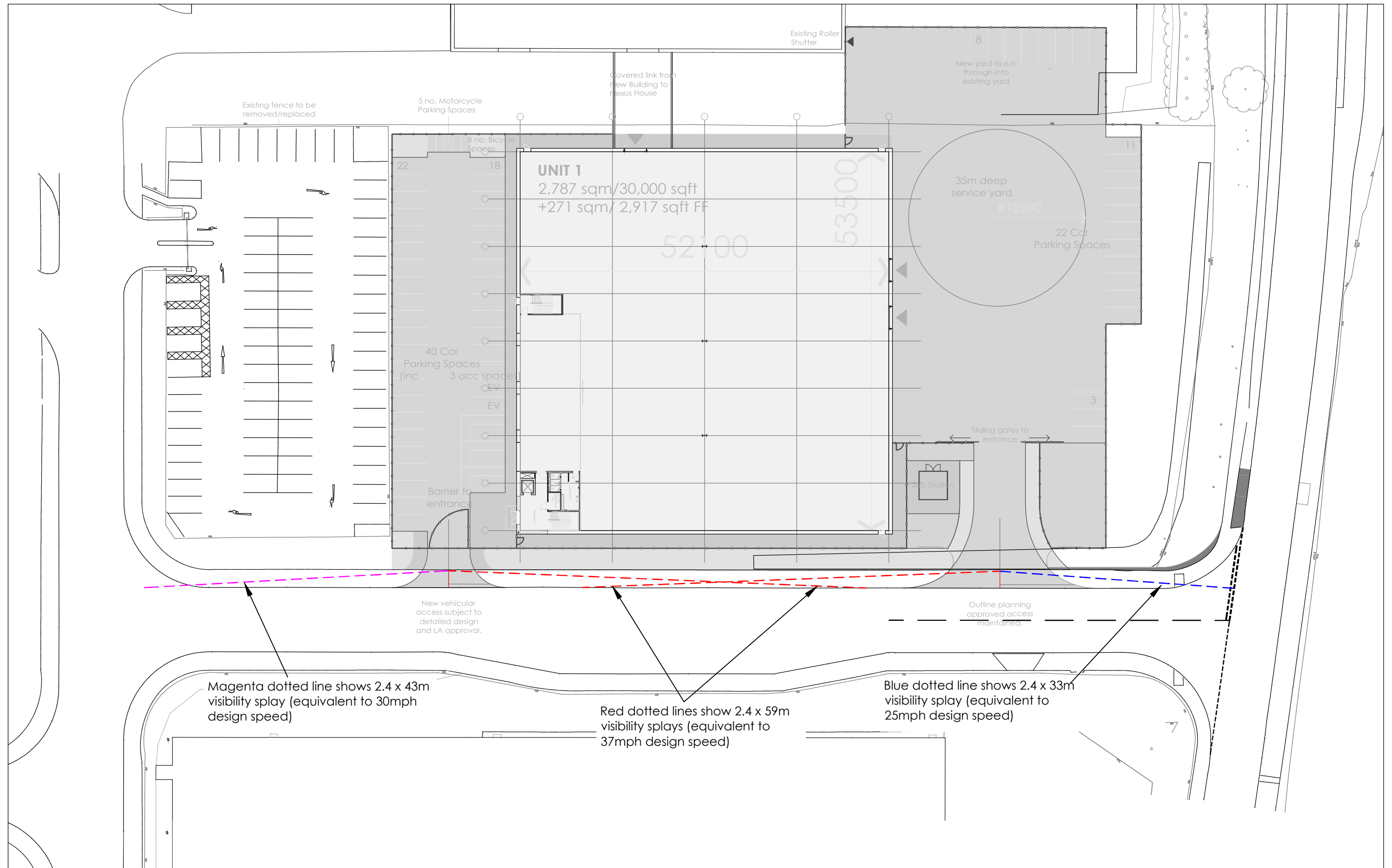


Figure 4.2 Swept Path Analysis: Articulated HGV Serving Eastern Loading Door
(1:500 @ A3)

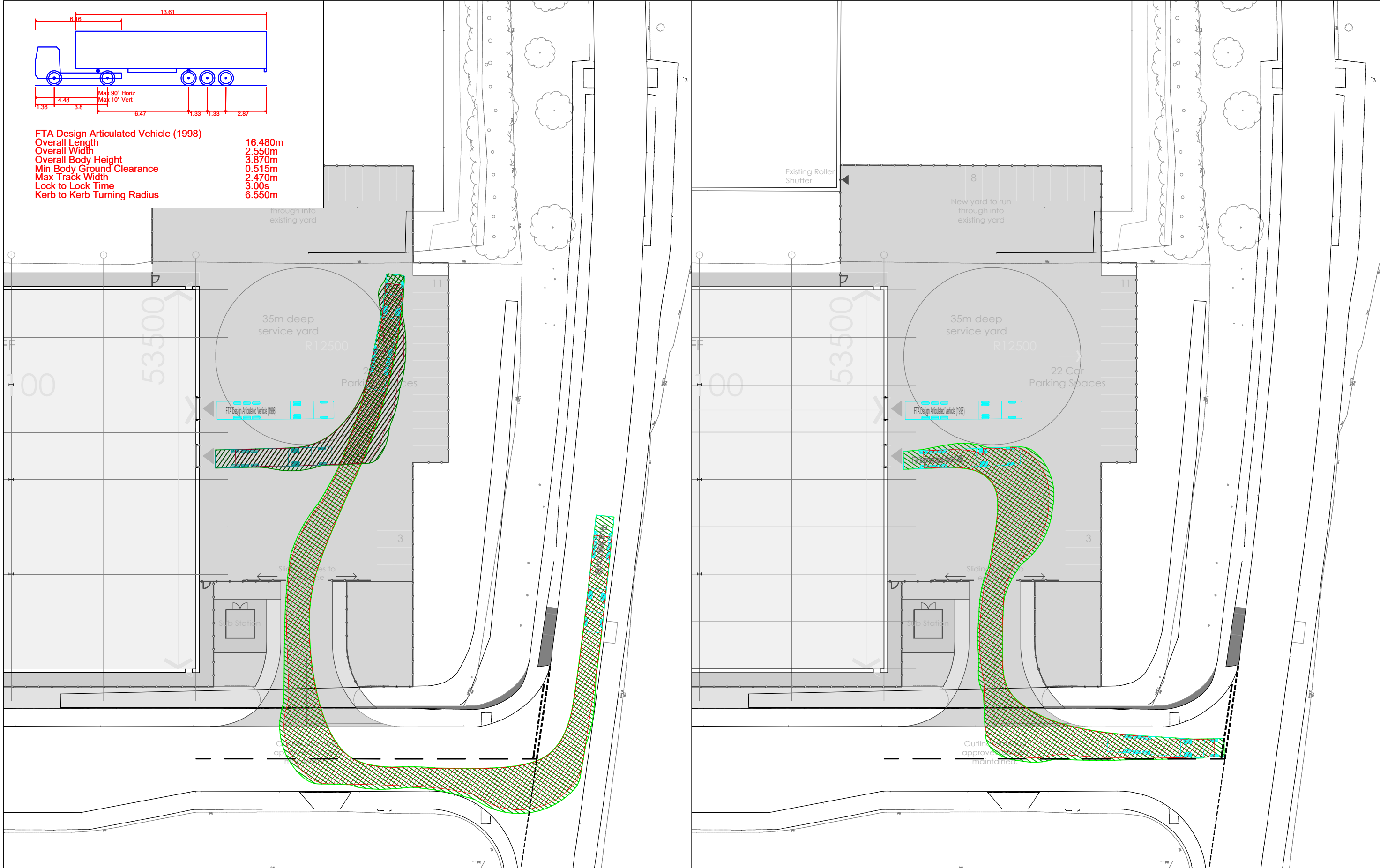
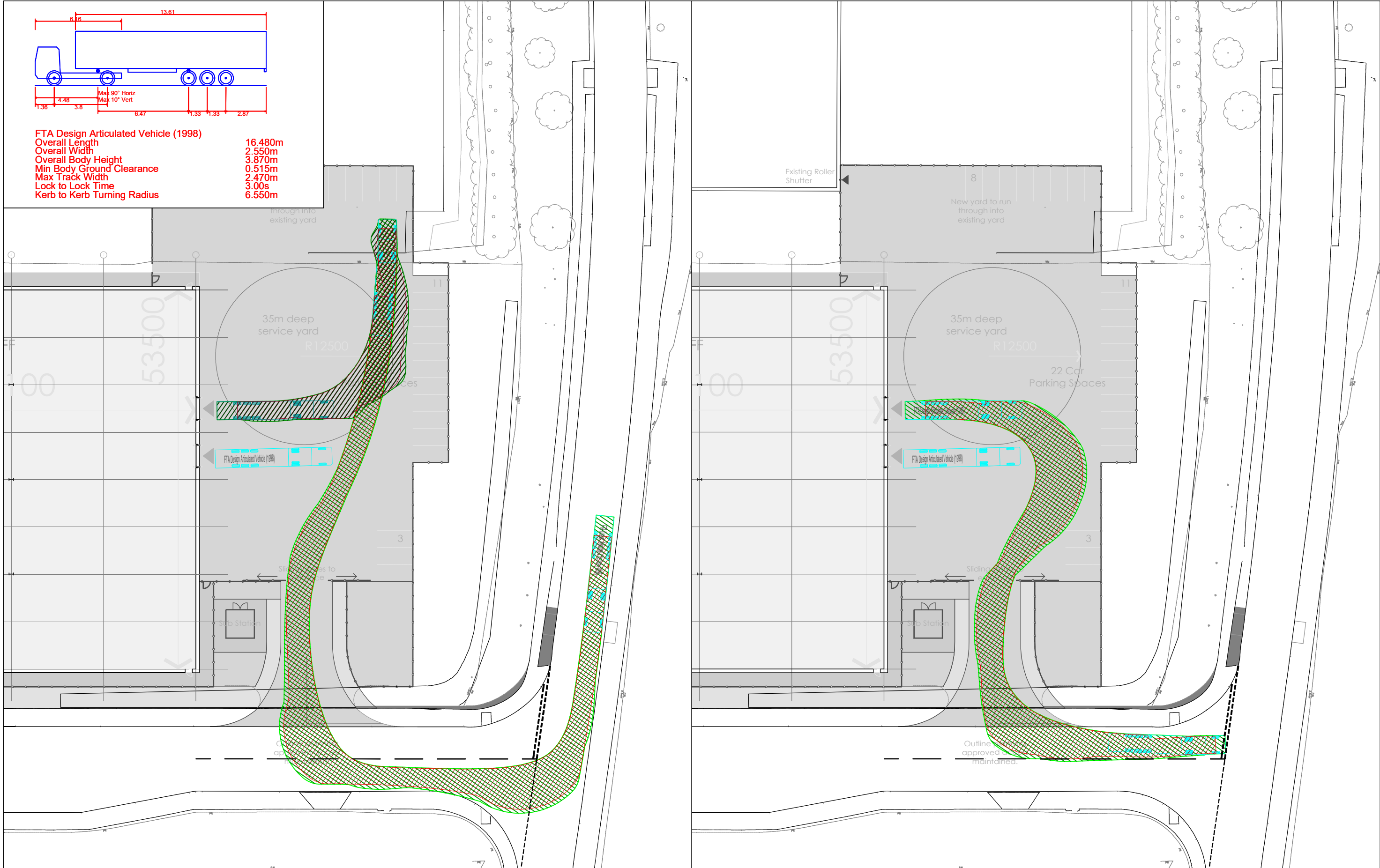
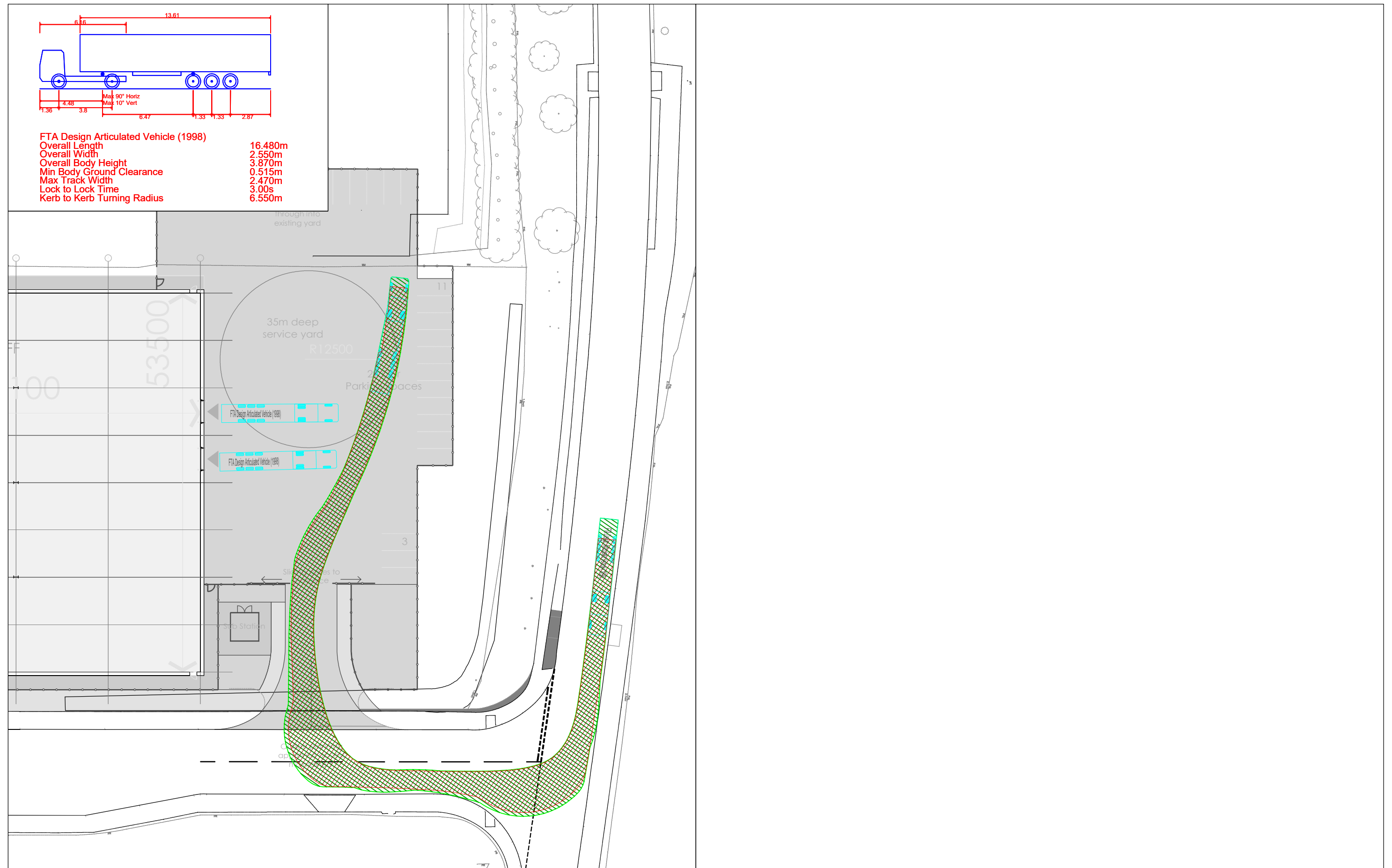


Figure 4.3 Swept Path Analysis: Articulated HGV Serving Western Loading Door
(1:500 @ A3)







Appendix 1: Previous Transport Statement



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1 Introduction

General

- 1.1 CBO Transport Ltd [CBO] has been commissioned by Tilstone Industrial Ltd to undertake an assessment of the transport matters associated with a proposed Industrial Units, Petrol Filling Station & Drive-Thru development at the Nexus Site, Randles Road, Knowsley Industrial Park.
- 1.2 This Transport Statement represents a culmination of this work and is submitted with the planning application for the scheme. A Travel Plan Framework has also been prepared and submitted with the application.
- 1.3 The site is split into two parts. The eastern part of the site comprises a grass area and is bound by the B5194 School Lane to the north, a car park to the south, Gellings Road to the east and an industrial unit to the west. The western part of the site comprises a grassed and car park area and is bound by the B5194 School Lane to the north, an industrial unit car park to the east and the M57 Junction 4 to the south and west. The location of the site, together with the areas of the two parcels, is shown in **Figure 1.1**.
- 1.4 The proposals for the eastern part of the site include up to 3,290sq.m of B2/B8 industrial units with 5% ancillary B1(c) office at first floor, accessed via dedicated accesses from Gellings Road. The proposals for the western part of the site include an up to 476sq.m Petrol Filling Station (including retail) with 8 car bays and 2 HGV bays, together with an up to 225sq.m Drive-Thru, accessed via a new access from the B5194 School Lane.
- 1.5 The site is located in the Knowsley area and Knowsley Council [KC] is both the local planning authority and highway authority for the local roads in the vicinity of the site.

Discussions with Knowsley Council and Highways England

- 1.6 CBO has held discussions with Knowsley Council [KC] highway officers and Highways England [HE] officers prior to undertaking this work. As a result of these discussions, it has been agreed that a Transport Statement is appropriate to support the planning application covering access by all modes and the off-site traffic impact based on a numerical review of the B5194 School Lane / Gellings Road junction (KC) and the M57 Junction 4 (HE).
- 1.7 With regard to the proposed access from the B5194 School Lane, it has been agreed that this be modelled in detail and be subject to a Stage 1 Road Safety Audit, and that consideration be given to vehicular movements in this part of the site and their potential impact on the B5194 School Lane.

Scope of Report

- 1.8 In light of the above, the purpose of this report is to provide KC and HE with the necessary information to support the proposals and consider their transport implications. In order to provide this information, this report has been produced in 8 sections including this introduction.
- 1.9 Section 2 reviews existing conditions and provides details of the study area from a highways perspective, whilst Section 3 considers the accessibility of the site by the sustainable modes and linkage to the surrounding area.
- 1.10 Section 4 then details the development proposals, whilst Section 5 considers the traffic generations associated with the scheme.
- 1.11 Section 6 considers the proposed B5194 School Lane access in detail, including a review of the findings of the Road Safety Audit and the results of operational assessments. Section 7 then reviews the off-site traffic impact of the development.
- 1.12 The conclusions and recommendations of the report are included in Section 8.

2 Existing Conditions and Study Area

Site Description

- 2.1 The site is split into two parts. The eastern part of the site comprises a grass area and is bound by the B5194 School Lane to the north, a car park to the south, Gellings Road to the east and an industrial unit to the west. The western part of the site comprises a grassed and car park area and is bound by the B5194 School Lane to the north, an industrial unit car park to the east and the M57 Junction 4 to the south and west. The location of the site, together with the areas of the two parcels, is shown in **Figure 1.1**.
- 2.2 There is currently no vehicular access to either part of the site directly from the adjoining highways.

Highway Study Area and 2017 Observed Traffic Flows / Speeds

Traffic Flows

- 2.3 Through discussions with KC and HE, it has been agreed that the study area in terms of considering traffic impact be made up of the following 3 local junctions:
- The proposed access from the B5194 School Lane;
 - The B5194 School Lane / Gellings Road junction; and
 - The M57 Junction 4.
- 2.4 With regard to the B5194 School Lane / Gellings Road junction and the M57 Junction 4, it has been agreed that traffic impact at these locations be considered at a high level and that traffic surveys and detailed assessments are not required. As a result, the only location where traffic count data is required is on the B5194 School Lane.
- 2.5 In order, therefore, to ascertain existing traffic flows on the B5194 School Lane past the proposed site, an Automatic Traffic Counter [ATC] was placed on site for a 7 day period from 3rd December to 9th December 2017. In addition, a manual link count and hand held radar speed survey was undertaken on Tuesday the 5th December 2017. The manual link count was undertaken during the period 15:00 - 19:00, whilst the speed survey picked up traffic speeds as vehicles exited the M57 Junction 4 roundabout to travel eastbound along the B5194 School Lane.
- 2.6 Based on these surveys, the weekday morning peak was identified as the hour 8:00 – 9:00, whilst the evening peak was seen to occur during the hour 16:15 – 17:15. Based on these peak hours, Table 2.1 below shows the link flows on the B5194 School Lane past the site, with the HGV percentages in brackets.

Table 2.1: B5194 School Lane Traffic Flows

Period	Eastbound	Westbound
8:00 – 9:00	750 (7%)	391 (17%)
16:15 – 17:15	359 (14%)	767 (3%)

Traffic Speeds

- 2.7 As set out above an ATC was placed on the B5194 School Lane outside the site for a period of 7 days, whilst a hand held radar speed survey was also undertaken which picked up traffic speeds as vehicles exited the M57 Junction 4 roundabout to travel eastbound along the B5194 School Lane. The data from the ATC and the hand held radar survey is included at **Appendix A**, whilst the results are set out below in Table 2.2.

Table 2.2: B5194 School Lane Speed Survey Results

Direction	Average (mph)	85 th Percentile (mph)
Eastbound off M57 Junction 4 Roundabout	28	31
Eastbound past site frontage (ATC)	33	39
Westbound past site frontage (ATC)	34	41

Highway Network

- 2.8 The B5194 School Lane past the northern site frontages travels on an effectively straight alignment and runs west-east from the M57 Junction 4 roundabout, through Knowsley Industrial Estate, before joining the B5202. To the east, it provides access to the A580 which continues east to St Helens and the M6 and, via the B5205, provides access to Knowsley Village, Fincham and other areas to the south. Via the M57 Junction 4 roundabout to the west, it provides access to the A580 heading west to Liverpool and to the M57 which runs north – south between the M62, A59 and A562.
- 2.9 Past the site, the B5194 School Lane is a lit single carriageway road of approximately 7 metres in width. Approximately 30 metres from its junction with the M57 Junction 4 roundabout and heading east past the site, the route is subject to a 40mph speed limit. Instead of a dotted centreline, the route includes a circa 1 metre wide central hatched area from the M57 Junction 4 roundabout, together with 40mph speed limit roundel and 'slow' road markings.
- 2.10 Approximately 195 metres from the M57 Junction 4 roundabout, the B5194 School Lane is joined by School Lane to the north via a simple priority junction arrangement. Approximately 140 metres to the east of this junction, the B5194 School Lane is then joined by Gellings Road to the south, again via a simple priority junction arrangement.
- 2.11 Gellings Road is approximately 9 metres in width and heads south from the B5194 School Lane / Gellings Road junction and past the eastern site frontage. The route is approximately 155 metres in length, lit and joins Randles Road at its southern end as the minor arm of a simple priority junction. Approximately midway along its length, Gellings Road includes a circa 30 metre long lay-by on its eastern side.
- 2.12 With regard to the M57 Junction 4 roundabout to the west, this is a large 5 arm grade separated roundabout. The M57 northbound off slip arm is signal controlled, as is the Moorgate Road South arm, which is a circa 185 metre long dual carriageway link which continues north to the A580. All other arms, including the M57 southbound off slip, are priority controlled.

Highway Conditions

- 2.13 Observations undertaken during the weekday evening peak showed that there was queuing on the B5194 School Lane approach to the M57 Junction 4 roundabout, with queuing extending past and along Gellings Road. However, the worst of this queueing looked to be limited to the 'peak within the peak' when presumably staff were leaving local employment sites.
- 2.14 With regard to the M57 Junction 4 roundabout, and with the exception of the B5194 School Lane approach, observations showed this was operating with minimal queuing or delay, and that its operation does not impact on the operation of upstream junctions.

Personal Injury Accident Record

- 2.15 Considering accident data that is freely available on the internet, this shows that there have been no personal injury accidents recorded on Gellings Road or at the B5194 School Lane / Gelling Road junction during the three year period between January 2015 and December 2018.
- 2.16 Considering the section of the B5194 School Lane between the B5194 School Lane / Gelling Road junction and the M54 Junction 4 roundabout, there have been two personal injury accidents recorded during the identified three year period.
- 2.17 The first occurred in January 2018 at the B5194 School Lane's junction with the M57 Junction 4 roundabout and was serious in nature. The second occurred at the B5194 School Lane's junction with School Lane in March 2018 and was slight in nature. Neither accident involved a pedestrian or cyclist.

-
- 2.18 Considering the M57 Junction 4 roundabout, and excluding the accident referred to above, there have been just two more personal injury accidents recorded at this roundabout. Both were slight in nature and occurred at the south western A580 slip road's junction with the roundabout. Neither accident involved a pedestrian or cyclist.
- 2.19 Based on the above, it is considered that there are no notable accident issues in the immediate vicinity of the site related to the existing highway layout which traffic from the proposed development would materially exacerbate.

3 Accessibility by the Sustainable Modes

Accessibility for Pedestrians

Infrastructure

- 3.1 Pedestrian infrastructure in the vicinity of the site is of a good standard.
- 3.2 At the eastern part of the site, there is a continuous footway running along the length of Gellings Road. There is also a footway running along the full length of the eastern side of Gellings Road. To the south, these footways link to footways running along both sides of Randles Road. To the north, there are dropped crossings with tactile paving across Gellings Road. From here, pedestrians can continue round onto a footway running along the south side of the B5194 which continues east through Knowsley Industrial Estate and provides access to a westbound bus stop on the B5194 School Lane.
- 3.3 Heading west from Gellings Road, there is a footway provided on the south side of the B5194 School Lane for a distance of approximately 90 metres to the east side of the B5194 School Lane / School Lane junction. At this point, the footway ends, with pedestrians being required to cross to the north side of the B5194 School Lane via a dropped crossing with tactile paving arrangement. There is then no footway on the south side from this point to the M57 Junction 4 roundabout, including past the western part of the site.
- 3.4 On the north side of the B5194 School Lane, there is a combined footway / cycleway running between the B5194 School Lane / School Lane junction and the B5194 School Lane / Unity Grove junction. The footway then continues east from Unity Grove along the north side of the B5194 School Lane through Knowsley Industrial Estate. At its western end, there is again no footway provided on the north side of the B5194 School Lane past the B5194 School Lane / School Lane junction. However, from the termination of the combined footway / cycleway, a footway runs along School Lane. This footway heads north west to the A580 / A5207 Moorgate Road North junction, which includes controlled pedestrian crossings and provides links to the surrounding pedestrian network.

