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TRANSPORT ASSESSMENT

Oxtec Development Limited

Unit 8 to 11

Oxford Technology Park

March 2023

Report control

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1 Introduction

1.1 Vectos has been commissioned by Oxtec Development Limited to provide transport and highways advice with regards to a planning application for further development within the Oxford Technology Park (OTP) site in Kidlington, near Oxford.

1.2 Outline planning consent was granted at OTP in 2016 for 40,362m2 of office, research and development (R&D), laboratory, storage, and ancillary space. A proportion of this consented development has either been delivered, consented at Reserved Matters stage or is the subject of a Reserved Matters application.

1.3 The applicant is now considering the delivery of the remaining units on the site, Units 8 to 11, within one new planning consent.

1.4 The proposed development will provide a total of 16,909m2 of additional R&D floorspace over four units. Car and cycle parking will be provided at each unit.

Planning History

1.5 The outline planning application for OTP was granted approval by Cherwell District Council (CDC) in 2016 (ref: 14/02067/OUT) for 40,362m2 of office, research and development (R&D), laboratory, storage, and ancillary space. The outline planning application was supported by a Transport Assessment prepared by Peter Brett Associates, dated 2014.

1.6 An application for a new Hotel (C1) and ancillary restaurant (A3) (ref: 17/02233/F) in relation to the Unit 2 plot at OTP was permitted by CDC in July 2018. The hotel has been constructed and is operational.

1.7 A Reserved Matters Application (ref:17/01542/REM) was then approved in November 2017, covering siting, design, layout, and external appearance of Buildings (Units) 1 and 3 at OTP. This consent covered 3,796m2 of B1 office use at Unit 1 and 2,779m2 of B1(b) the previous reference related to R&D use along with ancillary office space at Unit 3.

1.8 Proceeding this, a further planning consent was granted in order to amend the approved floor space for Units 1 and 3 (ref: 21/00690/REM) increasing Unit 3 from 2,779m2 to 4,452m2 of R&D and slightly reducing the size of Unit 1 to 3,519m2. Oxfordshire County Council (OCC) issued ‘no objection’ on the 4th of May 2021. Permission was granted by CDC on the 2nd of July 2021.

1.9 Further to this, a Full Planning Application for Buildings 4A and 4B (ref: 21/02278/F) was submitted seeking approval for a proposed development with uses including classes E(g) (i)-(iii), B2 and B8 and more generally described as R&D/Innovation. Building 4A includes 5 units for a total 3,228m2 GIA and Building 4B 6 units with a total 3,220m2 GIA. Resolution to grant consent was made by Cherwell DC Planning Committee on 7th October 2021 and full consent obtained in January 2023.

1.10 In addition, an application was submitted for development of Unit 5a and Unit 5b at OTP (ref 21/03913/F) for a total of 4,078m2 GIA of uses E(g)(i-iii), B2 and B8, again, in line with other units within OTP and in line with the OTP outline consent. The application has now been permitted as of 24th of June 2022.

1.11 An application was also submitted for development of Unit 7 (ref 22/01683) for a total of 3,455m2 GIA of uses E(g)(i-iii), B2 and B8, again, in line with other units within OTP and in line with the OTP outline consent. This application was consented in January 2023.

1.12 More recently, an application was made for the development of Units 6a and 6b (ref: 22/02647/F) intended to be used for Research and Development purposes with permission sought for Use Classes E (g) (i), and/or (ii), and/or (iii), and/or B2 and/or B8 consistent with the extant outline consent. Building 6 will comprise of a total of 4,396m2 GIA. This application was consented in January 2023.

Report Structure

1.13 This report forms a Transport Assessment (TA) submitted in support of the proposed development of Units 8 to 11 at OTP. It details an assessment of the likely transport implications of the further development at OTP, in the context of the outline consent granted originally, with due regard to the package of transport improvement measures agreed by the developer with the local highway and planning authorities at the time. The assessment also takes account of the various consents granted at OTP since the outline stage.

1.14 This report provides a review of the development site's current accessibility by all modes of transport, making reference to local infrastructure improvements agreed as part of the OTP outline consent. It then presents a review of vehicular trip generation to and from OTP, considering the proposed Units 8 to 11, in order to gain an understanding of the potential impact of the proposed development in the context of the vehicular trip generation agreed at the outline stage.

1.15 This TA report has been prepared with the benefit of knowledge and experience gained through working on similar developments both locally and nationally. In addition, the TA follows the local planning policy guidance and the principles of National Planning Policy Framework (NPPF).

1.16 The remainder of this TA is structured as follows:

- **Section 2** – Existing Conditions;
- **Section 3** – Policy Context;
- **Section 4** – Development Proposals;
- **Section 5** – Trip Generation Review;
- **Section 6** – Traffic Generation and Impact Assessment; and
- **Section 7** – Summary and Conclusion.

2 Existing Conditions

2.1 This section of the report describes the baseline conditions at the site, including the accessibility of the site by sustainable modes and the connectivity of the site to the local highway network.

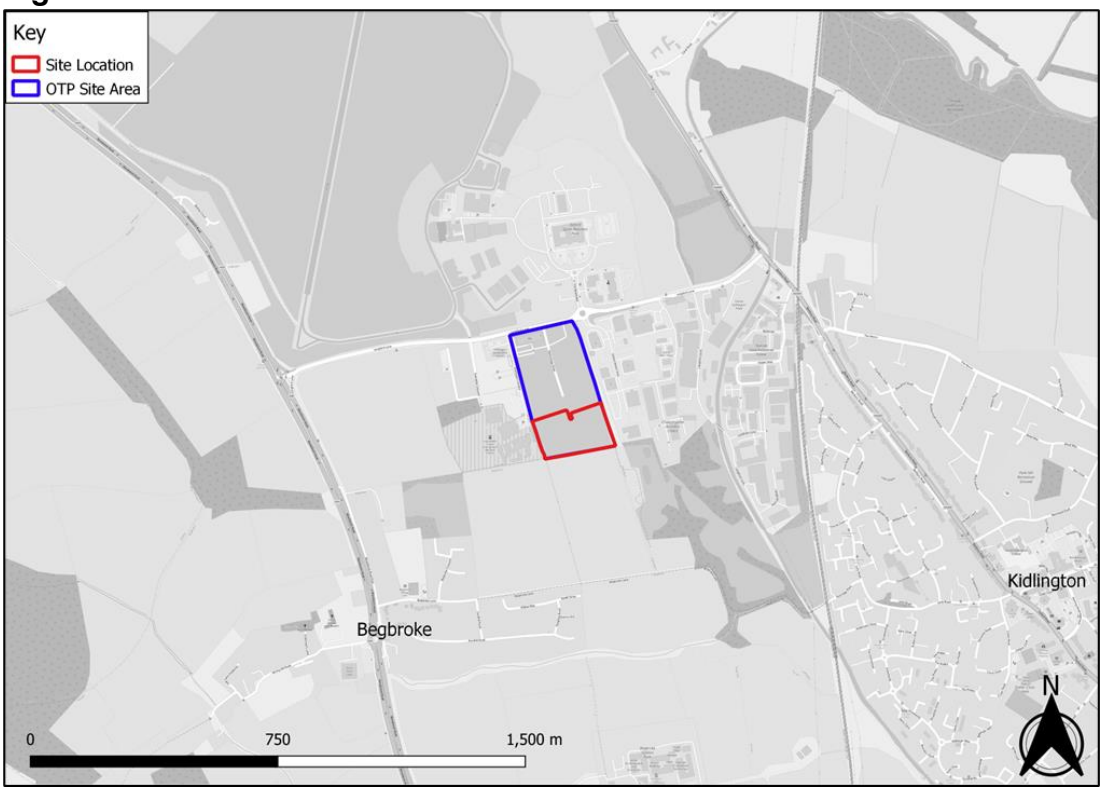
Site Location

2.2 The proposed development site is located within the Oxford Technology Park (OTP). OTP is situated to the northwest of Kidlington, located approximately 2km from the centre of town. OTP is bounded to the north by Oxford Airport, to the east by Oxford Motor Park, whilst an undeveloped greenfield and Campsfield House Immigration Removal Centre bound OTP to the south and west respectively. OTP is located approximately 11km north of the centre of Oxford.

2.3 The area surrounding OTP is encompassed by a vast network of roads, cycle paths and footways serving a varied mix of facilities and services. There is a range of facilities and services that can be found within proximity to OTP including public transit links, retail outlets, schools, recreational facilities and health centres.

2.4 The development site location is presented in **Figure 2.1** in the context of OTP and its surroundings.

Figure 2.1 – Site Location Plan



2.5 Access to the development will be taken from the constructed Technology Drive/Langford Lane junction, which is in the form of a priority T-junction. A ghost island turning bay is provided for right-turn movements into Technology Drive. This junction was developed following the consent of the outline application for OTP. The junction is to be used by all units delivered as part of OTP. The

existing layout of the junction, as seen from Google Streetview in June 2022, is presented at **Figure 2.2**.

Figure 2.2 – Existing Access Layout

Access by Non-Car Modes

Pedestrian Accessibility

2.6 The site benefits from an extensive unbroken network of footways feeding in from Langford Lane all the way to its signal-controlled junctions with the A44 Woodstock Road to the west and the A4026 Banbury Road to the east. The footways are of varying widths on one side of the carriageway offering safe, direct and coherent routes to local facilities and services with minimum obstructions.

2.7 Along Technology Drive, within OTP, there are footways provided measuring approximately 2m in width and are provided on both sides of the carriageway from the development site towards Langford Lane. Streetlighting is provided on Technology Drive at frequent intervals.

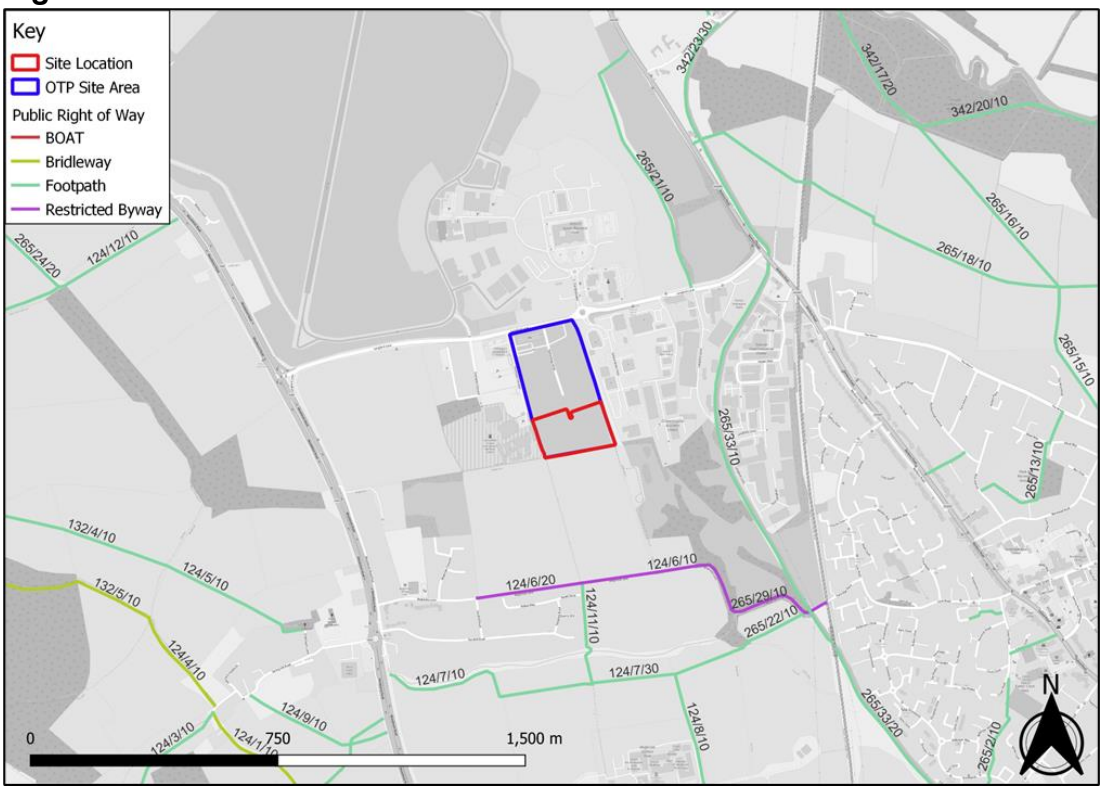
2.8 The Langford Lane / The Boulevard roundabout is 120 meters from the OTP access on Langford Lane with a short section of footway provided on the north arm (first exit from the direction of the site) of the roundabout providing pedestrian access to the Oxford Spires Business Park via The Boulevard.

2.9 Dropped kerbs flush with the carriageway and tactile paving are provided at crossing points near junctions to facilitate informal crossing. At the junction of Technology Drive with Langford Lane, a pedestrian island with informal crossing points and reflective bollards is provided to break the crossing distance for pedestrians. There is a wide footway provided along the frontage of the OTP site on Langford Lane, connecting to the route into the Oxford Spire Business Park.

2.10 The footways within Technology Drive and in the vicinity of the site on Langford Road are also well-lit.

2.11 Designated pedestrian routes surrounding the OTP site are extensive, with a number of Public Rights of Way (PRoWs), heading in a variety of directions. A plan showing the location of available footpaths in the vicinity of the development site is provided at **Figure 2.3**. to highlight existing routes around the site.

Figure 2.3 – PRoW Plan

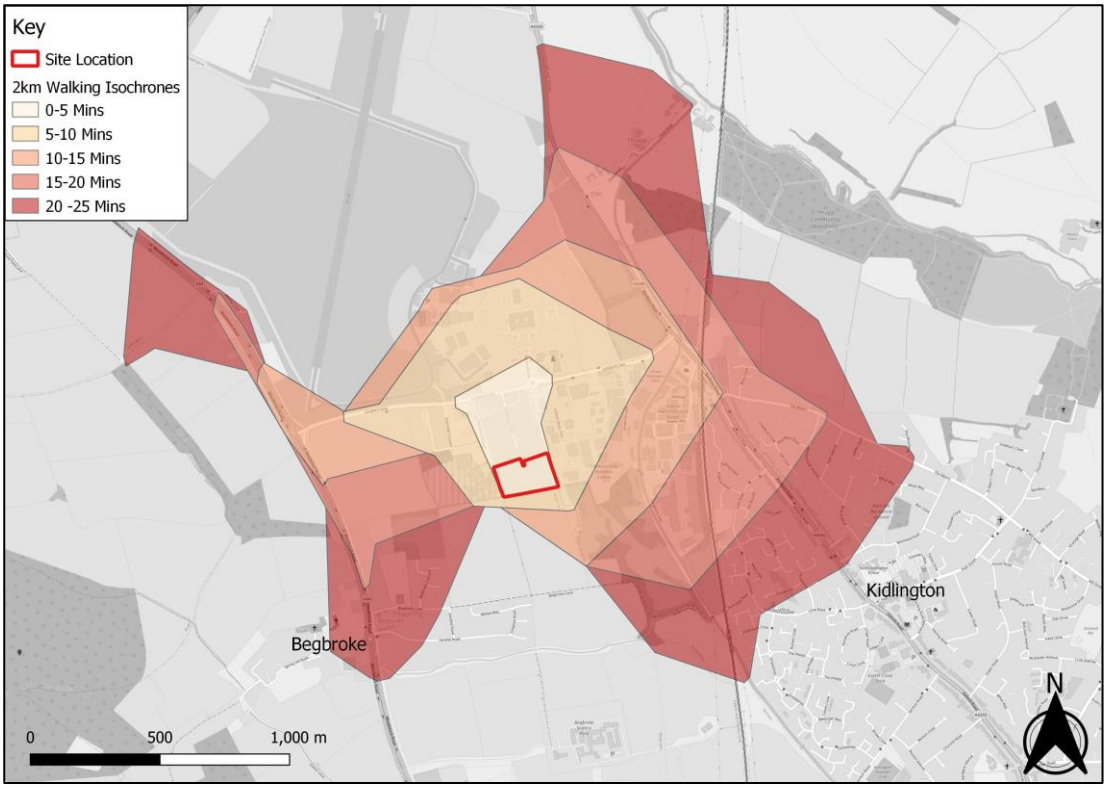


2.12 The distance people are prepared to walk will vary depending on journey type, journey purpose, and personal preference. National Travel Survey data for 2020 shows that 93% of walking trip are made up to a distance of 2 miles (3.2km) with 63% of walking trips being up to 1 mile (1.6km). Although it has now been superseded by the National Planning Policy Framework, the Planning Policy Guidance 13 quoted 2km as a trip distance offering the best opportunity for a switch to walking.

2.13 A study published in Local Transport Today (LTT 13-26th October 2017) established 85th percentile and average distances walked by people to access a number of services. It details that the distance up to which people would ordinarily walk as being the 85th percentile. The study suggested that it is the 85th percentile distance that should be used as the defining criteria for accessibility of new development. The study suggests that for all journey purposes for residential developments, the average distance is 1,150m. However, the 85th percentile, which is referred to as the distance up to which people would ordinarily walk, is 1,950m. This study provides a reasonable estimate for the distance in which future staff are likely to be prepared to walk to the site.

2.14 On that basis, a walking isochrone is included in **Figure 2.4** which provides isochrones up to 2km (achievable within 25 minutes at walking speed of 1.4m/s).

Figure 2.4 – Walking Isochrone



2.15 The walking isochrone indicates that a large residential area to the north of Kidlington can be reached within a 2km walk from the development site. Additionally, the majority of Begbroke is also accessible. The accessibility of these local areas increases the propensity for future staff to walk to the development site.

Cyclist Accessibility

2.16 As part of the S106 agreement for the wider OTP, a 2.5m shared footway/cycleway is currently being constructed along Langford Lane on the side of the Oxford Technology Park from the A44 / Langford Lane junction to the Langford Lane / The Boulevard junction east of the site.

2.17 The section of shared footway/cycleway across the frontage of the OTP site up to the Evenlode Crescent/ Langford Lane junction to the west and on the approach to the Langford Lane / The Boulevard Junction has been delivered already and is in use. A 2m wide pedestrian refuge will be provided on Langford Lane at the bus stop located to the west of the spine road junction.

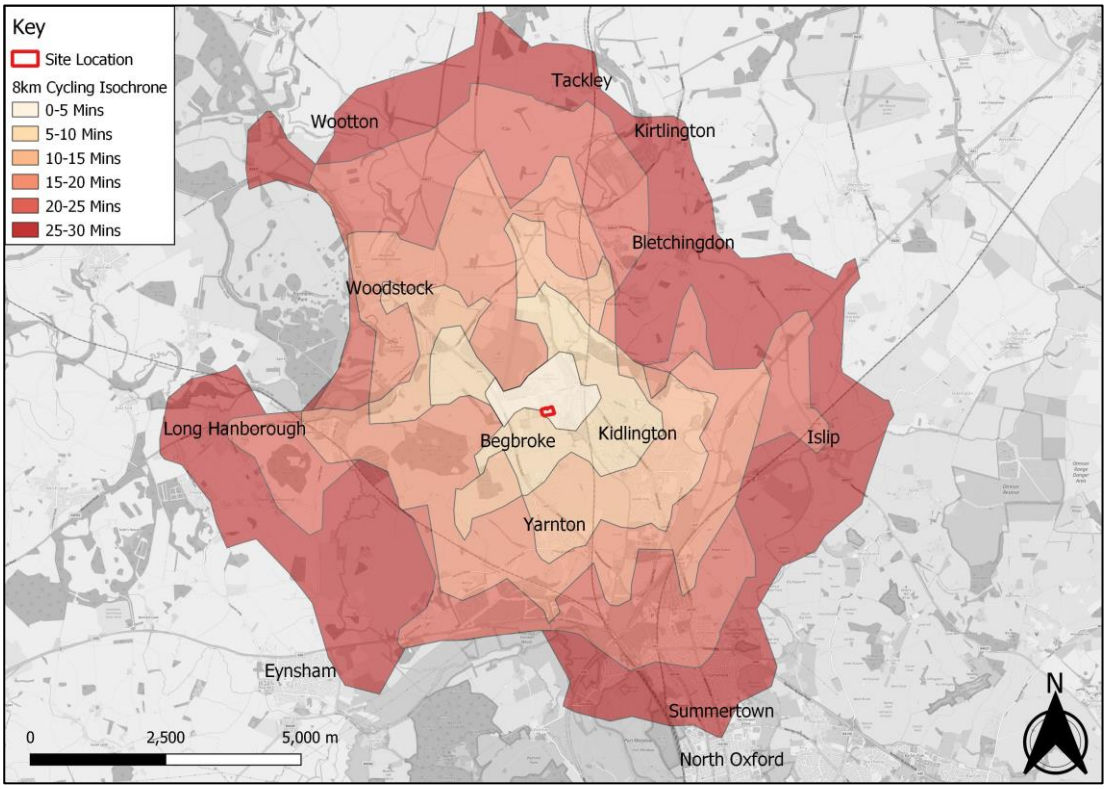
2.18 In addition, a footway/ cycleway, approximately 3.0m wide is provided along the western side of the A4260 from the junction with Langford Lane providing onward connections to / from Kidlington Town Centre.

2.19 National Cycle Network (NCN) Route 5, which operates between Banbury and Oxford (and continues further in both directions) is situated adjacent to the A44 to the west and can be reached within a 1000m cycle from the development site. This provides a mixture of on and off-road routes.

2.20 In line with the outline consent, access to Units within OTP will benefit from the delivery across OTP of a network of footways/cycleways and crossings which will deliver a safe permeable network of routes throughout the development, connecting employment plots with the hotel and restaurant on site, and the offsite foot / cycle network. Therefore, staff and visitors travelling to/from the development will benefit from good access by active travel modes to a diverse range of amenities.

2.21 Central government research states that for journeys between 5km and 8km cycling has the potential to replace car trips. An 8km cycled distance is equivalent to a 30-minute journey (assuming a reasonable cycling speed of 4.2m/s). A cycling isochrone is included at **Figure 2.5**. In reality, and particularly with the introduction and increased uptake of electric bikes, the distance people are prepared to cycle is increasing and journeys to work by bike often exceed 8km. The opportunity for commuting by bike will depend on personal preference and the type of facilities available to cyclists at the end of their journey such as shower and laundry facilities and bike storage (albeit that e-bikes can reduce the requirement for showers and changing facilities).

Figure 2.5 – Cycling Isochrone



2.22 The cycling isochrones indicate that the outskirts of Oxford can be reached within a 30-minute cycle from the development site. The entirety of Kidlington can be reached within a short cycle from the site, which provides access to Oxford Parkway railway station which can be reached in a cycle journey of under 15 minutes.

Bus Accessibility

2.23 The closest bus stop to the development site is on The Boulevard and is located immediately adjacent to Thames Valley Police HQ. It is located approximately 210m from the OTP access junction. At this location there is only a bus stop provided on the southbound side of the carriageway.

However both eastbound and westbound services operate at this stop. This bus stop benefits from a bus shelter with timetable information. One regular service (7 Gold) operates at this bus stop.

2.24 An additional bus service (S4) is accessible from the A4260 to the east of the site. The northbound bus stop is located approximately 750m from the site access, whilst the southbound bus stop is situated approximately 850m from OTP. Both stops currently have a flag and pole arrangement, whilst the southbound bus stop has a pull-in bus stop.

2.25 A further bus service (S3) is accessible from the A44. The northbound bus stop is located approximately 900m from the OTP access, whilst the southbound bus stop is situated 1000m away. Both bus stops benefit from pull-in bus stops and timetable information. The northbound bus stop benefits from a shelter, whilst the southbound bus stop has a flag and pole arrangement.

2.26 A summary of available services is provided **Table 2.1**. This table details the route, frequency and operator for each service.

Table 2.1: Summary of Bus Services

Bus Number	Operator	Route	First Bus (M-F)	Last Bus (M-F)	Average Frequency (Mins)			Nearest Stop
					Mon - Fri	Sat	Sun	
S3	Stagecoach Oxfordshire	Oxford – Chipping Norton	05:49	00:09	15-30	30	30	A44, adjacent to Langford Lane
		Chipping Norton - Oxford	06:05	23:26	15-30	30	30	A44, adjacent to Langford Lane
7	Stagecoach Oxfordshire	Oxford – Chipping Norton	06:00	23:42	30	30	30	The Blvd
		Chipping Norton - Woodstock - Oxford	6:12	00:00	30	30	30	The Blvd
S4	Stagecoach Oxfordshire	Oxford - Banbury	07:30	23:34	60	60	90	A4260, adjacent to Langford Lane
		Banbury - Oxford	06:41	22:34	60	60	90	A4260, opposite Langford Lane

2.27 **Table 2.1** above indicates that Stagecoach service S3, which links to Oxford city centre, and the market town of Chipping Norton between every 15 to 30 mins 7-days a week is available from the bus stops on the A44 to the west of the site.

2.28 The route 7 service operates on a similar route to the S3 service at a frequency of every 30 minutes 7-days a week. The route 7 service connects to Oxford Parkway station and Park & Ride which offers the potential for rail passengers to undertake multi-modal journeys to the railway station.

2.29 The Route S4 bus service to the east of the site provides an hourly service Monday to Saturday between Oxford and Banbury via Oxford Parkway Station and every 90 minutes on Sundays.