Proposed infrastructure

- 3.5 As part of the proposed development and as set out in detail in Section 4, it is proposed to provide a new footway from the proposed access serving the western part of the site that links to the existing footway on the south side of the B5194 School Lane. It is also proposed to provide additional crossing facilities on the B5194 School Lane just west of its junction with Gellings Road. These provisions will link the site to the existing pedestrian infrastructure referred to above.

Accessibility

- 3.6 Considering the walking catchment accessible by the above routes, it is commonly accepted that walking has the greatest potential to replace short car trips, particularly those under two kilometres, whilst the Institution of Highways and Transportation "Guidelines for Providing for Journeys on Foot" includes a table which suggests that 2km is an acceptable maximum distance for commuter journeys on foot.
- 3.7 In the context of the above, **Figure 3.1** shows the 2km walking catchment measured from the midpoint on Gellings Road. Whilst this slightly overestimates the area accessible to the western part of the site from the south, it provides an indication of the areas that are accessible.
- 3.8 Based on the catchment shown in **Figure 3.1**, the northern part of Knowsley is within 2km of the proposed site, as are the southern and eastern parts of the Southdene area of Kirkby. Whilst over 2km, the remainder of Knowsley and the Southdene area are around 2 to 3.2km from the proposed site. At up to around a 40 minute walk time, some of these areas could also be accessible to some on foot. These areas include a number of households from where future employees could potentially walk.
- 3.9 In light of the above, the site offers the opportunity for some journeys on foot by future employees travelling directly to and from home. The local infrastructure also allows pedestrians to walk to and from the local bus stops.

- 3.10 In addition to the above, **Figure 3.1** also shows a 1km catchment from the western part of the site, measured from the new access point from the B5194 School Lane, which gives an indication of the areas which are within customer walking distance of the retail element of the petrol filling station and the drive-thru. As can be seen from this figure, the southern tip of Southdene is within this walking distance, as are areas of Knowsley Industrial Estate. Some residents of Southdene may also be prepared to walk further than this distance to access this retail provision.
- 3.11 In light of the above, the site offers the opportunity for some journeys on foot by future customers of the retail element of the petrol filling station and the drive-thru.

Accessibility for Cyclists

Infrastructure / routes

- 3.12 With regard to cycling infrastructure and as referred to above and shown in **Figure 3.1**, there is a combined footway / cycleway running along the north side of the B5194 School Lane between School Lane and Unity Grove. This forms part of National Cycle Route 862 which, as also shown in **Figure 3.1**, runs north along School Lane and into Kirkby and south under the M57 (via Gellings Lane) to Stockbridge village.
- 3.13 As shown in **Figure 3.1** and via National Cycle Route 862, cyclists can also access off road cycle routes along the A580 and to the north and east sides of Kirkby.

Proposed infrastructure

- 3.14 As part of the proposed development and as set out in detail in Section 4, it is proposed to provide additional crossing facilities on the B5194 School Lane just west of its junction with Gellings Road, together with a widened footway / cycleway on the west side of Gellings Road. These provisions would enhance the linkage to National Cycle Route 862.

Accessibility

- 3.15 Considering the accessibility of the site by bicycle via these routes, it is commonly accepted that cycling has the potential to substitute for short car trips, particularly those under five kilometres, and to form part of a longer journey by public transport.
- 3.16 In this context all of Knowsley village and Kirkby, together with places such as Stocksbridge village, Gillmoss, Croxteth and the east sides of Norris Green and West Derby, are within a 5km cycle ride and accessible by bicycle. In addition, Huyton and Prescott are around a 7 to 8km ride from the site. Whilst outside the 5km distance referred to, it is considered that these areas will also be accessible to some employees by bicycle.
- 3.17 In light of the above, the site is considered to offer the opportunity for employees at the site to travel by bicycle directly to and from home. It also offers the opportunity for future customers of the retail element of the petrol filling station and the drive-thru to access the site by bicycle.

Accessibility by Public Transport

Bus

- 3.18 As shown in **Figure 3.1**, the nearest bus stops to the site are located on the B5194 School Lane just to the north east of the site and east of Gellings Road. These stops are located approximately 150 metres from the Gellings Road accesses and 300 metres from the B5194 School Lane access. Both of these stops are therefore within the 400 metre distance referred to in guidance.
- 3.19 In addition to the above and as also shown in **Figure 3.1**, there are bus stops located on the A580, Moorgate Road North and Ribblers Lane to the north west of the site. These stops are around 850 to 950 metres from the Gellings Road accesses and around 750 to 850 metres from the B5194 School Lane access. They are therefore outside the 400 metre distance referred to in guidance. However, even at 950 metres, they are around a 10 minute walk from the site and, given the services they provide access to as set out below, this walk distance / time is highly unlikely to deter future employees (and potentially customers) from using the stops. They are therefore considered accessible to future employees.
- 3.20 Based on the above, Table 3.1 below shows the buses serving the site.

Table 3.1: Local Bus Services (Monday to Saturday and Sunday)

No.	Route	AM Peak	Off Peak	PM Peak	Saturday	Sunday
B5194 School Lane						
14B	Pier Head – Broadway – Croxteth – Knowsley Ind Est – Knowsley Village – Kirkby – Kirkby Ind Est	7:50, 17:54, 18:22 & 18:45			No service	No service
14B	Knowsley Village – Knowsley Ind Est – Kirkby – Croxteth – Broadway – Pier Head	6:50, 7:08, 7:26 & 8:02			No service	No service
14C	Kirkby – Knowsley Village – Knowsley Ind Est – Kirkby – Croxteth – Broadway – Pier Head	7:35			No service	No service
227	Huyton – Page Moss – Knowsley Village – Knowsley Ind Est – Southdene – Kirkby	Every 30mins	Every 30mins	Every 30mins	Hourly	Hourly
898	Page Moss – Croxteth – Kirkby Ind Est – Kirkby – Knowsley Ind Est – Knowsley Village – Croxteth – Page Moss	Hourly	Hourly	Hourly	Hourly	Hourly
899	Page Moss – Croxteth – Knowsley Village – Knowsley Ind Est – Kirkby – Kirkby Ind Est – Croxteth – Page Moss	Hourly	Hourly	Hourly	No service	No service
A580 / A5207 Moorgate Road North						
14 / 14A	Pier Head – Broadway – Croxteth – Kirkby Moorgate Rd – Knowsley Village – Kirkby – Tower Hill	Every 30mins	Every 30mins	Every 30mins	2 buses per hour	2 buses per hour
19	Liverpool City Centre – Queen Sq. Bus Stat – Everton – Anfield – Gillmoss – Croxteth – Kirkby	Every 10mins	Every 10mins	Every 10mins	Every 10-15mins	Every 15mins
97/ 97A	Kirkby Circular	Every 30mins	Every 30mins	Every 35-40mins	Every 30mins	No service
Ribblers Lane						
97/ 97A	As above					

- 3.21 As can be seen from the above, there are a number of bus services operating in the area throughout the day, together with some which look to be aimed at people who work on Knowsley Industrial Estate. These local services will offer the opportunity for future staff, and potentially customers, at the proposed site to travel bus.

Rail

- 3.22 Kirkby Railway Station is the closest station to the site but, at around 5km, any journey by rail would need to be completed by bike, bus or taxi.
- 3.23 There is a frequent service on the Merseytravel Northern Line between Kirkby and Liverpool Central, with trains running from just before 6:00 to just before midnight in both directions. Intermediate stations include Fazakerley, Rice Lane, Kirkdale, Sandhills and Moorfields.
- 3.24 There is also an hourly service between Manchester Victoria and Kirkby which calls at Wigan and Salford. Services to and from Manchester run throughout the day.

4 Development Proposals

Development Proposals

- 4.1 The proposals include the development of the site to provide:
- Eastern Part: up to 3,290sq.m of B2/B8 industrial units with 5% ancillary B1(c) office at first floor, accessed via dedicated access from Gellings Road; and
 - Western Part: up to 476sq.m Petrol Filling Station (including retail) with 8 car bays and 2 HGV bays, together with an up to 225sq.m Drive Thru' (circa 140sq.m public floor area), accessed via a new access from the B5194 School Lane.
- 4.2 Given that the application is in outline the final details of the scheme are not yet known. However, an illustrative Masterplan has been produced for the scheme and is provided at **Appendix B**.

Site Access: Eastern Part of Site

- 4.3 As shown in the illustrative Masterplan at Appendix B, access to the eastern part of the site would be taken via two dedicated accesses from Gellings Road.
- 4.4 These dedicated accesses would take the form of kerbed radii accesses of approximately 13.2 metres in width. The northern access would be located 33 metres to the south of the B5194 School Lane / Gellings Road junction, with the southern access located 70 metres north of the Randles Road / Gellings Road junction. **Drawing number CBO-0504-002 Rev A at Appendix C** shows the details of these accesses and is submitted for conditioning to any permission.
- 4.5 With regard to visibility, drawing CBO-0504-002 Rev A shows that, in both directions from the southern access and in the southern direction from the northern access, 2.4 x 59 metres splays are achievable, which is sufficient for a design speed of 37mph based on the use of Manual for Streets.
- 4.6 Looking north from the northern access, drawing CBO-0504-002 Rev A shows that a splay of 2.4 x 33m is achievable. Again based on Manual for Streets, this is sufficient for a design speed of 25mph. Given the proximity of the access to the B5194 School Lane / Gellings Road junction and that vehicle speeds will consequently be low heading south on Gellings Road towards the access, this level of provision is considered sufficient.
- 4.7 Based on the above, the proposed accesses from Gellings Road are considered acceptable and appropriate from a design and safety perspective.

Site Access: Western Part of Site

- 4.8 As shown in the illustrative Masterplan at Appendix B, access to the western part of the site would be taken via a new access from the B5195 School Lane.
- 4.9 This access would take the form of a new, all movements ghost island priority junction arrangement, located approximately 110 metres east of the M57 Junction 4 roundabout. **Drawing number CBO-0504-001 Rev F at Appendix C** shows the details of this junction and is submitted for conditioning to any permission.
- 4.10 The adequacy of this access, together with how the final arrangement shown in drawing CBO-0504-001 Rev F has been arrived at, is discussed in detail in Section 6 of this report.

Internal Site Layout

- 4.11 As already identified, the Masterplan included at Appendix B is 'indicative' given that the scheme is in outline and is intended to show that the scale of development proposed can be practically delivered within the site constraints. As a result, the internal highway arrangements shown are by no means definitive and are likely to change as the scheme progresses.

Eastern part

- 4.12 Notwithstanding the above and with regard to the eastern part of the site, the illustrative Masterplan shows the B2/B8 industrial units located on the western portion of this part of the site, with car parking and a turning area provided between the units and the access from Gellings Road.
- 4.13 Based on these arrangements, **Figures 4.1 and 4.2** show articulated Heavy Goods Vehicles [HGV] manoeuvring within the turning areas to access loading bays within the units. As can be seen from these figures, and based on the illustrative Masterplan, these HGVs can enter and exit the eastern part site in a forward gear and use each loading bay when the adjacent bay is in use.

Western part

- 4.14 With regard to the western part of the site, the illustrative Masterplan shows the proposed access continuing west from the proposed access, before turning south through 90 degrees to head into the site in a north – south direction. It then shows the access road turning through 90 degrees to head west, with access to / egress from the drive-thru being provided to the south and access to the PFS being provided to the north. The exit from the PFS is shown located at the northern end of the north-south section of the internal site access road.
- 4.15 Based on these arrangements, **Figure 4.3** shows two articulated HGVs using the access road into and out of the site. As can be seen from these figures, two articulated HGVs are able to pass on the first bend in the site access road from the B5194 School Lane. They can also pass on the straight section of the access between this bend and the second bend, as well as on part of the second bend itself.
- 4.16 **Figure 4.4** shows an articulated HGV serving the drive-thru. It is assumed that this unit would be serviced at quieter times of the day, when the spaces required for loading on the northern elevation of the unit, and those for manoeuvring to the west, could be closed to customers.
- 4.17 With regard to the PFS, **Figure 4.5** shows this area being accessed by an articulated HGV. It also shows a car exiting the Drive-Thru at the same time as the HGV is entering the PFS.

Summary

- 4.18 In light of the above and whilst illustrative at this stage, the Masterplan included at Appendix B demonstrates that appropriate provisions can be made within the site to deliver a safe and efficient layout.

Pedestrian and Cycle Provision

Eastern part

- 4.19 As set out in Section 3, there are dropped crossings with tactile paving provided across the northern end of Gellings Road. However, there is no such provision across the B5194 School Lane. In addition, KC have raised concerns regarding cyclist accessing the combined footway / cycleway on the north side of the B5194 School Lane given that this provision, and Gellings Road, sit on National Cycle Route 862.
- 4.20 In light of the above, **Drawing number CBO-0504-002 Rev A at Appendix C** shows improvements around the B5194 School Lane / Gellings Road junction which include:
- The widening of the existing footway on the west side of Gellings Road to 3 metres from the north side of the northern Gellings Road site access around onto the B5194 School Lane to provide a section of combined footway/ cycleway; and
 - The provision of a new dropped crossing with tactile paving for pedestrians and cyclists across the B5194 School Lane on the west side of Gellings Road.
- 4.21 These provisions will assist pedestrians crossing the B5194 School Lane and cyclists wishing to join the combined footway / cycleway.

Western part

- 4.22 As set out in Section 3, the footway provision on the B5194 School Lane currently terminates at the eastern side of the B5194 School Lane / School Lane junction.
- 4.23 In light of the above, Drawing number CBO-0504-001 Rev F at Appendix C shows:
- The provision of a footway on both sides of the internal site access road;

- The northern internal site access road footway terminating before the bend in the access to join the B5194 School Lane, with a dropped crossing and tactile paving at this point to get pedestrians entering / leaving the site from / to the southern footway;
- The continuation of the southern / eastern footway from the site east along the B5194 School Lane for a distance of approximately 110 metres to join the existing footway on the south side of the B5194 School Lane.

4.24 These provisions will allow pedestrians to walk to and from the western part of the proposed development.

Parking Provision

- 4.25 Given that the final composition of the scheme is not known at this stage, it is not possible to define a final level of parking provision for the proposed development. Parking provision for vehicles and cycles in the final scheme will therefore be based on KC's adopted standards and approaches to calculating parking provision.
- 4.26 Notwithstanding the above, KC's current parking standards are set out in "Supplementary Planning Document: Ensuring a Choice of Travel". Appendix A of this document refers to B2 uses providing a maximum of 1 space per 45sqm, B8 uses providing a maximum of 1 space per 100sqm and Drive Thru's providing a maximum of 1 space per 5sqm of public floor area. It does not provide any standards for the PFS use.
- 4.27 Taking an average of the B2/B8 use standards, i.e. one space per 72sqm, the proposed industrial units should provide up to 46 spaces. The Illustrative Masterplan at Appendix B shows the provision of 48 spaces. With regard to the drive thru, and assuming circa 140sq.m of the gross floor area is public area, the drive thru should provide up to 28 spaces. The Illustrative Masterplan at Appendix B shows the provision of 32 spaces.
- 4.28 Based on the above, the Illustrative Masterplan shows that parking provision that broadly accords with KC standards can be provided within the site.

5 Traffic Generation and Assignment

TRICS Derived Trip Rates

- 5.1 In order to determine the trip rates associated with the proposed development, the TRICS database has been interrogated for the sub land uses of 'Industrial Estate', 'PFS – with Retail' and 'Fast food – drive through'. To achieve a broad dataset, sites from London and Ireland have been removed and the sites chosen based on developments of a similar size to that proposed.
- 5.2 Based on the methodology set out above, Table 5.1 below sets out the trip rates for the proposed scheme during the peak hours, whilst full TRICS Outputs are included at **Appendix D**.
- 5.3 It should be noted that the evening peak trip rates set out in Table 5.1 for the PFS and Drive-Thru' are from the hours 17:00 – 18:00 and 18:00 – 19:00 respectively, whilst the industrial unit rates are from the hour 16:30 – 17:30. Whilst these do not correspond with the observed 16:15 – 17:15 evening peak hour, the rates used are higher to allow for a level of robustness.

Table 5.1: Proposed Development Trip Rates

	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Ind unit (per 100sq.m)	0.805	0.429	1.234	0.302	0.699	1.001
PFS (Per bay)	8.506	8.152	16.658	9.949	9.772	19.721
Drive-Thru (per 100sq.m)	12.877	12.536	25.413	11.361	11.361	22.722

Resultant Traffic Generation

- 5.4 Applying the above trip rates to the proposed 3,290sq.m of B2/B8 industrial units, 476sq.m PFS with 8 car bays and 2 HGV bays and 225sq.m Drive-Thru, Table 5.2 below sets out the resultant traffic generation for the proposed development.

Table 5.2: Proposed Development Traffic Generations

Traffic Generation	Weekday Morning Peak			Weekday Evening Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Industrial units	26	14	40	10	23	33
PFS*	68	65	133	80	78	158
Drive Thru	29	28	57	26	26	52
Total	123	107	230	116	127	243

*PFS generations based on car bays, exc HGV bays

Traffic Assignment

- 5.5 The traffic assignment for the development has been considered separately for the industrial units on the eastern part of the site and the petrol filling station and drive-thru on the western part. The methodologies adopted are set out below.

Eastern Part (Industrial units)

- 5.6 In order to distribute the traffic movements at the industrial units and assign them to the local highway network, Journey to Work data from the 2011 census for the middle super output area within which the site sits (Knowsley 005) has been utilised. This information provides details of the origins of journeys taking place and the numbers of people making those journeys via different modes. For the purpose of this exercise, only the number of car drivers was taken into account.
- 5.7 Having determined the origins of car driver based journeys, these journeys have then been manually assigned to the local network based on the following broad destinations:

1. East from the site then east on the A580 or south through Knowsley village;
2. West from the site then south on the M57;
3. West from the site then west on the A580;
4. West from the site then north on the M57;
5. West from the site then north on Moorgate Road South.

- 5.8 The destination and origin areas associated with the above routes are shown in the information included at **Appendix E**, which provides the raw ward data used to derive the distribution.
- 5.9 Based on the methodology detailed above, Table 5.3 below shows the percentage of industrial unit development related traffic assigned to each of the origins.

Table 5.3: Traffic Distribution and Assignment

Route	Origin / Destination	Percentage
1	East from the site then east on the A580 or south through Knowsley village	23%
2	West from the site then south on the M57	27%
3	West from the site then west on the A580	22%
4	West from the site then north on the M57	16%
5	West from the site then north on Moorgate Road South	12%
Total		100%

- 5.10 Adopting the above methodology, the percentage traffic assignment at the B5194 School Lane / Gellings Road junction is shown in **Figure 5.1**.

Western Part (Petrol Filling Station and Drive-Thru)

- 5.11 With regard to the Petrol Filling Station and Drive-Thru uses and given the location of the site, it is considered that all of the peak hour traffic movements associated with these uses would already be on the local highway network. Traffic associated with these uses would therefore be either 'pass-by' traffic, i.e. traffic already travelling past the site on the B5194 School Lane, or 'diverted' traffic, i.e. traffic which diverts from the M57 Junction 4 roundabout, the M57 or the A580.
- 5.12 Given that the available information means the proportion of each trip type is not known or easily determined at this stage, it has been assumed that just 25% of Petrol Filling Station and Drive-Thru uses traffic is 'pass-by' on the B5194 School Lane. This is considered robust given the level of traffic already using the B5194 School Lane to access Knowsley Industrial Estate.
- 5.13 For the remaining 75% of development traffic, it has been assumed that 50% would be traffic diverting from an existing trip through the M57 Junction 4 roundabout and that 25% would be traffic diverting from an existing trip on the M57 and A580 routes passing over and near the M57 Junction 4 roundabout. These are considered reasonable assumptions on the basis that vehicles already passing through the roundabout will comprise more 'local' traffic that is most likely to make use of the facilities, particular given the short stay nature of the uses and competition on other routes which will mean any trip diversion is likely to be over a short distance.

Resultant Development Traffic Flows

- 5.14 Based on the traffic generations shown in Table 5.2 and the assignments discussed above, the weekday morning and evening peak traffic flows associated with the proposed development at the proposed B5194 School Lane access are shown diagrammatically in **Figure 5.1**.

6 Proposed B5194 School Lane Site Access

General

- 6.1 Through the pre-application process, KC highways raised a number of points in relation to the proposed B5194 School Lane access. As a result and as set out in the Introduction, it has been agreed that the proposed access be modelled in detail and be subject to a Stage 1 Road Safety Audit, and that consideration be given to vehicular movements in the western part of the site and their potential impact on the B5194 School Lane.
- 6.2 The findings of elements of the above process were shared with KC highways prior to the submission of the application. Following these discussions, KC highways requested that this information be integrated into a single and comprehensive report that addresses KC highways queries.
- 6.3 In light of the above, this Section of the report considers the proposed B5194 School Lane access in detail.

Road Safety Audit

Background

- 6.4 As part of the pre—application process, KC highways indicated that a Road Safety Audit had been prepared in the past for a previously consented outline scheme at the site. As a result of this work, KC highways previously agreed a 'left out only' arrangement off the B5194 School Lane.
- 6.5 However, a review of the drawings for the previously consented outline scheme shows consideration was only ever given to a 'left out only' provision at an access from the B5194 School Lane. Furthermore, the safety audit prepared for the scheme was also based on a left only out arrangement, which resulted in an amended left out only scheme being agreed. As a result of this review, it was concluded that a safety audit had never been undertaken that considers an all movements access in this location.
- 6.6 In light of the above and in agreement with KC highways, a safety audit was undertaken of the proposed all movements access from the B5194 School Lane.

Road Safety Audit

- 6.7 The road safety audit for the proposed all movements access from the B5194 School Lane was undertaken in October 2018. A copy of this road safety audit, which has been annotated with CBO's responses, is included at **Appendix F**.
- 6.8 The road safety audit at **Appendix F** did not raise any fundamental safety issues with the proposed all movements access. In addition, the issues that were raised were addressed in the responses included on the annotated road safety audit and an updated access drawing **CBO-0504-001 Rev D**, which is also included at **Appendix F**.
- 6.9 For completeness, Table 6.1 below summarises the problems / recommendation of the road safety audit, together with the subsequent response.

Table 6.1: Summary of Road Safety Audit Problems, Recommendations & Responses

Problem	Recommendation	Response
The entry on to the roundabout at the adjacent junction forms two lanes. There is a risk that vehicles approaching from the east could attempt to use the ghost island to bypass queuing traffic in the nearside lane increasing the risk of collision with turning vehicles	It is recommended that a traffic island be provided in the hatching to the east of the proposed junction on School Lane	A traffic island has been included in the hatching to the east of the proposed junction on School Lane. The revised layout is shown on Drawing Number CBO-0504-001 Rev D NOTE: This is now shown on Drawing number CBO-0504-001 Rev F at Appendix C)
There is an existing roundabout direction sign that will need to be relocated due to its current position within the proposed junction. At detailed design stage, the new junction should be included in the design of the replacement sign in order to warn approaching drivers of the proximity of the junction	It is recommended that the junction be presented on the relocated direction sign	It is envisaged that the new junction will be included on the relocated direction sign as part of the detailed design to warn approaching drivers of the proximity of the junction
The proposal shows a new footway on the western side of the development access. The footway extends up to the tangent with School Lane. There is no formal footway to the west of the development on School Lane. There is a narrow hardened verge. The proposed footway does not appear to connect with any existing footway infrastructure on School Lane. There is a risk that the presence of a footway all the way up to the junction could encourage pedestrians walking from the east to cross the junction mouth to access the footway on the western side of the development road. Crossing in this location increases the risk of collision with turning and emerging traffic	It is recommended that the footway be shortened on the western side of the development access and a marked crossing point be created further within the development	The footway will be shortened as part of the scheme layout to cross pedestrians on the straight east – west section of access road within the development. This crossing point will include dropped crossings and tactile paving where this footway terminates (NOTE: This is now shown on Drawing number CBO-0504-001 Rev F at Appendix C)
There is an existing semi mature hedge / tree line along the frontage of the development site on School Lane. The vegetation masks the development site from vehicles approaching from the roundabout. The type of development is likely to attract drivers unfamiliar with the area. There is a risk of late braking and shunt type collisions if the proximity of the development is not clearly visible	It is recommended that the frontage to the development site be cleared of all but low growing vegetation to ensure the development can be seen from the exit from the roundabout	As part of the design of the scheme, the boundary treatment of the School Lane site frontage can be designed to ensure the development can be seen from the exit from the roundabout

Subsequent Changes to the Access Arrangement

- 6.10 Following the completion of the road safety audit process, KC highways requested that a yellow boxed junction marking be included on the westbound carriageway about the access junction.