2.30 As part of the S106 agreement for the wider Oxford Technology Park, a bus stop is to be provided on the northbound section of The Boulevard, complete with flagpole and timetable case. This will reduce the walking distance from the site to the most local bus stop, and allow for safer access to the stops with the need to cross fewer roads. Also, as part of the S106 agreement, there will also be improvements to the frequency and hours of operation of bus services between Oxford Airport / Langford Lane and Oxford Parkway Station.

2.31 As a result, the development site within Oxford Technology Park will be connected to Oxford city centre, Oxford Parkway Station and local settlements offering staff and visitors good accessibility to / from the site by bus.

Rail Accessibility

2.32 The closest railway station to the site is Oxford Parkway Station. It is situated within an approximate 4.5km cycle to the southeast of the site and lies on the Oxford – Bicester railway line. The station forms part of a multi-modal transport interchange hub providing connections to rail services by bus, cars (Park and Ride site) and cycle.

2.33 A 4.5km cycle to the railway station from the site is equivalent to a journey time of approximately 18 minutes.

2.34 The following facilities are provided at the station:

- 830 Parking spaces, including 18 accessible spaces;
- 150 bicycle parking spaces under CCTV surveillance (40 additional spaces at adjacent park & ride facility);
- Ticket machines and ticket office staffed 7-days a week; and
- Refreshment facilities, waiting rooms and toilets provided within the station.

2.35 **Table 2.2** provides a summary of the services available from Oxford Parkway. The services included within **Table 2.2** account for direct services only.

Table 2.2 - Rail services at Oxford Parkway Station

Destination	Frequency (Train every hour)		Journey Time (Approx.)
	Peak	Off Peak	
Oxford	2	2	8 mins
Bicester Village	2	2	10 mins
Haddenham & Thame Parkway	2	1	24 mins
High Wycombe	2	2	36 mins
South Ruislip	1	1	55 mins
Wembley Stadium	1	1	58 mins
London Marylebone	2	2	65 mins

2.36 **Table 2.2** demonstrates that Oxford Parkway Station provides direct rail services to key local, regional and national destinations including Oxford, Bicester, High Wycombe, and London.

2.37 Oxford Parkway Station is accessible using bus service 7, providing a direct service to the station from Oxford Technology Park and the development site, which takes approximately 15 mins.

2.38 Therefore, train services to Oxford Parkway Station and connecting bus services from the station to the development site offer opportunities for national and international visitors to access the proposed development by public transport modes.

Local Facilities

2.39 One of the primary factors to benefit sustainable development is proximity, accessibility, and connectivity in relation to key local facilities by non-car modes.

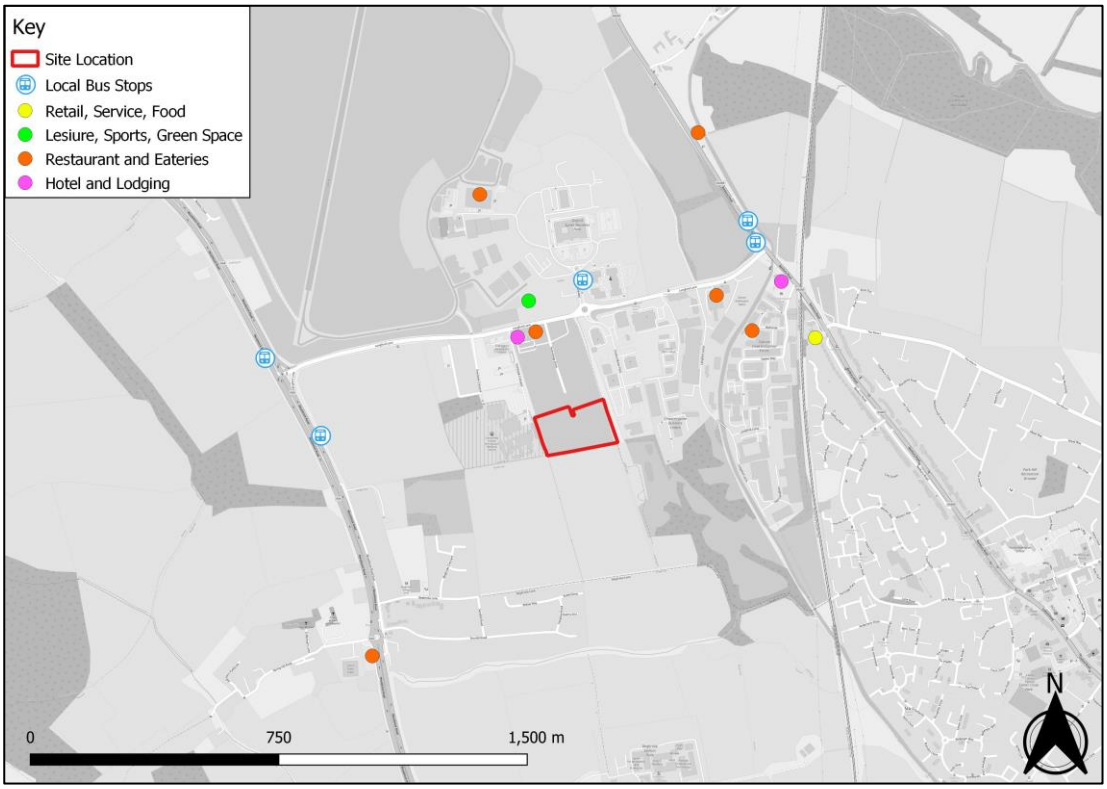
2.40 Whilst local facilities are typically used by residents, it is expected that some future employees at the development will utilise some of the local facilities as part of their day-to-day routine.

2.41 There are a number of local facilities and amenities within a reasonable walking distance from the development site. A selection of these is summarised in **Table 2.3**. A visualisation of the location of these facilities is presented at **Figure 2.6**.

Table 2.3 – Key Local Facilities

Facility	Distance (m)	Journey Time	
		Walking	Cycling
Premier Inn (Restaurant/Bar and Hotel)	260	3	1
Evenlode Crescent (Closest Bus Stops)	450	5	2
VH&F Gym	600	7	2
Cygnet Nursery	800	10	3
Cooperative Food	1300	15	5

Figure 2.6 – Local Facilities



2.42 **Table 2.3** and **Figure 2.6** demonstrate that the development site is well connected and accessible by foot (under 25 minutes) or by bicycle (under 10 minutes) to a range of local amenities, including bus stops, food stores, and gym & fitness centres. The development site fully complies with local and national policy in this respect offering real transport choice, improving health and well-being and being socially inclusive.

Local Highway Network

2.43 Within the vicinity of the OTP site, Langford Lane is subject to a 30mph speed limit and streetlighting is provided. To the west after approximately 250m the speed limit increases to the national speed limit (60mph) and the provision of streetlighting ceases. To the east, Langford Lane benefits from streetlighting for its entire extent up to the Langford Lane/A4260 junction.

2.44 Langford Lane connects with the A44 Woodstock Road to the west of the site through a signalised T-junction arrangement. At this location the A44 is a dual carriageway route and is subject to a speed limit of 50mph. Streetlighting is provided on both sides of the carriageway along with a segregated footway on either side of the carriageway.

2.45 To the east of the site, Langford Lane connects with the A4260 Banbury Road through a signalised T-junction arrangement. Banbury Road to the north of Langford Lane is a 50mph road, and to the south of the site is a 30mph road. Streetlighting is provided on approach to the junction from both directions on Banbury Road.

2.46 As part of the S106 agreement for the outline OTP consent, a signal-controlled crossing of the A44 is to be delivered providing a connection between Langford Lane and the site with National Cycle Route 5.

2.47 The Langford Lane/The Boulevard roundabout is located approximately 120m to the east of the OTP access at the Technology Drive/ Langford Lane junction and provides access to the Kidlington Airport (London-Oxford Airport) and Oxford Motor Park.

Highway Safety

2.48 Personal Injury Collision (PIC) data in the area surrounding the site has been obtained from Oxfordshire County Council for the most recent five years' worth of data. The area covered includes 1st January 2017 to 31st October 2022, which is the most recent five years' worth of available data.

2.49 At the time of the collection of the data (January 2023) from OCC, it was noted that the some of the 2022 data is provisional and is subject to change.

2.50 The search area comprised of the A44/Langford Lane junction, the Langford Lane corridor and all junctions on Langford Lane, and the A4260/Langford Lane junction.

2.51 Table 2.4 provides a breakdown of the recorded collisions, based on the year they occurred and their severity.

Table 2.4 – Collision Data – Year and Severity

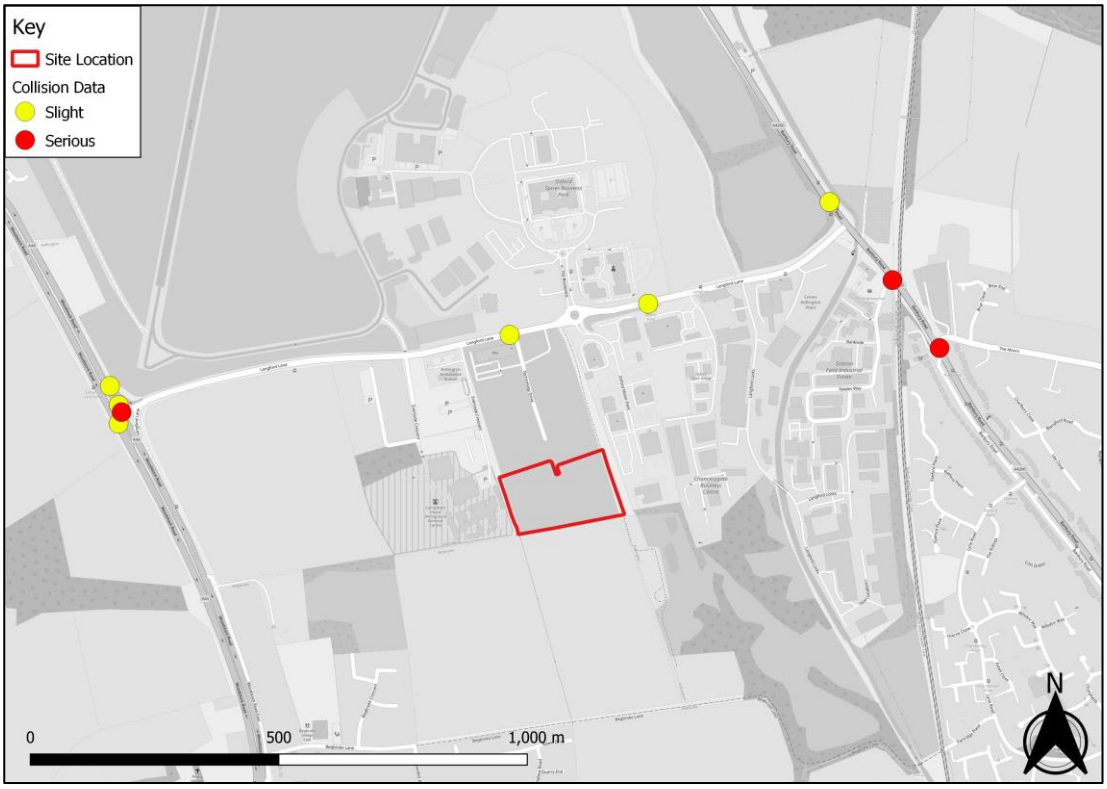
	Slight	Serious	Fatal	Total
2017	2	0	0	2
2018	1	0	0	1
2019	2	1	0	3
2020	0	2	0	2
2021	0	0	0	0
2022	1	0	0	1
Total	6	3	0	9

2.52 **Table 2.4** suggests that there have been no outlying years where a significant increase in collisions has occurred, with between 1-3 collisions recorded in each year (excluding 2021 where no collisions occurred). The data shows that within 60 months, a total of 9 collisions have occurred within the vicinity of the site, including at two major junctions (A44/Langford Lane and A4260/Langford Lane), equating to less than one collision on the network approximately every 6 months.

2.53 Within the most recent five years of available data there have been a total of 9 collisions, with 3 classified as serious in terms of severity. The remaining 6 collisions are all recorded as slight severity.

2.54 The collision data collected has been mapped and categorised based on severity (slight, serious and fatal). This is shown at **Figure 2.7**.

Figure 2.7 – Collision Data – Severity



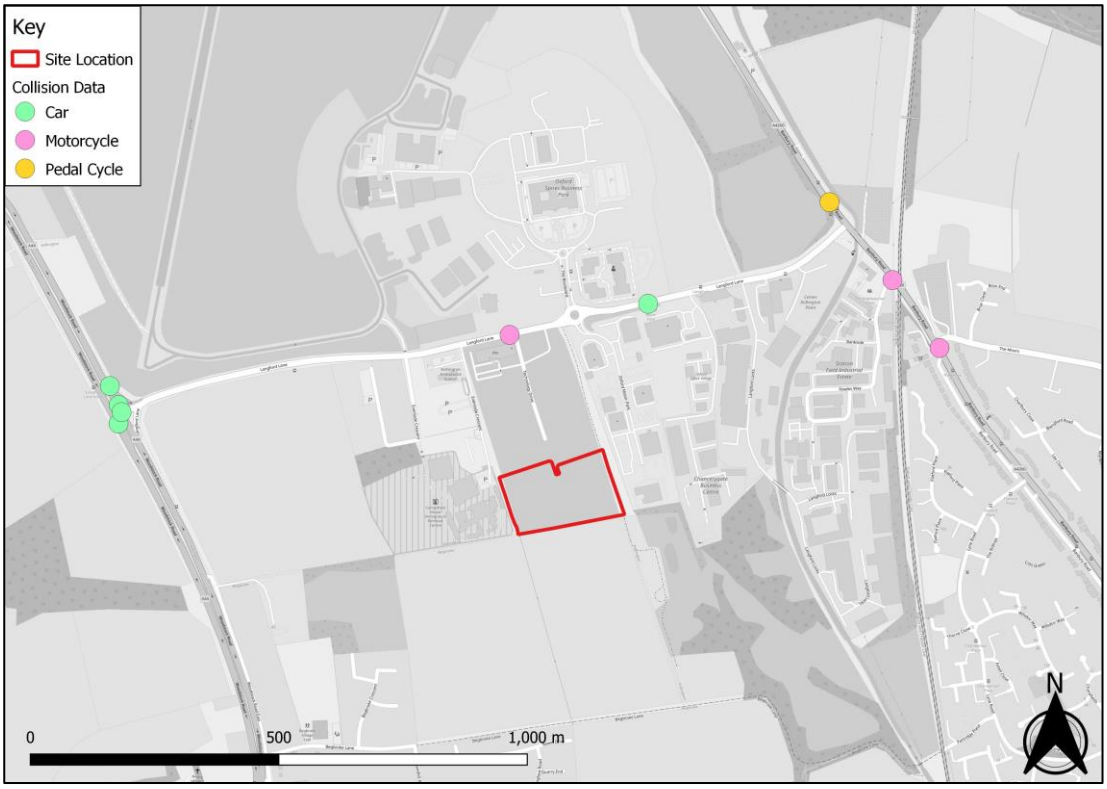
2.55 **Figure 2.7** indicates that all collisions recorded within the study have resulted in slight or serious injuries, with no fatal collisions observed.

2.56 There appears to be a small cluster of collisions recorded at the A44/Langford Lane junction with four collisions occurring here during the most recent five years. Following a further review of the collisions, three of the collisions were classified as rear shunts, whilst the final collision (which resulted in serious injuries) was a result of driver intoxication and disobeying traffic signals. On approach to the junction from both directions on the A44 there are signs displayed to indicate that a signal-controlled junction is approaching, and there are no significant gradient changes on approach to the junction which may impair visibility of stopped vehicles. This suggests that the rear end collisions which have been recorded at this junction are as a result of driver error as opposed to the result of a deficient highway layout.

2.57 There are no additional clusters of collisions recorded, which indicates that there are no inherent safety concerns with regard to the local highway network.

2.58 An additional figure has been produced which shows the location of each recorded collision and whether it involved a vulnerable road user (pedestrian, cyclist or powered two-wheel vehicle). This is shown at **Figure 2.8**.

Figure 2.8 – Collision Data – Vulnerable Road Users



2.59 The collision data highlighted at **Figure 2.8** indicates that three collisions involved vulnerable road users. One collision involved a cyclist, whilst the remaining casualties in collisions involving vulnerable road users were powered two-wheelers. No collisions involving pedestrians have been recorded within the most recent five years' worth of data.

2.60 The collision involving a cyclist occurred when the cyclist was waved by a driver to cross the road, and then failing to look in the opposite direction for oncoming traffic. The cyclist was hit and the suffered slight injuries. This is as a result of individual error.

2.61 One of the three collisions involving motorcyclists resulted in slight injuries and occurred at the OTP site access junction, when a motorcyclist collided with the rear of a vehicle which was turning into Technology Drive. This is expected to be as a result of driver error.

2.62 Two of the three collisions involving motorcyclists resulted in serious injuries. The first of these occurred as a result of excessive speed from the motorcyclist who failed to see that the vehicle in front had stopped to turn right. This collision is attributed to careless driving. The second collision occurred when a motorcyclist indicated to turn left before changing their mind, the motorcyclist then collided with a vehicle which had pulled out of the junction, assuming that the motorcyclist was turning. This collision is attributed to driver error.

Summary

2.63 The development site forms part of the OTP site and is located to the south of Banbury and north of Oxford in the north-western part of Kidlington about 2km from the town centre.

2.64 The development site benefits from good accessibility by all modes of transport to local facilities and services especially by sustainable and active travel modes. The site benefits from an extensive network of local cycling routes as well as having local access to the National Cycle Network. Pedestrian routes are provided within the OTP site and along Langford Lane connecting to a range of facilities as well as local bus stops.

2.65 The National Cycle Route 5 is less than 1km away from the development site in a northwest direction providing cycle links from Reading to Birmingham through Oxford.

2.66 The development site is also in proximity of a number of bus stops served by a minimum of 4 local bus services with an average frequency of 30 mins.

2.67 The development site has access to railway services. The closest railway station is the Oxford Parkway Railway station which is about 4.5km away from the site in the southeast direction and can be reached from the site by bus using the Route 7 from the bus stop on The Boulevard. The railway station offers services to a variety of local and regional destinations.

2.68 Collision data obtained from OCC has shown that no existing highways safety concerns exist within the vicinity of the development site.

3 Policy Context

3.1 This TA will take account of relevant national and local policy and guidance documents.

National Policy

National Planning Policy Framework (NPPF) (2021)

3.2 The National Planning Policy Framework (NPPF) sets out the Governments planning policies for England. This section relates to the latest revision of the document released in July 2021.

3.3 Now more than ever the NPPF places emphasis on sustainable development. It identifies the core principles behind the planning for and delivery of such development. The key overarching policies are set out in section 2 in points 7-14.

3.4 Transport plays an important role in all 3 objectives:

- Economically by providing effective infrastructure;
- Socially by providing good accessibility and improving the health of communities; and
- Environmentally by advancing low carbon options

3.5 Section 9 covers the importance of promoting sustainable transport which includes:

- *"a) the potential impacts of development on transport networks can be addressed;*
- *b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- *d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places. Manual for Streets and Manual for Streets 2".*

3.6 The NPPF is clear that large scale developments that are most likely to be successful if such developments are made accessible:

- *"Through limiting the need to travel and offering a genuine choice of transport modes."*

3.7 Paragraph 111 of the NPPF states that "developments should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".

Local Policy

Oxfordshire Local Transport and Connectivity Plan (LTCP) 2022 – 2050 (July 2022)

3.8 Adopted in 2022, Oxfordshire LTCP 2022-2050 is the statutory local transport plan that sets out Oxfordshire County Council's (OCC's) policy and strategy for developing transport systems in Oxfordshire to 2050.

3.9 OCC sets their transport goals as follows, in line with its key themes, which include:

- Environment: Sustainable communities that are resilient to climate change, enhance the natural and historic environment, improve biodiversity, reduce greenhouse gas emissions and are supported by our net-zero transport network.
- Health: Improved health and wellbeing and reduced health inequalities, enabled through active and healthy lifestyles, improved road safety and inclusive, communities.
- Healthy place shaping: Sustainable, well designed, thriving communities where healthy behaviours are the norm and which provide a sense of belonging, identity and community.
- Productivity: A world leading business base that is sustainable, has created new jobs, products and careers for all communities and is supported by an effective, net-zero transport network.
- Connectivity: Communities are digitally connected, innovative technologies are supported and there is improved connectivity and mobility across the county, enabling greater choice and seamless interchange between sustainable modes.
- Inclusivity: Barriers to access are removed and all communities are supported by our inclusive transport system to play a full role in society and have independence, choice and control.

3.10 This is achieved by a series of policies that include considerations for requiring:

- Policy 36 - Transport assessments accompanying planning applications for new development to follow the County Council's 'Implementing 'Decide & Provide': Requirements for Transport Assessments' document – The OTP development respond positively to this requirement as it has been designed from the outset with priority given to sustainable means of access over access by car. This is exemplified by the nature of the transport measures to be delivered through the S106 agreement accompanying the outline consent (cycle link, bus stop) and the car parking provision at the site that falls below the maximum standards;

- Where car parking is provided, an effective network of EV charging should be included following standards set out in OEVIS and access provided to an electric car club – Development at OTP meets the requirements set in terms of EV charging provision at each plot;

- Policy 34 - Ensure that all new developments have safe and attractive walking and cycling connections to the site, include a connected attractive network for when people are walking and cycling within the development and that the internal routes connect easily and conveniently to community facilities and the local cycle and walking network – This is the approach taken at OTP from the outset as set out in the S106 agreement accompanying the OTP outline consent; and

- Policy 22 - Consider multi-modal travel as a central option for transport planning and planning for new developments to achieve greater integration of the transport system;

Oxfordshire Parking Standards for New Developments

3.11 The Oxfordshire County Council Parking Standards for New Developments document sets out the required level of car and cycle parking required for developments dependant on their land use and location within Oxfordshire.

3.12 Parking standards for cars are set as maximum levels permitted, whilst parking standards for cycles are set as the minimum levels required. The document indicates that car parking that is over provided for will not be accepted.

3.13 The car and cycle parking standards for a research and development site is replicated at **Table 3.1**.

Table 3.1 – OCC R&D Land Use Car & Cycle Parking Standards

Land Use	Car Parking Standards - maximum	Cycle Parking Standards - minimum
E - Commercial, Business and Services (Office, R&D, and Light Industrial)	1 space per 45m^2	1 space per 100m^2 for staff, and 1 space per 250m^2 for visitors

3.14 In regards to electric vehicle parking, the standards document indicates that non-residential developments should provide active charging points at a minimum level of 25% of all parking spaces, with ducting provided at all remaining car parking spaces to future proof and allow for upgrading.

3.15 The document states that 6% of all spaces should be designed and allocated for the use of those with mobility impairments. These accessible spaces should be situated near to the main pedestrian access and have level access.

Active Travel Strategy (July 2022)

3.16 The Oxfordshire travel strategy was released in July 2022 and forms a part of the LTCP. The strategy focuses on active travel modes (walking, wheeling and cycling), which are key to delivering the

County Council's policies and plans for the next 10 years and to mitigate some of the biggest challenges we face: climate emergency, public health, congestion, air quality and social inequality.

3.17 For new developments this includes actions with design guidance and outreach by:

- "*Ensuring new developments designs prioritise sustainable travel modes and they provide high quality active travel routes and facilities."*; and
- "Support the development of travel plans for new developments to encourage modal shift"

Cherwell Local Plan 2011 – 2031 (September 2020)

3.18 The Cherwell Local Plan, adopted in 2015, sets out the Council's vision for the area up to 2031. This includes improving the economy of the area but also protecting existing town centres and villages.

3.19 Cherwell's Local Plan, in line with the policy direction of Oxfordshire County Council and National guidance, focuses on the delivery of sustainable growth through a number of strategic objectives, such as:

- Strategic Objective 13. To reduce the dependency on the private car as a mode of travel, increase the attraction of and opportunities for travelling by public transport, cycle and on foot, and to ensure high standards of accessibility to services for people with impaired mobility.
- Strategic Objective 14. Providing high-quality, locally distinctive and well-designed environments which increase the attractiveness of Cherwell's towns and villages as places to live and work which contribute to the well-being of residents.

3.20 The local plan also includes considerations for sustainable transport in policy PR4a which includes improvements to Langford Lane through:

- (a) improved bus services and facilities along:
  - i. the A44/A4144 corridor linking Woodstock and Oxford
  - ii. the A4260/A4165 (Oxford Road) linking Kidlington, Gosford, Water Eaton and Oxford
  - iii. Langford Lane.

Relevance to the Proposed Development

3.21 The proposed development at Units 8 to 11 is mindful of the policy context summarised above. The sustainable accessibility credentials of the wider OTP site provide the appropriate framework to deliver access to Unit 8 to 11 in line with the national and local policy objectives identified above.

3.22 The Outline consent was supported by a S106 agreement that put the priority on delivering transport infrastructure improvements targeted to sustainable transport modes rather than delivering an increase in traffic capacity (new bus stop, new walk and cycle facility along Langford lane). As such

the outline consent is consistent with the latest policy position adopted by Oxfordshire County Council.

3.23 It is also important to note that the outline consent and the subsequent consents on earlier Units at OTP form an important part of the planning context for the proposed development of Units 8 to 11, constituting not only the framework of sustainable infrastructure improvements that the proposals at Units 8 to 11 must be considered within, but also a number of precedents in terms of levels of parking provisions at each unit considered acceptable by the Local highway and planning authorities.

4 Development Description

The Development

4.1 This section outlines the development proposals at Units 8 to11 at OTP, with a particular focus on the transport proposals.