- 6.11 In addition and to allow for internal considerations, the access has also been moved approximately 1 metre to the west. The pedestrian crossing provision referred to in Table 6.1 above has also been added to the length of the internal access road that is being applied for as part of this outline application.
- 6.12 It is considered that these changes, which are shown on the proposed access **drawing CBO-0504-001 Rev F at Appendix C**, and which, as set in Section 4 is for condition to any permission, should not materially affect the findings of the road safety audit.

Junction Geometry

Right turn lane

- 6.13 The Design Manual for Roads & Bridges [DMRB] states that, for right turn lanes on roads with a design speed of 43.75mph, which is in excess of the observed 85th percentile speed set out in Table 2.2 at Section 2, right turn lanes should include the following:
- A 10 metre turning length plus the queue length (in this case zero – see later capacity assessments);
 - A 40 metre deceleration length; and
 - A 15m direct taper length.
- 6.14 With regard to the width of this right turn lane, KC highways has indicated that they would want this to be 3.3 metres.
- 6.15 **Drawing number CBO-0504-001 Rev F at Appendix C** makes all of the above provisions and includes 3.65m running lanes through the junction. The drawing also shows the hatching for the right turn lane tapering in accordance with DMRB, with the hatching to the west then forming the hatching to the roundabout.

Forward visibility on B5194 School Lane

- 6.16 With regard to forward visibility off the roundabout, the alignment of the proposed access as shown on Drawing Number CBO-0504-001 Rev F so that the eastbound through lane remains on its existing alignment, together with the right turn lane proposed into the access and the fact that any queues would be contained within this lane, means that forward visibility for through traffic is unaffected by the proposal.
- 6.17 In terms of forward visibility for those entering the site, then these drivers are highly unlikely to be travelling in excess of the 31mph recorded and set out in Table 2.2 at Section 2 given that they would be manoeuvring into the right turn lane and decelerating to use the access. The 70 – 90 metre provision shown on drawing CBO-0504-001 Rev F is therefore considered suitable.

Visibility from access

- 6.18 With regard to visibility from the access, KC highways indicated that they would require visibility to be provided from an 'x' distance of 4.5 metres. With regard to the 'y' distance and during the pre-application process, KC highways queried the adequacy of the provision proposed to the west of the access and referred to rounding up to the next speed in the DMRB table which, in this case, would be 120 metres.
- 6.19 However, the DMRB tables are typically only used when basing visibility on a roads speed limit and it is common practice where observed speed information is available to base visibility requirements on the formulas used in DMRB or Manual for Streets. It is also the case that visibility provision was not raised in the safety audit and the auditor was provided with all the speed survey information.
- 6.20 Based on the above, **drawing number CBO-0504-001 Rev F at Appendix C** shows that a visibility splay of 4.5 x 114m can be achieved to the west which, based on the formula in DMRB, is appropriate for a design speed of 43.75mph. This approach speed is considerably higher than the 31mph observed coming off the roundabout.
- 6.21 Relating it to the required distance, the 4.5 x 114 metre provision is also considerably in excess in of the 70 metres required by DMRB based on a design speed of 31.25mph, which is comparable to the observed speed set out in Table 2.2 at Section 2.
- 6.22 Whilst the above provision is therefore appropriate, **drawing number CBO-0504-001 Rev F at Appendix C** also shows that the 4.5 x 120 metre provision referred to by KC highways is achievable to the roundabout exit.

- 6.23 With regard to visibility to the east and based on the 41mph observed 85th percentile speed referred to in Table 2.2 at Section 2, **drawing number CBO-0504-001 Rev F at Appendix C** shows that the required 4.5 x 120 metres splay is achievable.

Summary

- 6.24 In light of the above, it is considered that the proposed access geometry and visibility provision is appropriate.

Capacity Assessment

Traffic Growth

- 6.25 The Transport Planning profession has been consistently over estimating the level of traffic growth, with national figures showing that the growth in traffic flow started to slow in the early 1990's and flattened off in the early 2000's. It is therefore considered that the application of background traffic growth is inappropriate.
- 6.26 Notwithstanding the above and for robustness, growth factors have been used to derive a set traffic flows that allow assessment of the proposed B5194 School Lane access at a 2024 future year.
- 6.27 In order to derive these future year flows, it is common practice to growth observed flows based on the 2015 National Transport Model [NTM] Indices, adjusted to local conditions using the geographical parameters within the TEMPRO program. Adopting this approach and using the geographical parameter of 'Knowsley 005' and the 'urban all' roads parameter within TEMPRO 7.2, Table 6.2 below details the growth factors to be applied to 2017 observed traffic flows set out in Section 2 to derive a set of 2024 background traffic flows.

Table 6.2: TEMPRO Adjusted Growth Factors for Knowsley 005

	Weekday Morning Peak	Weekday Evening Peak
2017 – 2024	1.1035	1.0973

- 6.28 Based on the application of the above TEMPRO derived traffic growth factors to the 2017 observed traffic flows, **Figure 6.1** shows the 2017 observed traffic flows set out in Table 2.1 in Section 2, together with the 2024 TEMPRO growthed base traffic flows past the proposed B5194 School Lane site access for the weekday morning and evening peaks

Operational Assessments

- 6.29 Based on the growthed base traffic flows referred to above and the range of proposed development traffic flows shown in Figure 5.1, **Figure 6.1** shows assessment traffic flows at the upper and lower end of the range.
- 6.30 Using these flows, Table 6.3 below shows the results of Junctions 9 assessments at the proposed B5194 School Lane site access. The full Junctions 9 outputs are included at **Appendix G**.

Table 6.3: Junctions 9 Results: Proposed B5194 School Lane Site Access

	Weekday Morning Peak		Weekday Evening Peak	
	RFC	Q	RFC	Q
Site access: left turn	0.154	0	0.231	0
Site access: right turn	0.089	0	0.057	0
Right turn from School Lane	0.192	0	0.217	0

RFC: Ratio of Flow to Capacity. Q: Queue length in vehs

- 6.31 As can be seen from the above table and despite the robust traffic flows used in the assessment, the access would be operating within its design capacity, with a maximum RFC of 0.192 during the morning peak and 0.231 during the evening peak.
- 6.32 With regard to the right turn lane into the site from the B5194 School Lane, Table 6.3 above shows there would be no queuing. Traffic associated with the proposed development would not, therefore, affect the flow of traffic on School Lane.

Impacts of Internal Movements

- 6.33 KC has requested that consideration be given to vehicular movements in the western part of the site and their potential impact on the B5194 School Lane.
- 6.34 As set out in Section 4, the Masterplan included at Appendix B is 'indicative' given that the scheme is in outline and is intended to show that the scale of development proposed can be practically delivered within the site constraints. As a result, the internal highway arrangements shown are by no means definitive and are likely to change as the scheme progresses.
- 6.35 However, the swept path analysis referred to in Section 4 shows that even if two HGVs are required to pass within the site, the layout is such that this scenario can be accommodated around the first section of the main site access. As a result, there should not be a scenario whereby vehicles are queuing on the internal site access road back to the B5194 School Lane access.
- 6.36 KC have also referred to a scenario when a petrol tanker is on site refilling the tanks, whether the site will be shut or access limited at this time and how vehicles would be prevented from queuing on the highway network under such a scenario.
- 6.37 It is envisaged that how this scenario is dealt with will be addressed as part of a reserved matters application once the final layout, operation and occupier of the site is known. However, it is considered that this scenario could be managed in some way, either with the site being closed entirely at the access from the B5194 School Lane for this short period, or with the site being closed to HGVs only at this point, with cars still then being able to circulate through the Drive-Thru car park.

Summary

- 6.38 Based on the above, the proposed all movements access has been shown to provide appropriate geometry and visibility provision and has been subject to a Road Safety Audit. Operational assessments of the access show it operates with ample spare capacity, whilst it is considered that movements on the internal access road would not affect the operation of the junction, which in turn would not affect the flow of traffic on the B5194 School Lane. The proposed all movements access from the B5194 School Lane is therefore considered acceptable and appropriate from a design and safety perspective.

7 Off-Site Traffic Impact

General

- 7.1 As set out in the Introduction and other than the proposed access from the B5194 School Lane that is discussed in detail in the previous section, it has been agreed that off-site traffic impact be based on a numerical review of the B5194 School Lane / Gellings Road junction (KC) and the M57 Junction 4 (HE).
- 7.2 In light of the above, this section sets out the findings of the consideration of off-site traffic impact.

B5194 School Lane / Gellings Road

- 7.3 The traffic flows presented in **Figure 5.1** show that, during the weekday morning peak, 40 additional vehicles would pass through the B5194 School Lane / Gellings Road junction as a result of the proposed development. During the weekday evening peak, **Figure 5.1** shows 33 additional vehicles would pass through the junction. These increases equate to a maximum of one additional vehicle every one and a half minutes.
- 7.4 Considering the most impacted approaches **Figure 5.1** shows that, during the weekday morning peak, this would be on the B5194 School Lane eastbound approach, with an increase of 20 vehicles. During the weekday evening peak, **Figure 5.1** shows Gellings Road would be the most impacted approach, with an increase of 23 vehicles. These increases equate to a maximum of one additional vehicle every three minutes.
- 7.5 It is considered that these increases could be accommodated in this location without materially impacting on highway operation and that this level of variation in traffic flow could be accounted for through daily variation.

M57 Junction 4

- 7.6 With regard to the M57 Junction 4, Highways England have referred to needing to be content that the additional movements associated with the proposed development do not have an impact on to the M57 slip roads given that some trips will be coming from the M57 and the A580 and onto the roundabout.
- 7.7 The traffic flows presented in **Figure 5.1** show that, during the weekday morning peak, 142 trips would be diverted from the M57 Junction 4 roundabout as a result of the proposed development. During the weekday evening peak, **Figure 5.1** shows 156 trips would be diverted from the M57 Junction 4 roundabout.
- 7.8 However, as set out in Section 5, it has been assumed that 50% of development traffic would be traffic diverting from an existing trip through the M57 Junction 4 roundabout and that 25% would be traffic diverting from an existing trip on the M57 and A580 routes passing over and near the M57 Junction 4 roundabout. As a result, only 48 of the weekday morning peak traffic flows and 53 of the weekday evening peak flows would be 'new' trips through the Junction 4 roundabout and, therefore, additional trips on the M57 / A580 / Moorgate Road South arms of the roundabout. Even if 50% of these trips were using the M57 slip roads, this would total less than 30 additional slip road trips per hour.
- 7.9 These levels of increase would have no material impact on the M57 Junction 4 slip roads.

Summary

- 7.10 Based on the above, it is concluded that no operational assessments are required at junctions in the vicinity of the site, that the operation of the B5194 School Lane / Gellings Road junction and the M57 Junction 4 roundabout would not be materially affected by the proposed development and that the impact of the proposals on these junctions could not be considered 'severe'.

8 Conclusions and Recommendations

Conclusions

8.1 Based on the findings of this report it is concluded that:

Sustainable Access / Proposed Pedestrian and Cycle Provision

- Pedestrian infrastructure in the vicinity of the site is of a good standard;
- There are continuous footways running along the length of Gellings Road. To the south, these link to footways running along both sides of Randles Road. To the north, pedestrians can continue round onto a footway running along the south side of the B5194 which continues east through Knowsley Industrial Estate and provides access to a westbound bus stop on the B5194 School Lane. Heading west from Gellings Road, there is a footway provided on the south side of the B5194 School Lane for a distance of approximately 90 metres, at which point pedestrians are required to cross to the north side of the B5194 School Lane. There is then no footway on the south side from this point to the M57 Junction 4 roundabout, including past the western part of the site;
- On the north side of the B5194 School Lane, there is a combined footway / cycleway running between the B5194 School Lane / School Lane junction and the B5194 School Lane / Unity Grove junction. The footway then continues east from Unity Grove along the north side of the B5194 School Lane through Knowsley Industrial Estate. At its western end, there is again no footway provided on the north side of the B5194 School Lane past the B5194 School Lane / School Lane junction. However, from the termination of the combined footway / cycleway, a footway runs along School Lane. This footway heads north west to the A580 / A5207 Moorgate Road North junction, which includes controlled pedestrian crossings and provides links to the surrounding pedestrian network.
- As part of the development, it is proposed to provide a new footway from the proposed access serving the western part of the site that links to the existing footway on the south side of the B5194 School Lane. It is also proposed to provide additional crossing facilities on the B5194 School Lane just west of its junction with Gellings Road. These provisions will link the site to the existing pedestrian infrastructure referred to above;
- Considering the wider context, the site is accessible for pedestrians and offers the opportunity for some journeys on foot by future employees travelling directly to and from home. The local infrastructure also allows pedestrians to walk to and from the local bus stops. In addition, the site offers the opportunity for some journeys on foot by future customers of the retail element of the petrol filling station and the drive-thru;
- In terms of cycle provision, there is a combined footway / cycleway running along the north side of the B5194 School Lane between School Lane and Unity Grove. This forms part of National Cycle Route 862, which also runs north along School Lane and into Kirkby and south under the M57 (via Gellings Lane) to Stockbridge village. Via National Cycle Route 862, cyclists can also access off road cycle routes along the A580 and to the north and east sides of Kirkby;
- As part of the development, it is proposed to provide additional crossing facilities on the B5194 School Lane just west of its junction with Gellings Road, together with a widened footway / cycleway on the west side of Gellings Road. These provisions would enhance the linkage to National Cycle Route 862;
- Considering the wider context, a 5km cycle ride takes in all of Knowsley village and Kirkby, together with places such as Stocksbridge village, Gillmoss, Croxteth and the east sides of Norris Green and West Derby. In addition, Huyton and Prescot are around a 7 to 8km ride from the site. Whilst outside the 5km distance referred to, it is considered that these areas will also be accessible to some employees by bicycle. The site therefore offers the opportunity for employees to travel by bicycle directly to and from home. It also offers the opportunity for future customers of the retail element of the petrol filling station and the drive-thru to access the site by bicycle;
- With regard to public transport, the proposed site is considered to be well connected to the local bus network, whilst Kirkby railway station could potentially be accessible from the site by bicycle, bus and taxi and provides frequent services to a number of destinations. The site therefore offers the opportunity for future employees and customers to travel by public transport;

Access, Pedestrian and Parking Provision

- Access to the industrial units on the eastern part of the site would be provided via two dedicated accesses from Gellings Road. These proposed accesses are considered acceptable and appropriate from a design and safety perspective;
- Access to the petrol filling station and drive-thru on the western part of the site would be provided via a new all movements access from the B5194 School Lane. This access has been shown to provide appropriate geometry and visibility provision and has been subject to a Road Safety Audit. Operational assessments of the access show it operates with ample spare capacity, whilst it is considered that movements on the internal access road would not affect the operation of the junction, which in turn would not affect the flow of traffic on the B5194 School Lane. The proposed all movements access from the B5194 School Lane is therefore acceptable and appropriate from a design and safety perspective;
- With regard to pedestrian provision at the western part of the site, dropped crossing points with tactile paving would be provided on both sides of the internal access road to allow pedestrians to cross to and from the footway along the south side of the B5194 School Lane. From here, pedestrians can link to the existing pedestrian network;
- Given that the final composition of the scheme is not known at this stage, it is not possible to define a final level of parking provision for the proposed development. Parking provision for vehicles and cycles in the final scheme will therefore be based on KC's adopted standards and approaches to calculating parking provision. However, the Illustrative Masterplan shows parking provision that broadly accords with KC standards;

Traffic Impact

- No operational assessments are required at junctions in the vicinity of the site, whilst the operation of the A5194 School Lane / Gellings Road junction and the M57 Junction 4 roundabout would not be materially affected by the proposed development. The impact of the proposals on these junctions could not therefore be considered 'severe' in the context of the NPPF.

Recommendations

- 8.2 In light of the above it is the recommendation of CBO Transport that there are no traffic or transportation grounds on which to refuse the application for the proposed development.



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Figures

- Figure 1.1: Site Location
- Figure 3.1: Walking Catchment and Site Accessibility
- Figure 4.1: Swept Path Analysis: Articulated HGVs Serving B2/B8 Units 1 & 2
- Figure 4.2: Swept Path Analysis: Articulated HGVs Serving B2/B8 Unit 3
- Figure 4.3: Swept Path Analysis: Two Articulated HGVs Using Western Site Access
- Figure 4.4: Swept Path Analysis: Articulated HGV Serving Drive-Thru Unit
- Figure 4.5: Swept Path Analysis: Articulated HGVs Using PFS
- Figure 5.1: Proposed Development Traffic Flows at B5194 School Lane Access and B5194 School Lane / Gellings Road Junction
- Figure 6.1: Assessment Traffic Flows at B5194 School Lane Access

Figure 1.1 Site Location

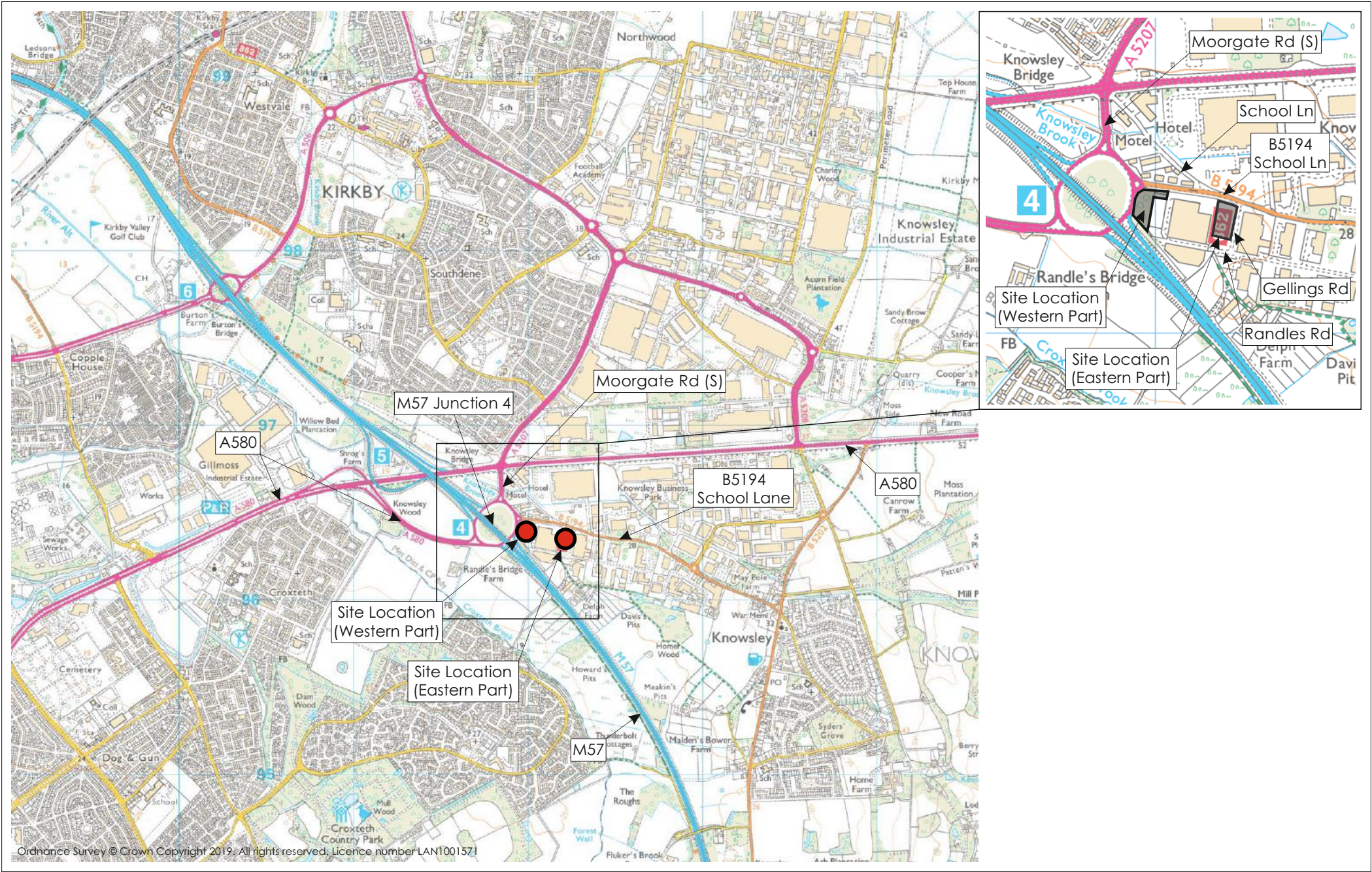


Figure 3.1 Walking Catchment and Site Accessibility

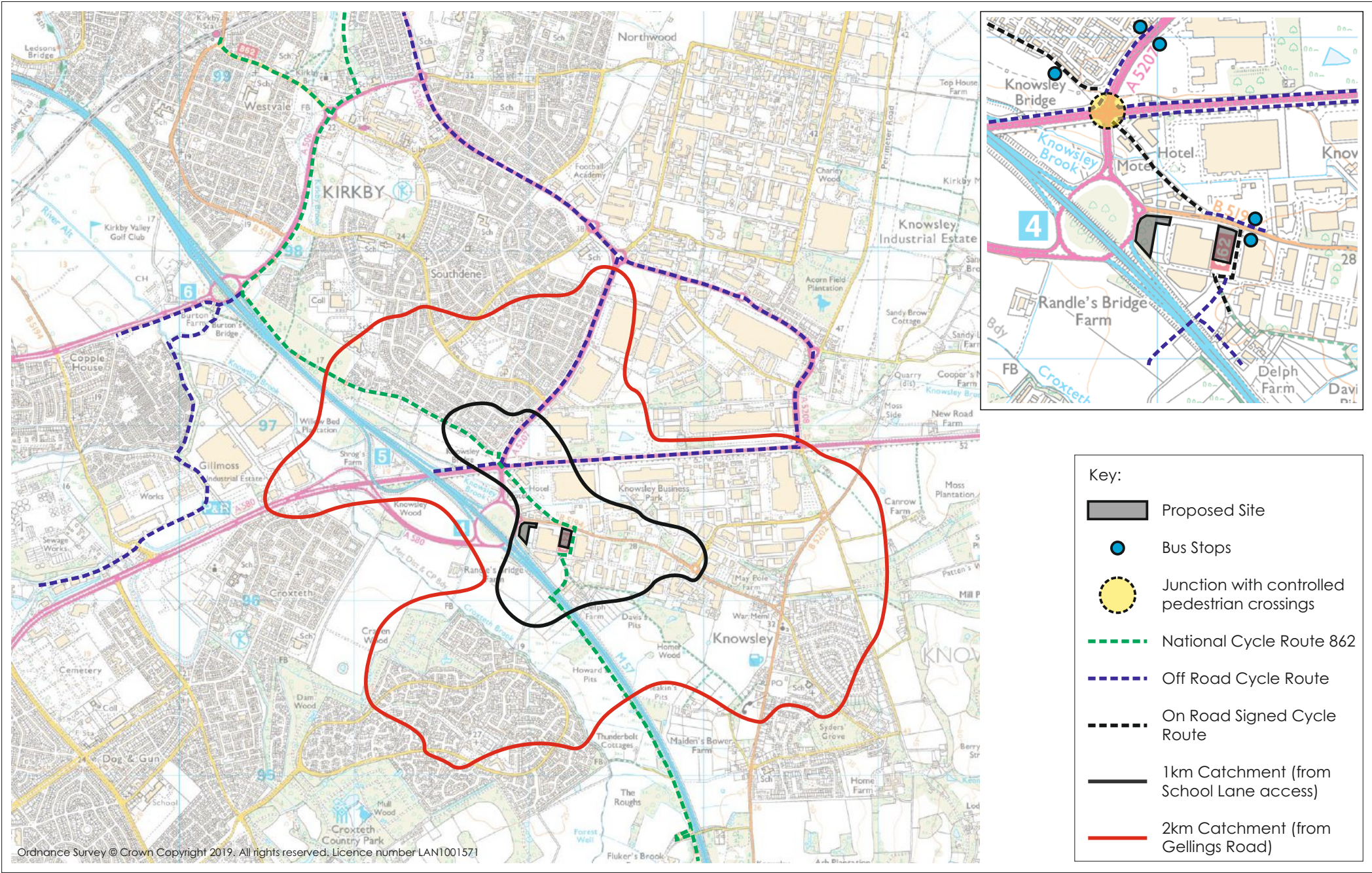


Figure 4.1 Swept Path Analysis: Articulated HGVs Serving B2/B8 Units 1 & 2 (1:250 @ A3)