4.2 The masterplan for the development is provided in **Appendix A**.

4.3 The development proposals are for a total floorspace of 16,909m2 of Research and Development (R&D) land uses split over four units (8 to 11), with units 8 and 9 further split again (8a and 8b, 9a and 9b). The development includes dedicated space for car and cycle parking.

4.4 A breakdown of the proposed floor area is provided in **Table 4.1**.

Table 4.1 – Proposed Floor Area (Units 8 to 11)

Unit	Floorspace
Unit 8a	2,353m^2
Unit 8b	2,353m^2
Unit 9a	2,038m^2
Unit 9b	2,038m^2
Unit 10	4,235m^2
Unit 11	3,892m^2
Total (Units 8 to 11)	16,909m^2

4.5 The proposed development will bring the total floorspace across all units provided within OTP to 43,257m2 (plus 101-bedroom hotel). The floorspace provision at each unit is set out at **Table 4.2**. For the purpose of conciseness, Units 8a and 8b, and Unit 9a and 9b have been re-combined within this table.

Table 4.2 – Total Floorspace Provision at OTP (Units 1 to 11)

Unit	Floorspace[1]
Unit 1 (Office)	3,519m^2
Unit 2 (Hotel)	101 Beds
Unit 3 (R&D)	4,452m^2
Unit 4 (R&D)	6,448m^2
Unit 5 (R&D)	4,078m^2
Unit 6 (R&D)	4,396m^2
Unit 7 (R&D)	3,455m^2
Unit 8 (R&D)	4,706m^2
Unit 9 (R&D)	4,076m^2
Unit 10 (R&D)	4,235m^2
Unit 11 (R&D)	3,892m^2
Total (Units 1 to 11)	43,257m^2 (plus a 101 bed hotel)

Site Access

4.6 This section sets out the access points for each mode of transport to the proposed development.

Active Travel Access

4.7 Pedestrian access to each of Units 8 to 11 will be gained from Technology Drive, which forms the spine road running across the wider OTP site. This will then connect each unit within the development to the facilities provided by OTP along Langford Lane. Technology Drive provides footways on both sides of the carriageway, footways measuring 2m in width. Streetlighting is provided at regular intervals on Technology Drive.

4.8 At all minor accesses to currently constructed units on Technology Drive there are dropped kerbs and tactile paving to allow for safe pedestrian movement. Furthermore, to improve safety for

[1] Numbers rounded up.

pedestrians there are bollards situated adjacent to the carriageway on Technology Drive with the purpose of restricting vehicles from mounting the kerb. This arrangement is shown within a Google Streetview screengrab at **Figure 4.1**.

Figure 4.1 – Pedestrian Segregation on Technology Drive

4.9 Units 8 to 11 will be accessible for cyclists using Technology Drive that again will provide the main connection to the cycle network available along Langford Lane. Vehicle flows on Technology Drive are expected to be low (as set out within **Section 5**) and speeds are limited to 30mph which is conducive to cyclist movements on-carriageway.

4.10 Cycle parking is to be provided at a convenient location adjacent to each unit and is detailed further within this section.

Vehicular Access

4.11 Each of the proposed units will benefit from individual access points from Technology Drive. These are designed to accommodate vehicles of all sizes that are expected to access the development. Tracking drawings showing a 12m rigid vehicle accessing and egressing each access point proposed are contained within **Appendix B**. These vehicle types are representative of the servicing requirements of the proposed R&D development.

4.12 Refuse collection is likely to be undertaken by a private refuse collection company, and therefore a suitable vehicle for the site layout would be chosen by the operative company. Tracking of a large refuse vehicle has been undertaken at all units and these drawings can be found at **Appendix B**.

Parking

Cycle Parking

4.13 As set out within **Section 3**, the latest cycle parking standards as set out by Oxfordshire County Council would require the provision of 1 cycle parking space for every 100m2 of floorspace for the use of staff, with a further space provided every 250m2 for the use of visitors.

4.14 The level of cycle parking therefore suggested by the latest standards, applied to a total floorspace of 16,909sqm GIA, would equate to a total of 237 cycle parking spaces, equating to a provision of 1 cycle parking space per 71sqm GIA. A review of the recent consents at Units 3 to 7 indicates that the local planning authority is content with a cycle provision at OTP that ranges from 1 cycle parking space per 86sqm GIA (Unit 7) to 1 per 161sqm GIA (Unit 4).

4.15 This therefore provides a range within which cycle provision at OTP is considered acceptable, between 1 space per 161sqm GIA and 1 space per 71sqm GIA.

4.16 It is proposed that the development will provide 160 cycle parking spaces, so a provision of 1 space per 106sqm, within the range identified above.

4.17 Cycle parking will be provided in a convenient location. The cycle parking will be covered and cycling facilities are to be provided within each unit to allow staff to shower, store clothes for drying and change. For consistency across OTP, the type of shelter consented to serve Units 3 to 7 will be used again at Units 8 to 11.

Car Parking

4.18 As set out within **Section 3**, the development is required to provide a maximum of 1 car parking space for every 45m2 of floorspace. There is no specification for the level of visitor parking required for R&D land uses and therefore it is assumed that visitor parking is included within this.

4.19 EV charging should be provided from the outset at a ratio of 25% of all car parking spaces, with ducting provided at all other parking spaces to allow for future conversion to electric charging spaces.

4.20 Accessible spaces for the use of disabled staff and visitors should be provided at a rate of 6% of all car parking spaces. These should be located at the most convenient place close to the site access.

4.21 The maximum level of car parking identified by the latest car parking standards would equate to 376 spaces for the 16,909sqm GIA proposed at Units 8 to 11.

4.22 The level of car parking proposed at the development is set out at **Table 4.3**.

Table 4.3– Car Parking Proposals

	Floorspace	Car Parking (Total)	EV Charging Spaces	Accessible Spaces
Unit 8a	2,353m²	35	9	3
Unit 8b	2,353m²	35	9	3
Unit 9a	2,038m²	31	8	3
Unit 9b	2,038m²	31	8	3
Unit 10	4,235m²	72	19	6
Unit 11	3,892m²	64	16	5
TOTAL	16,909m²	268	69 (25.7%)	23 (8.6%)

4.23 It is proposed that the development will provide a total of 268 car parking spaces. This level of provision is within the maximum level set by the OCC standards and therefore considered appropriate. The level of EV charging spaces proposed exceeds the 25% requirement, and the level of accessible spaces considerably exceeds the 6% requirement. As such, the level of car parking meets the requirements set out by OCC. A selection of the disabled car parking spaces will be provided with electric vehicle charging capabilities.

4.24 The level of parking proposed will be appropriate due to the sustainable location of the site. A lower provision of parking will encourage future staff to undertake journeys to work by non-car modes of transport. To further support this lower provision of car parking, a car parking accumulation assessment has been undertaken within **Section 6**, informed by the forecast trip generation, to show that the full demand for the car park can be accommodated.

5 Trip Generation Review

5.1 The outline consent for development at Oxford Technology Park was supported by a Transport Assessment (TA) that identified the predicted vehicular trip generation to / from the facility. Based on this predicted trip generation, the predicted impacts of the OTP development were agreed with Oxfordshire County Council and a series of transport mitigation measures set out in obligations attached to the OTP development consent.

5.2 Throughout the Reserved Matters applications that followed outline consent, to deliver development on plots at OTP, the approach has consistently been to keep a tally of predicted trip generation for all plot either delivered or applied for, to ensure that the total vehicular trip generation of development actually implemented at the Park remained within the envelope of trip generation identified at the outline stage.

5.3 The Transport Statement (TS) for the latest Reserved Matters Application (Unit 6) demonstrates that development at OTP would theoretically reach this envelope of trip generation. The Unit 6 TS, as with all other transport assessment work done for development at OTP to date, is based on the same trip generation assumptions used in the 2014 TA supporting the outline consent. Going forward, and now considering the development of Units 8 to 11, it was considered relevant to undertake a review of the trip generation assumptions to apply to development at OTP.

5.4 The review is pertinent as the OTP development over time has dynamically responded to the need of the market resulting in a stronger focus on B1(b) R&D and B2 uses than B8 use as expected at the time of the outline consent. Consequently, the trip rates considered in 2014, not only can be considered as old, but also may not necessarily fully reflect the actual use of the site, with a strong bias towards research and high-tech industries. However, note that under the terms of the outline permission, all of the floorspace proposed could be used for R&D purposes.

5.5 Furthermore, the context for the development has changed since 2014. Technology has brought about changes in the way people ‘consume mobility’, an evolution accelerated by the Covid pandemic and the advent and establishment of ‘hybrid’ working patterns, with working from home a stronger reality than before. This means that trip generation from employment site is likely to have changed and observed peak traffic on the local network may have evolved differently from the predictions made in 2014.

5.6 The following paragraphs set out the outcome of the trip generation review carried out. This review informs the transport assessment work prepared in support of the proposed further development at OTP, with Units 8 to 11, and set out further in this report.

5.7 The trip generation review carried out is presented as follows:

- **Assumed Rates:** A presentation of the rates and assumptions used to support the OPA in 2014 and carried over across the Reserved Matters applications for development on the site to date.

- **Hotel trips:** A comparison of the assumed trip generation rates used in the OPA in 2014 to observed current trip generation levels at the hotel at OTP, since this plot has now been occupied and operational for a while.

- **Similar Developments:** A comparison of the rates from similar local facilities which share the same use as the OTP as well as similar accessibility by all modes of transport. The Begbroke Science Park has been identified as such a relevant site and surveys of vehicular trip generation to/from this site were conducted in 2022.

- **Background Traffic on Langford Lane:** A comparison between current observed baseline conditions on three key junctions in the transport network with the predicted levels of traffic at the same junctions used to support the OPA in 2014.

Assumed Rates

5.8 **Table 5.1** shows the assumptions in trip rates that were used in the OPA Transport Assessment and subsequently used throughout Reserved Matters applications at OTP.

Table 5.1: Trip Generation Rates – Assumptions Made to Date – Vehicular Trips

	AM			PM			
Use	**In**	**Out**	**2 Way**	**In**	**Out**	**2 Way**	**Notes**
B1a	1.533	0.141	1.674	0.111	1.602	1.713	OPA Avg
B1b	1.191	0.078	1.269	0.086	0.914	1.000	OPA Avg
B8	0.214	0.090	0.304	0.051	0.165	0.216	OPA Avg
Hotel	0.14	0.231	0.371	0.182	0.093	0.275	RMA, /bedroom
Restaurant	-	-	-	2.340	1.783	4.123	RMA
B1b	1.191	0.078	1.269	0.086	0.914	1.000	RMA
B2	0.605	0.142	0.747	0.047	0.501	0.548	RMA

5.9 A tally of predicted trip generation was applied to various applications submitted for development at OTP based on the trip rates in **Table 5.1** above. **Table 5.2** provides a tabulation of the predicted trips at OTP.

Table 5.2: Total Predicted Vehicular Trip Generation to Date

Use	Size (Sqm)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Previously Consented - Outline Application Trip Generation							
Total outline application	40362	283	40	323	28	268	296
New Total - Oxford Technology Park Including (Units 1-7)							
Unit 1: Office (consented)	3,519	54	5	59	4	56	60
Unit 2: Hotel (consented)	101 Bed	14	23	37	30	18	48
Unit 3: R&D/B1(b)/B2 (consented)	4,452	53	3	56	4	41	45
Units 4a and 4b: R&D/B1(b)/B2 (consented)	6,448	77	5	82	6	59	65
Units 5a and 5b: R&D/B1(b)/B2 (consented)	4,078	39	4	43	3	31	34
Unit 7: R&D/B1(b)/B2 (consented)	3,455	29	4	33	2	23	25
Units 6a and 6b: R&D/B1(b)/B2 (consented)	4,396	36	5	41	2	29	31
Total	-	302	49	351	51	257	308
Difference to OPA		+19 (+7%)	+9 (+23%)	+28 (+9%)	+23 (+82%)	-11 (-4%)	+12 (+4%)

5.10 The data in **Table 5.2** above allows for an aggregation of overall employment trip rates for development at OTP, combining the B1(a), B1(b), B2 and B8 uses currently consented/applied for at the site, to

provide a basis for comparison with similar facilities and also doing the same for Research and Development trip rates (B1(b) and B2 uses).

5.11 **Table 5.3** provides the aggregated trip generation rates for the different uses which form a basis for comparison with other sites.

Table 5.3: OTP Aggregated Trip Generation Rates – Vehicular Trips

	AM			PM			
Use	**In**	**Out**	**2 Way**	**In**	**Out**	**2 Way**	**Notes**
Aggregated Employment trips OTP	288	26	314	21	239	260	Trips for 26,348 sqm
Aggregated Employment rates OTP	1.093	0.099	1.192	0.080	0.907	0.987	Trip rates /100sqm
Aggregated R&D trips OTP	234	21	255	17	183	200	Trips for 22,829 sqm
Aggregated R&D rates OTP	1.025	0.092	1.117	0.074	0.802	0.876	Trip rates /100sqm

Hotel trips

5.12 The Transport Statement supporting the application for the Hotel at OTP was based on trip generation prediction derived from the TRICS database. The hotel is now operational and occupied and therefore directly observed trip generation data can be obtained by survey.

5.13 A survey was carried out from the 15th of June 2022 to the 21st of June 2022 which gave insight to observed peak hour trip numbers which appear lower than the predicted levels used for the various planning applications for development at OTP.

5.14 The programme of surveys carried out covered local junctions on Langford Lane and allow the derivation of local peak periods. These were observed to be 08.00-09.00 and 16.45-17.45. These were used to then derive the peak period observed trip generation to and from the Hotel and then compare to the TRICS assumptions made to date.

5.15 **Table 5.4** provides a comparison between the predicted trips derived from TRICS, peak hour observed trips.

Table 5.4: Hotel Trip Generation Comparison – Predicted Vs Observed

	HOTEL TRIPS					
	AM			PM		
	IN	OUT	2WAY	IN	OUT	2WAY
Hotel TS Trips	14	23	37	30	18	48
Peak Hour trips (08:00-09:00 and 16.45-17.45)	9	15	24	24	20	44
% Difference (Hotel TS trips – Peak Hour trips)	-36%	-35%	-35%	-20%	+11%	-8%

Similar Developments – Begbroke Science Park

5.16 Trip generation to/from the Begbroke Science Park was observed in 2022. The Begbroke Science Park was identified as the closest existing development to the OTP site, in terms of tenants and type of activities on site, and also in terms of accessibility attributes.

5.17 A camera-based automated traffic count (ATC) survey was undertaken for the week commencing the 19/09/2022 and ending on 25/09/2022. This survey provided the number of arrivals and departures on the site via Begbroke hill.

5.18 These results could be used to derive a 5-day average trip generation for Begbroke Science Park, assuming a total floorspace at Begbroke Science Park of 14,200sqm. Due to unforeseen circumstance, the 19/09/2022 was a designated a public holiday and therefore only a 4-day average was derived.

5.19 **Table 5.5** details the 2022 observed trip generation for the Begbroke Science Park.

Table 5.5 – Begbroke Science Park Average Weekday Trip Generation

Network Peak Periods	Trip Rate per 100m2 GFA			Surveyed Trips		
	Arrival	Depart	Two-Way	Arrival	Depart	Two-Way
AM Peak	0.676	0.099	0.775	96	14	110
PM Peak	0.097	0.590	0.687	14	84	98

5.20 The observed trip rates at Begbroke Science Park when compared to the OPA aggregated R&D trip generation rates, show a lower level of trip generation in practice, most likely reflecting the changed context for the development. **Table 5.6** provides a comparison between rates.

Table 5.6 – R&D Trip Generation Comparison

	AM Peak			PM Peak		
	Arrival	Depart	Two-Way	Arrival	Depart	Two-Way
2014 OPA TA	1.036	0.093	1.129	0.075	0.810	0.885
2022 R&D rates	0.676	0.099	0.775	0.097	0.590	0.687

5.21 As a result, going forward, it is proposed to use the observed 2022 R&D trip generation rates to development at Oxford Technology Park, in the context of further development at Units 8 to 11.

Background Traffic on Langford Lane

5.22 A survey was carried out to revalidate the background traffic data used to support the OPA in 2014.

5.23 Baseline conditions were observed for the three major junctions within proximity of the site:

- A44/ Langford Lane Junction
- A4206/ Langford Lane Junction
- The Boulevard/ Langford Lane Junction.

5.24 **Tables 5.7, 5.8, and 5.9** provide a comparison of four different data sets:

- 2013/2014 observed traffic flow data, as an 'observed' point of reference
- The 2021 base case data, which was derived at the time of the OPA TA using growth assumptions set in 2014
- 2022 Maximum observed peak traffic flows.

Table 5.7 – Background Traffic Comparison – A44/Langford Lane

	Total Traffic	
JUNCTIONS	**AM**	**PM**
A44/Langford Ln – 2013/2014	2,715	2,720
A44/Langford Ln – 2021 Base Case – OPA TA	3,041	3,059
A44/Langford Ln – 2022 Max Observed (08:00-09:00 and 16:15-17:15)	2,457	2,662

Table 5.8 – Background Traffic Comparison – A4260/Langford Lane

	Total Traffic	
Junctions	**AM**	**PM**
A4260/Langford Ln – 2013/2014	1,982	1,935
A4260/Langford Ln – 2021 Base Case – OPA TA	2,234	2,189
A4260/Langford Ln – 2022 max Observed (8.00-09.00 and 17.00-18.00)	1,656	2,023

Table 5.9 – Background traffic comparison – Langford Lane/The Boulevard

	Total Traffic	
Junctions	**AM**	**PM**
Langford Ln/The Boulevard – 2013/2014	1,912	1,652
Langford Ln/The Boulevard – 2021 Base Case – OPA TA	2,188	1,906
Langford Ln/The Boulevard – 2022 max Observed (7.45-8.45 and 16.30-17.30)	1,328	1,212

5.25 **Tables 5.7, 5.8, and 5.9** show that the maximum observed flows through these junctions are much lower than the predicted values which were derived by applying growth factors to the base data observed during the OPA. These differences in traffic levels are likely to be attributable to varying circumstances occasioned by the passage of time, technological advances and changes in public travel behaviour and attitude to mobility. The legacy of the Covid pandemic on commuting could also explain the observed changes in background peak traffic locally.

Summary

5.26 The Trip Generation Review carried out identifies an up-to-date set of traffic parameters to be considered as part of the transport assessment supporting further development at Oxford Technology Park, at Units 8 to 11. In particular, the review:

- Confirms the trip generation to/from the Hotel on site based on observation at the Hotel itself, now that it is fully operational,
- Identifies a set of trip generation rates that are more directly relevant to the actual end use of the site, based on known and future occupiers at OTP, using data observed directly at a nearby site with similar end users and similar accessibility credentials.
- Confirms background traffic flows observed in 2022 that are significantly lower than the level of background traffic considered as part of the OPA traffic impact assessment.

Revised baseline

5.27 The identified up-dated trip generation rates for Units 3 to 7 (in **Table 5.5**) and the directly observed Hotel trip generation have been used to derive a revised baseline of trip generation for the entire OTP site, from which to consider the potential traffic implications of development at Units 8-11. Table **5.10** presents this revised baseline.

Table 5.6 – Updated Trip Generation (Unit 1-7)

Use	Size (m²)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Previously Consented - Outline Application Trip Generation							
Total outline application	40,362	283	40	323	28	268	296
New Total - Oxford Technology Park Including (Units 1-7)							
Unit 1: Office (consented)	3,519	54	5	59	4	56	60
Unit 2: Hotel (consented)	101 Bed	9	15	25	25	20	45
Unit 3: R&D/B1(b)/B2 (consented)	4,452	30	4	34	4	26	31
Units 4a and 4b: R&D/B1(b)/B2 (consented)	6,448	44	6	50	6	38	44
Units 5a and 5b: R&D/B1(b)/B2 (consented)	4,078	28	4	32	4	24	28
Unit 7: R&D/B1(b)/B2 (consented)	3,455	23	3	27	3	20	24
Units 6a and 6b: R&D/B1(b)/B2 (consented)	4,396	30	4	34	4	26	30
Total	-	217	43	260	51	211	262
Difference to OPA		-66 (-23%)	+3 (+7%)	-63 (-19%)	+23 (+81%)	-57 (-21%)	-34 (-12%)

6 Traffic Generation and Impact Assessment

6.1 This section provides an assessment of the potential traffic impact of the proposed development at Units 8 to 11 on the highway network. The assessment presented is caried out in the context of the outline consent granted originally, with due regard to the package of transport improvement measures agreed by the developer with the local highway and planning authorities at the time. The assessment also takes account of the various consents granted at OTP since the outline stage.

Proposed Trip Generation

6.2 As set out within **Section 4**, the proposed development will comprise of four employment units which will be used for the same type of uses as previously consented at Units 3 to 7, here labelled 'R&D' for simplicity. In total, the proposed development will deliver 15,243m2 of R&D floorspace between Units 8-11.

6.3 To provide a consistent assessment, the R&D trip rates identified as part of the trip generation review presented in **Section 5** (as shown at **Table 5.5**) have been applied to the proposed floorspace at Unit 8-11.

6.4 The resultant trip generation for each of the proposed units is presented at **Table 6.1**.

Table 6.1 – Proposed Units (8 to 11) Trip Generation

Use	Size (m^2)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
R&D Trip Rates	/100m^2	0.676	0.099	0.775	0.097	0.590	0.687
Proposed Trip Generation							
Unit 8	4,706	32	5	37	5	28	33
Unit 9	4,076	28	4	32	4	24	28
Unit 10	4,235	29	4	33	4	25	29
Unit 11	3,892	26	4	30	4	23	27
Total	16,909	115	17	132	17	100	117

6.5 As set out within **Table 6.1**, the proposed development at Units 8-11 is forecast to generate 132 additional two-way vehicle trips in the AM peak hour, and 117 two-way vehicle trips in the PM peak hour.

6.6 **Table 6.2** provides a comparison between the consented level of trips as per the OPA, and the level of trips forecast for the entirety of OTP as set out within Table **5.10** (for existing, consented and under-consideration units) and **Table 6.1** (for proposed units).

Table 6.2 – OTP Forecast Total Trip Generation – with Units 8-11

Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Previously Consented – Outline Planning Application Trip Generation						
Total outline application	283	40	323	28	268	296
New Total – Oxford Technology Park (Units 1-11)						
Unit 1-7	217	43	260	51	211	262
Unit 8-11	115	17	132	17	100	117
Total (Unit 1-11)	**332**	**60**	**392**	**68**	**311**	**379**
Difference to OPA	+49 (+17%)	+20 (+50%)	+69 (+21%)	+40 (+143%)	+43 (+16%)	+83 (+28%)

6.7 From **Table 6.2**, it can be seen that the proposed development of Units 8 to 11 would lead to an overall trip generation at Oxford Technology Park which exceeds the envelope of trip generation agreed at the outline stage by 69 two-way vehicle trips in the AM peak (+21%) and 83 two-way vehicle trips in the PM peak (+28%).

6.8 These exceedances should be considered in the context of the background traffic on the local road network and how this compares to the predicted level of traffic tested at the outline stage at junctions along Langford Lane. This is detailed further in this section.

Car Parking Accumulation

6.9 A car parking accumulation assessment for Units 8-11 has been undertaken to demonstrate that the level of car parking proposed is capable of fully accommodating the forecast demand of the site. As set out within **Section 4** of this report, the proposed units will provide a total of 268 car parking spaces.

6.10 Using the data obtained from the Begbroke Science Park traffic survey, which informed the trip generation assessment, it is possible to determine weekday hourly R&D vehicle trip rates (per 100m2) for the entire day (00:00-24:00). The hour-by-hour trip rates are set out at **Table 6.3**.

Table 6.3 – Hour-by-Hour R&D Trip Rates

Time Period (Hour Starting)	In	Out	Two-Way
00:00	0.002	0.007	0.009
01:00	0.000	0.000	0.000
02:00	0.000	0.000	0.000
03:00	0.000	0.000	0.000
04:00	0.009	0.005	0.014
05:00	0.004	0.005	0.009
06:00	0.099	0.002	0.100
07:00	0.336	0.048	0.384
08:00	0.676	0.099	0.775
09:00	0.456	0.134	0.590
10:00	0.236	0.162	0.398
11:00	0.130	0.155	0.285
12:00	0.120	0.211	0.331
13:00	0.187	0.153	0.340
14:00	0.130	0.192	0.322
15:00	0.097	0.254	0.350
16:00	0.102	0.435	0.537
17:00	0.090	0.585	0.674
18:00	0.042	0.202	0.245
19:00	0.025	0.074	0.099
20:00	0.007	0.018	0.025
21:00	0.005	0.011	0.016
22:00	0.004	0.005	0.009
22:00	0.004	0.005	0.009
23:00	0.009	0.009	0.018

6.11 Applying the trip rates set out at **Table 6.3** to the proposed floorspace for Unit 8-11 shows the forecast trip generation for each hour for the proposed development. This is shown at **Table 6.4**. Also shown is the number of vehicles parked at the end of each hour, which is calculated by adding the number of arrivals to the number of parked cars at the start of the day (assumed to be 10 as a starting point) and subtracting the number of departures. A car parking occupation figure is also provided, showing how full the car park is forecast to be at any point during the day.