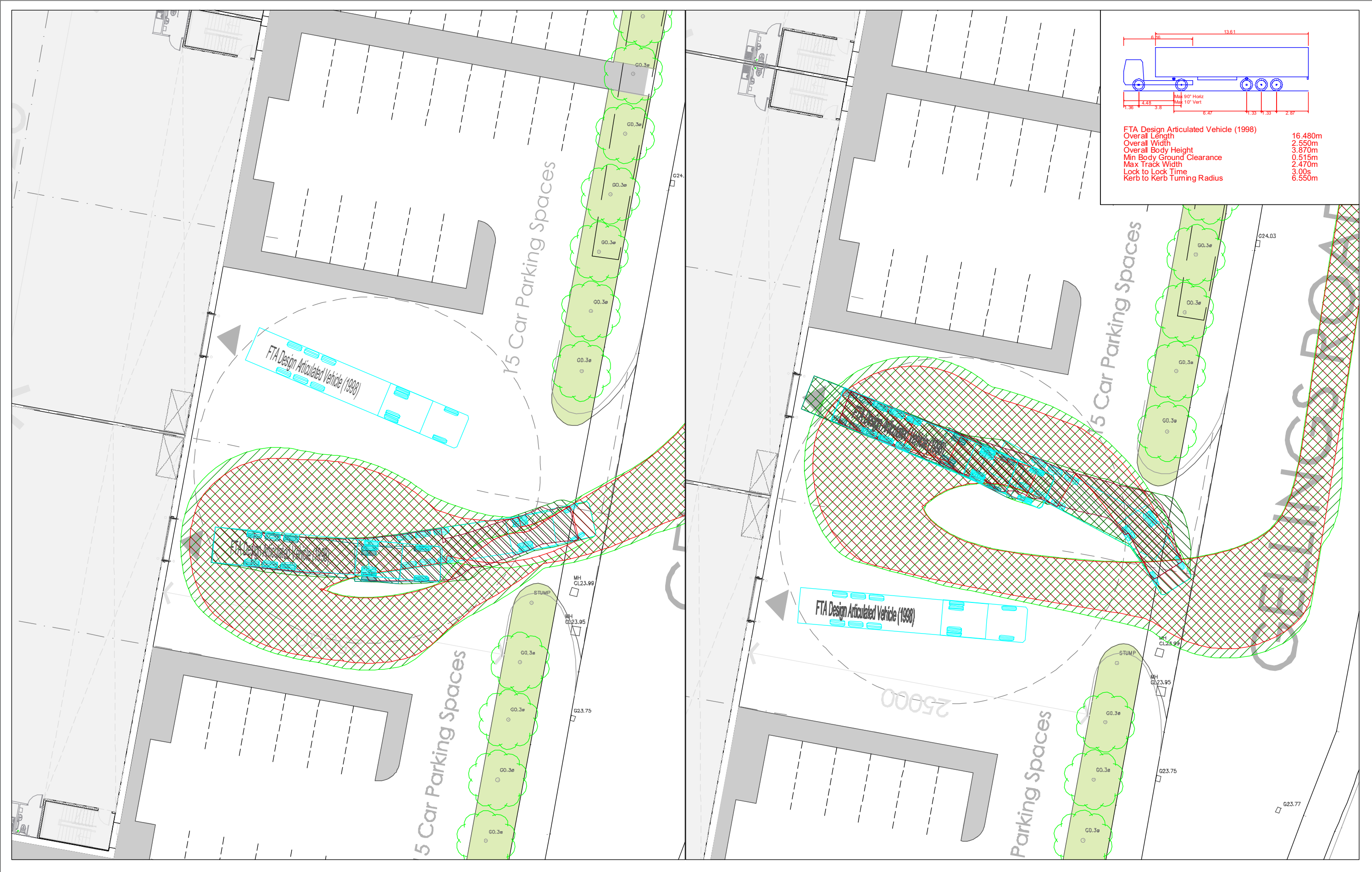
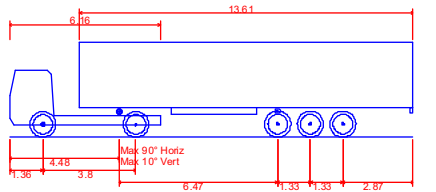


Figure 4.2



FTA Design Articulated Vehicle (1998)	
Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to Lock Time	3.00s
Kerb to Kerb Turning Radius	6.550m

Figure 4.3 Swept Path Analysis: Two Articulated HGVs Using Western Site Access (1:250 @ A3)

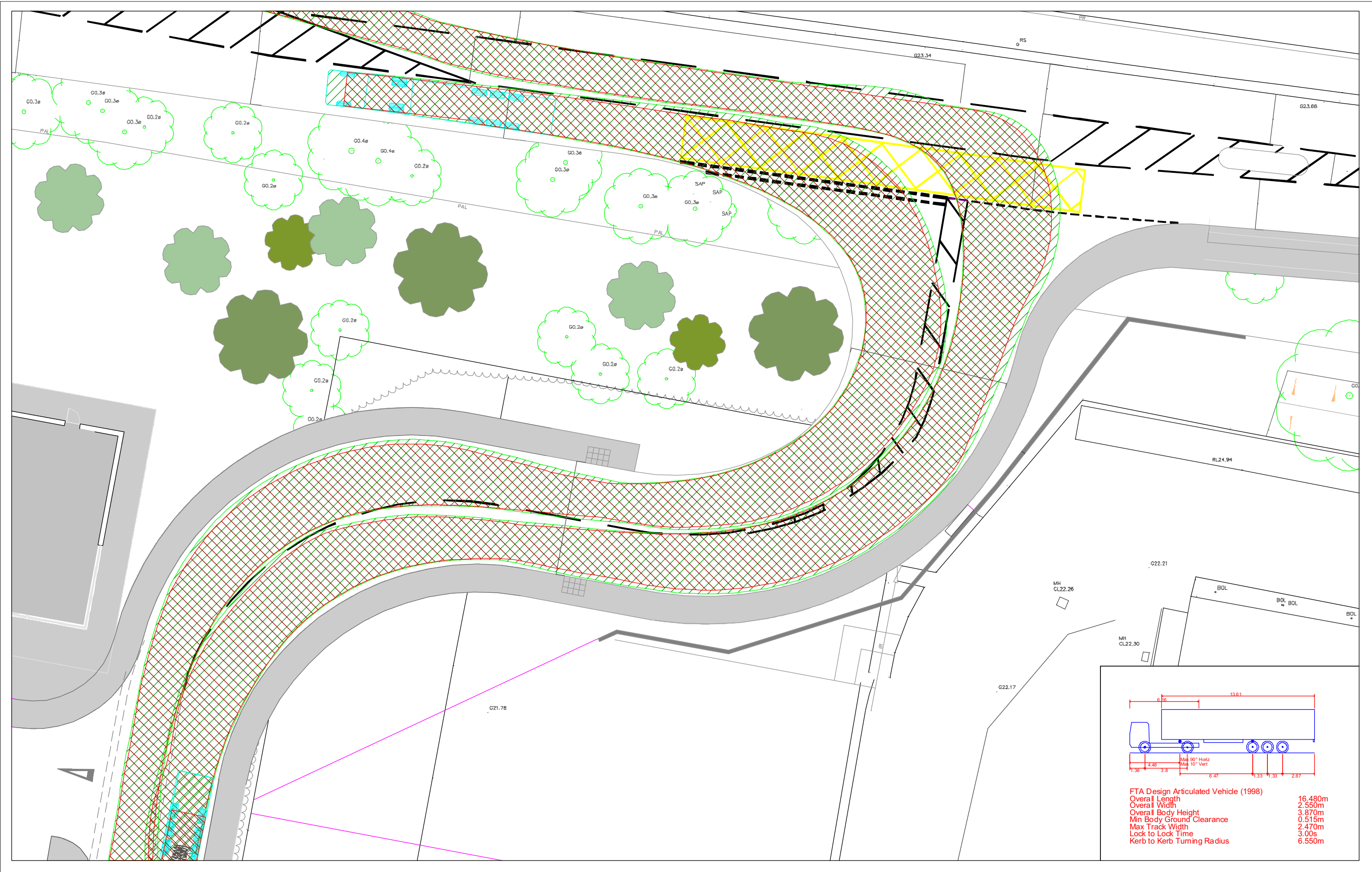


Figure 4.4

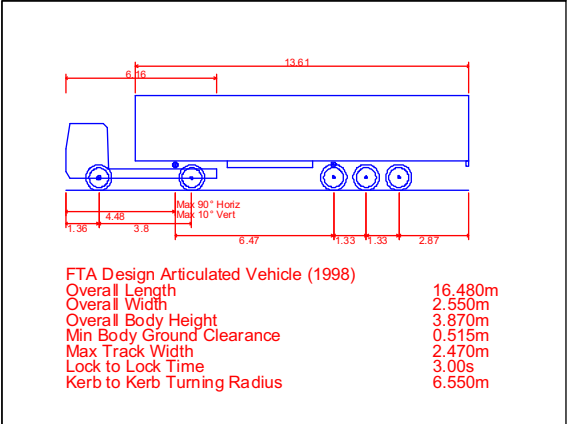


Figure 4.5

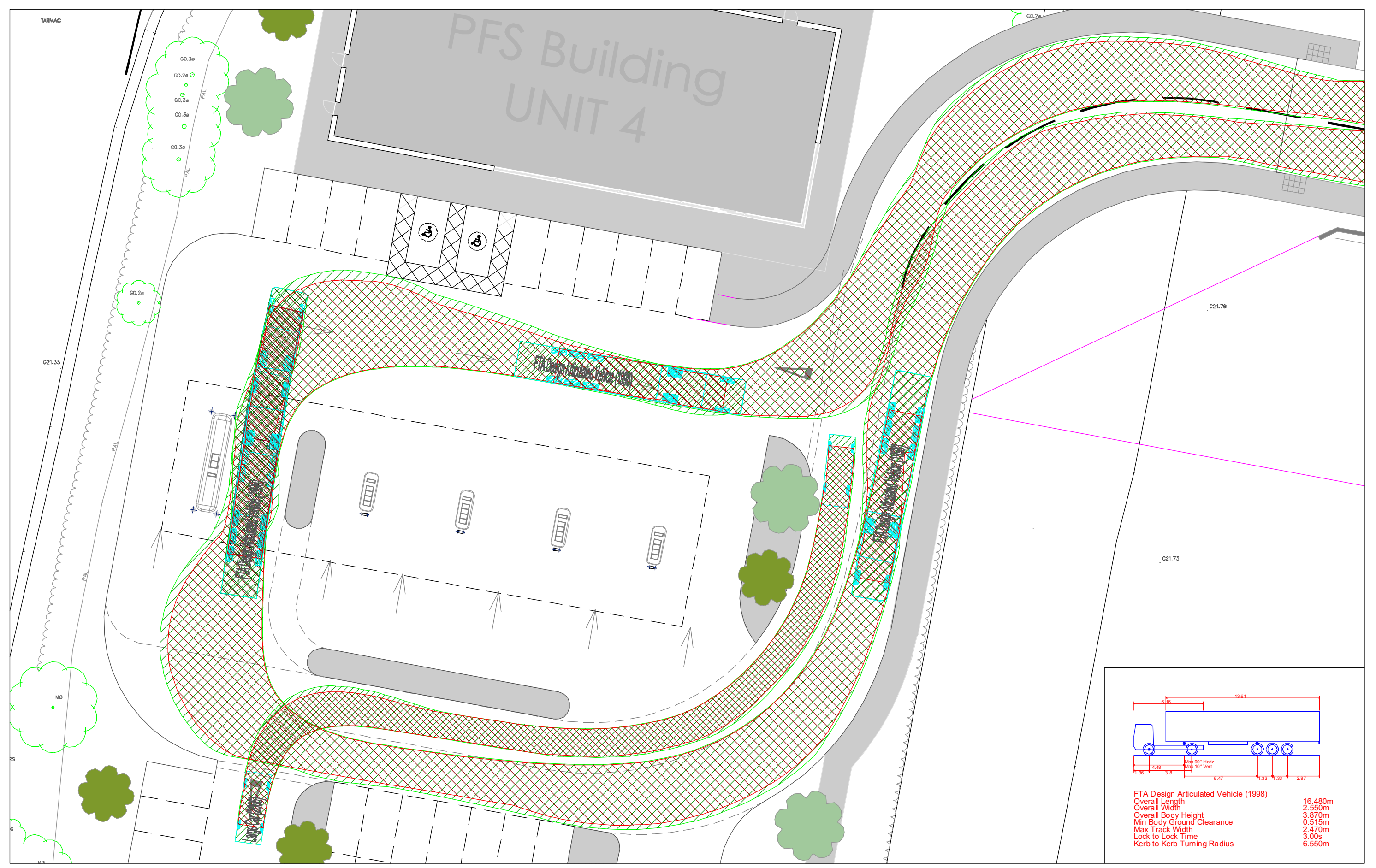


Figure 5.1

Proposed Development Traffic Flows at B5194 School Lane Access and B5194 School Lane / Gellings Road Junction

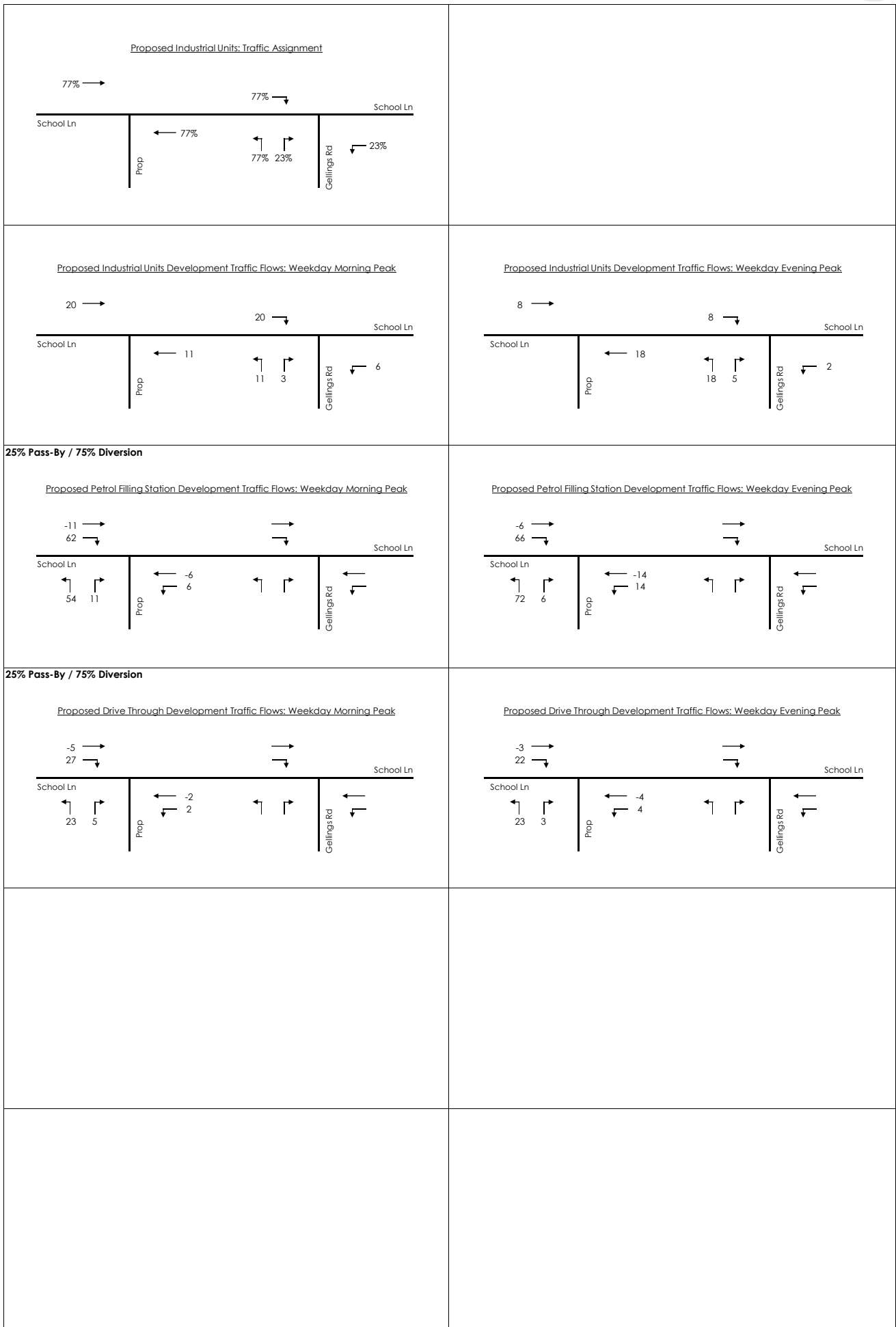
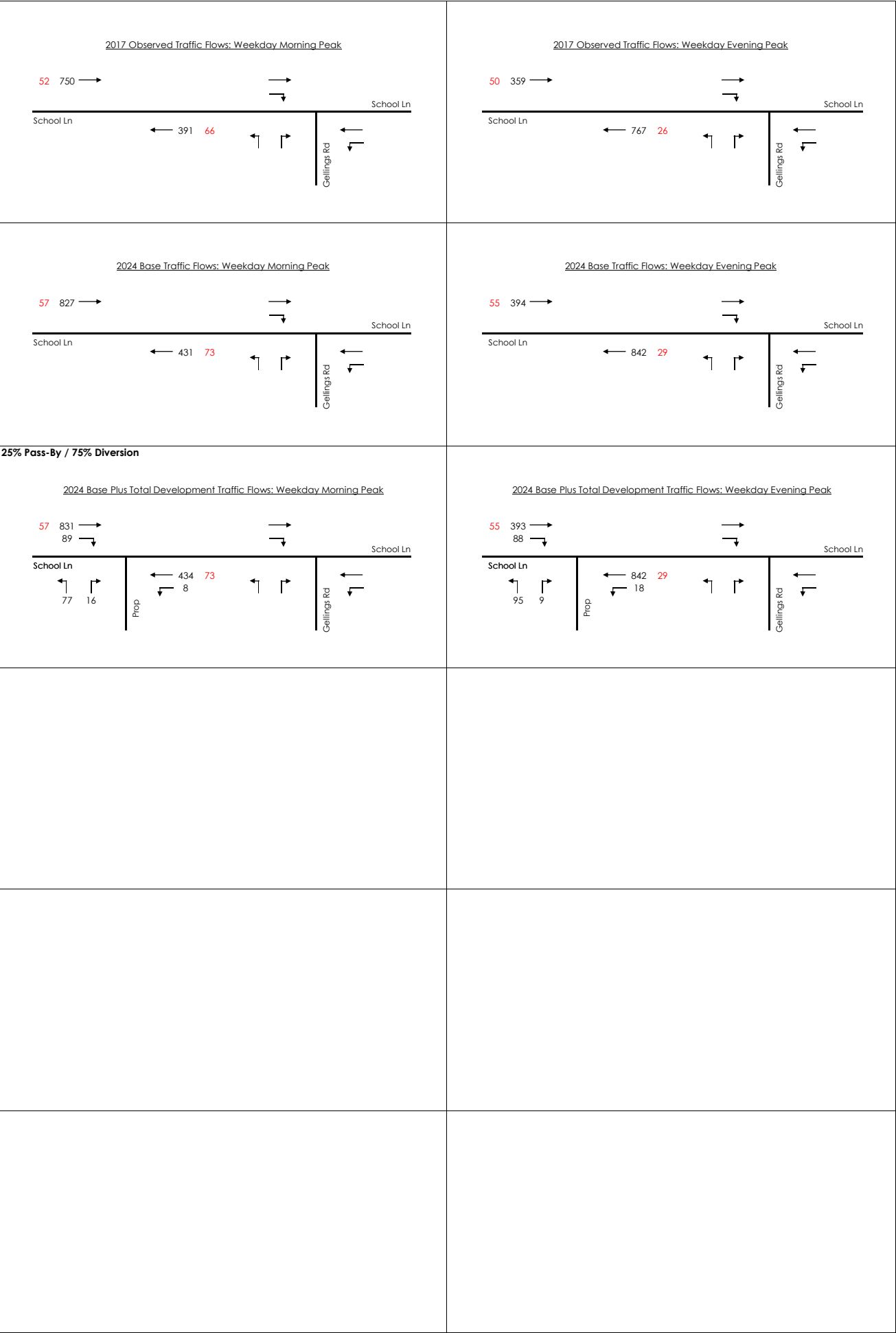


Figure 6.1 Assessment Traffic Flows at B5194 School Lane Access





Appendix A: Speed Survey Data

Weather Conditions - Fine, Dull & Breezy/Road Surface - Dry

Eastbound

31	29	21	36	29	24	21	26	24	26
27	32	20	25	30	28	24	30	28	26
25	27	29	34	25	40	31	25	20	36
29	26	33	28	28	30	26	33	25	28
24	33	28	30	32	26	27	24	29	31
32	27	30	33	26	28	32	27	25	27
27	29	25	27	31	22	29	35	27	24
23	27	31	23	28	25	31	29	25	27
26	35	24	28	32	25	28	26	30	23
33	28	34	30	28	32	30	23	24	27
27	31	29	33	27	29	33	30	28	25
28	25	27	30	25	31	28	30	26	29
31	28	23	32	29	23	30	34	29	27
28	29	34	25	21	29	20	25	28	31
26	31	28	29	27	24	30	27	31	29
30	26	32	27	29	27	23	31	28	24
26	29	27	31	27	30	28	24	30	27
29	24	30	28	33	24	31	28	24	29
25	30	28	25	32	30	26	24	31	27
27	23	28	30	31	25	30	28	24	31

Max - 40

Min - 20

85% - 31

Ave - 28

Sp. Limit - 40

31 - Cars/LGV's

24 - HGV's/PSV's

Automatic Classified Counts, Knowsley

LOCATION: B5194 SCHOOL LANE

Direction : WESTBOUND

AVERAGE SPEEDS							
Hr Ending	Sunday 3-Dec-17	Monday 4-Dec-17	Tuesday 5-Dec-17	Wednesday 6-Dec-17	Thursday 7-Dec-17	Friday 8-Dec-17	Saturday 9-Dec-17
1	30.4	37.2	37.5	36.8	33.5	36.9	31.3
2	28.7	38.2	36.3	34.8	35.4	36.0	33.3
3	32.3	38.6	38.5	40.0	33.9	38.4	31.4
4	36.5	31.2	37.2	32.9	34.0	39.0	32.0
5	34.5	32.7	30.9	35.7	32.4	39.4	35.1
6	34.6	33.0	35.0	33.8	32.1	34.4	36.3
7	35.8	34.7	33.5	34.4	32.0	33.7	34.4
8	32.2	31.3	32.8	32.5	31.5	32.3	30.5
9	34.7	33.0	32.5	32.3	32.2	31.6	33.4
10	34.9	33.5	32.2	33.8	32.8	32.5	33.8
11	32.7	32.8	34.1	34.7	31.9	32.6	34.1
12	33.8	33.5	33.2	33.9	32.4	32.4	34.6
13	35.7	33.8	34.7	34.9	33.3	33.6	35.7
14	37.3	34.2	34.7	34.5	35.3	33.5	36.2
15	34.2	34.0	33.5	34.7	34.0	34.9	34.8
16	35.7	33.7	33.7	32.3	33.0	30.3	34.5
17	36.0	25.2	24.6	27.3	22.6	27.4	34.9
18	35.2	25.0	25.3	22.2	26.2	31.7	34.8
19	36.6	33.5	33.9	34.1	33.4	34.7	33.2
20	37.2	35.2	34.1	34.8	35.3	32.6	30.6
21	37.4	35.7	36.9	37.0	34.5	30.0	35.8
22	38.8	38.3	35.6	36.4	34.7	35.7	34.6
23	35.4	37.4	36.2	34.4	37.1	32.4	30.5
24	32.9	33.3	33.7	31.4	34.4	31.2	34.2
10-12	33.2	33.2	33.7	34.3	32.2	32.5	34.4
14-16	34.9	33.9	33.6	33.5	33.5	32.6	34.6
0-24	34.7	33.7	33.8	33.7	32.8	33.6	33.8

85TH PERCENTILE							
Hr Ending	Sunday 3-Dec-17	Monday 4-Dec-17	Tuesday 5-Dec-17	Wednesday 6-Dec-17	Thursday 7-Dec-17	Friday 8-Dec-17	Saturday 9-Dec-17
1	37.9	44.8	45.6	43.5	40.1	43.4	37.5
2	35.2	43.0	43.5	44.4	43.4	42.3	38.5
3	38.9	45.4	47.7	48.1	42.6	44.4	37.1
4	46.3	44.7	44.1	42.3	42.1	45.3	39.6
5	40.2	41.0	40.4	43.5	41.6	46.7	41.8
6	42.1	40.5	42.2	43.3	40.6	41.3	44.3
7	43.6	42.0	41.2	40.6	38.5	42.1	41.5
8	38.8	38.2	39.1	39.0	37.5	38.0	35.5
9	42.6	38.8	37.3	39.0	38.1	37.3	41.5
10	43.8	40.1	39.9	40.4	39.6	38.9	40.3
11	40.1	39.4	41.1	42.2	39.0	39.1	41.7
12	41.6	39.6	39.6	40.8	39.8	38.6	41.4
13	41.5	39.8	41.6	41.6	39.6	39.4	42.3
14	44.0	40.5	41.0	41.3	41.7	39.8	43.3
15	41.3	40.6	39.3	41.1	40.4	41.7	41.4
16	43.5	40.2	41.0	38.7	39.4	36.4	41.1
17	42.6	35.6	35.3	35.7	32.5	36.6	41.4
18	42.0	35.6	35.4	33.1	37.0	37.8	41.4
19	43.2	40.5	40.5	40.4	39.7	41.1	40.7
20	44.5	42.1	40.6	42.0	40.9	39.9	37.4
21	44.5	41.8	43.5	43.9	40.9	37.2	42.8
22	47.1	45.6	43.6	44.4	43.0	43.2	42.2
23	44.6	43.5	42.9	41.1	42.9	40.1	38.6
24	40.1	40.7	42.8	38.9	43.2	37.5	43.4
10-12	40.8	39.5	40.3	41.5	39.4	38.9	41.5
14-16	42.4	40.4	40.2	39.9	39.9	39.0	41.3
0-24	42.1	41.0	41.2	41.2	40.2	40.3	40.7

7 DAY AVERAGE SPEED	33.7
7 DAY AVERAGE 85th PERCENTILE	41.0

Automatic Classified Counts, Knowsley

LOCATION: B5194 SCHOOL LANE

Direction : EASTBOUND

AVERAGE SPEEDS							
Hr Ending	Sunday 3-Dec-17	Monday 4-Dec-17	Tuesday 5-Dec-17	Wednesday 6-Dec-17	Thursday 7-Dec-17	Friday 8-Dec-17	Saturday 9-Dec-17
1	31.6	34.2	32.7	35.6	32.7	33.4	34.6
2	32.1	32.5	36.0	36.6	32.4	34.8	32.3
3	31.5	36.9	35.3	28.0	29.3	38.3	30.4
4	34.3	30.8	31.3	34.9	32.6	38.8	31.0
5	38.5	35.1	36.6	36.0	34.1	35.2	31.0
6	36.6	35.2	33.7	36.3	33.1	33.1	35.2
7	38.4	33.4	34.0	33.3	30.8	32.8	34.9
8	35.1	29.5	30.5	30.6	29.0	30.9	33.8
9	33.0	31.0	31.3	31.1	30.9	30.0	32.5
10	34.9	32.2	32.8	33.0	34.1	32.0	35.6
11	35.4	32.1	32.3	31.4	32.2	33.8	33.7
12	36.9	32.2	32.8	33.4	32.1	32.4	34.2
13	35.9	32.8	33.8	33.3	32.2	34.6	35.9
14	36.0	33.5	34.7	34.0	33.7	33.2	33.9
15	34.6	34.0	32.5	32.8	33.9	33.2	32.5
16	34.8	32.5	32.2	29.5	31.5	32.2	35.0
17	36.5	31.4	31.0	28.7	29.5	31.0	31.7
18	37.3	29.7	29.8	29.4	29.4	29.6	33.7
19	36.0	32.0	31.3	32.1	31.8	31.7	31.2
20	37.1	35.2	32.6	34.3	30.9	31.6	30.0
21	39.9	36.3	34.1	33.8	35.8	31.6	34.1
22	37.1	35.3	32.1	35.1	35.5	36.2	33.7
23	32.2	34.6	33.6	34.8	32.0	35.4	33.5
24	38.8	31.3	35.7	32.8	33.8	32.3	34.1
10-12	36.1	32.2	32.5	32.4	32.1	33.1	34.0
14-16	34.7	33.3	32.3	31.2	32.7	32.7	33.7
0-24	35.6	33.1	33.0	32.9	32.2	33.3	33.3

85TH PERCENTILE							
Hr Ending	Sunday 3-Dec-17	Monday 4-Dec-17	Tuesday 5-Dec-17	Wednesday 6-Dec-17	Thursday 7-Dec-17	Friday 8-Dec-17	Saturday 9-Dec-17
1	37.6	38.3	36.1	42.4	38.3	40.3	40.7
2	37.6	37.0	41.0	41.7	37.6	41.1	38.2
3	38.7	43.7	41.2	36.9	34.2	40.4	37.8
4	39.5	36.0	36.8	41.9	38.2	44.8	38.1
5	42.1	40.9	41.3	41.8	41.5	40.3	37.2
6	41.8	40.8	40.4	41.6	39.2	38.2	40.5
7	43.3	39.2	39.6	39.6	37.4	38.1	39.3
8	40.5	35.6	36.7	37.4	35.1	36.1	39.0
9	38.8	37.5	37.0	37.9	36.8	35.9	37.7
10	41.1	38.0	38.4	38.9	40.0	37.0	41.1
11	42.3	37.6	37.5	38.0	38.4	38.2	39.1
12	42.0	38.8	38.3	39.3	38.5	37.9	38.7
13	41.6	38.8	39.1	39.5	38.6	39.6	40.3
14	41.3	40.1	42.8	40.0	39.9	38.5	39.9
15	40.0	39.7	38.7	38.7	39.9	39.5	38.3
16	40.0	38.3	38.6	35.9	37.7	37.2	40.4
17	41.5	37.4	37.3	35.6	34.8	36.7	37.0
18	42.9	36.8	36.5	36.9	36.8	36.6	38.7
19	42.3	39.7	37.1	39.9	39.4	37.3	36.9
20	43.5	42.5	40.2	40.6	36.5	38.3	35.6
21	46.0	41.4	40.0	39.1	40.9	37.5	39.2
22	42.8	39.9	37.9	42.2	41.9	43.1	40.9
23	38.3	40.4	38.8	40.9	39.8	41.7	39.2
24	43.9	36.0	40.3	40.1	38.7	36.2	40.1
10-12	42.1	38.2	37.9	38.6	38.4	38.0	38.9
14-16	40.0	39.0	38.6	37.3	38.8	38.4	39.4
0-24	41.2	38.9	38.8	39.4	38.3	38.8	38.9

7 DAY AVERAGE SPEED	33.3
7 DAY AVERAGE 85th PERCENTILE	39.2



Appendix B: Illustrative Masterplan



General Notes

All site dimensions shall be verified by the Contractor on site prior to commencing any works.

Do not scale from this drawing.

Only work to written dimensions.

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UNIT	AREA SQM / SQFT	TOTAL
Unit 1 (B1/B2/B8)	925sqm / 10,000sqft + 15% Mezz	1063sqm/ 11,442sqft
Unit 2 (B1/B2/B8)	925sqm / 10,000sqft + 15% Mezz	1063sqm/ 11,442sqft
Unit 3 (B1/B2/B8)	1010sqm / 10,871sqft + 15% Mezz	1161sqm/ 12,496sqft
Unit 4 (Sui Generis)	476sqm/ 5123sqft	476sqm/ 5123sqft
Unit 5 (A1/A3/A5)	225sqm/ 2750sqft	225sqm/ 2750sqft
	SUB TOTAL:	3988sqm/ 43,253sqft

-  Site Boundaries
-  Existing tree
-  Proposed tree

Revision A First Issue 12.04.19 AR

Scale 1:1250@A3
Status PLANNING
Drawn by AR
Date 03.04.19
Client
TILSTONE MANAGING WAREHOUSE
REIT PLC
Project
GELLINGS ROAD, KNOWSLEY

Drawing Description
ILLUSTRATIVE MASTERPLAN

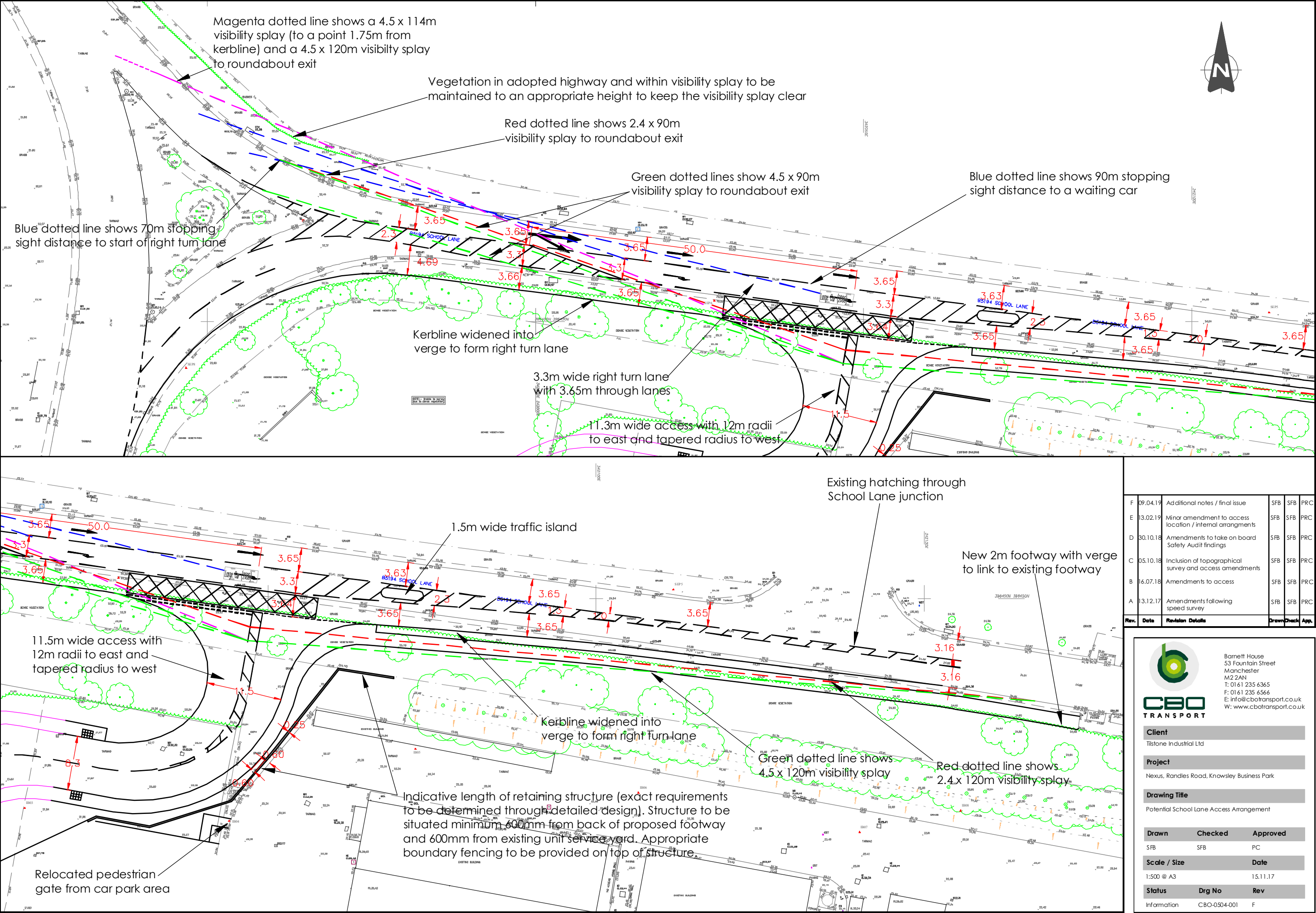
Drawing No. 19008_PL02 Rev. A

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Appendix C: CBO Drawings





F	09.04.19	Additional notes / final issue	SFB	SFB	PRC
E	13.02.19	Minor amendment to access location / internal arrangements	SFB	SFB	PRC
D	30.10.18	Amendments to take on board Safety Audit findings	SFB	SFB	PRC
C	05.10.18	Inclusion of topographical survey and access amendments	SFB	SFB	PRC
B	16.07.18	Amendments to access	SFB	SFB	PRC
A	13.12.17	Amendments following speed survey	SFB	SFB	PRC
Rev.	Date	Revision Details	Drawn	Check	App.



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M2 2AN
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W: www.cbotransport.co.uk

Client
Tilstone Industrial Ltd

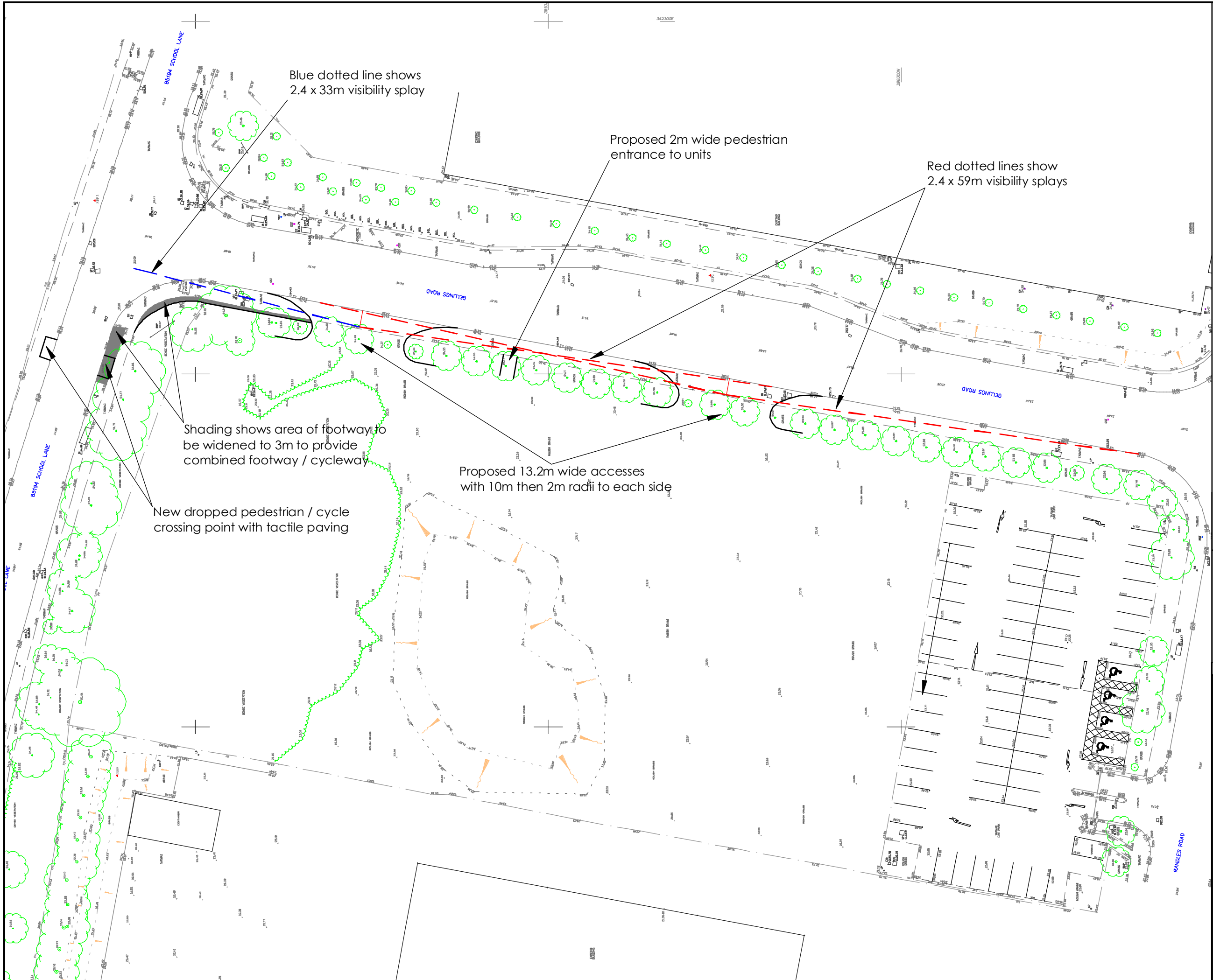
Project
Nexus, Randles Road, Knowsley Business Park

Drawing Title
Potential School Lane Access Arrangement

Drawn	Checked	Approved
SFB	SFB	PC

Scale / Size	Date
1:500 @ A3	15.11.17

Status	Drg No	Rev
Information	CBO-0504-001	F



Rev.	Date	Revision Details	Drawn	Check	App.
A	09.04.19	Final issue	SFB	SFB	PRC



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Client Tilstone Industrial Ltd		
Project Nexus, Randles Road, Knowsley Business Park		
Drawing Title Proposed Gellings Road Accesses and Cycle Improvements		
Drawn SFB	Checked SFB	Approved PC
Scale / Size 1:500 @ A3		Date 13.02.19
Status Information	Drg No CBO-0504-002	Rev A



Appendix D: TRICS Outputs



Calculation Reference: AUDIT-751701-190318-0351

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : D - INDUSTRIAL ESTATE
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WG WOKINGHAM	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	3 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	2 days
08	NORTH WEST	
	LC LANCASHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 2559 to 4700 (units: sqm)
 Range Selected by User: 2000 to 5000 (units: sqm)

Parking Spaces Range: Selected: 18 to 1800 Actual: 18 to 1800

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 17/11/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	5 days
Thursday	1 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	4
Commercial Zone	1
Village	1
No Sub Category	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known	1 days
B1	3 days
B2	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	1 days
5,001 to 10,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	7 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	4 days
1.6 to 2.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	9 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	9 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-02-D-01	IND. ESTATE		CAMBRIDGESHIRE
	STURROCK WAY			
	PETERBOROUGH			
	BRETTON			
	Suburban Area (PPS6 Out of Centre)			
	Industrial Zone			
	Total Gross floor area:	4300 sqm		
	Survey date: TUESDAY	13/05/08		Survey Type: MANUAL
2	CA-02-D-03	IND. ESTATE		CAMBRIDGESHIRE
	SAVILLE ROAD			
	PETERBOROUGH			
	WESTWOOD			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:	4425 sqm		
	Survey date: THURSDAY	22/10/09		Survey Type: MANUAL
3	CA-02-D-04	INDUSTRIAL ESTATE		CAMBRIDGESHIRE
	LINCOLN ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:	4133 sqm		
	Survey date: TUESDAY	02/12/14		Survey Type: MANUAL
4	LC-02-D-07	INDUSTRIAL ESTATE		LANCASHIRE
	CHAIN CAUL WAY			
	PRESTON			
	ASHTON-ON-RIBBLE			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:	4700 sqm		
	Survey date: FRIDAY	17/11/17		Survey Type: MANUAL
5	LN-02-D-02	INDUSTRIAL ESTATE		LINCOLNSHIRE
	STATION ROAD			
	NEAR BOSTON			
	SWINESHEAD			
	Neighbourhood Centre (PPS6 Local Centre)			
	Village			
	Total Gross floor area:	4600 sqm		
	Survey date: TUESDAY	11/12/12		Survey Type: MANUAL
6	WG-02-D-01	INDUSTRIAL ESTATE		WOKINGHAM
	FISHPONDS ROAD			
	WOKINGHAM			
	Suburban Area (PPS6 Out of Centre)			
	Industrial Zone			
	Total Gross floor area:	3800 sqm		
	Survey date: TUESDAY	20/11/12		Survey Type: MANUAL
7	WO-02-D-01	INDUSTRIAL ESTATE		WORCESTERSHIRE
	SANDY LANE			
	STOURPORT-ON-SEVERN			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:	2758 sqm		
	Survey date: FRIDAY	23/05/14		Survey Type: MANUAL
8	WY-02-D-06	INDUSTRIAL ESTATE (PART)		WEST YORKSHIRE
	PIONEER WAY			
	CASTLEFORD			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:	4328 sqm		
	Survey date: TUESDAY	23/05/17		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9 WY-02-D-07 INDUSTRIAL ESTATE WEST YORKSHIRE
 THUNDERHEAD RIDGE RD
 CASTLEFORD
 GLASSHOUGHTON
 Edge of Town
 No Sub Category
 Total Gross floor area: 3191 sqm
 Survey date: MONDAY 15/05/17 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CA-02-D-02	High PT
DV-02-D-07	High PT
GM-02-D-07	High PT
MS-02-D-06	High PT

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	3907	0.114	9	3907	0.037	9	3907	0.151
07:30 - 08:00	9	3907	0.327	9	3907	0.077	9	3907	0.404
08:00 - 08:30	9	3907	0.395	9	3907	0.210	9	3907	0.605
08:30 - 09:00	9	3907	0.410	9	3907	0.219	9	3907	0.629
09:00 - 09:30	9	3907	0.341	9	3907	0.259	9	3907	0.600
09:30 - 10:00	9	3907	0.279	9	3907	0.205	9	3907	0.484
10:00 - 10:30	9	3907	0.293	9	3907	0.270	9	3907	0.563
10:30 - 11:00	9	3907	0.242	9	3907	0.262	9	3907	0.504
11:00 - 11:30	9	3907	0.282	9	3907	0.256	9	3907	0.538
11:30 - 12:00	9	3907	0.267	9	3907	0.290	9	3907	0.557
12:00 - 12:30	9	3907	0.270	9	3907	0.330	9	3907	0.600
12:30 - 13:00	9	3907	0.330	9	3907	0.282	9	3907	0.612
13:00 - 13:30	9	3907	0.264	9	3907	0.287	9	3907	0.551
13:30 - 14:00	9	3907	0.247	9	3907	0.179	9	3907	0.426
14:00 - 14:30	9	3907	0.276	9	3907	0.279	9	3907	0.555
14:30 - 15:00	9	3907	0.210	9	3907	0.222	9	3907	0.432
15:00 - 15:30	9	3907	0.250	9	3907	0.267	9	3907	0.517
15:30 - 16:00	9	3907	0.213	9	3907	0.228	9	3907	0.441
16:00 - 16:30	9	3907	0.199	9	3907	0.316	9	3907	0.515
16:30 - 17:00	9	3907	0.165	9	3907	0.338	9	3907	0.503
17:00 - 17:30	9	3907	0.137	9	3907	0.361	9	3907	0.498
17:30 - 18:00	9	3907	0.074	9	3907	0.202	9	3907	0.276
18:00 - 18:30	9	3907	0.054	9	3907	0.148	9	3907	0.202
18:30 - 19:00	9	3907	0.023	9	3907	0.046	9	3907	0.069
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			5.662			5.570			11.232

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	2559 - 4700 (units: sqm)
Survey date range:	01/01/07 - 17/11/17
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	4

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
07:30 - 08:00	9	3907	0.006	9	3907	0.000	9	3907	0.006
08:00 - 08:30	9	3907	0.006	9	3907	0.003	9	3907	0.009
08:30 - 09:00	9	3907	0.003	9	3907	0.003	9	3907	0.006
09:00 - 09:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
09:30 - 10:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
10:00 - 10:30	9	3907	0.003	9	3907	0.000	9	3907	0.003
10:30 - 11:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
11:00 - 11:30	9	3907	0.000	9	3907	0.006	9	3907	0.006
11:30 - 12:00	9	3907	0.000	9	3907	0.006	9	3907	0.006
12:00 - 12:30	9	3907	0.011	9	3907	0.000	9	3907	0.011
12:30 - 13:00	9	3907	0.000	9	3907	0.003	9	3907	0.003
13:00 - 13:30	9	3907	0.000	9	3907	0.009	9	3907	0.009
13:30 - 14:00	9	3907	0.003	9	3907	0.000	9	3907	0.003
14:00 - 14:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
14:30 - 15:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
15:00 - 15:30	9	3907	0.009	9	3907	0.003	9	3907	0.012
15:30 - 16:00	9	3907	0.003	9	3907	0.009	9	3907	0.012
16:00 - 16:30	9	3907	0.006	9	3907	0.003	9	3907	0.009
16:30 - 17:00	9	3907	0.006	9	3907	0.009	9	3907	0.015
17:00 - 17:30	9	3907	0.006	9	3907	0.003	9	3907	0.009
17:30 - 18:00	9	3907	0.000	9	3907	0.006	9	3907	0.006
18:00 - 18:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
18:30 - 19:00	9	3907	0.003	9	3907	0.003	9	3907	0.006
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.065			0.066			0.131

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	3907	0.003	9	3907	0.003	9	3907	0.006
07:30 - 08:00	9	3907	0.014	9	3907	0.003	9	3907	0.017
08:00 - 08:30	9	3907	0.026	9	3907	0.023	9	3907	0.049
08:30 - 09:00	9	3907	0.031	9	3907	0.020	9	3907	0.051
09:00 - 09:30	9	3907	0.020	9	3907	0.028	9	3907	0.048
09:30 - 10:00	9	3907	0.031	9	3907	0.026	9	3907	0.057
10:00 - 10:30	9	3907	0.034	9	3907	0.026	9	3907	0.060
10:30 - 11:00	9	3907	0.011	9	3907	0.037	9	3907	0.048
11:00 - 11:30	9	3907	0.014	9	3907	0.009	9	3907	0.023
11:30 - 12:00	9	3907	0.011	9	3907	0.017	9	3907	0.028
12:00 - 12:30	9	3907	0.014	9	3907	0.011	9	3907	0.025
12:30 - 13:00	9	3907	0.017	9	3907	0.011	9	3907	0.028
13:00 - 13:30	9	3907	0.009	9	3907	0.009	9	3907	0.018
13:30 - 14:00	9	3907	0.020	9	3907	0.006	9	3907	0.026
14:00 - 14:30	9	3907	0.023	9	3907	0.026	9	3907	0.049
14:30 - 15:00	9	3907	0.009	9	3907	0.017	9	3907	0.026
15:00 - 15:30	9	3907	0.020	9	3907	0.020	9	3907	0.040
15:30 - 16:00	9	3907	0.014	9	3907	0.017	9	3907	0.031
16:00 - 16:30	9	3907	0.006	9	3907	0.006	9	3907	0.012
16:30 - 17:00	9	3907	0.014	9	3907	0.020	9	3907	0.034
17:00 - 17:30	9	3907	0.009	9	3907	0.009	9	3907	0.018
17:30 - 18:00	9	3907	0.006	9	3907	0.006	9	3907	0.012
18:00 - 18:30	9	3907	0.003	9	3907	0.009	9	3907	0.012
18:30 - 19:00	9	3907	0.000	9	3907	0.003	9	3907	0.003
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.359			0.362			0.721

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
07:30 - 08:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
08:00 - 08:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
08:30 - 09:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
09:00 - 09:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
09:30 - 10:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
10:00 - 10:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
10:30 - 11:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
11:00 - 11:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
11:30 - 12:00	9	3907	0.003	9	3907	0.000	9	3907	0.003
12:00 - 12:30	9	3907	0.000	9	3907	0.003	9	3907	0.003
12:30 - 13:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
13:00 - 13:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
13:30 - 14:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
14:00 - 14:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
14:30 - 15:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
15:00 - 15:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
15:30 - 16:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
16:00 - 16:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
16:30 - 17:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
17:00 - 17:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
17:30 - 18:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
18:00 - 18:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
18:30 - 19:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.003			0.003			0.006