Table 6.4 – Hour-by-Hour Development Trip Generation (Unit 8-11)

Time Period (Hour Starting)	In	Out	Two-Way	Parked Vehicles	Car Park Occupancy
00:00	0	1	1	9	3.4%
01:00	0	0	0	9	3.4%
02:00	0	0	0	9	3.4%
03:00	0	0	0	9	3.4%
04:00	1	1	2	10	3.6%
05:00	1	1	1	9	3.5%
06:00	17	0	17	26	9.6%
07:00	57	8	65	75	27.8%
08:00	114	17	131	172	64.3%
09:00	77	23	100	227	84.6%
10:00	40	27	67	239	89.3%
11:00	22	26	48	235	87.7%
12:00	20	36	56	220	81.9%
13:00	32	26	57	225	84.0%
14:00	22	32	54	215	80.2%
15:00	16	43	59	188	70.3%
16:00	17	74	91	132	49.3%
17:00	15	99	114	48	18.1%
18:00	7	34	41	21	8.0%
19:00	4	13	17	13	4.8%
20:00	1	3	4	11	4.2%

Time Period (Hour Starting)	In	Out	Two-Way	Parked Vehicles	Car Park Occupancy
21:00	1	2	3	10	3.8%
22:00	1	1	1	10	3.7%
22:00	1	1	1	10	3.6%
23:00	1	1	3	10	3.6%

6.12 Based on the trip rates used to inform the trip generation for the proposed development, the car parking accumulation assessment suggests that at most there will be 239 vehicles parked at the site at any time, observed during 10:00-11:00. This level of demand for car parking represents an occupancy of the car parks of 89.3%, which will leave a reasonable number of spaces to allow vehicles to find a space without the need to circulate the car parks, as well as allowing for daily variations in demand.

6.13 The car parking accumulation assessment has shown that the proposals for 268 car parking spaces will be able to accommodate the predicted car parking demand of the site, and will not result in either an overprovision encouraging car use, or an under provision resulting in overspill of parking onto the local highway network.

Highway Network

6.14 The potential impact of the proposed development on traffic conditions on the local road network has been assessed at the following locations:

- Langford Lane/Technology Drive Junction;
- Langford Lane/The Blvd Roundabout;
- Langford Lane/A44 Signalised Junction; and
- Langford Lane/A4260 Signalised Junction.

6.15 The impact of the OTP site was assessed at these junctions at the outline stage. The degree of impact assessed then formed the justification and basis for the package of transport mitigation measures included within the S106 agreement for OTP, measures that are being delivered as the development is built. It is therefore pertinent to consider the revised impacts of the entire OTP site, including the proposed Units 8 to 11, in the updated context identified at **Section 5**. This allows for any additional impacts over and above the ones identified and addressed at outline to be defined.

Assessment Scenarios

6.16 The highway network at the above junctions has been assessed in the following scenarios:

- 2022 Base;

- 2022 Base + Development;
- 2025 Future Year Base; and
- 2025 Future Year Base + Development.

6.17 The following time periods have been used to inform the highway network assessment.

- AM (08:00-09:00); and
- PM (16:45-17:45).

6.18 The 2022 Base flows are informed by the traffic survey data collected in June 2022. This data was used to calculate the peak hour periods.

6.19 The 2025 Future Year Base is informed by the 2022 Base data, which has been uplifted by a TEMPro growth factor to replicate potential traffic growth in the area. This presents a robust assessment as there has been negative growth observed on the network between 2013/2014 when the original baseline surveys used within the OPA were undertaken, and 2022 which is shown by comparing traffic flows collected as part of the outline planning application and the most recent surveys. This is detailed at **Tables 5.7, 5.8** and **5.9**.

Traffic Growth

6.20 A TEMPro growth factor to the year 2025 has been applied to simulate potential traffic growth. The site is expected to be fully occupied by 2025. The parameters used to derive the growth factors are set out as follows:

- TEMPro Version – 7.2c;
- Years – 2022 to 2025;
- Area – Cherwell 019;
- Mode – Car Driver Only;
- Trip End Type – Origin/Destination;
- Area Type – All;
- Road Type – Principal;
- Serves – Region; and
- TEMPro Dataset – RTF 2018 Scenario 1.

6.21 The TEMPro growth factors used within this assessment are shown at **Table 6.5**. As aforementioned, this presents a robust assessment as there has been negative growth observed on the network between 2013/2014 and 2022 despite considerable economic growth in the area.

Table 6.5 – 2022 to 2025 TEMPro Growth Factor

Time Period	Factor
AM	1.0287
PM	1.0292

6.22 The application of TEMPro traffic growth should be considered in context. In terms of overall travel patterns, we make 16% fewer trips than in 1996, we use motorise transport for 14% fewer trips per year than in 2002, we travel 10% fewer miles than in 2002, and spend 22 hours less travelling than we did a decade ago. If trip rates were to continue to decline then by 2040 travel would be 70 billion vehicle miles per year less than current forecasts. These trends are not a blip in the data. They pre-date the advent of broadband and mobile internet as well as the COVID pandemic.

6.23 Since the COVID-19 pandemic which began in 2020, there have been some notable changes in how much, where, and how people travel. Workers are now commuting to work on fewer days per week, and there has been growth in the number of workers who do not have a fixed usual workplace. Working from home is growing both on an occasional and usual basis, which results in fewer trips on the local highway network.

6.24 The resultant number of movements expected at each assessed junction in 2025 as a result of the application of the growth factors is shown at **Table 6.6**.

Table 6.6 – Resultant 2025 Baseline Junction Total Movements

Time Period	AM Peak	PM Peak
A44/Langford Lane	2,527	2,671
Langford Lane/The Blvd	1,393	1,224
A4260/Langford Lane	1,714	1,987

Committed Development

6.25 Within the assessment it has been determined that no committed development sites will be considered. In the surrounding area there have been no major planning applications that have been granted consent within recent years.

6.26 Additionally, as aforementioned there has been negative traffic growth on the network between 2013/2014 and 2022 as observed from traffic surveys undertaken at three local junctions, despite growth occurring in terms of development.

6.27 The consented and under-consideration units within OTP have been included as development traffic for the purpose of the assessment. It is important to note that the wider OPT outline consent covers the delivery of development at Units 8-11. The purpose of this assessment, prepared in support of development at Units 8 to11, is to consider whether the proposals for Units 8 to 11, with the

development already fully consented within the rest of the OTP site would generate any additional impacts over and above the impacts identified, agreed and addressed at the outline stage.

Development Traffic Distribution

6.28 Traffic associated with the development has been distributed onto the local highway network using Origin & Destination 2011 census data (Census data table WU03EW). The data collected was for car drivers only.

6.29 Census data for the MSOA in which the site resides (Cherwell 019) was collected. Using this data, the top 41 origins, which each account for at least 0.5% of all commuting trips made to Cherwell 019 by car drivers have been considered. This equates to 87.1% of all trips to Cherwell 019 from all locations. Considering locations which generate less than 0.5% of trips to Cherwell 019 would be unlikely to alter the findings of the assessment and would require assessment and consideration of 168 further locations. The remaining 12.9% has been proportionally reallocated to origins which generate more than 0.5% of all trips.

6.30 The likely route that traffic will take to the development from each origin location was determined using Google Maps journey route planner, using a journey start time of 08:30 on a neutral weekday. Professional judgement was used when instances arose in which more than one route was available.

6.31 **Table 6.7** shows a summary of the proportion of development traffic using each local route, and **Figure 6.1** provides a flow diagram visualising this data for inbound trips, whilst **Figure 6.2** shows a flow diagram for outbound trips.

Table 6.7 – Distribution Summary

Route	Distribution
North of Langford Lane/A4260 Junction	12.8%
South of Langford Lane/A4260 Junction	32.7%
North of Langford Lane/A44 Junction	27.0%
South of Langford Lane/A44 Junction	27.5%

Figure 6.1 – Inbound Flow Diagram

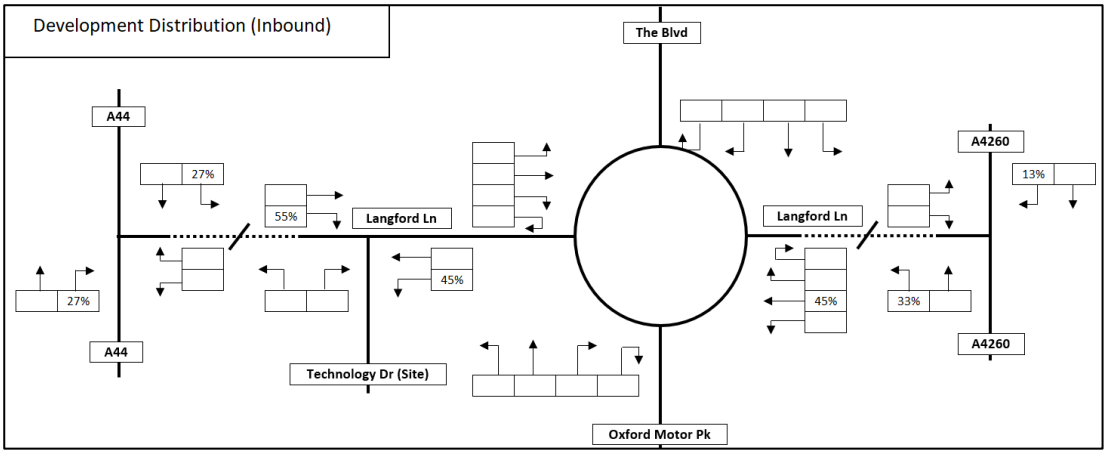
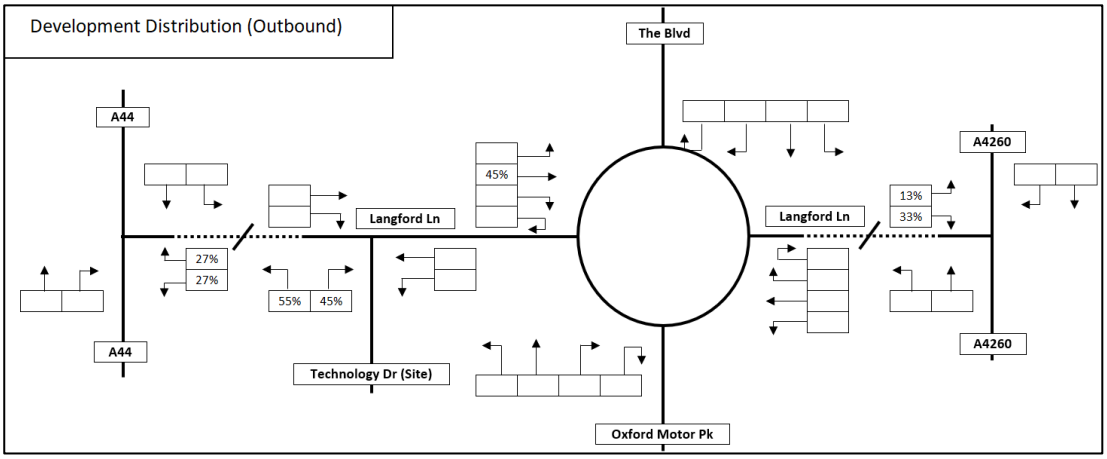


Figure 6.2 – Outbound Flow Diagram



Junction Modelling Assessment

6.32 This section sets out the results of the junction modelling work that has been undertaken for each assessed junction. Flow diagrams showing the turning movements for all junctions within all assessment scenarios and periods are provided within **Appendix C**.

Langford Lane/Technology Drive

6.33 The Langford Lane junction with Technology Drive forms the access to all units from OTP. It takes the form of a priority T-junction with a ghost island right turn bay provided on Langford Lane.

Previous Assessment

6.34 The operation of this junction was assessed within the OPA. The full occupation scenario assessed within the OPA utilises a future year of 2025, which is the same as the future year assessment for the Unit 8-11 application. Therefore, it is useful to consider the forecast operation of the junction in 2025 to provide a consistent comparison.

6.35 The flow diagrams produced to accompany the OPA indicate that total junction flows (PCU) within the 2025 + Development scenario at the Langford Lane/Technology Drive junction were forecast to

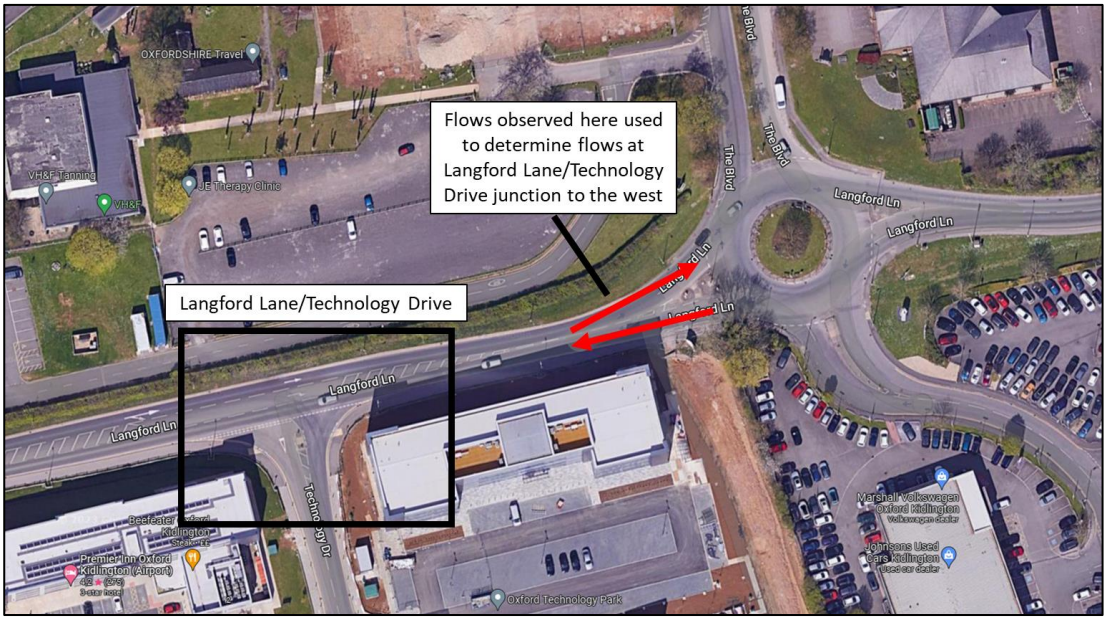
be 1,933 within the AM peak hour and 1,693 within the PM peak hour. The OPA gained planning consent and therefore this number of trips is essentially the threshold that the proposed development should be considered against.

6.36 The junction assessment undertaken for the junction within the OPA showed that the junction would operate within capacity with a maximum RFC of 0.63 recorded at the junction. This is therefore the level of operation that the highways authority considers to be acceptable at the junction.

New Assessment

6.37 Baseline flows for the Langford Lane mainline at the point of the site access were determined based on the flow in both directions on the western arm of the Langford Lane/The Blvd junction. This is the closest junction to the site access there is no gap in the network between the site access and the Langford Lane/The Blvd junction, as shown at **Figure 6.3**.

Figure 6.3 – Situation of Site Access Junction



6.38 Within the 2025 future year assessment, flows on the western arm of the aforementioned junction are shown as 1,060 and 898 (PCU) within the AM and PM peak hours respectively. This is therefore the 2025 baseline flow at the site access junction prior to the addition of development.

6.39 As the sole access point to OTP, all development traffic will utilise this junction. This will result in an additional 391 and 378 vehicle trips in the AM and PM peak hours respectively. This brings the future year (2025) + development junction flow to 1,452 PCU in the AM peak and 1,276 PCU within the PM peak. This is considerably lower than the level forecast and subsequently accepted by OCC as part of the OPA (1,933 AM and 1,693 PM – see para 6.35).

6.40 The Langford Lane/Technology Drive junction has been assessed within the Junctions 9 software program. A summary of the results is provided within **Table 6.8**, whilst the full modelling output report is included within **Appendix D**.

Table 6.8 – Langford Lane/Technology Drive Modelling Summary

	AM Peak Hour (08:00-09:00)			PM Peak Hour (16:45-17:45)		
	Max Queue (PCU)	Max Delay (s)	Max RFC	Max Queue (PCU)	Max Delay (s)	Max RFC
2022 Base	0.0	0.00	0.00	0.0	0.00	0.00
2022 Base + Dev	0.5	16.40	0.34	0.9	22.26	0.49
2025 Base	0.0	0.00	0.00	0.0	0.00	0.00
2025 Base + Dev	0.5	16.84	0.34	1.0	23.12	0.50

6.41 **Table 6.8** indicates that the junction will operate well within capacity with a maximum RFC of 0.50 recorded in either peak hour period (PM peak). This is recorded for right turn movements out of the site access. The junction modelling shows an improved level of operation compared to the previous assessment contained within the OPA which suggested a maximum RFC of 0.63 within the worst-case scenario. The level of operation forecast is therefore acceptable as it does not exceed the level of operation consented previously.

Langford Lane/The Blvd

6.42 The Langford Lane junction with The Boulevard is located to the east of the site access junction and provides access to Oxford Motor Park to the south, and Oxford Airport to the north. It takes the form of a four-arm priority roundabout.

Previous Assessment

6.43 The operation of this junction was assessed within the OPA. The full occupation scenario assessed within the OPA utilises a future year of 2025, which is the same as the future year assessment for the Unit 8-11 application. Therefore, it is useful to consider the forecast operation of the junction in 2025 to provide a consistent comparison.

6.44 The flow diagrams produced to accompany the OPA indicate that total junction flows (PCU) within the 2025 + Development scenario at the Langford Lane/The Blvd were forecast to be 2,474 within the AM peak hour and 2,185 within the PM peak hour. The OPA gained planning consent and therefore this number of trips is essentially the threshold that the proposed development should be considered against.

6.45 The junction assessment undertaken for the junction within the OPA showed that the junction would operate within capacity with a maximum RFC of 0.87 recorded at the junction. This is therefore the level of operation that the highways authority considers to be acceptable at the junction.

New Assessment

6.46 Baseline flows for the junction were observed from a traffic survey undertaken in 2022. A growth factor was applied to bring these to 2025 forecast levels.

6.47 Within the 2025 future year assessment, flows at the Langford Lane/The Blvd junction are shown as 1,393 and 1,224 (PCU) within the AM and PM peak hours respectively. This is the 2025 baseline flow at the junction prior to the addition of development.

6.48 As shown within **Figure 6.1** and **Figure 6.2** a high proportion of development traffic (45%) will utilise this junction which will result in an additional 178 and 172 vehicle trips in the AM and PM peak hours respectively. This brings the future year (2025) + development junction flow to 1,570 PCU in the AM peak and 1,396 PCU within the PM peak. This is considerably lower than the level forecast and subsequently accepted by OCC as part of the OPA (2,474 AM and 2,185 PM – see para 6.44).

6.49 The Langford Lane/The Blvd junction has been assessed within the Junctions 9 software program. A summary of the results is provided within **Table 6.9**, whilst the full modelling output report is included within **Appendix D**.

Table 6.9 – Langford Lane/The Blvd Modelling Summary

	AM Peak Hour (08:00-09:00)			PM Peak Hour (16:45-17:45)		
	Max Queue (PCU)	Max Delay (s)	Max RFC	Max Queue (PCU)	Max Delay (s)	Max RFC
2022 Base	0.7	3.59	0.42	0.5	3.52	0.31
2022 Base + Dev	0.9	4.26	0.46	0.5	3.89	0.33
2025 Base	0.8	3.66	0.43	0.5	3.56	0.32
2025 Base + Dev	0.9	4.35	0.47	0.5	3.97	0.34

6.50 **Table 6.9** indicates that the junction will operate well within capacity with a maximum RFC of 0.47 recorded in either peak hour period (AM peak). This is recorded on the Langford Lane (E) arm of the junction. Queue lengths are below 1 PCU for all movements for all assessment scenarios. The junction modelling shows an improved level of operation compared to the previous assessment contained within the OPA which suggested a maximum RFC of 0.87 within the worst-case scenario. The level of operation forecast is therefore acceptable as it does not exceed the level of operation consented previously.

Langford Lane/A44

6.51 The Langford Lane junction with A44 is located to the west of the development and provides access towards Oxford to the south, and towards Woodstock to the north. It takes the form of a signal-controlled T-junction. OCC provided signal controller data for this junction which was used to inform the set-up of the model.

Previous Assessment

6.52 The operation of this junction was assessed within the OPA. The full occupation scenario assessed within the OPA utilises a future year of 2025, which is the same as the future year assessment for the

Unit 8-11 application. Therefore, it is useful to consider the forecast operation of the junction in 2025 to provide a consistent comparison.

6.53 The flow diagrams produced to accompany the OPA indicate that total junction flows (PCU) within the 2025 + Development scenario at Langford Lane/A44 were forecast to be 3,412 within the AM peak hour and 3,398 within the PM peak hour. The OPA gained planning consent and therefore this number of trips is essentially the threshold that the proposed development should be considered against.

6.54 The junction assessment undertaken within TRANSYT for the junction within the OPA showed that the junction would operate within capacity with a Practical Reserve Capacity (PRC) as low as 3% recorded at the junction. This is therefore considered to be the level of operation that the highways authority deems to be acceptable at the junction.

6.55 To allow for a comparable test against the new assessment, the flows used within the OPA TA for the 2025 + Development scenario have been tested within the same LINSIG model that has been used to assess the new flows. This assessment has shown the junction to operate with a minimum PRC of 4.2% within the AM peak hour, and 12.2% within the PM peak hour when using the flows previously assessed. This is essentially the level of operation shown within the LINSIG model that is considered to be acceptable.

New Assessment

6.56 Baseline flows for the junction were observed from a traffic survey undertaken in 2022. A growth factor was applied to bring these to 2025 forecast levels.

6.57 Within the 2025 future year assessment, flows at the Langford Lane/A44 junction are shown as 2,527 and 2,671 (PCU) within the AM and PM peak hours respectively. This is the 2025 baseline flow at the junction prior to the addition of development.

6.58 As shown within **Figure 6.1** and **Figure 6.2** a high proportion of development traffic (55%) will utilise this junction which will result in an additional 213 and 206 vehicle trips in the AM and PM peak hours respectively. This brings the future year (2025) + development junction flow to 2,741 PCU in the AM peak and 2,877 PCU within the PM peak. This is considerably lower than the level forecast and subsequently accepted by OCC as part of the OPA (3,412 AM and 3,398 PM – see para 6.53).

6.59 The Langford Lane/A44 signalised junction has been assessed within the LINSIG software program. A summary of the results is provided within **Table 6.10**, whilst the full modelling output report is included within **Appendix D**.

Table 6.10 – Langford Lane/A44 Modelling Summary

	AM Peak Hour (08:00-09:00)				PM Peak Hour (16:45-17:45)			
	Max Queue (PCU)	Max Delay (s)	Max DoS	PRC	Max Queue (PCU)	Max Delay (s)	Max DoS	PRC
2022 Base	7.6	32.7	72.2	24.7	10.0	32.6	67.6	33.1
2022 Base + Dev	8.8	34.9	81.4	10.6	10.6	35.1	69.7	29.1
2025 Base	8.0	33.6	74.1	21.5	10.6	33.1	69.5	29.5
2025 Base + Dev	9.3	36.3	83.3	8.0	11.2	35.8	71.6	25.7

6.60 **Table 6.10** indicates that the junction will operate well within capacity with a minimum PRC of 8.0% recorded in either peak hour period (AM peak). Queue lengths are forecast to increase by no more than 2 PCU in any scenario following the addition of development traffic and the resultant queues will not extend back to any upstream junctions on any arms of the junction. The increase in delay is at most no more than 3 seconds which will not be perceptible. The level of operation forecast is therefore acceptable as it does not exceed the level of operation shown using the previously consented flows (minimum PRC of 4.2%).

Langford Lane/A4260

6.61 The Langford Lane junction with A4260 is located to the east of the development and provides access towards Oxford to the south via Kidlington, and towards Banbury to the north. It takes the form of a signal-controlled T-junction. OCC provided signal controller data for this junction which was used to inform the set-up of the model.

Previous Assessment

6.62 The operation of this junction was assessed within the OPA. The full occupation scenario assessed within the OPA utilises a future year of 2025, which is the same as the future year assessment for the Unit 8-11 application. Therefore, it is useful to consider the forecast operation of the junction in 2025 to provide a consistent comparison.

6.63 The flow diagrams produced to accompany the OPA indicate that total junction flows (PCU) within the 2025 + Development scenario at Langford Lane/A4260 were forecast to be 2,525 within the AM peak hour and 2,486 within the PM peak hour. The OPA gained planning consent and therefore this number of trips is essentially the threshold that the proposed development should be considered against.

6.64 The junction assessment undertaken within TRANSYT for the junction within the OPA showed that the junction would operate within capacity with a Practical Reserve Capacity (PRC) as low as 3% recorded at the junction. This is therefore the level of operation that the highways authority considers to be acceptable at the junction.

6.65 To allow for a comparable test against the new assessment, the flows used within the previous 2025 + Development scenario have been tested within the same LINSIG model. This assessment has shown the junction to operate with a minimum PRC of 8.0% within the AM peak hour, and -17.4% within the PM peak hour. This is essentially the level of operation shown within the LINSIG model that is considered to be acceptable.

New Assessment

6.66 Baseline flows for the junction were observed from a traffic survey undertaken in 2022. A growth factor was applied to bring these to 2025 forecast levels.

6.67 Within the 2025 future year assessment, flows at the Langford Lane/A4260 junction are shown as 1,714 and 1,987 (PCU) within the AM and PM peak hours respectively. This is the 2025 baseline flow at the junction prior to the addition of development.