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
07:30 - 08:00	9	3907	0.011	9	3907	0.000	9	3907	0.011
08:00 - 08:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
08:30 - 09:00	9	3907	0.003	9	3907	0.000	9	3907	0.003
09:00 - 09:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
09:30 - 10:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
10:00 - 10:30	9	3907	0.000	9	3907	0.003	9	3907	0.003
10:30 - 11:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
11:00 - 11:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
11:30 - 12:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
12:00 - 12:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
12:30 - 13:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
13:00 - 13:30	9	3907	0.000	9	3907	0.003	9	3907	0.003
13:30 - 14:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
14:00 - 14:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
14:30 - 15:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
15:00 - 15:30	9	3907	0.006	9	3907	0.006	9	3907	0.012
15:30 - 16:00	9	3907	0.000	9	3907	0.006	9	3907	0.006
16:00 - 16:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
16:30 - 17:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
17:00 - 17:30	9	3907	0.006	9	3907	0.006	9	3907	0.012
17:30 - 18:00	9	3907	0.000	9	3907	0.003	9	3907	0.003
18:00 - 18:30	9	3907	0.000	9	3907	0.000	9	3907	0.000
18:30 - 19:00	9	3907	0.000	9	3907	0.000	9	3907	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.026			0.027			0.053

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Calculation Reference: AUDIT-751701-190318-0342

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 13 - PETROL FILLING STATIONS
 Category : B - PFS - WITH RETAIL
 VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	2 days
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	1 days
	LN LINCOLNSHIRE	1 days
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
10	WALES	
	DB DENBIGHSHIRE	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	FI FIFE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Filling bays
 Actual Range: 6 to 16 (units:)
 Range Selected by User: 4 to 16 (units:)

Parking Spaces Range: Selected: to Actual: to

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 22/11/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	7 days
Wednesday	3 days
Thursday	1 days
Friday	5 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	18 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	10
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Sui Generis 18 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	2 days
10,001 to 15,000	5 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	4 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	2 days
50,001 to 75,000	3 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	4 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	5 days
1.1 to 1.5	10 days
1.6 to 2.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 18 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 18 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-13-B-02 LINCOLN ROAD PETERBOROUGH	MURCO & COSTCUTTER	CAMBRIDGESHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Filling bays: 8 Survey date: TUESDAY 16/12/14		Survey Type: MANUAL
2	DB-13-B-02 RHYL ROAD RHUDDLAN	TEXACO & CO-OP	DENBIGHSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Filling bays: 8 Survey date: TUESDAY 12/11/13		Survey Type: MANUAL
3	DC-13-B-01 271 BARRACK ROAD CHRISTCHURCH	ESSO & TESCO EXPRESS	DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays: 6 Survey date: MONDAY 24/03/14		Survey Type: MANUAL
4	DC-13-B-02 71-75 SOMERFORD ROAD CHRISTCHURCH	M&S & BP	DORSET
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Filling bays: 8 Survey date: FRIDAY 21/03/14		Survey Type: MANUAL
5	DS-13-B-01 NOTTINGHAM ROAD DERBY CHADDESSEN	ESSO & TESCO EXPRESS	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays: 8 Survey date: FRIDAY 26/06/15		Survey Type: MANUAL
6	DV-13-B-01 TORBAY ROAD PAIGNTON	BP & COSTCUTTER	DEVON
	Edge of Town Residential Zone Total Filling bays: 8 Survey date: TUESDAY 18/07/17		Survey Type: MANUAL
7	EB-13-B-02 BULLYEON ROAD QUEENSFERRY	BP CONNECT & M&S	CITY OF EDINBURGH
	Edge of Town Residential Zone Total Filling bays: 15 Survey date: THURSDAY 26/06/14		Survey Type: MANUAL
8	FI-13-B-01 HARBOUR DRIVE DALGETY BAY	BP & M&S	FIFE
	Edge of Town No Sub Category Total Filling bays: 13 Survey date: WEDNESDAY 23/03/16		Survey Type: MANUAL
9	GM-13-B-01 NEW STREET ROCHDALE MILNROW	BP & SPAR	GREATER MANCHESTER
	Edge of Town Residential Zone Total Filling bays: 8 Survey date: WEDNESDAY 21/10/15		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

10	LE-13-B-02 FOSSE ROAD NORTH LEICESTER	TESCO EXPRESS & ESSO	LEICESTERSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays:	8	
	Survey date: TUESDAY	28/10/14	Survey Type: MANUAL
11	LN-13-B-01 CARHOLME ROAD LINCOLN	GULF & CO-OP	LINCOLNSHIRE
	Edge of Town Residential Zone Total Filling bays:	8	
	Survey date: WEDNESDAY	04/10/17	Survey Type: MANUAL
12	MS-13-B-01 ULLET ROAD LIVERPOOL SEFTON PARK	ESSO & SPAR	MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays:	6	
	Survey date: TUESDAY	18/11/14	Survey Type: MANUAL
13	NT-13-B-03 CASTLE BRIDGE ROAD NOTTINGHAM	SAINSBURY'S PFS	NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) Development Zone Total Filling bays:	16	
	Survey date: FRIDAY	25/11/16	Survey Type: MANUAL
14	NY-13-B-02 NORTH STREET RIPON	BP & SPAR	NORTH YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays:	6	
	Survey date: MONDAY	23/09/13	Survey Type: MANUAL
15	NY-13-B-03 WETHERBY ROAD NORTH KNARESBOROUGH	ESSO & CO-OP	NORTH YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Filling bays:	8	
	Survey date: FRIDAY	30/09/16	Survey Type: MANUAL
16	SF-13-B-01 HILLSIDE ROAD EAST BUNGAY	TOTAL	SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays:	8	
	Survey date: TUESDAY	09/10/12	Survey Type: MANUAL
17	SF-13-B-02 ROUGHAM ROAD BURY ST EDMUNDS	BP CONNECT & M&S	SUFFOLK
	Edge of Town Residential Zone Total Filling bays:	8	
	Survey date: FRIDAY	19/07/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

18	WM-13-B-05	TEXACO & CO-OPERATIVE	WEST MIDLANDS
	HIGH STREET		
	BIRMINGHAM		
	HARBORNE		
	Suburban Area (PPS6 Out of Centre)		
	High Street		
	Total Filling bays:	8	
	Survey date: TUESDAY	22/10/13	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL
VEHICLES

Calculation factor: 1 BAYS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	18	9	4.633	18	9	4.291	18	9	8.924
07:00 - 08:00	18	9	7.665	18	9	7.354	18	9	15.019
08:00 - 09:00	18	9	8.506	18	9	8.152	18	9	16.658
09:00 - 10:00	18	9	8.329	18	9	8.430	18	9	16.759
10:00 - 11:00	18	9	7.430	18	9	7.304	18	9	14.734
11:00 - 12:00	18	9	7.329	18	9	7.418	18	9	14.747
12:00 - 13:00	18	9	8.576	18	9	8.620	18	9	17.196
13:00 - 14:00	18	9	8.272	18	9	8.215	18	9	16.487
14:00 - 15:00	18	9	8.139	18	9	7.956	18	9	16.095
15:00 - 16:00	18	9	8.259	18	9	8.342	18	9	16.601
16:00 - 17:00	18	9	8.778	18	9	9.044	18	9	17.822
17:00 - 18:00	18	9	9.949	18	9	9.772	18	9	19.721
18:00 - 19:00	18	9	8.823	18	9	8.943	18	9	17.766
19:00 - 20:00	18	9	7.462	18	9	7.785	18	9	15.247
20:00 - 21:00	18	9	5.127	18	9	5.278	18	9	10.405
21:00 - 22:00	18	9	3.816	18	9	3.987	18	9	7.803
22:00 - 23:00	1	8	2.125	1	8	2.750	1	8	4.875
23:00 - 24:00	1	8	0.000	1	8	0.250	1	8	0.250
Total Rates:			123.218			123.891			247.109

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	6 - 16 (units:)
Survey date date range:	01/01/12 - 22/11/17
Number of weekdays (Monday-Friday):	18
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL TAXIS

Calculation factor: 1 BAYS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	18	9	0.089	18	9	0.076	18	9	0.165
07:00 - 08:00	18	9	0.057	18	9	0.070	18	9	0.127
08:00 - 09:00	18	9	0.120	18	9	0.120	18	9	0.240
09:00 - 10:00	18	9	0.184	18	9	0.190	18	9	0.374
10:00 - 11:00	18	9	0.152	18	9	0.146	18	9	0.298
11:00 - 12:00	18	9	0.139	18	9	0.139	18	9	0.278
12:00 - 13:00	18	9	0.139	18	9	0.133	18	9	0.272
13:00 - 14:00	18	9	0.108	18	9	0.114	18	9	0.222
14:00 - 15:00	18	9	0.133	18	9	0.114	18	9	0.247
15:00 - 16:00	18	9	0.076	18	9	0.095	18	9	0.171
16:00 - 17:00	18	9	0.165	18	9	0.165	18	9	0.330
17:00 - 18:00	18	9	0.165	18	9	0.165	18	9	0.330
18:00 - 19:00	18	9	0.101	18	9	0.101	18	9	0.202
19:00 - 20:00	18	9	0.120	18	9	0.120	18	9	0.240
20:00 - 21:00	18	9	0.177	18	9	0.165	18	9	0.342
21:00 - 22:00	18	9	0.063	18	9	0.070	18	9	0.133
22:00 - 23:00	1	8	0.000	1	8	0.000	1	8	0.000
23:00 - 24:00	1	8	0.000	1	8	0.000	1	8	0.000
Total Rates:			1.988			1.983			3.971

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL

OGVS

Calculation factor: 1 BAYS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	18	9	0.171	18	9	0.152	18	9	0.323
07:00 - 08:00	18	9	0.259	18	9	0.278	18	9	0.537
08:00 - 09:00	18	9	0.171	18	9	0.177	18	9	0.348
09:00 - 10:00	18	9	0.196	18	9	0.203	18	9	0.399
10:00 - 11:00	18	9	0.165	18	9	0.158	18	9	0.323
11:00 - 12:00	18	9	0.152	18	9	0.146	18	9	0.298
12:00 - 13:00	18	9	0.190	18	9	0.171	18	9	0.361
13:00 - 14:00	18	9	0.139	18	9	0.120	18	9	0.259
14:00 - 15:00	18	9	0.127	18	9	0.127	18	9	0.254
15:00 - 16:00	18	9	0.139	18	9	0.152	18	9	0.291
16:00 - 17:00	18	9	0.101	18	9	0.101	18	9	0.202
17:00 - 18:00	18	9	0.076	18	9	0.070	18	9	0.146
18:00 - 19:00	18	9	0.025	18	9	0.051	18	9	0.076
19:00 - 20:00	18	9	0.063	18	9	0.057	18	9	0.120
20:00 - 21:00	18	9	0.019	18	9	0.025	18	9	0.044
21:00 - 22:00	18	9	0.025	18	9	0.025	18	9	0.050
22:00 - 23:00	1	8	0.000	1	8	0.000	1	8	0.000
23:00 - 24:00	1	8	0.000	1	8	0.000	1	8	0.000
Total Rates:			2.018			2.013			4.031

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL

PSVS

Calculation factor: 1 BAYS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	18	9	0.013	18	9	0.013	18	9	0.026
07:00 - 08:00	18	9	0.013	18	9	0.013	18	9	0.026
08:00 - 09:00	18	9	0.025	18	9	0.019	18	9	0.044
09:00 - 10:00	18	9	0.019	18	9	0.019	18	9	0.038
10:00 - 11:00	18	9	0.032	18	9	0.032	18	9	0.064
11:00 - 12:00	18	9	0.019	18	9	0.025	18	9	0.044
12:00 - 13:00	18	9	0.006	18	9	0.006	18	9	0.012
13:00 - 14:00	18	9	0.000	18	9	0.000	18	9	0.000
14:00 - 15:00	18	9	0.000	18	9	0.000	18	9	0.000
15:00 - 16:00	18	9	0.006	18	9	0.006	18	9	0.012
16:00 - 17:00	18	9	0.006	18	9	0.000	18	9	0.006
17:00 - 18:00	18	9	0.025	18	9	0.032	18	9	0.057
18:00 - 19:00	18	9	0.006	18	9	0.000	18	9	0.006
19:00 - 20:00	18	9	0.000	18	9	0.006	18	9	0.006
20:00 - 21:00	18	9	0.000	18	9	0.000	18	9	0.000
21:00 - 22:00	18	9	0.000	18	9	0.000	18	9	0.000
22:00 - 23:00	1	8	0.000	1	8	0.000	1	8	0.000
23:00 - 24:00	1	8	0.000	1	8	0.000	1	8	0.000
Total Rates:			0.170	0.171			0.341		

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL
CYCLISTS

Calculation factor: 1 BAYS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	18	9	0.057	18	9	0.051	18	9	0.108
07:00 - 08:00	18	9	0.082	18	9	0.089	18	9	0.171
08:00 - 09:00	18	9	0.051	18	9	0.038	18	9	0.089
09:00 - 10:00	18	9	0.025	18	9	0.025	18	9	0.050
10:00 - 11:00	18	9	0.032	18	9	0.025	18	9	0.057
11:00 - 12:00	18	9	0.051	18	9	0.051	18	9	0.102
12:00 - 13:00	18	9	0.025	18	9	0.025	18	9	0.050
13:00 - 14:00	18	9	0.044	18	9	0.057	18	9	0.101
14:00 - 15:00	18	9	0.032	18	9	0.019	18	9	0.051
15:00 - 16:00	18	9	0.057	18	9	0.057	18	9	0.114
16:00 - 17:00	18	9	0.101	18	9	0.095	18	9	0.196
17:00 - 18:00	18	9	0.044	18	9	0.063	18	9	0.107
18:00 - 19:00	18	9	0.076	18	9	0.089	18	9	0.165
19:00 - 20:00	18	9	0.025	18	9	0.019	18	9	0.044
20:00 - 21:00	18	9	0.063	18	9	0.070	18	9	0.133
21:00 - 22:00	18	9	0.025	18	9	0.025	18	9	0.050
22:00 - 23:00	1	8	0.000	1	8	0.000	1	8	0.000
23:00 - 24:00	1	8	0.000	1	8	0.000	1	8	0.000
Total Rates:			0.790			0.798			1.588

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Calculation Reference: AUDIT-751701-190318-0331

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
 Category : D - FAST FOOD - DRIVE THROUGH
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	SO SLOUGH	1 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
10	WALES	
	CO CONWY	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	FI FIFE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 210 to 480 (units: sqm)
 Range Selected by User: 200 to 500 (units: sqm)

Parking Spaces Range: Selected: 19 to 151 Actual: 19 to 151

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 19/09/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	4 days
Wednesday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	1
Development Zone	1
Residential Zone	3
Out of Town	1
High Street	1
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

A3	5 days
A5	2 days
C3	1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000	3 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	1 days
100,001 to 125,000	2 days
125,001 to 250,000	3 days
500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	5 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	8 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	8 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BR-06-D-01 SHEENE ROAD BRISTOL BEDMINSTER Neighbourhood Centre (PPS6 Local Centre) High Street Total Gross floor area: 210 sqm Survey date: MONDAY 21/09/15	MCDONALD'S	BRISTOL CITY	Survey Type: MANUAL
2	CA-06-D-02 NEWMARKET ROAD CAMBRIDGE Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 435 sqm Survey date: TUESDAY 19/09/17	MCDONALD'S	CAMBRIDGESHIRE	Survey Type: MANUAL
3	CO-06-D-01 RHUDDLAN ROAD ABERGELE Edge of Town Out of Town Total Gross floor area: 410 sqm Survey date: FRIDAY 21/10/11	MCDONALD'S	CONWY	Survey Type: MANUAL
4	EB-06-D-01 GYLEMUIR ROAD EDINBURGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 475 sqm Survey date: WEDNESDAY 18/06/08	MCDONALD'S	CITY OF EDINBURGH	Survey Type: MANUAL
5	FI-06-D-02 WHIMBREL PLACE DUNFERMLINE HALBEATH Edge of Town Development Zone Total Gross floor area: 275 sqm Survey date: TUESDAY 22/03/16	KFC	FIFE	Survey Type: MANUAL
6	NR-06-D-01 MARQUEE DRIVE NORTHAMPTON Edge of Town Commercial Zone Total Gross floor area: 220 sqm Survey date: TUESDAY 22/05/07	MCDONALD'S	NORTHAMPTONSHIRE	Survey Type: MANUAL
7	SO-06-D-01 WINDSOR ROAD SLOUGH Edge of Town Residential Zone Total Gross floor area: 480 sqm Survey date: WEDNESDAY 21/11/12	MCDONALD'S	SLOUGH	Survey Type: MANUAL
8	WM-06-D-01 KINGSBURY ROAD BIRMINGHAM ERDINGTON Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area: 250 sqm Survey date: TUESDAY 25/11/08	BURGER KING	WEST MIDLANDS	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.417	1	480	0.000	1	480	0.417
06:00 - 07:00	2	445	3.708	2	445	2.921	2	445	6.629
07:00 - 08:00	5	351	9.117	5	351	7.692	5	351	16.809
08:00 - 09:00	5	351	12.877	5	351	12.536	5	351	25.413
09:00 - 10:00	6	334	10.823	6	334	10.973	6	334	21.796
10:00 - 11:00	8	344	8.276	8	344	8.639	8	344	16.915
11:00 - 12:00	8	344	10.381	8	344	9.474	8	344	19.855
12:00 - 13:00	8	344	16.443	8	344	15.681	8	344	32.124
13:00 - 14:00	8	344	15.064	8	344	16.152	8	344	31.216
14:00 - 15:00	8	344	10.635	8	344	11.397	8	344	22.032
15:00 - 16:00	8	344	9.909	8	344	9.728	8	344	19.637
16:00 - 17:00	8	344	10.817	8	344	9.982	8	344	20.799
17:00 - 18:00	8	344	10.563	8	344	11.071	8	344	21.634
18:00 - 19:00	8	344	11.361	8	344	11.361	8	344	22.722
19:00 - 20:00	8	344	9.837	8	344	10.272	8	344	20.109
20:00 - 21:00	8	344	7.514	8	344	8.058	8	344	15.572
21:00 - 22:00	8	344	5.771	8	344	5.953	8	344	11.724
22:00 - 23:00	5	372	3.280	5	372	3.763	5	372	7.043
23:00 - 24:00	2	478	0.733	2	478	1.257	2	478	1.990
Total Rates:			167.526			166.910			334.436

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	210 - 480 (units: sqm)
Survey date range:	01/01/07 - 19/09/17
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.000	1	480	0.000	1	480	0.000
06:00 - 07:00	2	445	0.000	2	445	0.000	2	445	0.000
07:00 - 08:00	5	351	0.000	5	351	0.000	5	351	0.000
08:00 - 09:00	5	351	0.000	5	351	0.000	5	351	0.000
09:00 - 10:00	6	334	0.050	6	334	0.050	6	334	0.100
10:00 - 11:00	8	344	0.036	8	344	0.036	8	344	0.072
11:00 - 12:00	8	344	0.073	8	344	0.073	8	344	0.146
12:00 - 13:00	8	344	0.109	8	344	0.073	8	344	0.182
13:00 - 14:00	8	344	0.073	8	344	0.073	8	344	0.146
14:00 - 15:00	8	344	0.218	8	344	0.218	8	344	0.436
15:00 - 16:00	8	344	0.000	8	344	0.036	8	344	0.036
16:00 - 17:00	8	344	0.145	8	344	0.145	8	344	0.290
17:00 - 18:00	8	344	0.073	8	344	0.036	8	344	0.109
18:00 - 19:00	8	344	0.073	8	344	0.109	8	344	0.182
19:00 - 20:00	8	344	0.109	8	344	0.073	8	344	0.182
20:00 - 21:00	8	344	0.145	8	344	0.145	8	344	0.290
21:00 - 22:00	8	344	0.000	8	344	0.036	8	344	0.036
22:00 - 23:00	5	372	0.000	5	372	0.000	5	372	0.000
23:00 - 24:00	2	478	0.000	2	478	0.000	2	478	0.000
Total Rates:			1.104			1.103			2.207

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.000	1	480	0.000	1	480	0.000
06:00 - 07:00	2	445	0.000	2	445	0.000	2	445	0.000
07:00 - 08:00	5	351	0.000	5	351	0.000	5	351	0.000
08:00 - 09:00	5	351	0.000	5	351	0.000	5	351	0.000
09:00 - 10:00	6	334	0.000	6	334	0.000	6	334	0.000
10:00 - 11:00	8	344	0.000	8	344	0.000	8	344	0.000
11:00 - 12:00	8	344	0.073	8	344	0.036	8	344	0.109
12:00 - 13:00	8	344	0.109	8	344	0.109	8	344	0.218
13:00 - 14:00	8	344	0.036	8	344	0.073	8	344	0.109
14:00 - 15:00	8	344	0.000	8	344	0.000	8	344	0.000
15:00 - 16:00	8	344	0.036	8	344	0.036	8	344	0.072
16:00 - 17:00	8	344	0.073	8	344	0.036	8	344	0.109
17:00 - 18:00	8	344	0.000	8	344	0.036	8	344	0.036
18:00 - 19:00	8	344	0.000	8	344	0.000	8	344	0.000
19:00 - 20:00	8	344	0.000	8	344	0.000	8	344	0.000
20:00 - 21:00	8	344	0.000	8	344	0.000	8	344	0.000
21:00 - 22:00	8	344	0.000	8	344	0.000	8	344	0.000
22:00 - 23:00	5	372	0.000	5	372	0.000	5	372	0.000
23:00 - 24:00	2	478	0.000	2	478	0.000	2	478	0.000
Total Rates:			0.327	0.326			0.653		

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.000	1	480	0.000	1	480	0.000
06:00 - 07:00	2	445	0.000	2	445	0.000	2	445	0.000
07:00 - 08:00	5	351	0.000	5	351	0.000	5	351	0.000
08:00 - 09:00	5	351	0.000	5	351	0.000	5	351	0.000
09:00 - 10:00	6	334	0.000	6	334	0.000	6	334	0.000
10:00 - 11:00	8	344	0.000	8	344	0.000	8	344	0.000
11:00 - 12:00	8	344	0.036	8	344	0.036	8	344	0.072
12:00 - 13:00	8	344	0.000	8	344	0.000	8	344	0.000
13:00 - 14:00	8	344	0.000	8	344	0.000	8	344	0.000
14:00 - 15:00	8	344	0.000	8	344	0.000	8	344	0.000
15:00 - 16:00	8	344	0.000	8	344	0.000	8	344	0.000
16:00 - 17:00	8	344	0.000	8	344	0.000	8	344	0.000
17:00 - 18:00	8	344	0.036	8	344	0.036	8	344	0.072
18:00 - 19:00	8	344	0.000	8	344	0.000	8	344	0.000
19:00 - 20:00	8	344	0.000	8	344	0.000	8	344	0.000
20:00 - 21:00	8	344	0.000	8	344	0.000	8	344	0.000
21:00 - 22:00	8	344	0.000	8	344	0.000	8	344	0.000
22:00 - 23:00	5	372	0.000	5	372	0.000	5	372	0.000
23:00 - 24:00	2	478	0.000	2	478	0.000	2	478	0.000
Total Rates:			0.072			0.072			0.144

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.000	1	480	0.000	1	480	0.000
06:00 - 07:00	2	445	0.000	2	445	0.000	2	445	0.000
07:00 - 08:00	5	351	0.171	5	351	0.057	5	351	0.228
08:00 - 09:00	5	351	0.057	5	351	0.171	5	351	0.228
09:00 - 10:00	6	334	0.050	6	334	0.050	6	334	0.100
10:00 - 11:00	8	344	0.036	8	344	0.036	8	344	0.072
11:00 - 12:00	8	344	0.000	8	344	0.000	8	344	0.000
12:00 - 13:00	8	344	0.036	8	344	0.036	8	344	0.072
13:00 - 14:00	8	344	0.073	8	344	0.073	8	344	0.146
14:00 - 15:00	8	344	0.036	8	344	0.036	8	344	0.072
15:00 - 16:00	8	344	0.073	8	344	0.073	8	344	0.146
16:00 - 17:00	8	344	0.218	8	344	0.218	8	344	0.436
17:00 - 18:00	8	344	0.109	8	344	0.073	8	344	0.182
18:00 - 19:00	8	344	0.218	8	344	0.218	8	344	0.436
19:00 - 20:00	8	344	0.000	8	344	0.036	8	344	0.036
20:00 - 21:00	8	344	0.000	8	344	0.000	8	344	0.000
21:00 - 22:00	8	344	0.000	8	344	0.000	8	344	0.000
22:00 - 23:00	5	372	0.000	5	372	0.000	5	372	0.000
23:00 - 24:00	2	478	0.000	2	478	0.000	2	478	0.000
Total Rates:			1.077			1.077			2.154

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.