6.68 As shown within **Figure 6.1** and **Figure 6.2** a high proportion of development traffic (45%) will utilise this junction which will result in an additional 178 and 172 vehicle trips in the AM and PM peak hours respectively. This brings the future year (2025) + development junction flow to 1,892 PCU in the AM peak and 2,159 PCU within the PM peak. This is considerably lower than the level forecast and subsequently accepted by OCC as part of the OPA (2,525 AM and 2,486 PM – see para 6.63).

6.69 The Langford Lane/A4260 signalised junction has been assessed within the LINSIG software program. A summary of the results is provided within **Table 6.11**, whilst the full modelling output report is included within **Appendix D**.

Table 6.11 – Langford Lane/A4260 Modelling Summary

	AM Peak Hour (08:00-09:00)				PM Peak Hour (16:45-17:45)			
	Max Queue (PCU)	Max Delay (s)	Max DoS	PRC	Max Queue (PCU)	Max Delay (s)	Max DoS	PRC
2022 Base	6.9	27.9	62.1	44.9	9.1	23.1	82.6	9.0
2022 Base + Dev	7.1	26.7	64.1	40.4	12.1	26.5	88.7	1.5
2025 Base	7.2	28.3	63.9	40.8	9.2	23.5	84.9	6.0
2025 Base + Dev	7.5	27.2	66.0	36.4	14.0	27.8	89.9	0.1

6.70 **Table 6.9** indicates that the junction will operate within capacity with a minimum PRC of 0.1% recorded in either peak hour period (PM peak). Queue lengths are forecast to increase by no more than 5 PCU in any scenario following the addition of development traffic and the resultant queues will not extend back to any upstream junctions on any arms of the junction. The increase in delay is at most no more than 5 seconds which will not be perceptible. The level of operation forecast is therefore acceptable as it does not exceed the level of operation shown using the previously consented flows (minimum PRC of -17.4%).

Summary

6.71 The modelling work undertaken within this assessment has shown that all junctions will operate within capacity following the addition of development traffic associated with Unit 1-11 at OTP within the most trip intensive scenario.

6.72 Additionally, when compared to the level of trips that had previously been considered as a basis for the OPA assessment that then formed the basis for the transport measures featured in the S106 agreement related to development at OTP, there is a significant reduction in terms of trips on the network. The updated traffic assessment carried out shows that with the addition of the proposed Units 8 to 11, the predicted operation of the local road network will not be made worse than what was predicted at the time of the OPA. On the contrary, a combination of lower baseline traffic and limited additional development traffic result in a predicted improved level of operation, when compared to the 2014 OPA TA predictions.

6.73 As a result, it is considered that the proposed development at Units 8 to 11 will not lead to any additional severe impacts on the operation or safety of the local road network, when compared to the predicted impacts of the OTP development at the time of the outline consent. There is an agreed package of transport measures related to addressing any impact of development at OTP, and this package of measures is still relevant and able to support the proposals at Units 8 to 11.

7 Summary and Conclusions

Summary

7.1 Vectos has been commissioned by Oxtec Development Limited to provide highways and transportation advice in relation to a proposed employment development to the north west of Kidlington, referred to as Unit 8-11 at Oxford Technology Park (OTP). The wider OTP site benefits from an outline planning consent covering development at Units 8 to 11. This Transport Assessment (TA) has been prepared in support of development at Units 8 to 11, in the context of the wider outline consent.

7.2 The development proposals are for four employment units which will be used for a similar range of uses to the uses consented on Units 3 to 7 at OTP, labelled for simplicity as Research & Development for the purpose of this report. The four units will equal a total of 16,909m2 GIA of employment floorspace.

7.3 The site is located within a sustainable location with good pedestrian and cyclist connections and regular bus services available within a short distance of the site.

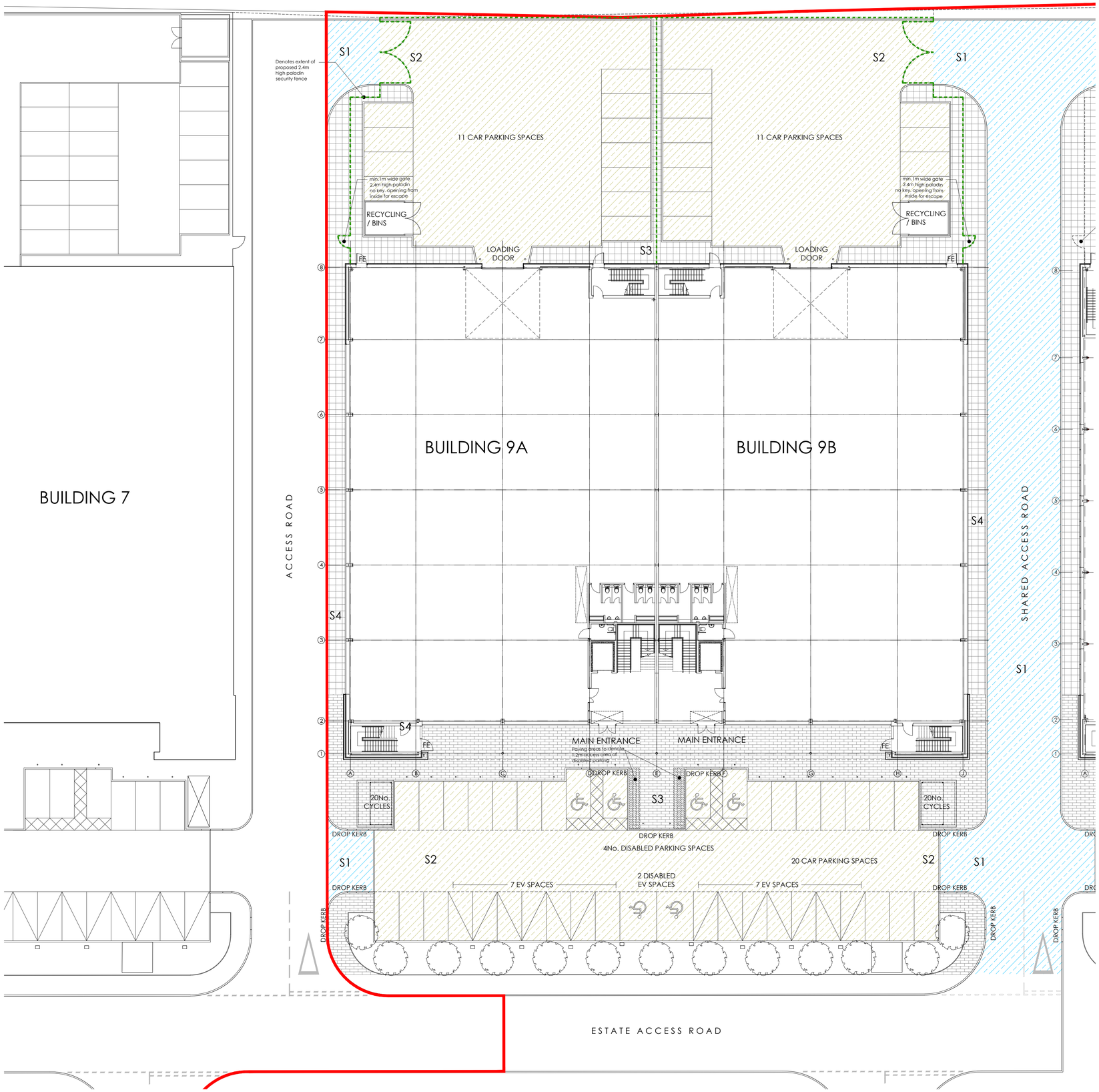
7.4 This TA provides an assessment of the potential implications of the development of Units 8 to 11 at OTP, taking into account the outline consent for the entire OTP site as well as the recent consents on Units 1 to 7 at OTP. As such this assessment considers afresh the potential impact of the entirety of Oxford Technology Park, taking into account updated trip generation assumptions, now that end users at the site are better defined, and also changes to background traffic and travel patterns, in particular following the COVID pandemic. This assessment shows that the predicted traffic generation to/from the entire OTP site, including the proposed development at Units 8 to 11 is likely to exceed the level of traffic generation identified at the time of the outline consent for OTP. However, the operation of the local road network would not be detrimentally affected. This report presents junction capacity assessments for the local junctions around the development site, demonstrating that the updated predicted level of operation at these junctions would be better than the worst case level of operation predicted at the time of the outline.

Conclusion

7.5 In the context of the NPPF, the development of Units 8 to 11, considered in the wider context of the OTP outline consent and recent detailed consents on Units 1 to 7, will not result in severe or unacceptable impacts on the highway network, over and above the impacts determined at the time of the outline consent for OTP. As such the package of transport measures featured in the S106 agreement related to the OTP development are still relevant and still address the predicted impacts of development at OTP, including the proposed development at Units 8 to 11.

7.6 The proposed development at Units 8 to 11 is therefore acceptable on highways & transportation grounds.

Appendix A



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S1 — **CAR PARK ISLE/ ROAD CONSTRUCTION**
Surface course — Asphalt construction - See Engineer's build up specification.

S2 — **CAR PARKING BAYS**
Surface course — 240mm x 120mm x 80mm thick Tobermore permeable paving concrete block paviours to BS EN 1338:2003 colour : Charcoal, demarcation line : Natural

S3 — **FOOTWAY CONSTRUCTION**
Surface course — 600mm x 150mm x 80mm thick Tobermore Manhattan paviours to BS EN 1338:2003

S4 — **FOOTWAY CONSTRUCTION**
Surface course — 600mm x 600mm Concrete Paving slabs to BS EN 1338:2003 colour : Charcoal

PLEASE REFER TO ENGINEERS DRAWINGS IN RELATION TO SURFACE AND BUILD UP DEPTHS AND SPECIFICATION. ALL LEVELS/KERBS SHOULD BE READ IN CONJUNCTION WITH SIMPSON'S LATEST ENGINEERING LAYOUT DRAWING.

PLANNING ISSUE

REV.	AMENDMENT	DRAWN	DATE	AUTH'D
PL4	PLANNING ISSUE 4	LT	09.02.23	MD
PL3	PLANNING ISSUE 3	LT	22.12.22	MD
PL2	PLANNING ISSUE 2	LT	28.09.22	MD
PL1	PLANNING ISSUE 1	LT	19.07.22	MD

client : HILL STREET HOLDINGS

project : OXFORD TECHNOLOGY PARK

site : LANGFORD LANE
KIDLINGTON, OXFORDSHIRE

content : BUILDING 9A & 9B
HARD LANDSCAPING PLAN

date : JULY 2022

scale : 1 : 200 @ A1

ALL DIMENSIONS TO BE CHECKED ON SITE

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MARLOW
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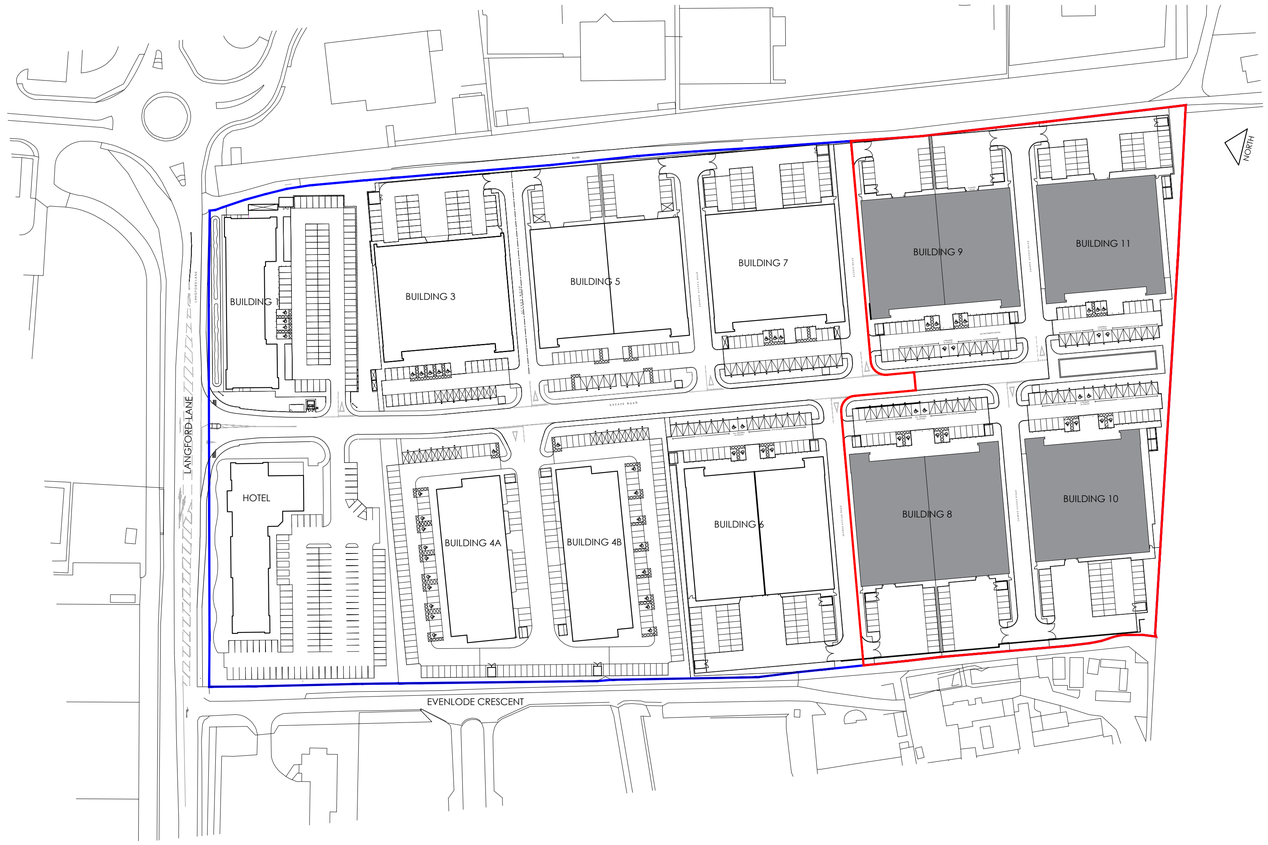
drg.no : 2670 - 05

revision : PL4



PROPOSED LOCATION PLAN

SCALE - 1:1250

SCALE BAR

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HILL STREET HOLDINGS

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PLANNING ISSUE

REV.	AMENDMENT	DRAWN	DATE	AUTHD
PL4	PLANNING ISSUE 4	LT	09.02.23	MD
PL3	PLANNING ISSUE 3	LT	18.01.23	MD
PL2	PLANNING ISSUE 2	LT	22.12.22	MD
PL1	PLANNING ISSUE 1	LT	13.10.22	MD

client : HILL STREET HOLDINGS

project : OXFORD TECHNOLOGY PARK

site : LANGFORD LANE
KIDLINGTON, OXFORDSHIRE

content : BUILDINGS 8, 9, 10 & 11
PROPOSED SITE LOCATION PLAN

date : OCT 2022

scale : 1:1250 @ A1

ALL DIMENSIONS TO BE CHECKED ON SITE

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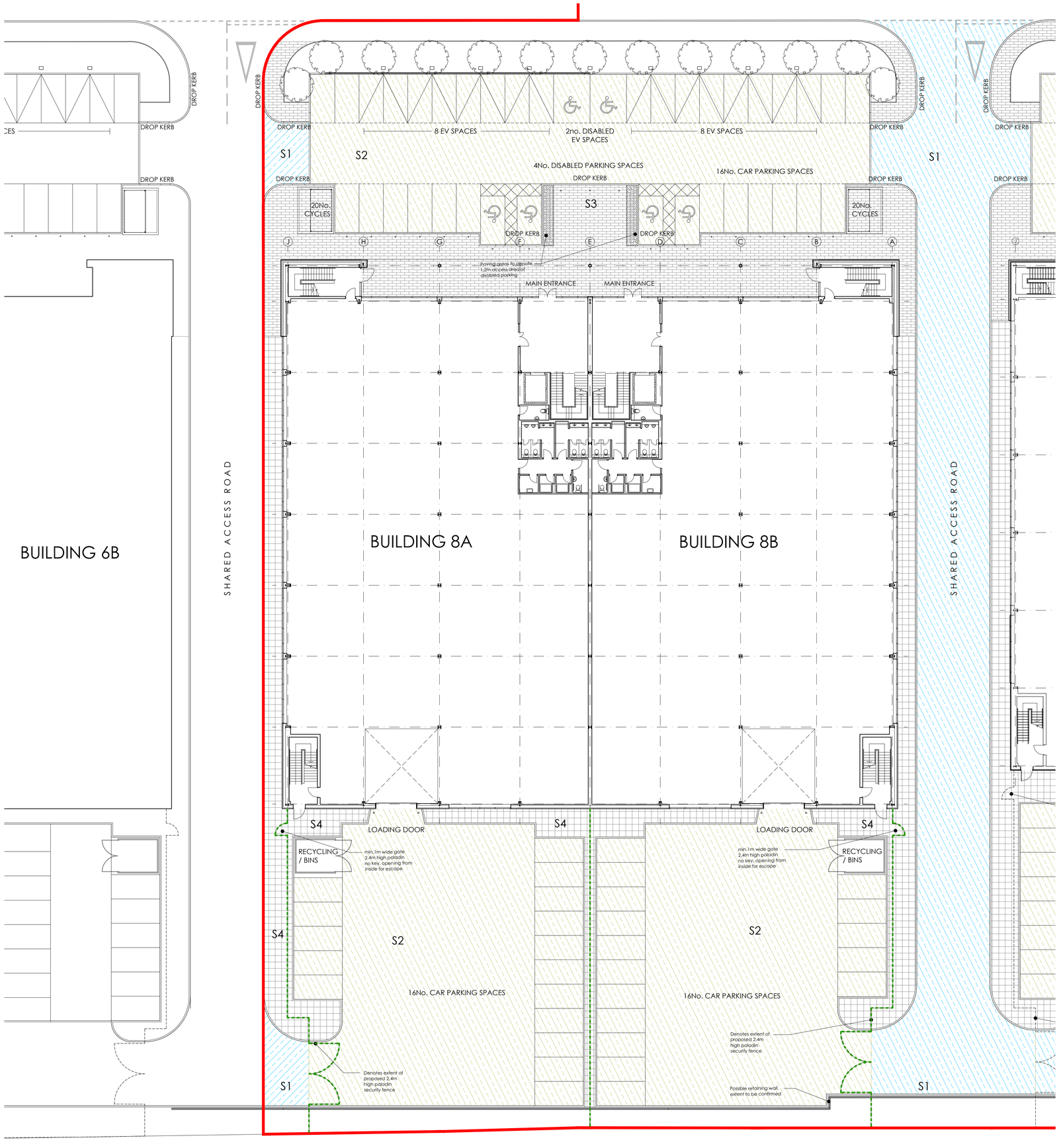
revision : PL4



HILL STREET HOLDINGS

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S4 — **FOOTWAY CONSTRUCTION**
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PLANNING ISSUE

REV.	AMENDMENT	DATE	AUTH'D
PL2	PLANNING ISSUE 2	30.01.23	MD
PL1	PLANNING ISSUE 1	30.09.22	MD

client : HILL STREET HOLDINGS

project : OXFORD TECHNOLOGY PARK

site : LANGFORD LANE
KIDLINGTON, OXFORDSHIRE

content : BUILDING 8A & 8B
HARD LANDSCAPING PLAN

date : SEPT 2022

scale : 1 : 200 @ A1

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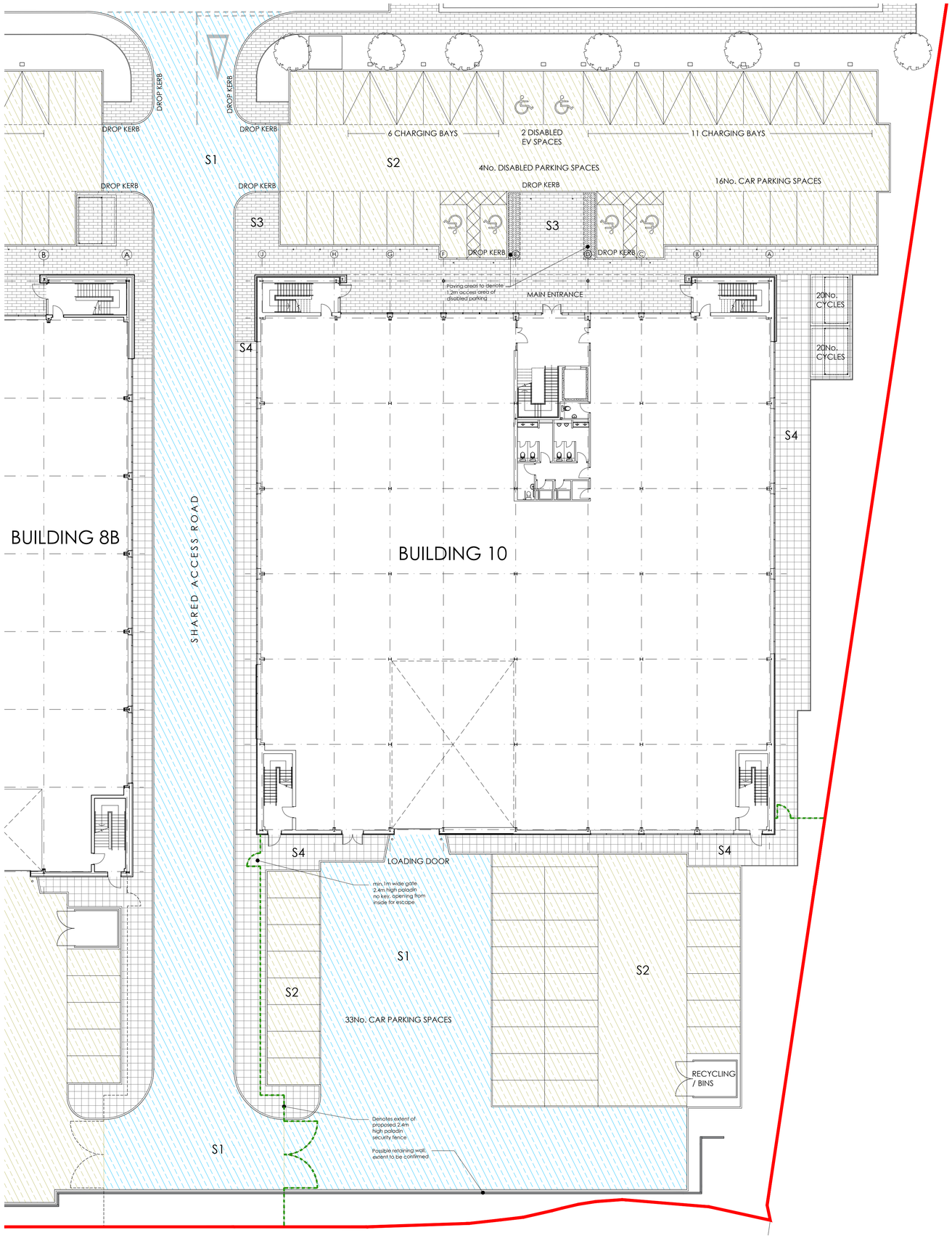

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Surface course — 240mm x 120mm x 60mm thick concrete blocks to BS EN 1338:2003 colour : Charcoal

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PLANNING ISSUE

REV.	AMENDMENT	DRAWN	DATE	AUTH'D
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PL2	PLANNING ISSUE 2	LT	30.01.23	MD
PL1	PLANNING ISSUE 1	LT	13.10.22	MD

client : HILL STREET HOLDINGS

project : OXFORD TECHNOLOGY PARK

site : LANGFORD LANE
KIDLINGTON, OXFORDSHIRE

content : BUILDING 10
HARD LANDSCAPING PLAN

date : SEPT 2022

scale : 1 : 200 @ A1

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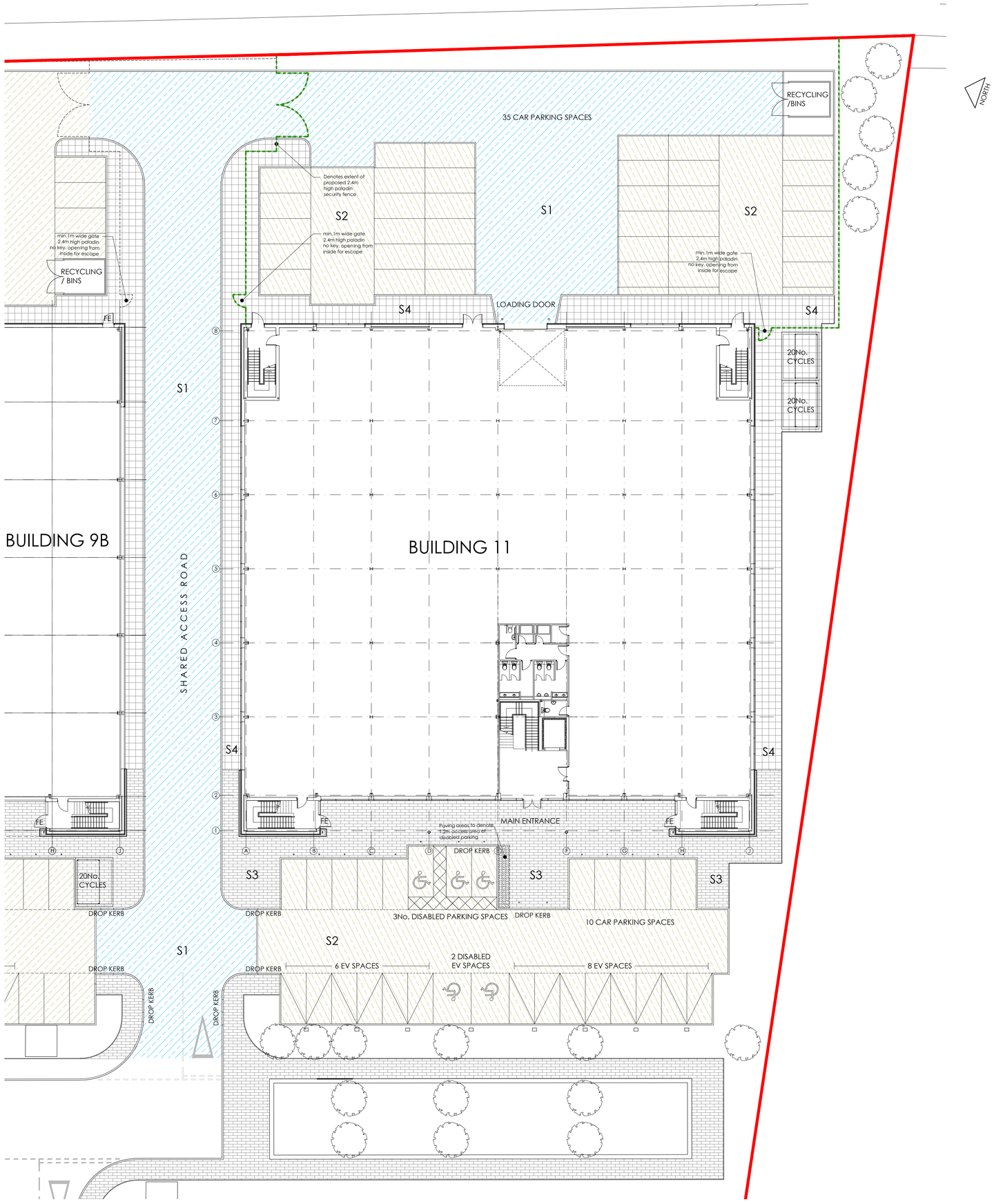

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PLANNING ISSUE

REV.	AMENDMENT	DRAWN	DATE	AUTH'D
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PL2	PLANNING ISSUE 2	LT	30.01.23	MD
PL1	PLANNING ISSUE 1	LT	13.10.22	MD

client : HILL STREET HOLDINGS

project : OXFORD TECHNOLOGY PARK

site : LANGFORD LANE
KIDLINGTON, OXFORDSHIRE

content : BUILDING 11
HARD LANDSCAPING PLAN

date : OCT 2022

scale : 1 : 200 @ A1

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revision : PL3

Appendix B

REV.	DETAILS	DRAWN	CHECKED	DATE
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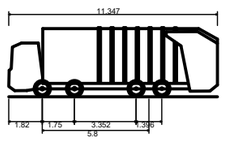

Large Refuse Vehicle (4 axle)	
Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Building 8 Bay Count:
Main Parking:
16 Standard bays
16 EV bays
2 Disabled EV bays
4 Standard disabled bays

Rear Parking:
32 Standard bays

PROJECT: Oxford Technology Park

CLIENT: -

DRAWING TITLE:
Swept Path Analysis
Refuse Vehicle
Buildings 8A & 8B

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3rd Floor, Brew House, Jacob Street, Bristol, BS2 0EQ
t: 0117 203 5240 e: enquiries@vectos.co.uk

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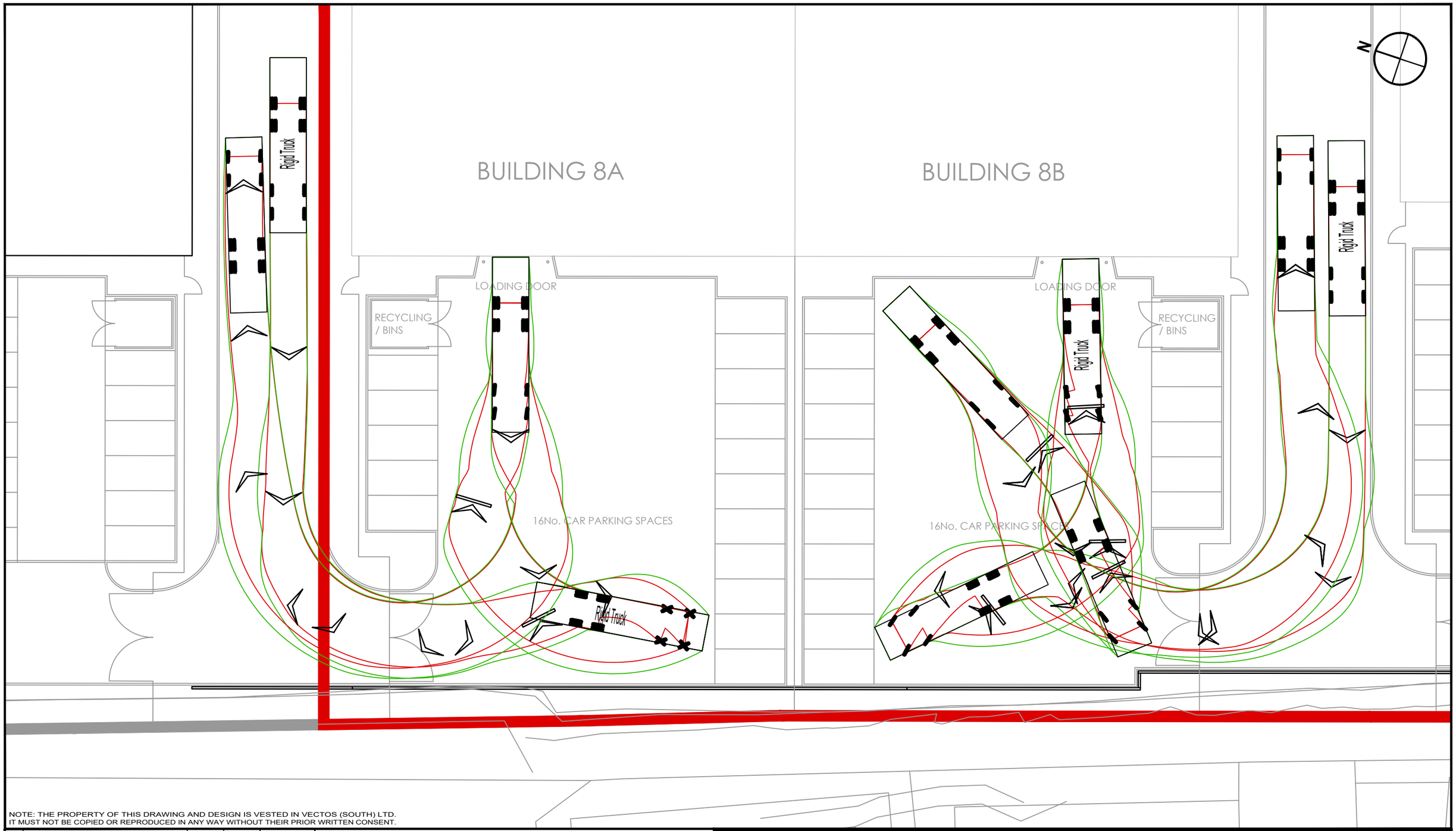

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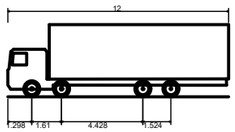

Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.900m

Building 8 Bay Count:
Main Parking:
16 Standard bays
16 EV bays
2 Disabled EV bays
4 Standard disabled bays

Rear Parking:
32 Standard bays

PROJECT: Oxford Technology Park

CLIENT: -

DRAWING TITLE:
Swept Path Analysis
12m Rigid Truck
Buildings 8A & 8B

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REVISION: A

RECYCLING

11 CAR PARKING SPACES

RECYCLING / BINS

BUILDING 9A

Large Refuse Vehicle (4 axle)

ACCESS ROAD

11 CAR PARKING SPACES

RECYCLING / BINS

LOADING DOOR

BUILDING 9B

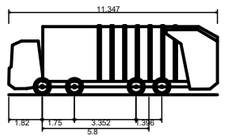
Large Refuse Vehicle (4 axle)

ACCESS ROAD

N

REV.	DETAILS	DRAWN	CHECKED	DATE
A	Masterplan updated	LJ	FC	10.02.23

STATUS:
INFORMATION ONLY



Large Refuse Vehicle (4 axle)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Building 9 Bay Count:
Main Parking:
20 Standard bays
14 EV bays
2 Disabled EV bays
4 Standard disabled bays

Rear Parking:
22 Standard bays

PROJECT: Oxford Technology Park

CLIENT: -

DRAWING TITLE:
Swept Path Analysis
Refuse Vehicle
Buildings 9A & 9B

DRAWN:	CHECKED:	DATE:	SCALES:
LJ	FC	20.01.23	1:250 @ A3

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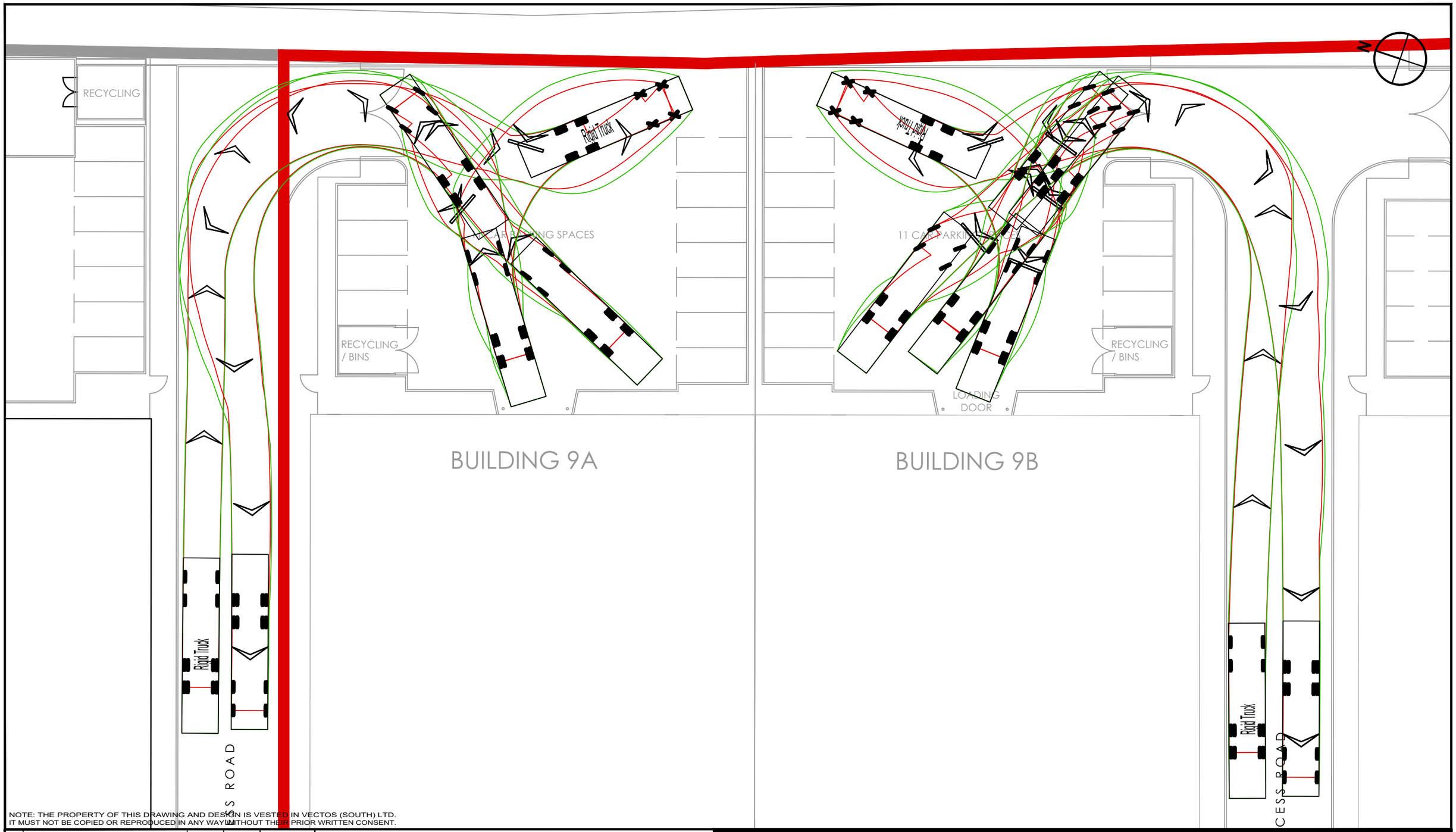

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A	Masterplan updated	LJ	FC	10.02.23

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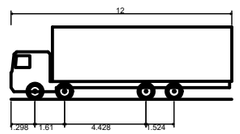

Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.900m

Building 9 Bay Count:
Main Parking:
20 Standard bays
14 EV bays
2 Disabled EV bays
4 Standard disabled bays

Rear Parking:
22 Standard bays

PROJECT:
Oxford Technology Park

CLIENT:
-

DRAWING TITLE:
Swept Path Analysis
12m Rigid Truck
Buildings 9A & 9B

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LJ	FC	20.01.23	1:250 @ A3	226698B_PD01_AT04	A

BUILDING 8B

LOADING DOOR

RECYCLING / BINS

16No. CAR PARKING SPACES

Large Refuse Vehicle (4 axle)

BUILDING 10

LOADING DOOR

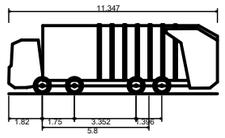
33No. CAR PARKING SPACES

RECYCLING / BINS

N

REV.	DETAILS	DRAWN	CHECKED	DATE
A	Masterplan updated	LJ	FC	10.02.23

STATUS:
INFORMATION ONLY



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Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Building 10 Bay Count:
Main Parking:
16 Standard bays
17 EV bays
2 Disabled EV bays
4 Standard disabled bays

Rear Parking:
33 Standard bays

PROJECT:
Oxford Technology Park

CLIENT:
-

DRAWING TITLE:
Swept Path Analysis
Refuse Vehicle
Building 10

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REV.	DETAILS	DRAWN	CHECKED	DATE
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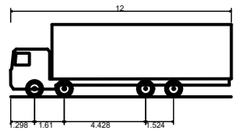

Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.900m

Building 10 Bay Count:
Main Parking:
16 Standard bays
17 EV bays
2 Disabled EV bays
4 Standard disabled bays

Rear Parking:
33 Standard bays

PROJECT:
Oxford Technology Park

CLIENT:
-

DRAWING TITLE:
Swept Path Analysis
12m Rigid Truck
Building 10

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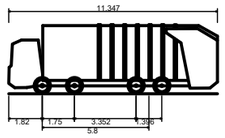

Large Refuse Vehicle (4 axle)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Building 11 Bay Count:
Main Parking:
10 Standard bays
14 EV bays
2 Disabled EV bays
3 Standard disabled bays

Rear Parking:
35 Standard bays

PROJECT:
Oxford Technology Park

CLIENT:
-

DRAWING TITLE:
Swept Path Analysis
Refuse Vehicle
Building 11

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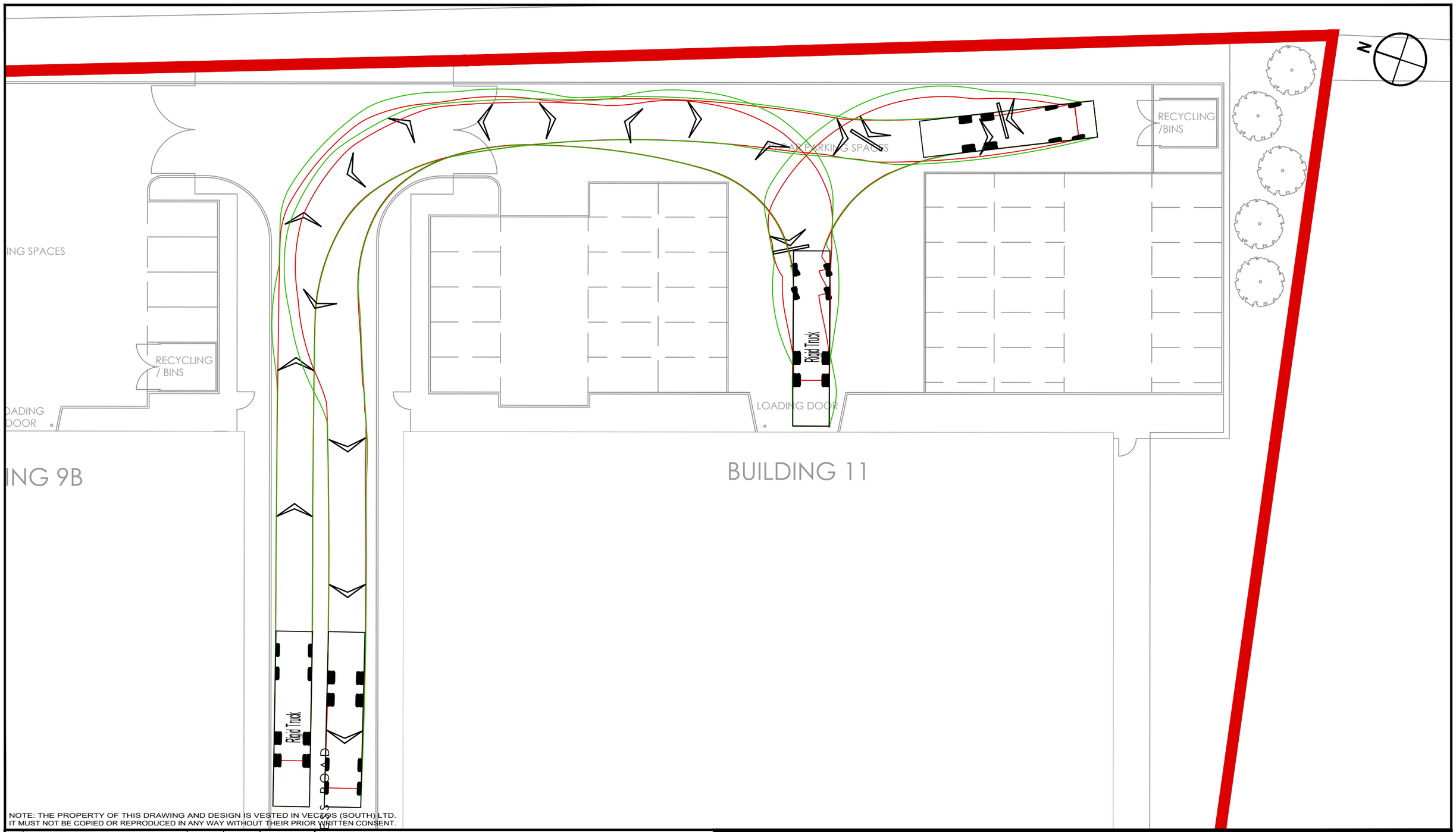
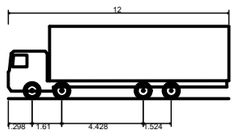
t: 0117 203 5240 e: enquiries@vectos.co.uk

DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
LJ	FC	20.01.23	1:250 @ A3	226698B_PD01_AT07	A



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Masterplan updated	LJ	FC	10.02.23

STATUS:
INFORMATION ONLY



Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.900m

Building 11 Bay Count:
Main Parking:
10 Standard bays
14 EV bays
2 Disabled EV bays
3 Standard disabled bays

Rear Parking:
35 Standard bays

PROJECT: Oxford Technology Park

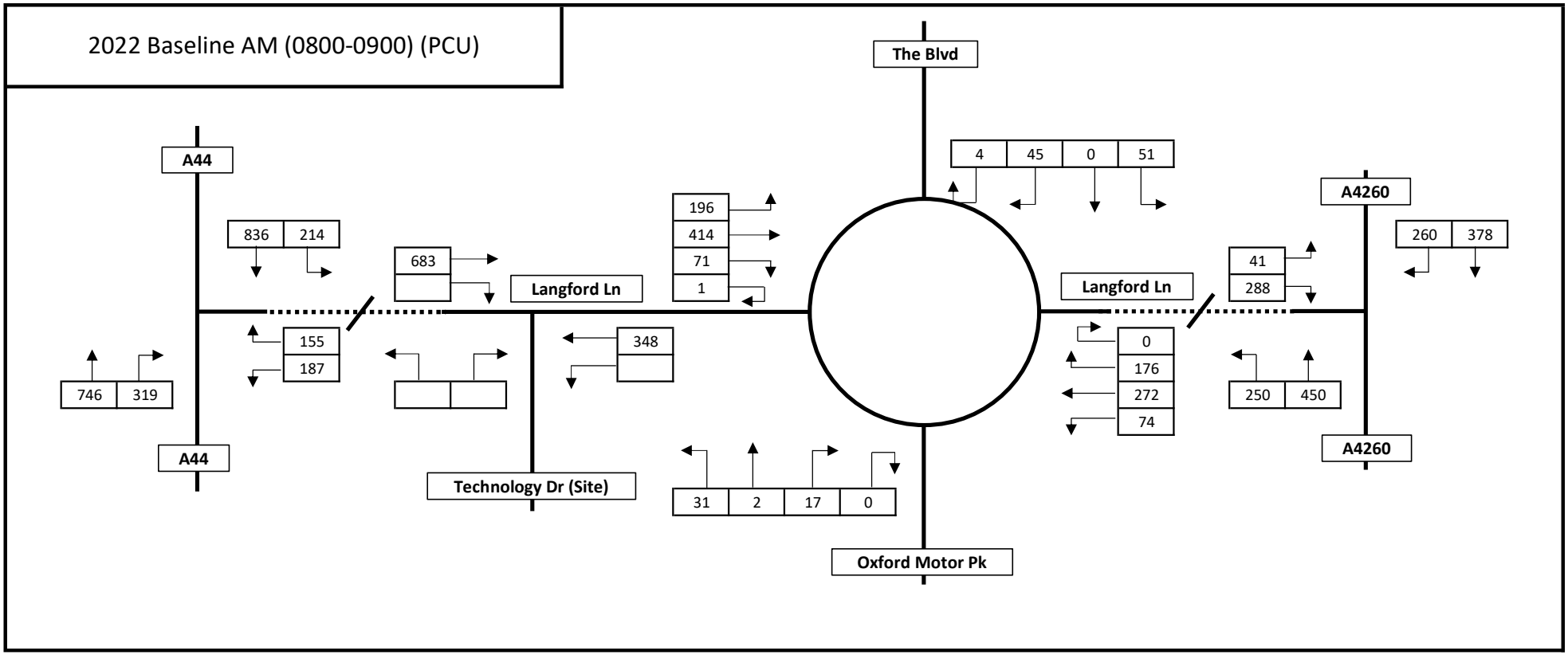
CLIENT: -

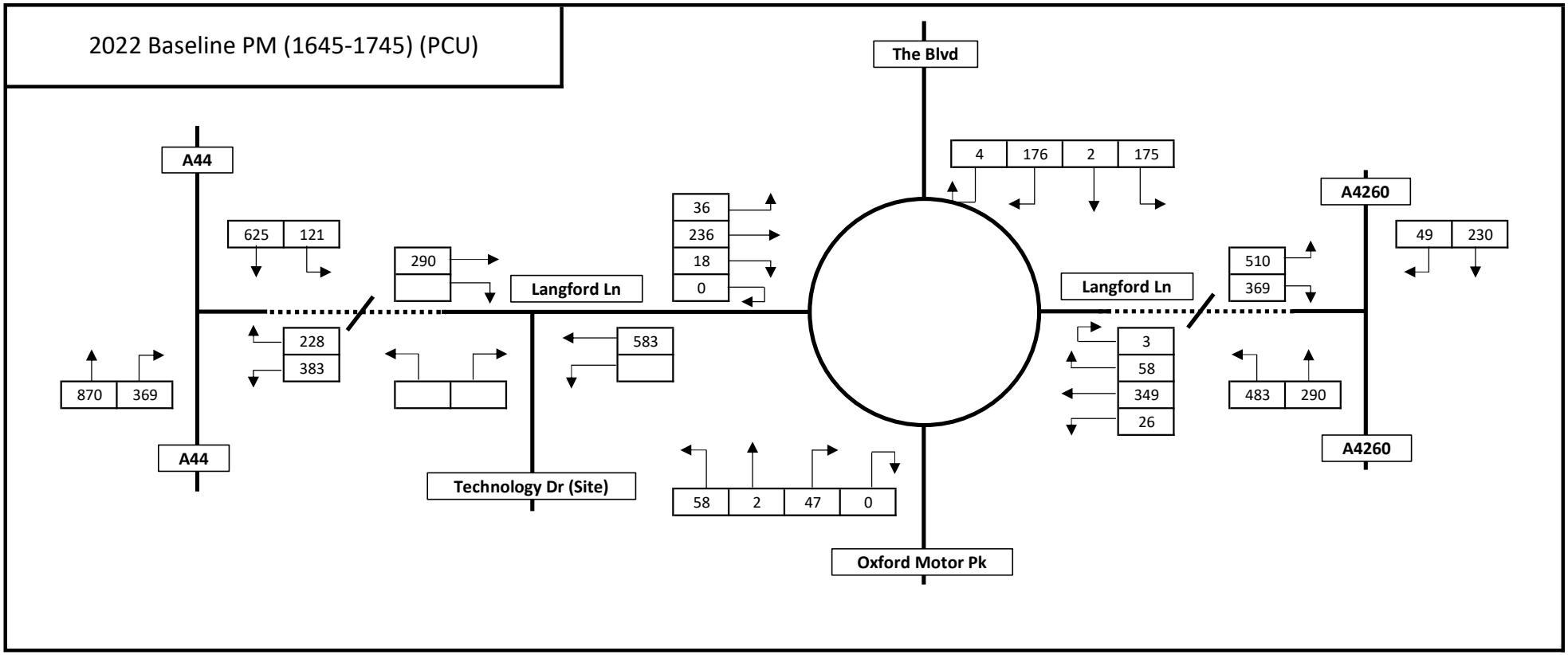
DRAWING TITLE:
Swept Path Analysis
12m Rigid Truck
Building 11