Appendix E: Super Output Area and Traffic Distribution Data



Selection of areas

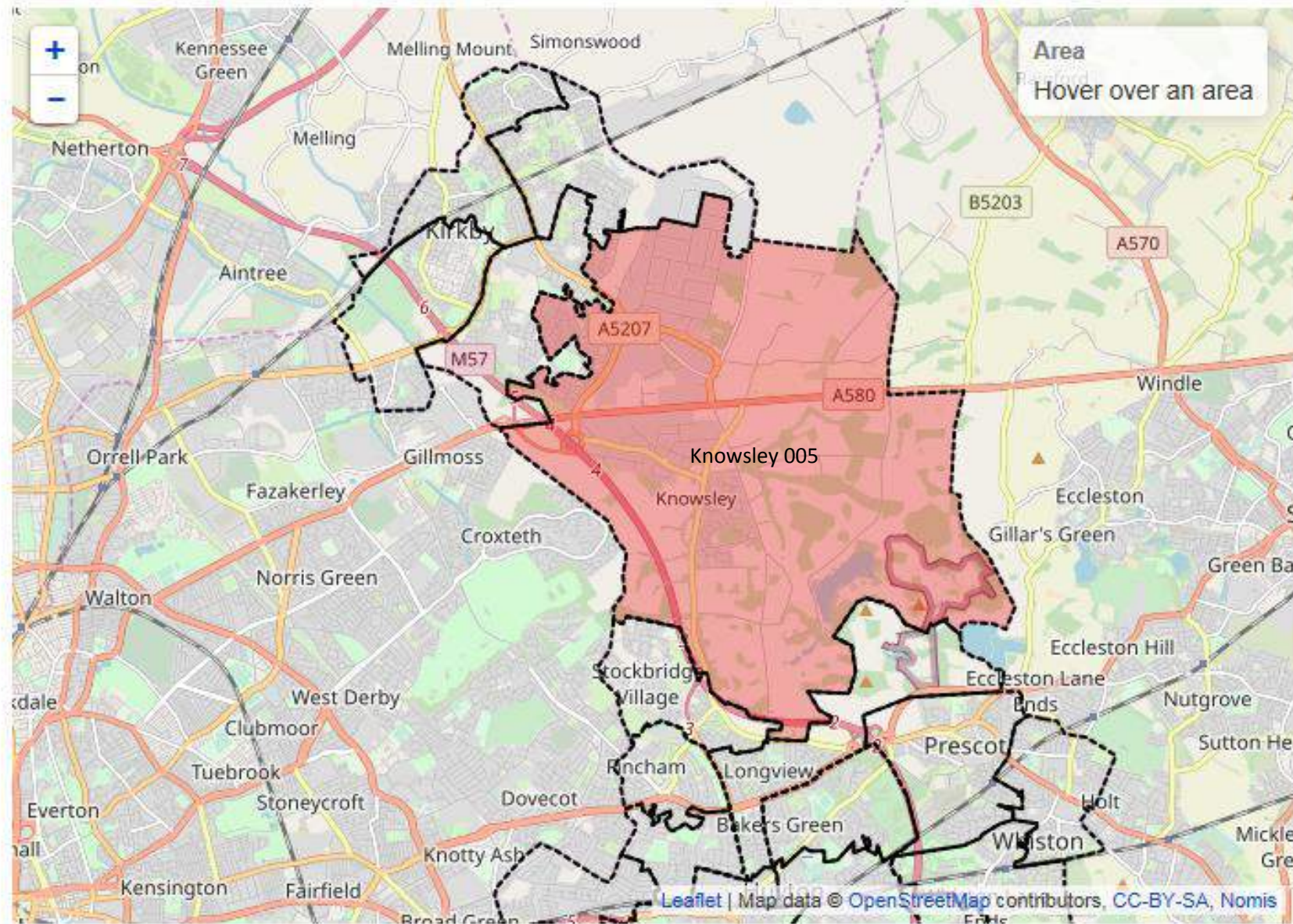


Table E1: Workplace Origins

Location	Car Driver		1	2	Route 3	4	5
Blackburn with Darwen	11		6			5	
Bolton	47		24	23			
Bury	18		9	9			
Cheshire East	47			47			
Cheshire West and Chester	106			106			
Chorley	46	23				23	
Halton	323			323			
Hyndburn	10	5				5	
Manchester	36			36			
Oldham	30	10	20				
Preston	15	8	7				
Rochdale	27	9	18				
Rossendale	9	4	5				
Salford	64	32	32				
South Ribble	38	19				19	
Stockport	28	14	14				
Tameside	17	8	9				
Trafford	46	23	23				
Warrington	221		221				
Wigan	334	334					
Wirral	333			333			
E02001327 : Knowsley 001	162						162
E02001328 : Knowsley 002	330						330
E02001329 : Knowsley 003	191						191
E02001330 : Knowsley 004	153						153
E02001331 : Knowsley 005	339	169					170
E02001332 : Knowsley 006	90	45	45				
E02001333 : Knowsley 007	76		76				
E02001334 : Knowsley 008	38	19	19				
E02001335 : Knowsley 009	63		63				
E02001336 : Knowsley 010	48		48				
E02001337 : Knowsley 011	70		70				
E02001338 : Knowsley 012	51	25	26				
E02001339 : Knowsley 013	43		43				
E02001340 : Knowsley 014	99	49	50				
E02001341 : Knowsley 015	53		53				
E02001342 : Knowsley 016	74	37	37				
E02001343 : Knowsley 017	54		54				
E02001344 : Knowsley 018	25		25				
E02001345 : Knowsley 019	26		26				
E02001346 : Knowsley 020	34		34				
E02001347 : Liverpool 001	97			97			
E02001348 : Liverpool 002	72			72			
E02001349 : Liverpool 003	73			73			
E02001350 : Liverpool 004	96			96			
E02001351 : Liverpool 005	70			70			
E02001352 : Liverpool 006	44			44			
E02001353 : Liverpool 007	139			139			
E02001354 : Liverpool 008	52			52			
E02001355 : Liverpool 009	42			42			
E02001356 : Liverpool 010	25			25			
E02001357 : Liverpool 011	49			49			
E02001358 : Liverpool 012	38			38			
E02001359 : Liverpool 013	69			69			
E02001360 : Liverpool 014	29			29			
E02001361 : Liverpool 015	51			51			
E02001362 : Liverpool 016	49			49			
E02001363 : Liverpool 017	45	22	23				
E02001364 : Liverpool 018	28			28			
E02001365 : Liverpool 019	30			30			
E02001366 : Liverpool 020	40			40			
E02001367 : Liverpool 021	66			66			
E02001368 : Liverpool 022	12			12			
E02001369 : Liverpool 023	32			32			
E02001370 : Liverpool 024	17			17			
E02001371 : Liverpool 025	44	22	22				
E02001372 : Liverpool 026	40	20	20				
E02001373 : Liverpool 027	48		24	24			
E02001374 : Liverpool 028	26		13	13			
E02001375 : Liverpool 029	30	15	15				
E02001376 : Liverpool 030	20			20			
E02001377 : Liverpool 031	11		5	6			
E02001378 : Liverpool 032	25	12	13				
E02001380 : Liverpool 034	31	15	16				
E02001381 : Liverpool 035	22	11	11				
E02001382 : Liverpool 036	45	22	23				
E02001383 : Liverpool 037	12			12			
E02001384 : Liverpool 038	20	10	10				
E02001385 : Liverpool 039	2		2				
E02001386 : Liverpool 040	16	8	8				
E02001387 : Liverpool 041	21	10	11				
E02001388 : Liverpool 042	21	10	11				
E02001389 : Liverpool 043	12	6	6				
E02001390 : Liverpool 044	17	8	9				
E02001391 : Liverpool 045	21	10	11				
E02001392 : Liverpool 046	28		14	14			
E02001393 : Liverpool 047	29	14	15				
E02001394 : Liverpool 048	19	9	10				
E02001395 : Liverpool 049	26	13	13				
E02001396 : Liverpool 050	19	9	10				
E02001397 : Liverpool 051	16	8	8				
E02001398 : Liverpool 052	19	10	9				
E02001399 : Liverpool 053	32	16	16				
E02001400 : Liverpool 054	22		22				
E02001401 : Liverpool 055	28		28				
E02001402 : Liverpool 056	29		29				
E02001403 : Liverpool 057	19		19				
E02001404 : Liverpool 058	17		17				
E02001405 : Liverpool 059	31		31				
E02006932 : Liverpool 060	10			10			
E02006933 : Liverpool 061	10			10			
E02006934 : Liverpool 062	14			14			
E02001429 : Sefton 001	17				17		
E02001430 : Sefton 002	14				14		
E02001431 : Sefton 003	13				13		
E02001432 : Sefton 004	19				19		
E02001433 : Sefton 005	11				11		
E02001434 : Sefton 006	17				17		
E02001435 : Sefton 007	11				11		
E02001436 : Sefton 008	21				21		
E02001437 : Sefton 009	28				28		
E02001438 : Sefton 010	10				10		
E02001439 : Sefton 011	17				17		
E02001440 : Sefton 012	17				17		
E02001441 : Sefton 013	34				34		
E02001442 : Sefton 014	25				25		
E02001443 : Sefton 015	45				45		
E02001444 : Sefton 016	24				24		
E02001445 : Sefton 017	114				114		
E02001446 : Sefton 018	82				82		
E02001447 : Sefton 019	68				68		
E02001448 : Sefton 020	72				72		
E02001449 : Sefton 021	49				49		
E02001450 : Sefton 022	24				24		
E02001451 : Sefton 023	44				44		
E02001452 : Sefton 024	24				24		
E02001453 : Sefton 025	52			26	26		
E02001454 : Sefton 026	86				86		
E02001455 : Sefton 027	64			64			
E02001456 : Sefton 028	33			16	17		
E02001457 : Sefton 029	33				33		
E02001458 : Sefton 030	31			15	16		
E02001459 : Sefton 031	51			13	38		
E02001460 : Sefton 032	37			9	28		
E02001461 : Sefton 033	44			11	33		
E02001462 : Sefton 034	18				4	14	
E02001463 : Sefton 035	37				37		
E02001464 : Sefton 036	21			21			
E02001465 : Sefton 037	11			11			
E02001466 : Sefton 038	43			43			
E02001406 : St. Helens 001	46	46					
E02001407 : St. Helens 002	34	34					
E02001408 : St. Helens 003	15	15					
E02001409 : St. Helens 004	58	58					
E02001410 : St. Helens 005	13	13					
E02001411 : St. Helens 006	19	19					
E02001412 : St. Helens 007	45	45					
E02001413 : St. Helens 008	47	47					
E02001414 : St. Helens 009	36	36					
E02001415 : St. Helens 010	12	12					
E02001416 : St. Helens 011	20						
E02001417 : St. Helens 012	26	13	13				
E02001418 : St. Helens 013	17	17					
E02001419 : St. Helens 014	16	8	8				
E02001420 : St. Helens 015	27	27					
E02001421 : St. Helens 016	37	18	19				
E02001422 : St. Helens 017	17	9	8				
E02001423 : St. Helens 018	37	19	18				
E02001424 : St. Helens 019	52	26	26				
E02001425 : St. Helens 020	53	40	13				
E02001426 : St. Helens 021	29		29				
E02001427 : St. Helens 022	57		57				
E02001428 : St. Helens 023	29		29				
E02005304 : West Lancashire 001	13	3			10		
E02005305 : West Lancashire 002	14	3			11		
E02005306 : West Lancashire 003	36	9			27		
E02005307 : West Lancashire 004	37	9			28		
E02005308 : West Lancashire 005	19	19					
E02005309 : West Lancashire 006	35	9			26		
E02005310 : West Lancashire 007	25	6			19		
E02005311 : West Lancashire 008	39	29			10		
E02005312 : West Lancashire 009	35	35					
E02005313 : West Lancashire 010	28	28					
E02005314 : West Lancashire 011	36	36					
E02005315 : West Lancashire 012	98	24			74		
E02005316 : West Lancashire 013	9	9					
E02005317 : West Lancashire 014	13	13					
E02005318 : West Lancashire 015	20	20					
	8,502		1,940	2,276	1,932	1,348	1,006

22.82% 26.77% 22.72% 15.86% 11.83% 100.00%
23.00% 27.00% 22.00% 16.00% 12.00% 100.00%



Appendix F: Stage One Road Safety Audit



**FINAL
STAGE 1
ROAD SAFETY AUDIT**

**School Lane
Knowsley**

20th October 2018

**CLIENT:
CBO Transport Ltd
Barnett House
53 Fountain Street
Manchester
M2 2AN**

**PROVIDER:
Network Road Safety Limited
35 Hollin Moor View
Thurgoland
Sheffield
S35 7EE**

School Lane Knowsley

CONTENTS

SECTION	PAGE No.
Introduction	1
Items raised at this Stage 1 Road Safety Audit	2
Audit Team Statement	4
Appendix A – List of drawings, documents and departures from standard	5
Appendix B – Problem location reference drawings	6

Doc Ref: SLK/F/RSA1

Project: School Lane, Knowsley

Report Produced for; -

CBO Transport Ltd

Report Produced by; -

David Ramsden

Report Dated; -

20th October 2018

Audit Team Leader; -

David Ramsden

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1. INTRODUCTION

- 1.1 This report results from a Stage 1 Road Safety Audit carried out on the scheme: School Lane, Knowsley, at the request of the consulting organisation CBO Transport Ltd. The Road Safety Audit was carried out during October 2018.
- 1.2 The Audit Team membership was as follows:
- D Ramsden DipASM CertAI MIRSO MAIRSO FIHE
 Network Road Safety Limited
 (Certificate of Competency in Road Safety Audit June 2015)
- N Jones BA(hons) DipTEDM MSoRSA MCIHT
 Network Road Safety Limited
 (Certificate of Competency in Road Safety Audit December 2013)
- 1.3 The Road Safety Audit took place during October 2018. The audit comprised of an examination of the documents provided by the design team, which are listed in Appendix A. The audit team visited the site together on the 17th October 2018. During the site visit the weather was overcast and the existing road surface was dry. Traffic conditions were free flowing.
- 1.4 The terms of reference of the Road Safety Audit are as described in HD 19/15. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.
- 1.5 All comments and recommendations are referenced to the preliminary design drawings and the locations have been indicated on the plan supplied by the design team, which is attached at Appendix B.
- 1.6 The proposed scheme is the construction of a new priority junction on School Lane adjacent to J4 M57. The junction will service a proposed fuel filling station and drive through restaurant.

2. ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

2.1 PROBLEM

Location: A – School Lane

Summary: Overrunning of the ghost island could conflict with turning vehicles

The entry on to the roundabout at the adjacent junction forms two lanes. There is a risk that vehicles approaching from the east could attempt to use the ghost island to bypass queuing traffic in the nearside lane increasing the risk of collision with turning vehicles.

RECOMMENDATION

It is recommended that a traffic island be provided in the hatching to the east of the proposed junction on School Lane.

2.2 PROBLEM

Location: B – School Lane

CBO Response (Location A):

A traffic island has been included in the hatching to the east of the proposed junction on School Lane. The revised layout is shown on Drawing Number CBO-0504-001 Rev D

Summary: Relocation of existing direction sign

There is an existing roundabout direction sign that will need to be relocated due to its current position within the proposed junction. At detailed design stage, the new junction should be included in the design of the replacement sign in order to warn approaching drivers of the proximity of the junction.

RECOMMENDATION

It is recommended that the junction be presented on the relocated direction sign.

CBO Response (Location B):

It is envisaged that the new junction will be included on the relocated direction sign as part of the detailed design to warn approaching drivers of the proximity of the junction

2.3 PROBLEM

Location: C – Development access

Summary: Footway could encourage pedestrians to cross the junction

The proposal shows a new footway on the western side of the development access. The footway extends up to the tangent with School Lane. There is no formal footway to the west of the development on School Lane. There is a narrow hardened verge. The proposed footway does not appear to connect with any existing footway infrastructure on School Lane. There is a risk that the presence of a footway all the way up to the junction could encourage pedestrians walking from the east to cross the junction mouth to access the footway on the western side of the development road. Crossing in this location increases the risk of collision with turning and emerging traffic.

RECOMMENDATION

It is recommended that the footway be shortened on the western side of the development access and a marked crossing point be created further within the development.

CBO Response (Location C):

The footway will be shortened as part of the scheme layout to cross pedestrians on the straight east – west section of access road within the development. This crossing point will include dropped crossings and tactile paving included where this footway terminates

2.4 PROBLEM

Location: D – Development frontage

Summary: Vegetation could reduce conspicuity of the development

There is an existing semi mature hedge / tree line along the frontage of the development site on School Lane. The vegetation masks the development site from vehicles approaching from the roundabout. The type of development is likely to attract drivers unfamiliar with the area. There is a risk of late braking and shunt type collisions if the propinquity of the development is not clearly visible.

RECOMMENDATION

It is recommended that the frontage to the development site be cleared of all but low growing vegetation to ensure the development can be seen from the exit from the roundabout.

CBO Response (Location D):

As part of the design of the scheme, the boundary treatment of the School Lane site frontage can be designed to ensure the development can be seen from the exit from the roundabout

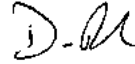
3. **AUDIT TEAM STATEMENT**

We certify that this Road Safety Audit has been carried out in accordance with HD19/15.

ROAD SAFETY AUDIT TEAM LEADER

D Ramsden
DipASM CertAI MIRSO MAIRSO FIHE
Network Road Safety Limited
35 Hollin Moor View
Thurgoland
Sheffield
S35 7EE

Signed



Date 19th October 2018

ROAD SAFETY AUDIT TEAM MEMBER

N Jones
BA(hons) DipTEDM MSoRSA MCIHT
Network Road Safety Limited

Signed



Date 20th October 2018

APPENDIX A

List of Drawings and Documents

- CBO-0504-001 C Potential School Lane access arrangement
- RSA brief including peak hour traffic flows & observed 85th percentile speeds
- ATC survey locations
- Speed survey locations
- Swept path – HGV drive through
- Swept path – HGV fuel filling station
- Swept path – tanker entering fuel filling station
- Swept path – tanker exiting fuel filling station

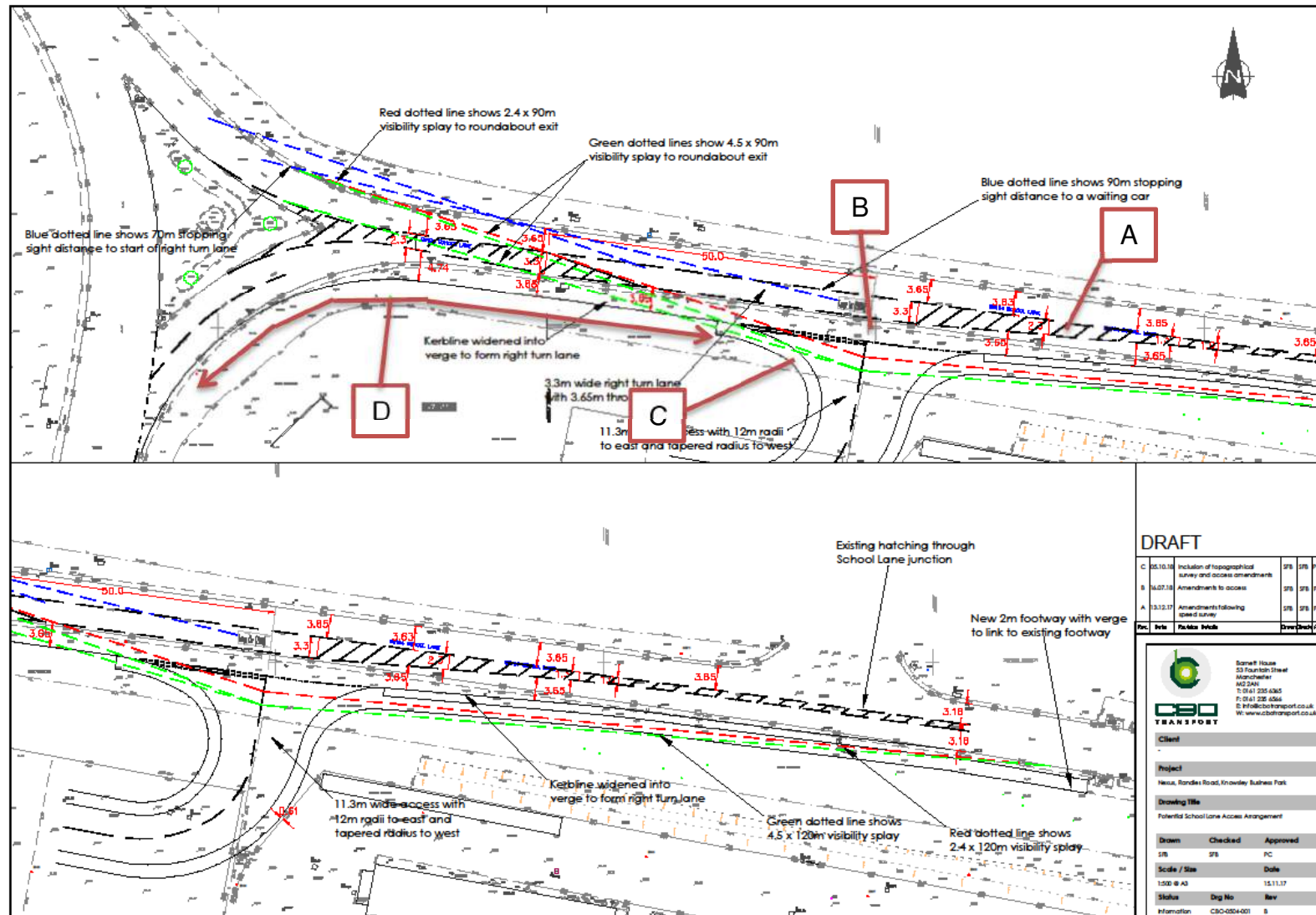
Departures from standard

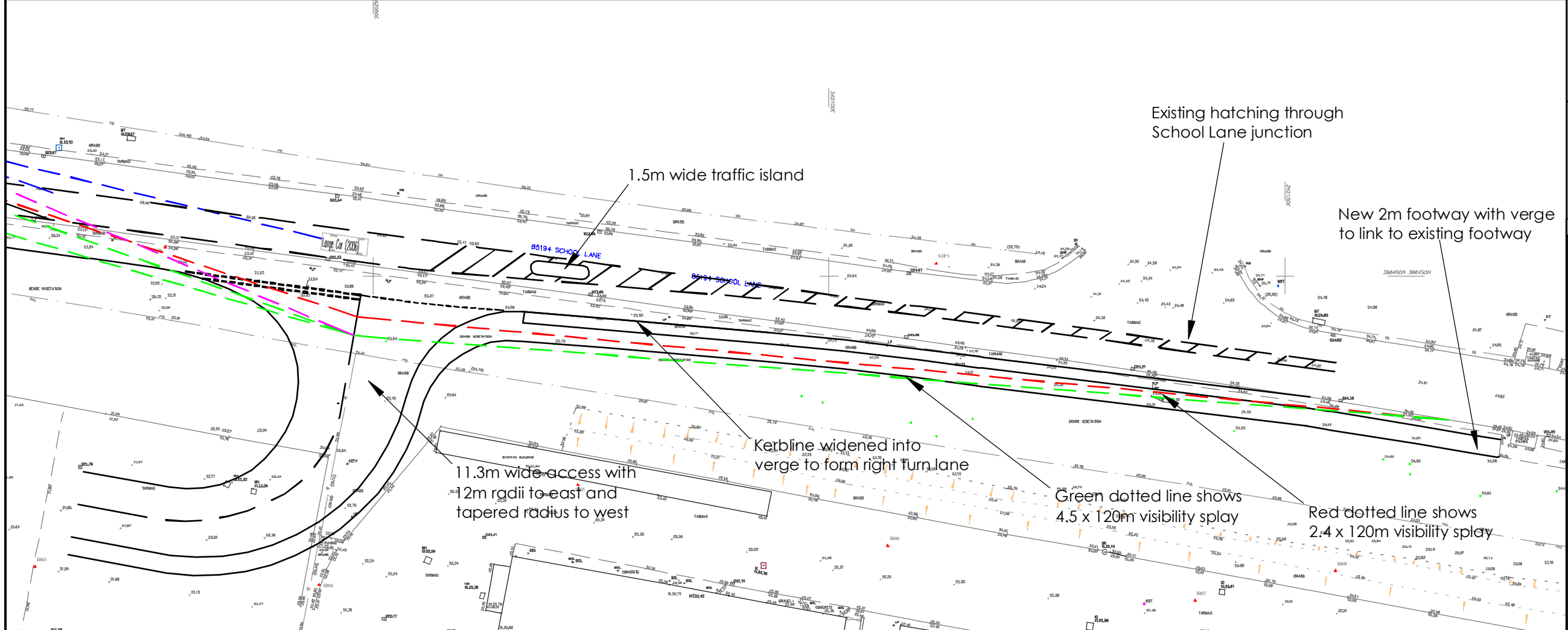
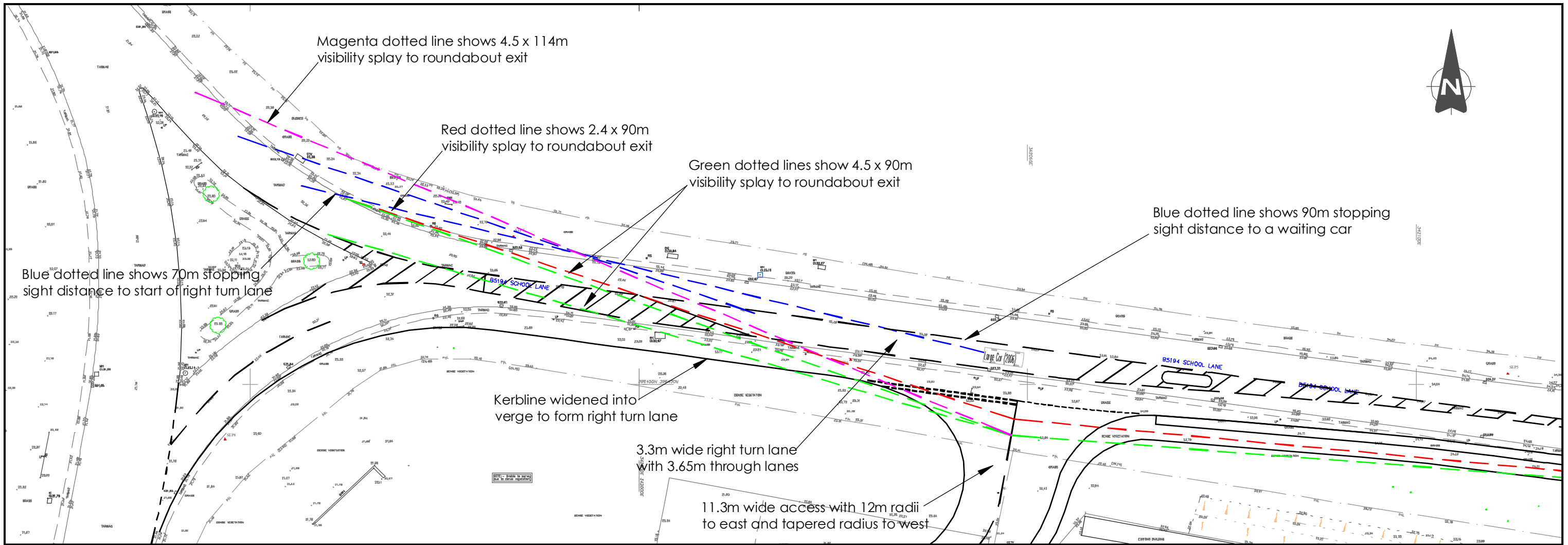
- None presented

APPENDIX B

Problem location reference drawings

- CBO-0504-001 C





DRAFT

D	30.10.18	Amendments to take on board Safety Audit findings	SFB	SFB	PRC
C	05.10.18	Inclusion of topographical survey and access amendments	SFB	SFB	PRC
B	16.07.18	Amendments to access	SFB	SFB	PRC
A	13.12.17	Amendments following speed survey	SFB	SFB	PRC
Rev.	Date	Revision Details	Drawn	Check	App.