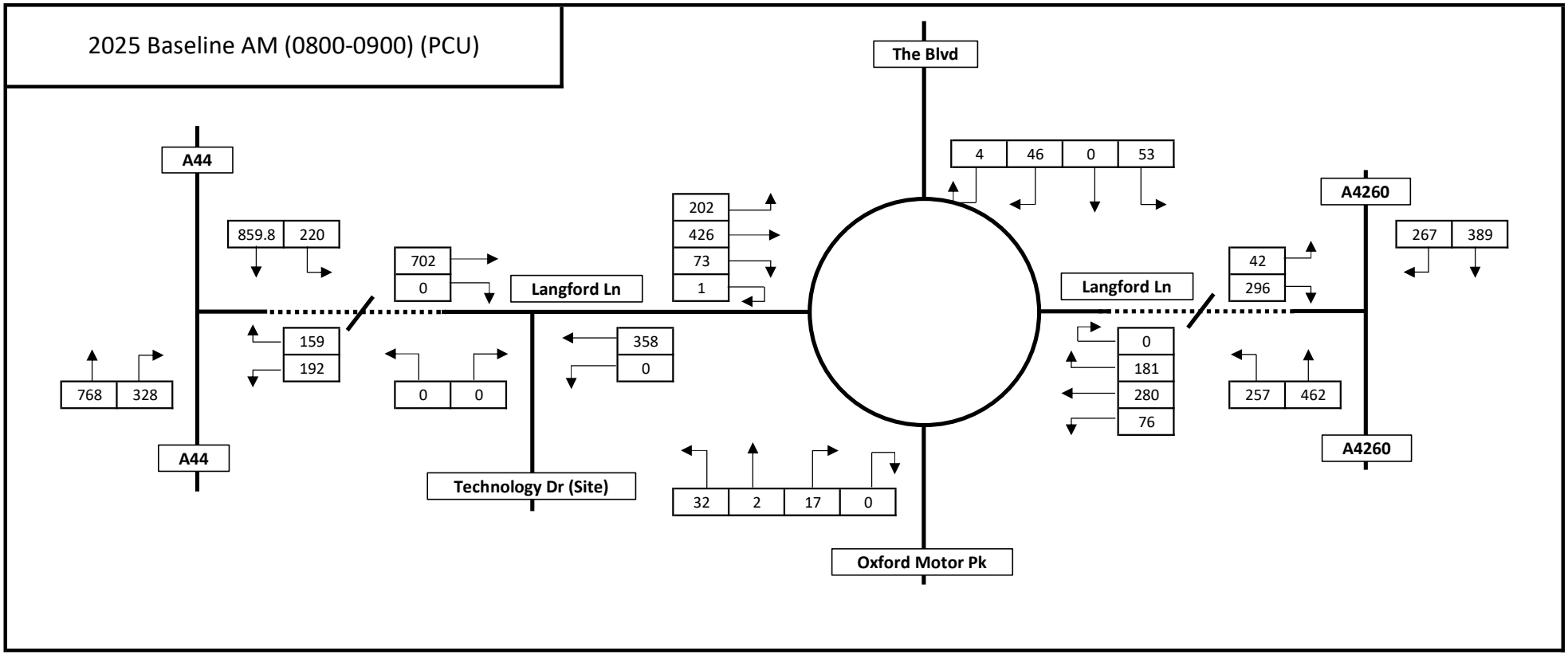
vectos. | PART OF SLR
3rd Floor, Brew House, Jacob Street, Bristol, BS2 0EQ
t: 0117 203 5240 e: enquiries@vectos.co.uk

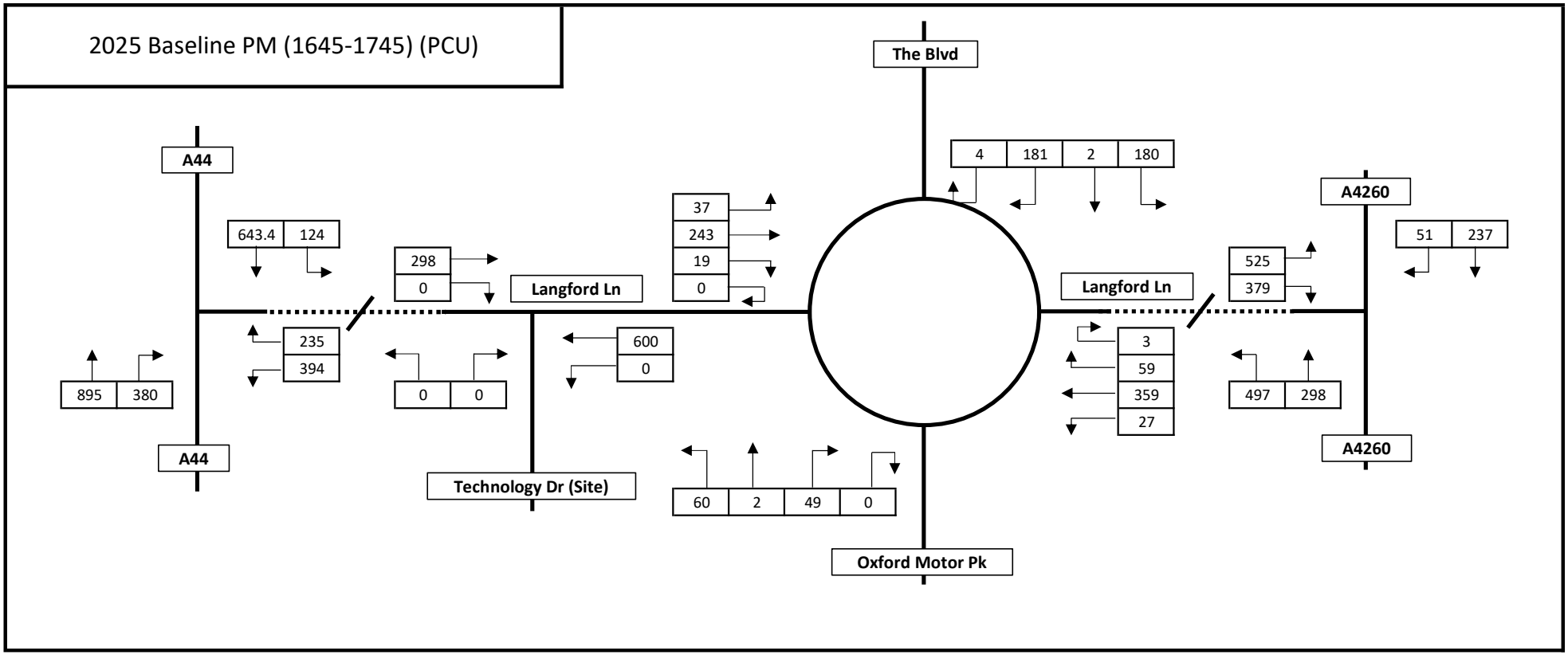
DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
LJ	FC	20.01.23	1:250 @ A3	226698B_PD01_AT08	A

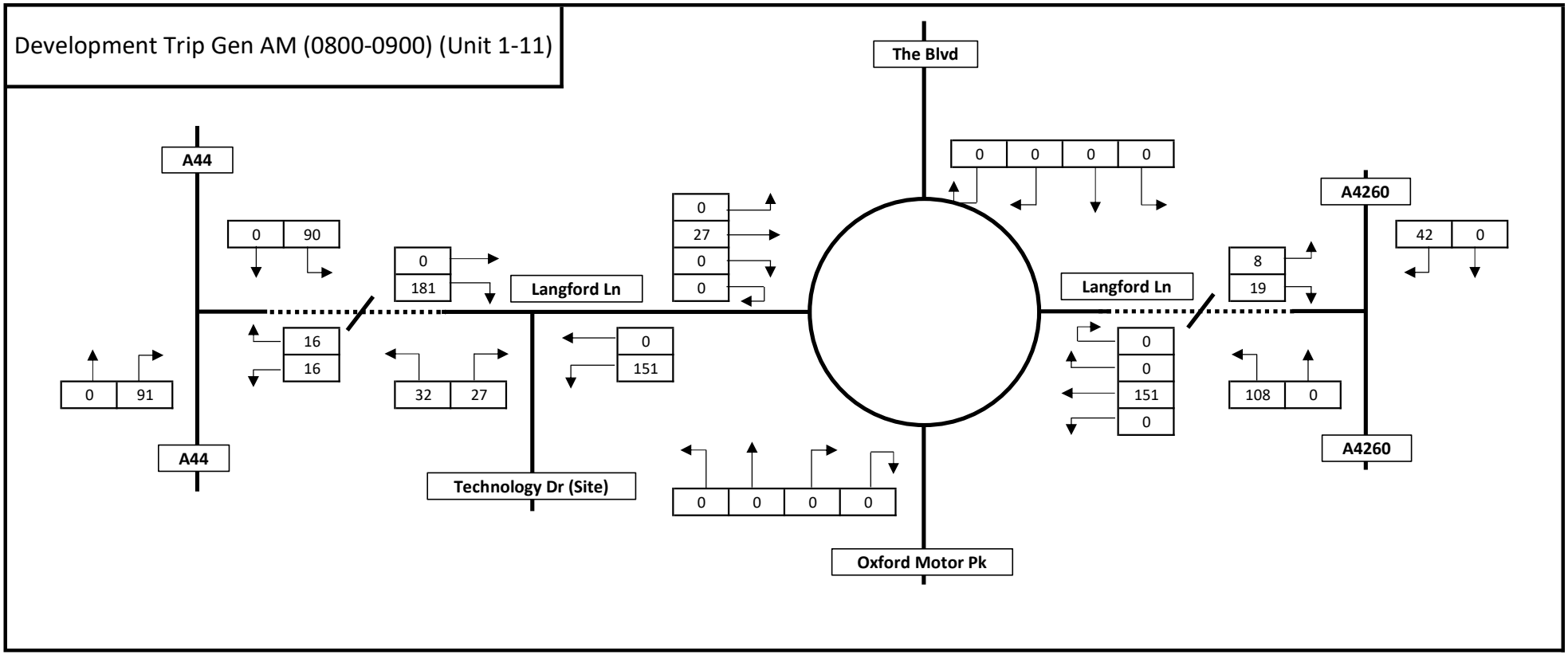
Appendix C

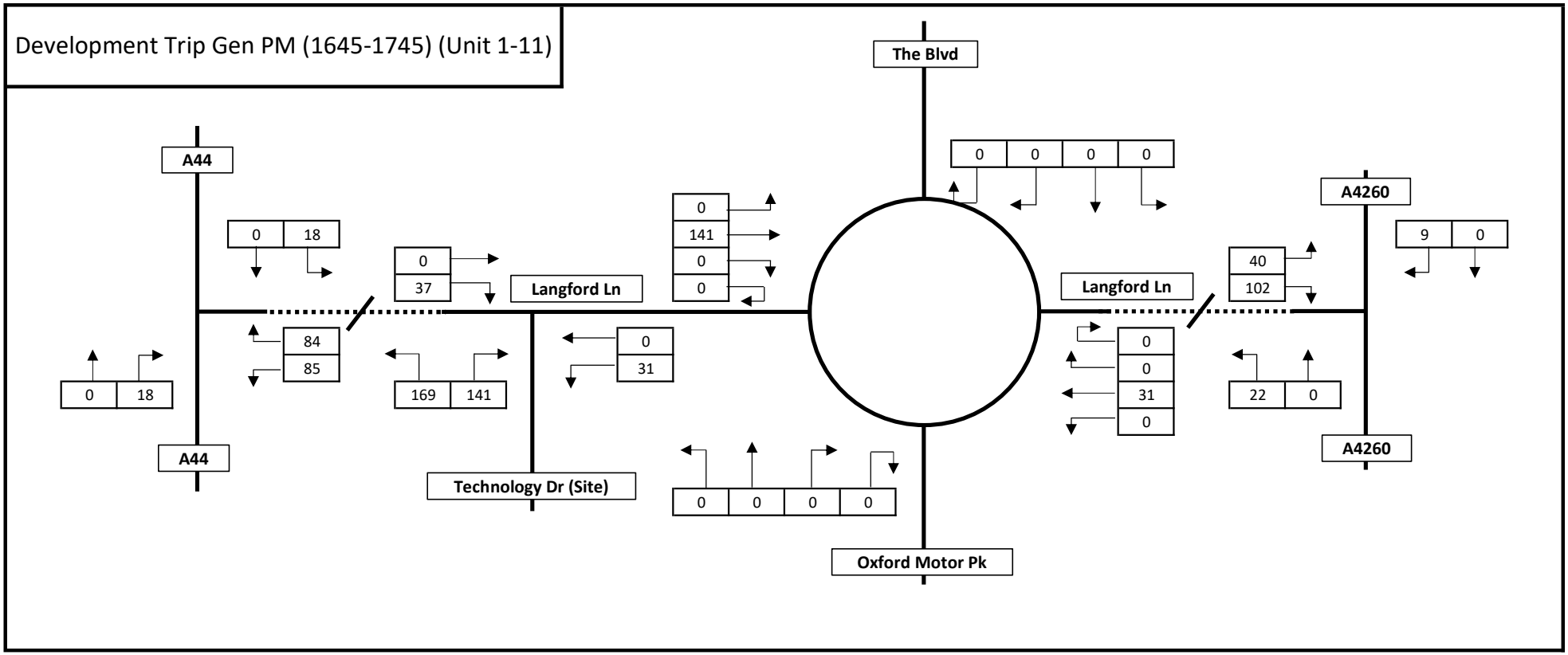

2022 Baseline AM (0800-0900) (PCU)
The Blvd
A44
A44
A4260
A4260
Langford Ln
Langford Ln
Technology Dr (Site)
Oxford Motor Pk
4
45
0
51
836
214
683
196
414
71
1
41
288
260
378
155
187
348
746
319
0
176
272
74
250
450
31
2
17
0

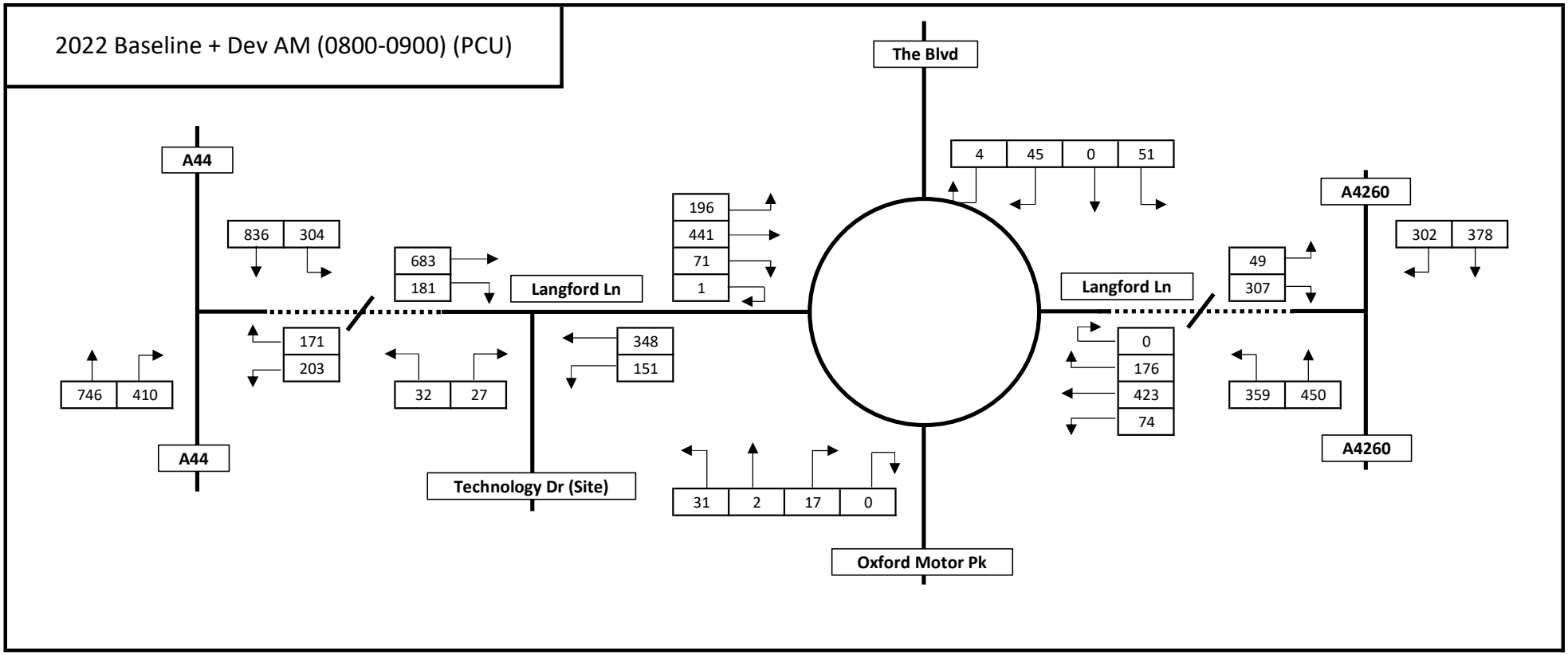

2022 Baseline PM (1645-1745) (PCU)
The Blvd
A44
625
121
290
Langford Ln
36
236
18
0
4
176
2
175
A4260
49
230
510
369
Langford Ln
228
383
583
3
58
349
26
870
369
483
290
A44
A4260
Technology Dr (Site)
58
2
47
0
Oxford Motor Pk

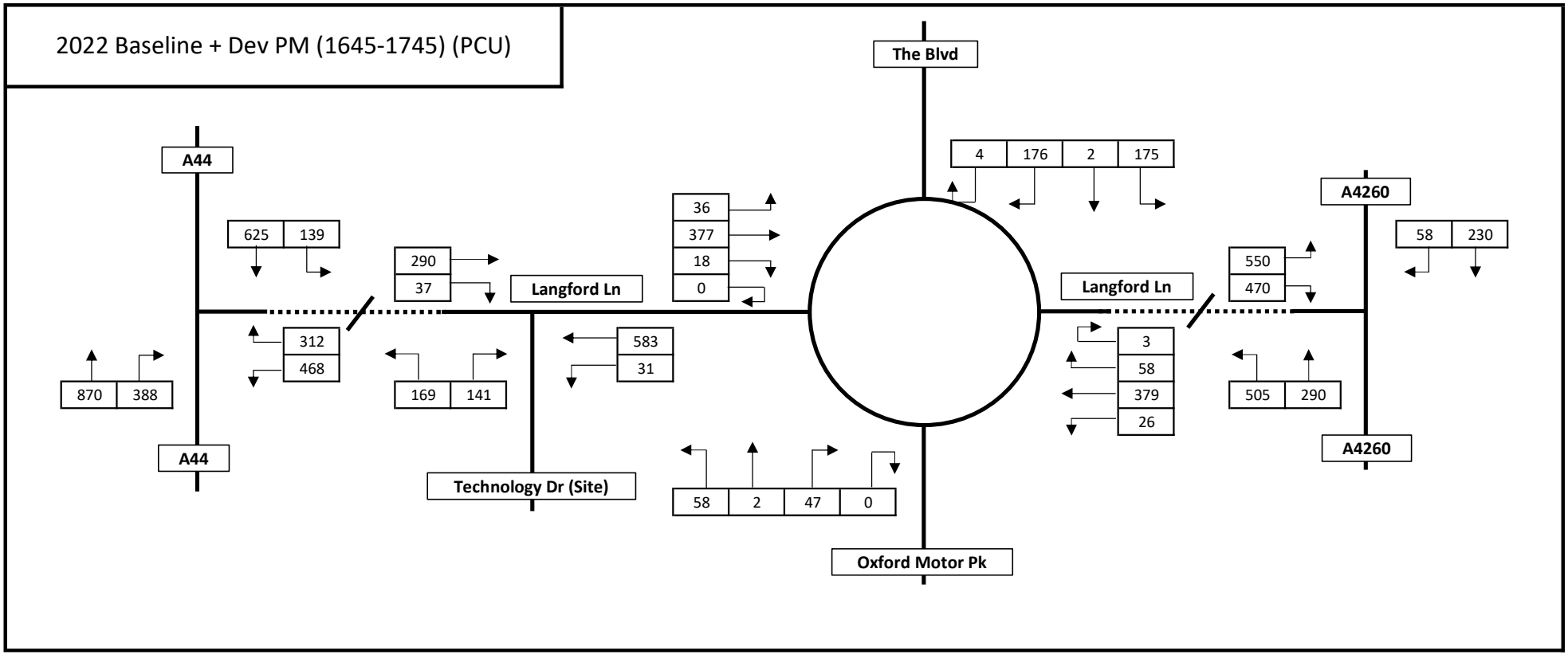

2025 Baseline AM (0800-0900) (PCU)
The Blvd
A44
A44
A4260
A4260
Langford Ln
Langford Ln
Technology Dr (Site)
Oxford Motor Pk
4
46
0
53
859.8
220
702
0
202
426
73
1
42
296
267
389
159
192
0
0
358
0
768
328
0
181
280
76
257
462
32
2
17
0

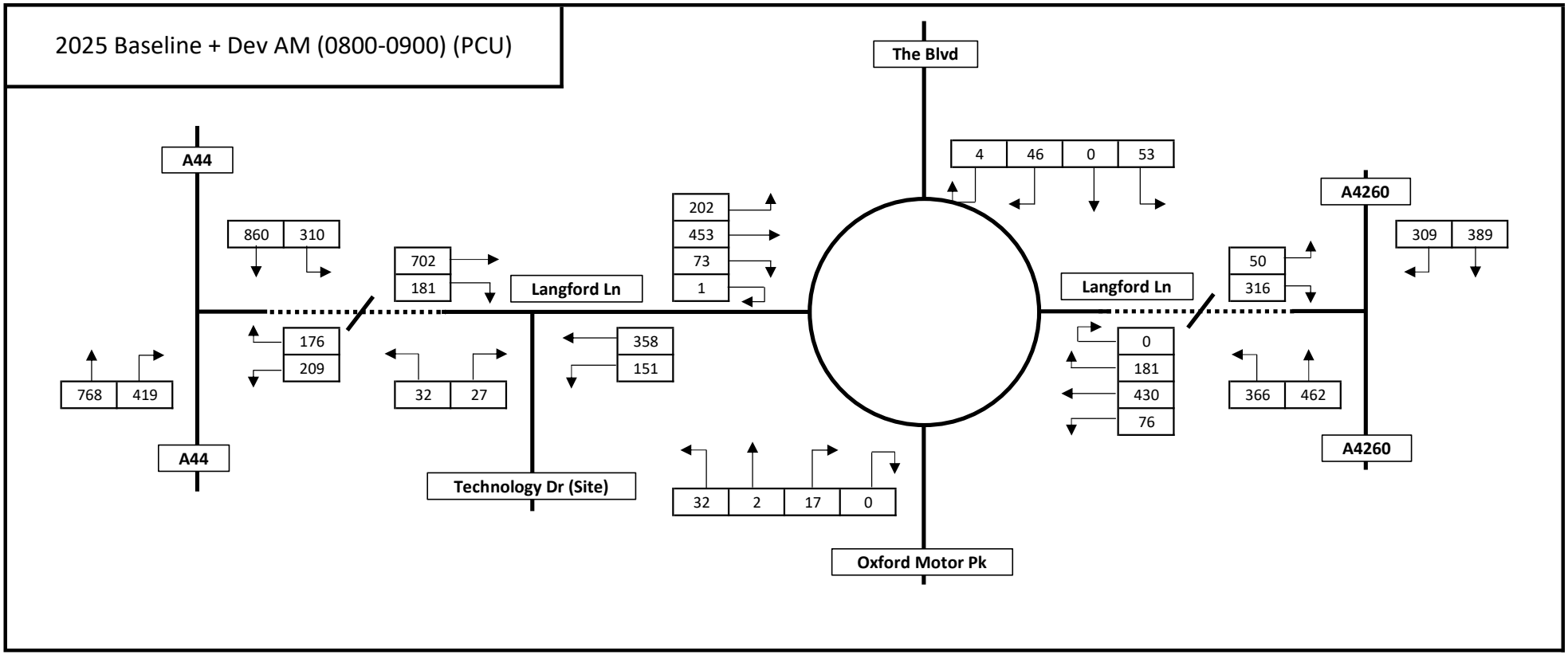

2025 Baseline PM (1645-1745) (PCU)
The Blvd
A44
643.4
124
298
0
Langford Ln
37
243
19
0
4
181
2
180
A4260
51
237
525
379
Langford Ln
235
394
600
0
3
59
359
27
895
380
0
0
497
298
A44
A4260
Technology Dr (Site)
60
2
49
0
Oxford Motor Pk