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Client

Project

Nexus, Randles Road, Knowsley Business Park

Drawing Title

Potential School Lane Access Arrangement

Drawn	Checked	Approved
SFB	SFB	PC
Scale / Size		Date
1:500 @ A3		15.11.17
Status	Drg No	Rev
Information	CBO-0504-001	D



Appendix G: Junctions 9 Outputs:
B5194 School Lane Site Access



Junctions 9										
PICADY 9 - Priority Intersection Module										
Version: 9.0.2.5947 © Copyright TRL Limited, 2017										
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk										
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution										

Filename: B5194 School Ln site access TS Rev A.j9
Path: L:\Projects\CBO-0504 Nexus, Randles Road, Knowsley Business Park\PICADY
Report generation date: 09/04/2019 14:35:51

»Proposed Access - 2024 plus Dev, AM
 »Proposed Access - 2024 plus Dev , PM

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
Proposed Access - 2024 plus Dev										
Stream B-C	0.2	8.10	0.15	A	25 % [Stream B-A]	0.3	11.36	0.23	B	16 % [Stream B-A]
Stream B-A	0.1	20.92	0.09	C		0.1	24.05	0.06	C	
Stream C-B	0.2	8.63	0.19	A		0.3	11.66	0.22	B	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	School Lane access
Location	
Site number	
Date	19/03/2019
Version	
Status	
Identifier	
Client	
Jobnumber	CBO-0504
Enumerator	CBO
Description	

Units

Distance	Speed	Traffic units	Traffic units	Flow	Average delay	Total delay	Rate of delay
----------	-------	---------------	---------------	------	---------------	-------------	---------------

units	units	input	results	units	units	units	units
m	kph	Veh	Veh	perMin	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2024 plus Dev	AM	ONE HOUR	07:45	09:15		15
D2	2024 plus Dev	PM	DIRECT	16:15	17:15	60	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Proposed Access	100.000

Proposed Access - 2024 plus Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.13	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	School Lane (E)		Major
B	Site Access		Minor
C	School Lane (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30		✓	3.30	120.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
-----	----------------	-----------------------	-----------------	------------------	------------------	------------------	-----------------------	--------------------	------------------------	-------------------------

B	One lane plus flare	10.00	7.70	5.20	5.10	5.00		2.00	38	37
---	---------------------	-------	------	------	------	------	--	------	----	----

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/min)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	7.643	0.079	0.199	0.125	0.285
1	B-C	12.487	0.108	0.274	-	-
1	C-B	12.008	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 plus Dev	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/min)	Scaling Factor (%)
A			7.52	100.000
B			1.48	100.000
C			15.50	100.000

Origin-Destination Data

Demand (Veh/min)

	To			
		A	B	C
	From A	0.00	0.13	7.23
	From B	0.27	0.00	1.28
	From C	13.85	1.48	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	From A	0	0	17
	From B	0	0	10
	From C	7	10	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/min)	Demand in PCU (PCU/min)
07:45-08:00	A	5.66	6.60
	B	1.12	1.21
	C	11.67	12.52
08:00-08:15	A	6.76	7.89
	B	1.33	1.44
	C	13.93	14.95
08:15-08:30	A	8.28	9.66
	B	1.63	1.77
	C	17.07	18.31
08:30-08:45	A	8.28	9.66
	B	1.63	1.77
	C	17.07	18.31
08:45-09:00	A	6.76	7.89
	B	1.33	1.44
	C	13.93	14.95
09:00-09:15	A	5.66	6.60
	B	1.12	1.21
	C	11.67	12.52

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.15	8.10	0.2	A
B-A	0.09	20.92	0.1	C
C-A				
C-B	0.19	8.63	0.2	A
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	0.92	9.62	0.096	0.92	0.1	6.887	A
B-A	0.19	4.57	0.042	0.19	0.0	13.679	B
C-A	10.54			10.54			
C-B	1.13	9.34	0.121	1.12	0.1	7.295	A
A-B	0.10			0.10			
A-C	5.56			5.56			

08:00 - 08:15

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.10	9.27	0.119	1.10	0.1	7.346	A
B-A	0.23	3.98	0.058	0.23	0.1	16.009	C
C-A	12.59			12.59			
C-B	1.35	9.03	0.149	1.35	0.2	7.807	A
A-B	0.12			0.12			
A-C	6.64			6.64			

08:15 - 08:30

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.35	8.76	0.154	1.35	0.2	8.089	A
B-A	0.28	3.15	0.089	0.28	0.1	20.881	C
C-A	15.41			15.41			
C-B	1.65	8.60	0.192	1.65	0.2	8.618	A
A-B	0.15			0.15			
A-C	8.13			8.13			

08:30 - 08:45

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.35	8.76	0.154	1.35	0.2	8.099	A
B-A	0.28	3.15	0.089	0.28	0.1	20.917	C
C-A	15.41			15.41			
C-B	1.65	8.60	0.192	1.65	0.2	8.628	A
A-B	0.15			0.15			
A-C	8.13			8.13			

08:45 - 09:00

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.10	9.26	0.119	1.11	0.1	7.362	A
B-A	0.23	3.97	0.058	0.23	0.1	16.040	C
C-A	12.59			12.59			
C-B	1.35	9.03	0.149	1.35	0.2	7.819	A
A-B	0.12			0.12			
A-C	6.64			6.64			

09:00 - 09:15

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	0.92	9.61	0.096	0.93	0.1	6.909	A
B-A	0.19	4.57	0.042	0.19	0.0	13.706	B
C-A	10.54			10.54			
C-B	1.13	9.34	0.121	1.13	0.1	7.317	A
A-B	0.10			0.10			
A-C	5.56			5.56			

Proposed Access - 2024 plus Dev , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2024 plus Dev	PM	DIRECT	16:15	17:15	60	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A			100.000
B			100.000
C			100.000

Origin-Destination Data

Demand (Veh/min)

	To			
From		A	B	C
	A	0.00	0.30	14.03
	B	0.15	0.00	1.58
	C	6.55	1.47	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	3
	B	0	0	10
	C	14	10	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/min)	Demand in PCU (PCU/min)
16:15-16:30	A	10.40	10.71
	B	1.73	1.89
	C	7.67	8.69
16:30-16:45	A	17.28	17.79
	B	1.73	1.89
	C	7.89	8.94
16:45-17:00	A	11.71	12.05
	B	1.73	1.89
	C	9.13	10.34
17:00-17:15	A	17.93	18.46
	B	1.73	1.89
	C	7.38	8.36

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.23	11.36	0.3	B
B-A	0.06	24.05	0.1	C
C-A				
C-B	0.22	11.66	0.3	B
A-B				
A-C				

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.58	8.82	0.179	1.57	0.2	8.251	A
B-A	0.15	4.08	0.037	0.15	0.0	15.231	C
C-A	6.27			6.27			
C-B	1.40	8.35	0.168	1.39	0.2	8.600	A
A-B	0.22			0.22			
A-C	10.18			10.18			

16:30 - 16:45

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.58	7.02	0.225	1.58	0.3	11.005	B
B-A	0.15	2.69	0.056	0.15	0.1	23.639	C
C-A	6.45			6.45			
C-B	1.44	6.66	0.217	1.44	0.3	11.486	B
A-B	0.36			0.36			
A-C	16.92			16.92			

16:45 - 17:00

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.58	8.47	0.187	1.58	0.2	8.719	A
B-A	0.15	3.57	0.042	0.15	0.0	17.530	C
C-A	7.46			7.46			
C-B	1.67	8.03	0.208	1.67	0.3	9.435	A
A-B	0.25			0.25			
A-C	11.46			11.46			

17:00 - 17:15

Stream	Total Demand (Veh/min)	Capacity (Veh/min)	RFC	Throughput (Veh/min)	End queue (Veh)	Delay (s)	LOS
B-C	1.58	6.85	0.231	1.58	0.3	11.357	B
B-A	0.15	2.64	0.057	0.15	0.1	24.051	C
C-A	6.03			6.03			
C-B	1.35	6.50	0.208	1.35	0.3	11.656	B
A-B	0.38			0.38			
A-C	17.55			17.55			



Appendix 2: Proposed Site Layout



General Notes

Do not scale from this drawing. Only work to written dimensions.

All site dimensions shall be verified by the Contractor on site prior to commencing any works.

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Site Area - 0.82Ha
(2.03acres)

P3	General amendments	18/08/21		
P1	Red line boundary & fence line amended, building height increased, office elevations amended and bris soleils added, sub station added and general amendments	11/08/21		
P0	First Issue	20/07/21		
Rev.	Description	Date	ISS	APP

Scale 1 : 500 @ A2

Status

Drawn By JB

Checked By BB

Date 05/07/21

Client:

Tilstone Managing Warehouse REIT PLC
Gellings Road
Knowsley

Sheet Name:

Proposed Site Plan

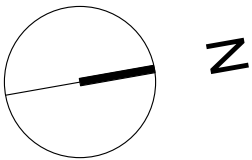
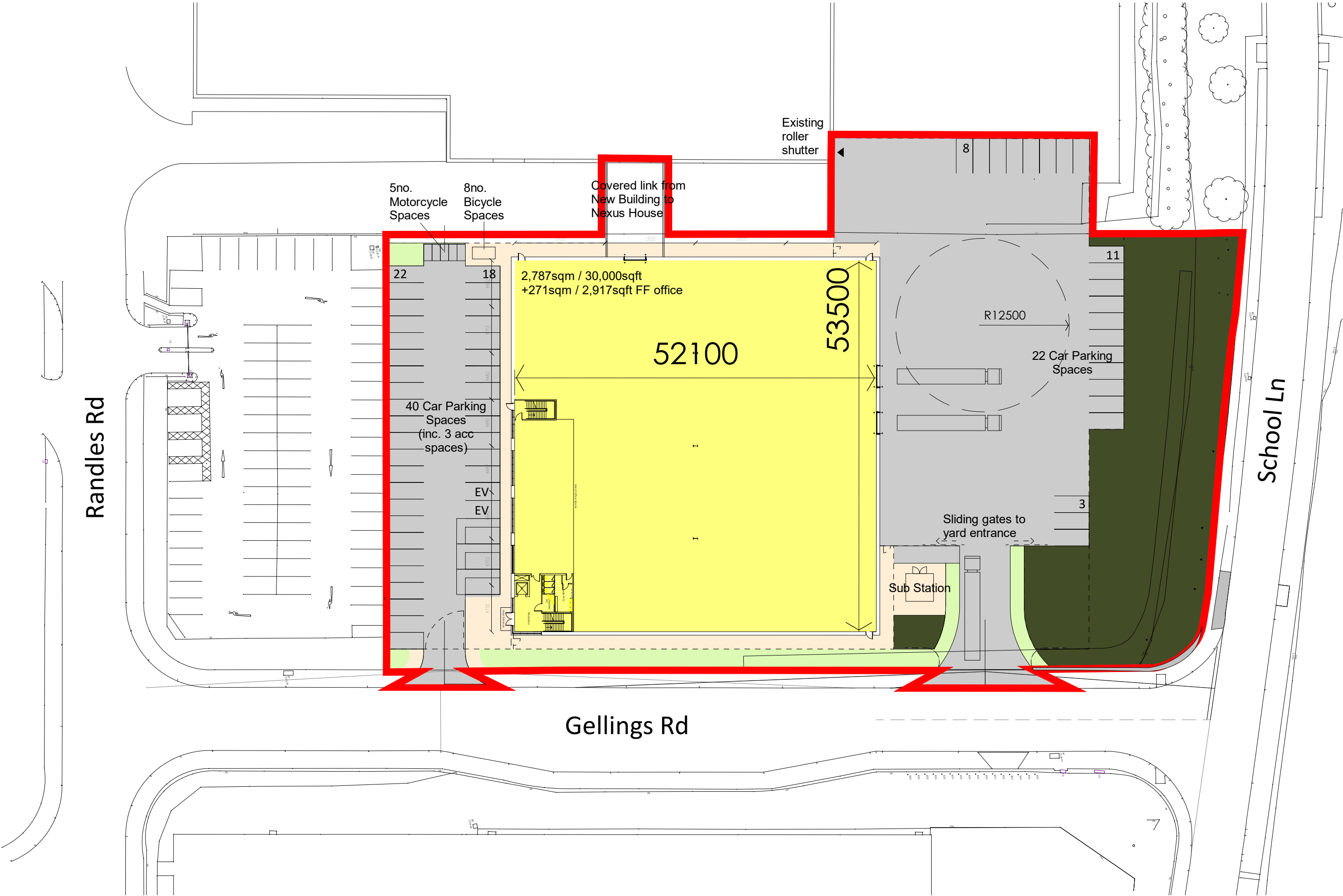
Project No. Orig. Zone Level Type Role Cls. Dwg No. Rev
19008-FRA-01-00-A-DR -90-1001 P3

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Proposed Site Plan
1 : 500





Appendix 3: TRICS Outputs



Calculation Reference: AUDIT-751701-210716-0757

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : C - INDUSTRIAL UNIT
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
11	SCOTLAND	
	FI FIFE	1 days
	SR STIRLING	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 2350 to 4900 (units: sqm)
 Range Selected by User: 2000 to 5000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 21/11/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	3 days
Thursday	3 days
Friday	1 days
Sunday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	7
Village	1
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known 9 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 9 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DC-02-C-06	DORSET CEREALS	DORSET
	PEVERELL AVENUE EAST		
	DORCHESTER		
	POUNDBURY		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	2880 sqm	
	Survey date: SUNDAY	20/07/08	Survey Type: MANUAL
2	DS-02-C-02	ENGINEERED PRODUCTS	DERBYSHIRE
	PONTEFRAC STREET		
	DERBY		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	2600 sqm	
	Survey date: THURSDAY	25/06/15	Survey Type: MANUAL
3	DV-02-C-02	ENERGY RECOVERY FACILITY	DEVON
	GRACE ROAD SOUTH		
	EXETER		
	MARSH BARTON TRAD. EST.		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	3513 sqm	
	Survey date: THURSDAY	06/07/17	Survey Type: MANUAL
4	FI-02-C-01	REFRIGERATION	FIFE
	HALBEATH PLACE		
	DUNFERMLINE		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	4900 sqm	
	Survey date: FRIDAY	20/04/07	Survey Type: MANUAL
5	HC-02-C-01	ENGINEERING COMPANY	HAMPSHIRE
	JAYS CLOSE		
	BASINGSTOKE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3000 sqm	
	Survey date: THURSDAY	16/06/16	Survey Type: MANUAL
6	NY-02-C-01	FOOD PRODUCTION	NORTH YORKSHIRE
	FEARBY ROAD		
	MASHAM		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Gross floor area:	2491 sqm	
	Survey date: TUESDAY	23/09/08	Survey Type: MANUAL
7	SR-02-C-01	SPECIALIST MODEL MAKING	STIRLING
	BORROWMEADOW ROAD		
	STIRLING		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	2350 sqm	
	Survey date: MONDAY	16/06/14	Survey Type: MANUAL
8	WM-02-C-01	METAL BEARINGS	WEST MIDLANDS
	FORGE LANE		
	SUTTON COLDFIELD		
	MINWORTH		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	4200 sqm	
	Survey date: TUESDAY	25/11/08	Survey Type: MANUAL
9	WM-02-C-04	FOUNDRY	WEST MIDLANDS
	STOURVALE ROAD		
	STOURBRIDGE		
	LYE		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	4324 sqm	
	Survey date: TUESDAY	21/11/17	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00	1	2350	0.298	1	2350	0.043	1	2350	0.341
07:00 - 07:30	9	3362	0.182	9	3362	0.026	9	3362	0.208
07:30 - 08:00	9	3362	0.304	9	3362	0.030	9	3362	0.334
08:00 - 08:30	9	3362	0.202	9	3362	0.036	9	3362	0.238
08:30 - 09:00	9	3362	0.208	9	3362	0.036	9	3362	0.244
09:00 - 09:30	9	3362	0.136	9	3362	0.043	9	3362	0.179
09:30 - 10:00	9	3362	0.093	9	3362	0.096	9	3362	0.189
10:00 - 10:30	9	3362	0.076	9	3362	0.050	9	3362	0.126
10:30 - 11:00	9	3362	0.059	9	3362	0.059	9	3362	0.118
11:00 - 11:30	9	3362	0.053	9	3362	0.050	9	3362	0.103
11:30 - 12:00	9	3362	0.073	9	3362	0.063	9	3362	0.136
12:00 - 12:30	9	3362	0.089	9	3362	0.093	9	3362	0.182
12:30 - 13:00	9	3362	0.079	9	3362	0.112	9	3362	0.191
13:00 - 13:30	9	3362	0.109	9	3362	0.093	9	3362	0.202
13:30 - 14:00	9	3362	0.083	9	3362	0.073	9	3362	0.156
14:00 - 14:30	9	3362	0.089	9	3362	0.112	9	3362	0.201
14:30 - 15:00	9	3362	0.050	9	3362	0.076	9	3362	0.126
15:00 - 15:30	9	3362	0.033	9	3362	0.073	9	3362	0.106
15:30 - 16:00	9	3362	0.036	9	3362	0.112	9	3362	0.148
16:00 - 16:30	9	3362	0.050	9	3362	0.149	9	3362	0.199
16:30 - 17:00	9	3362	0.007	9	3362	0.264	9	3362	0.271
17:00 - 17:30	9	3362	0.020	9	3362	0.182	9	3362	0.202
17:30 - 18:00	9	3362	0.003	9	3362	0.139	9	3362	0.142
18:00 - 18:30	8	3170	0.004	8	3170	0.075	8	3170	0.079
18:30 - 19:00	7	3287	0.004	7	3287	0.039	7	3287	0.043
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.340			2.124			4.464

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	2350 - 4900 (units: sqm)
Survey date range:	01/01/07 - 21/11/17
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	1
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00	1	2350	0.000	1	2350	0.000	1	2350	0.000
07:00 - 07:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
07:30 - 08:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
08:00 - 08:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
08:30 - 09:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
09:00 - 09:30	9	3362	0.003	9	3362	0.003	9	3362	0.006
09:30 - 10:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
10:00 - 10:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
10:30 - 11:00	9	3362	0.003	9	3362	0.003	9	3362	0.006
11:00 - 11:30	9	3362	0.003	9	3362	0.003	9	3362	0.006
11:30 - 12:00	9	3362	0.003	9	3362	0.003	9	3362	0.006
12:00 - 12:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
12:30 - 13:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
13:00 - 13:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
13:30 - 14:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
14:00 - 14:30	9	3362	0.003	9	3362	0.003	9	3362	0.006
14:30 - 15:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
15:00 - 15:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
15:30 - 16:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
16:00 - 16:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
16:30 - 17:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
17:00 - 17:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
17:30 - 18:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
18:00 - 18:30	8	3170	0.000	8	3170	0.000	8	3170	0.000
18:30 - 19:00	7	3287	0.004	7	3287	0.004	7	3287	0.008
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.019			0.019			0.038

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00	1	2350	0.000	1	2350	0.000	1	2350	0.000
07:00 - 07:30	9	3362	0.017	9	3362	0.007	9	3362	0.024
07:30 - 08:00	9	3362	0.020	9	3362	0.010	9	3362	0.030
08:00 - 08:30	9	3362	0.023	9	3362	0.023	9	3362	0.046
08:30 - 09:00	9	3362	0.026	9	3362	0.020	9	3362	0.046
09:00 - 09:30	9	3362	0.023	9	3362	0.020	9	3362	0.043
09:30 - 10:00	9	3362	0.036	9	3362	0.043	9	3362	0.079
10:00 - 10:30	9	3362	0.023	9	3362	0.013	9	3362	0.036
10:30 - 11:00	9	3362	0.013	9	3362	0.017	9	3362	0.030
11:00 - 11:30	9	3362	0.013	9	3362	0.023	9	3362	0.036
11:30 - 12:00	9	3362	0.023	9	3362	0.023	9	3362	0.046
12:00 - 12:30	9	3362	0.043	9	3362	0.043	9	3362	0.086
12:30 - 13:00	9	3362	0.017	9	3362	0.030	9	3362	0.047
13:00 - 13:30	9	3362	0.023	9	3362	0.017	9	3362	0.040
13:30 - 14:00	9	3362	0.017	9	3362	0.013	9	3362	0.030
14:00 - 14:30	9	3362	0.023	9	3362	0.013	9	3362	0.036
14:30 - 15:00	9	3362	0.010	9	3362	0.017	9	3362	0.027
15:00 - 15:30	9	3362	0.017	9	3362	0.017	9	3362	0.034
15:30 - 16:00	9	3362	0.007	9	3362	0.010	9	3362	0.017
16:00 - 16:30	9	3362	0.013	9	3362	0.017	9	3362	0.030
16:30 - 17:00	9	3362	0.007	9	3362	0.013	9	3362	0.020
17:00 - 17:30	9	3362	0.007	9	3362	0.007	9	3362	0.014
17:30 - 18:00	9	3362	0.003	9	3362	0.013	9	3362	0.016
18:00 - 18:30	8	3170	0.004	8	3170	0.004	8	3170	0.008
18:30 - 19:00	8	3170	0.000	8	3170	0.000	8	3170	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.408			0.413			0.821

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00	1	2350	0.000	1	2350	0.000	1	2350	0.000
07:00 - 07:30	9	3362	0.003	9	3362	0.000	9	3362	0.003
07:30 - 08:00	9	3362	0.030	9	3362	0.000	9	3362	0.030
08:00 - 08:30	9	3362	0.007	9	3362	0.000	9	3362	0.007
08:30 - 09:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
09:00 - 09:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
09:30 - 10:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
10:00 - 10:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
10:30 - 11:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
11:00 - 11:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
11:30 - 12:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
12:00 - 12:30	9	3362	0.003	9	3362	0.003	9	3362	0.006
12:30 - 13:00	9	3362	0.000	9	3362	0.003	9	3362	0.003
13:00 - 13:30	9	3362	0.003	9	3362	0.003	9	3362	0.006
13:30 - 14:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
14:00 - 14:30	9	3362	0.000	9	3362	0.000	9	3362	0.000
14:30 - 15:00	9	3362	0.000	9	3362	0.007	9	3362	0.007
15:00 - 15:30	9	3362	0.000	9	3362	0.007	9	3362	0.007
15:30 - 16:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
16:00 - 16:30	9	3362	0.000	9	3362	0.013	9	3362	0.013
16:30 - 17:00	9	3362	0.000	9	3362	0.010	9	3362	0.010
17:00 - 17:30	9	3362	0.000	9	3362	0.003	9	3362	0.003
17:30 - 18:00	9	3362	0.000	9	3362	0.000	9	3362	0.000
18:00 - 18:30	8	3170	0.000	8	3170	0.000	8	3170	0.000
18:30 - 19:00	8	3170	0.000	8	3170	0.000	8	3170	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.046			0.049			0.095

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.