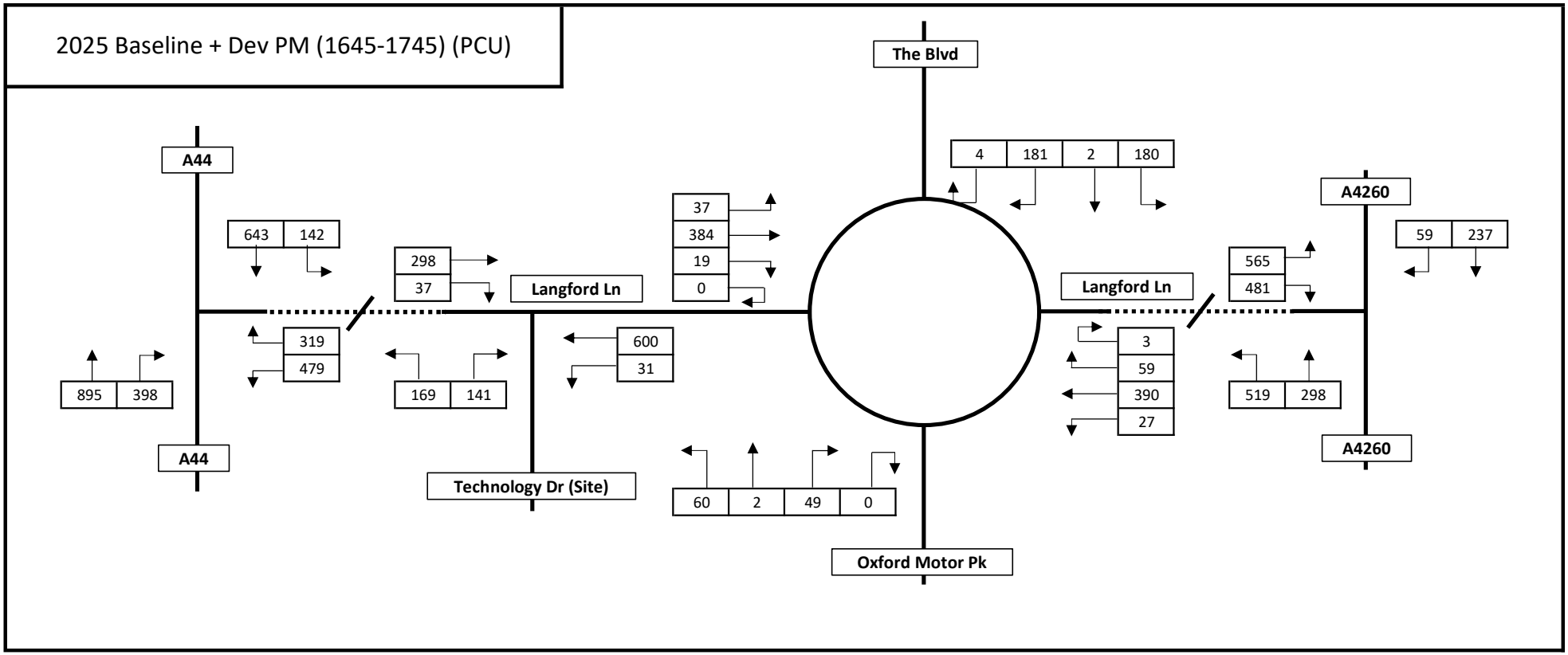

Development Trip Gen AM (0800-0900) (Unit 1-11)
The Blvd
A44
A44
A4260
A4260
Langford Ln
Langford Ln
Technology Dr (Site)
Oxford Motor Pk
0 90
0 91
0 181
16 16
32 27
0 151
0 27 0 0
0 0 0 0
0 0 151 0
8 19
108 0
42 0
0 0 0 0


Development Trip Gen PM (1645-1745) (Unit 1-11)
The Blvd
A44
A44
Langford Ln
Langford Ln
Technology Dr (Site)
Oxford Motor Pk
A4260
A4260
0 18
0 18
0 37
84 85
169 141
0 31
0 141 0 0
0 0 0 0
0 0 0 0
0 0 31 0
40 102
22 0
9 0


2022 Baseline + Dev AM (0800-0900) (PCU)
The Blvd
A44
A44
A4260
A4260
Langford Ln
Langford Ln
Technology Dr (Site)
Oxford Motor Pk
836
304
683
181
196
441
71
1
4
45
0
51
49
307
302
378
171
203
348
151
746
410
32
27
0
176
423
74
359
450
31
2
17
0


2022 Baseline + Dev PM (1645-1745) (PCU)
The Blvd
A44
625
139
290
37
Langford Ln
36
377
18
0
4
176
2
175
A4260
58
230
550
470
Langford Ln
312
468
583
31
3
58
379
26
870
388
169
141
505
290
A44
A4260
Technology Dr (Site)
58
2
47
0
Oxford Motor Pk


2025 Baseline + Dev AM (0800-0900) (PCU)
The Blvd
A44
A44
A4260
A4260
Langford Ln
Langford Ln
Technology Dr (Site)
Oxford Motor Pk
4
46
0
53
860
310
702
181
202
453
73
1
50
316
309
389
176
209
358
151
768
419
32
27
0
181
430
76
366
462
32
2
17
0


2025 Baseline + Dev PM (1645-1745) (PCU)
The Blvd
A44
643
142
298
37
Langford Ln
37
384
19
0
4
181
2
180
A4260
59
237
565
481
Langford Ln
319
479
895
398
169
141
600
31
3
59
390
27
519
298
A44
A4260
Technology Dr (Site)
60
2
49
0
Oxford Motor Pk

Appendix D

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.2.1013

Filename: 226698B-Langford Ln The Blvd-V1.j9
Path: P:\Projects\220000\226698B - OTP Units 8 to 11\Technical\B - Transport Assessment\Modelling
Report generation date: 08/03/2023 14:59:54

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2022					
1 - The Blvd	0.1	3.38	0.09	0.4	3.52	0.28
2 - Langford Lane (E)	0.6	3.59	0.36	0.5	3.45	0.31
3 - Oxford Motor Park	0.0	2.99	0.04	0.1	3.18	0.09
4 - Langford Lane (W)	0.7	3.51	0.42	0.2	2.40	0.17
	2025					
1 - The Blvd	0.1	3.42	0.09	0.4	3.58	0.28
2 - Langford Lane (E)	0.6	3.66	0.37	0.5	3.51	0.32
3 - Oxford Motor Park	0.0	3.02	0.04	0.1	3.22	0.10
4 - Langford Lane (W)	0.8	3.60	0.43	0.2	2.42	0.18
	2022+Dev					
1 - The Blvd	0.1	3.44	0.09	0.4	3.89	0.30
2 - Langford Lane (E)	0.9	4.26	0.46	0.5	3.56	0.33
3 - Oxford Motor Park	0.0	3.25	0.05	0.1	3.24	0.10
4 - Langford Lane (W)	0.8	3.61	0.43	0.3	2.64	0.25
	2025+Dev					
1 - The Blvd	0.1	3.48	0.09	0.4	3.97	0.31
2 - Langford Lane (E)	0.9	4.35	0.47	0.5	3.62	0.34
3 - Oxford Motor Park	0.1	3.28	0.05	0.1	3.28	0.10
4 - Langford Lane (W)	0.8	3.71	0.45	0.4	2.66	0.26

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	12/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\taylor.davis
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				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 segment length (min)	Run automatically	Relationship type	Relationship
D1	2022	AM	ONE HOUR	07:45	09:15	15	✓		
D2	2022	PM	ONE HOUR	16:30	18:00	15	✓		
D3	2025	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*1.0287
D4	2025	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2*1.0292
D5	Development	AM	ONE HOUR	07:45	09:15	15			
D6	Development	PM	ONE HOUR	16:30	18:00	15			
D7	2022+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1+D5
D8	2022+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2+D6
D9	2025+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5
D10	2025+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D4+D6

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	The Blvd	
2	Langford Lane (E)	
3	Oxford Motor Park	
4	Langford Lane (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - The Blvd	4.60	5.90	3.8	19.3	40.0	18.7	
2 - Langford Lane (E)	3.70	7.60	15.0	19.0	40.0	42.0	
3 - Oxford Motor Park	3.50	7.80	24.1	14.8	40.0	64.8	
4 - Langford Lane (W)	4.00	6.80	20.0	55.8	40.0	14.3	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - The Blvd	0.641	1641
2 - Langford Lane (E)	0.626	1688
3 - Oxford Motor Park	0.586	1629
4 - Langford Lane (W)	0.718	1953

The slope and intercept shown above include any corrections and adjustments.

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)	Run automatically
D1	2022	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	100	100.000
2 - Langford Lane (E)		ONE HOUR	✓	522	100.000
3 - Oxford Motor Park		ONE HOUR	✓	50	100.000
4 - Langford Lane (W)		ONE HOUR	✓	682	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	51	0	45
	2 - Langford Lane (E)	176	0	74	272
	3 - Oxford Motor Park	2	17	0	31
	4 - Langford Lane (W)	196	414	71	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	11	0	11
	2 - Langford Lane (E)	1	0	3	4
	3 - Oxford Motor Park	0	0	0	7
	4 - Langford Lane (W)	2	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.09	3.38	0.1	A	92	138
2 - Langford Lane (E)	0.36	3.59	0.6	A	479	718
3 - Oxford Motor Park	0.04	2.99	0.0	A	46	69
4 - Langford Lane (W)	0.42	3.51	0.7	A	626	939

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	75	19	378	1399	0.054	75	284	0.0	0.1	3.005	A
2 - Langford Lane (E)	393	98	91	1631	0.241	392	362	0.0	0.3	2.984	A
3 - Oxford Motor Park	38	9	374	1410	0.027	38	109	0.0	0.0	2.733	A
4 - Langford Lane (W)	513	128	149	1845	0.278	512	262	0.0	0.4	2.749	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	90	22	452	1351	0.067	90	340	0.1	0.1	3.153	A
2 - Langford Lane (E)	469	117	109	1620	0.290	469	433	0.3	0.4	3.216	A
3 - Oxford Motor Park	45	11	447	1367	0.033	45	130	0.0	0.0	2.837	A
4 - Langford Lane (W)	613	153	179	1824	0.336	613	314	0.4	0.5	3.025	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	110	28	553	1286	0.086	110	416	0.1	0.1	3.381	A
2 - Langford Lane (E)	575	144	133	1605	0.358	574	530	0.4	0.6	3.590	A
3 - Oxford Motor Park	55	14	548	1308	0.042	55	159	0.0	0.0	2.993	A
4 - Langford Lane (W)	751	188	219	1795	0.418	750	384	0.5	0.7	3.505	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	110	28	554	1286	0.086	110	416	0.1	0.1	3.383	A
2 - Langford Lane (E)	575	144	133	1605	0.358	575	531	0.6	0.6	3.593	A
3 - Oxford Motor Park	55	14	548	1308	0.042	55	160	0.0	0.0	2.994	A
4 - Langford Lane (W)	751	188	219	1795	0.418	751	384	0.7	0.7	3.511	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	90	22	453	1351	0.067	90	340	0.1	0.1	3.157	A
2 - Langford Lane (E)	469	117	109	1620	0.290	470	434	0.6	0.4	3.219	A
3 - Oxford Motor Park	45	11	448	1366	0.033	45	131	0.0	0.0	2.841	A
4 - Langford Lane (W)	613	153	179	1824	0.336	614	314	0.7	0.5	3.033	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	75	19	379	1398	0.054	75	285	0.1	0.1	3.009	A
2 - Langford Lane (E)	393	98	91	1631	0.241	393	363	0.4	0.3	2.991	A
3 - Oxford Motor Park	38	9	375	1409	0.027	38	109	0.0	0.0	2.737	A
4 - Langford Lane (W)	513	128	150	1845	0.278	514	263	0.5	0.4	2.758	A

2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically
D2	2022	PM	ONE HOUR	16:30	18:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	357	100.000
2 - Langford Lane (E)		ONE HOUR	✓	436	100.000
3 - Oxford Motor Park		ONE HOUR	✓	107	100.000
4 - Langford Lane (W)		ONE HOUR	✓	290	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	175	2	176
	2 - Langford Lane (E)	58	3	26	349
	3 - Oxford Motor Park	2	47	0	58
	4 - Langford Lane (W)	36	236	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	1	0	1
	2 - Langford Lane (E)	12	100	0	1
	3 - Oxford Motor Park	0	0	0	0
	4 - Langford Lane (W)	10	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.28	3.52	0.4	A	328	491
2 - Langford Lane (E)	0.31	3.45	0.5	A	400	600
3 - Oxford Motor Park	0.09	3.18	0.1	A	98	147
4 - Langford Lane (W)	0.17	2.40	0.2	A	266	399

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	269	67	228	1495	0.180	268	75	0.0	0.2	2.962	A
2 - Langford Lane (E)	328	82	150	1594	0.206	327	346	0.0	0.3	2.913	A
3 - Oxford Motor Park	81	20	443	1370	0.059	80	35	0.0	0.1	2.791	A
4 - Langford Lane (W)	218	55	86	1891	0.115	218	437	0.0	0.1	2.211	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	321	80	273	1466	0.219	321	90	0.2	0.3	3.174	A
2 - Langford Lane (E)	392	98	180	1576	0.249	392	414	0.3	0.3	3.120	A
3 - Oxford Motor Park	96	24	530	1319	0.073	96	41	0.1	0.1	2.944	A
4 - Langford Lane (W)	261	65	102	1879	0.139	261	524	0.1	0.2	2.286	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	393	98	334	1426	0.276	393	110	0.3	0.4	3.514	A
2 - Langford Lane (E)	480	120	220	1550	0.310	480	507	0.3	0.5	3.448	A
3 - Oxford Motor Park	118	29	649	1249	0.094	118	51	0.1	0.1	3.182	A
4 - Langford Lane (W)	319	80	125	1862	0.171	319	641	0.2	0.2	2.397	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	393	98	335	1426	0.276	393	110	0.4	0.4	3.517	A
2 - Langford Lane (E)	480	120	220	1550	0.310	480	508	0.5	0.5	3.451	A
3 - Oxford Motor Park	118	29	650	1248	0.094	118	51	0.1	0.1	3.183	A
4 - Langford Lane (W)	319	80	126	1862	0.171	319	642	0.2	0.2	2.397	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	321	80	273	1466	0.219	321	90	0.4	0.3	3.179	A
2 - Langford Lane (E)	392	98	180	1575	0.249	392	415	0.5	0.3	3.123	A
3 - Oxford Motor Park	96	24	531	1318	0.073	96	41	0.1	0.1	2.946	A
4 - Langford Lane (W)	261	65	103	1879	0.139	261	525	0.2	0.2	2.288	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	269	67	229	1494	0.180	269	75	0.3	0.2	2.969	A
2 - Langford Lane (E)	328	82	151	1594	0.206	329	347	0.3	0.3	2.920	A
3 - Oxford Motor Park	81	20	445	1369	0.059	81	35	0.1	0.1	2.796	A
4 - Langford Lane (W)	218	55	86	1891	0.115	218	439	0.2	0.1	2.214	A

2025, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D3	2025	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*1.0287

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	103	100.000
2 - Langford Lane (E)		ONE HOUR	✓	537	100.000
3 - Oxford Motor Park		ONE HOUR	✓	51	100.000
4 - Langford Lane (W)		ONE HOUR	✓	702	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	52	0	46
	2 - Langford Lane (E)	181	0	76	280
	3 - Oxford Motor Park	2	17	0	32
	4 - Langford Lane (W)	202	426	73	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	11	0	11
	2 - Langford Lane (E)	1	0	3	4
	3 - Oxford Motor Park	0	0	0	7
	4 - Langford Lane (W)	2	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.09	3.42	0.1	A	94	142
2 - Langford Lane (E)	0.37	3.66	0.6	A	493	739
3 - Oxford Motor Park	0.04	3.02	0.0	A	47	71
4 - Langford Lane (W)	0.43	3.60	0.8	A	644	966

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	77	19	388	1392	0.056	77	292	0.0	0.1	3.025	A
2 - Langford Lane (E)	404	101	93	1630	0.248	403	372	0.0	0.3	3.015	A
3 - Oxford Motor Park	39	10	384	1404	0.028	39	112	0.0	0.0	2.747	A
4 - Langford Lane (W)	528	132	154	1842	0.287	527	269	0.0	0.4	2.784	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	92	23	465	1343	0.069	92	349	0.1	0.1	3.180	A
2 - Langford Lane (E)	483	121	112	1618	0.298	482	445	0.3	0.4	3.259	A
3 - Oxford Motor Park	46	12	460	1360	0.034	46	134	0.0	0.0	2.856	A
4 - Langford Lane (W)	631	158	184	1820	0.346	630	322	0.4	0.5	3.079	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	113	28	569	1276	0.089	113	428	0.1	0.1	3.420	A
2 - Langford Lane (E)	591	148	137	1602	0.369	591	545	0.4	0.6	3.657	A
3 - Oxford Motor Park	57	14	563	1299	0.044	57	164	0.0	0.0	3.019	A
4 - Langford Lane (W)	772	193	225	1791	0.431	772	395	0.5	0.8	3.595	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	113	28	570	1276	0.089	113	428	0.1	0.1	3.421	A
2 - Langford Lane (E)	591	148	137	1602	0.369	591	546	0.6	0.6	3.660	A
3 - Oxford Motor Park	57	14	564	1299	0.044	57	164	0.0	0.0	3.020	A
4 - Langford Lane (W)	772	193	225	1791	0.431	772	395	0.8	0.8	3.601	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	92	23	466	1342	0.069	93	350	0.1	0.1	3.185	A
2 - Langford Lane (E)	483	121	112	1618	0.298	483	446	0.6	0.4	3.266	A
3 - Oxford Motor Park	46	12	461	1359	0.034	46	134	0.0	0.0	2.857	A
4 - Langford Lane (W)	631	158	184	1820	0.347	632	323	0.8	0.5	3.090	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	77	19	390	1391	0.056	78	293	0.1	0.1	3.028	A
2 - Langford Lane (E)	404	101	94	1629	0.248	405	374	0.4	0.3	3.023	A
3 - Oxford Motor Park	39	10	386	1403	0.028	39	112	0.0	0.0	2.749	A
4 - Langford Lane (W)	528	132	154	1842	0.287	529	271	0.5	0.4	2.794	A

2025, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D4	2025	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2*1.0292

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	367	100.000
2 - Langford Lane (E)		ONE HOUR	✓	449	100.000
3 - Oxford Motor Park		ONE HOUR	✓	110	100.000
4 - Langford Lane (W)		ONE HOUR	✓	298	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	180	2	181
	2 - Langford Lane (E)	60	3	27	359
	3 - Oxford Motor Park	2	48	0	60
	4 - Langford Lane (W)	37	243	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	1	0	1
	2 - Langford Lane (E)	12	100	0	1
	3 - Oxford Motor Park	0	0	0	0
	4 - Langford Lane (W)	10	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.28	3.58	0.4	A	337	506
2 - Langford Lane (E)	0.32	3.51	0.5	A	412	618
3 - Oxford Motor Park	0.10	3.22	0.1	A	101	152
4 - Langford Lane (W)	0.18	2.42	0.2	A	274	411

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	277	69	235	1490	0.186	276	77	0.0	0.2	2.992	A
2 - Langford Lane (E)	338	84	154	1591	0.212	337	356	0.0	0.3	2.942	A
3 - Oxford Motor Park	83	21	456	1362	0.061	83	36	0.0	0.1	2.813	A
4 - Langford Lane (W)	225	56	88	1889	0.119	224	450	0.0	0.1	2.222	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	330	83	281	1461	0.226	330	92	0.2	0.3	3.215	A
2 - Langford Lane (E)	403	101	185	1572	0.257	403	426	0.3	0.4	3.160	A
3 - Oxford Motor Park	99	25	545	1310	0.076	99	43	0.1	0.1	2.973	A
4 - Langford Lane (W)	268	67	105	1877	0.143	268	539	0.1	0.2	2.300	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	405	101	344	1420	0.285	404	113	0.3	0.4	3.575	A
2 - Langford Lane (E)	494	124	226	1546	0.320	494	522	0.4	0.5	3.507	A
3 - Oxford Motor Park	121	30	668	1238	0.098	121	52	0.1	0.1	3.223	A
4 - Langford Lane (W)	329	82	129	1860	0.177	328	660	0.2	0.2	2.416	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	405	101	344	1420	0.285	405	113	0.4	0.4	3.578	A
2 - Langford Lane (E)	494	124	227	1546	0.320	494	522	0.5	0.5	3.510	A
3 - Oxford Motor Park	121	30	669	1237	0.098	121	52	0.1	0.1	3.224	A
4 - Langford Lane (W)	329	82	129	1860	0.177	329	661	0.2	0.2	2.416	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	330	83	281	1460	0.226	331	93	0.4	0.3	3.220	A
2 - Langford Lane (E)	403	101	185	1572	0.257	404	427	0.5	0.4	3.163	A
3 - Oxford Motor Park	99	25	547	1309	0.076	99	43	0.1	0.1	2.977	A
4 - Langford Lane (W)	268	67	106	1877	0.143	269	540	0.2	0.2	2.301	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	277	69	236	1490	0.186	277	78	0.3	0.2	2.999	A
2 - Langford Lane (E)	338	84	155	1591	0.212	338	357	0.4	0.3	2.951	A
3 - Oxford Motor Park	83	21	458	1361	0.061	83	36	0.1	0.1	2.816	A
4 - Langford Lane (W)	225	56	88	1889	0.119	225	452	0.2	0.1	2.223	A

2022+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D7	2022+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1+D5

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	100	100.000
2 - Langford Lane (E)		ONE HOUR	✓	673	100.000
3 - Oxford Motor Park		ONE HOUR	✓	50	100.000
4 - Langford Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	51	0	45
	2 - Langford Lane (E)	176	0	74	423
	3 - Oxford Motor Park	2	17	0	31
	4 - Langford Lane (W)	196	441	71	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	11	0	11
	2 - Langford Lane (E)	1	0	3	3
	3 - Oxford Motor Park	0	0	0	7
	4 - Langford Lane (W)	2	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.09	3.44	0.1	A	92	138
2 - Langford Lane (E)	0.46	4.26	0.9	A	618	926
3 - Oxford Motor Park	0.05	3.25	0.0	A	46	69
4 - Langford Lane (W)	0.43	3.61	0.8	A	651	976

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	75	19	398	1386	0.054	75	284	0.0	0.1	3.034	A
2 - Langford Lane (E)	507	127	91	1631	0.311	505	382	0.0	0.5	3.260	A
3 - Oxford Motor Park	38	9	487	1344	0.028	38	109	0.0	0.0	2.871	A
4 - Langford Lane (W)	534	133	149	1845	0.289	532	375	0.0	0.4	2.787	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	90	22	476	1336	0.067	90	340	0.1	0.1	3.192	A
2 - Langford Lane (E)	605	151	109	1620	0.373	604	457	0.5	0.6	3.620	A
3 - Oxford Motor Park	45	11	583	1288	0.035	45	130	0.0	0.0	3.018	A
4 - Langford Lane (W)	637	159	179	1824	0.349	637	449	0.4	0.5	3.085	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	110	28	583	1267	0.087	110	416	0.1	0.1	3.437	A
2 - Langford Lane (E)	741	185	133	1605	0.462	740	560	0.6	0.9	4.248	A
3 - Oxford Motor Park	55	14	714	1211	0.045	55	159	0.0	0.0	3.245	A
4 - Langford Lane (W)	781	195	219	1795	0.435	780	550	0.5	0.8	3.605	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	110	28	584	1267	0.087	110	416	0.1	0.1	3.438	A
2 - Langford Lane (E)	741	185	133	1605	0.462	741	560	0.9	0.9	4.258	A
3 - Oxford Motor Park	55	14	715	1210	0.045	55	160	0.0	0.0	3.246	A
4 - Langford Lane (W)	781	195	219	1795	0.435	781	551	0.8	0.8	3.611	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	90	22	477	1335	0.067	90	340	0.1	0.1	3.195	A
2 - Langford Lane (E)	605	151	109	1620	0.374	606	458	0.9	0.6	3.631	A
3 - Oxford Motor Park	45	11	584	1287	0.035	45	131	0.0	0.0	3.023	A
4 - Langford Lane (W)	637	159	179	1824	0.349	638	450	0.8	0.5	3.095	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	75	19	399	1385	0.054	75	285	0.1	0.1	3.037	A
2 - Langford Lane (E)	507	127	91	1631	0.311	507	384	0.6	0.5	3.274	A
3 - Oxford Motor Park	38	9	489	1343	0.028	38	109	0.0	0.0	2.875	A
4 - Langford Lane (W)	534	133	150	1845	0.289	534	377	0.5	0.4	2.797	A

2022+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D8	2022+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2+D6

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	357	100.000
2 - Langford Lane (E)		ONE HOUR	✓	467	100.000
3 - Oxford Motor Park		ONE HOUR	✓	107	100.000
4 - Langford Lane (W)		ONE HOUR	✓	431	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	175	2	176
	2 - Langford Lane (E)	58	3	26	380
	3 - Oxford Motor Park	2	47	0	58
	4 - Langford Lane (W)	36	377	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	1	0	1
	2 - Langford Lane (E)	12	100	0	1
	3 - Oxford Motor Park	0	0	0	0
	4 - Langford Lane (W)	10	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.30	3.89	0.4	A	328	491
2 - Langford Lane (E)	0.33	3.56	0.5	A	429	643
3 - Oxford Motor Park	0.10	3.24	0.1	A	98	147
4 - Langford Lane (W)	0.25	2.64	0.3	A	395	593

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	269	67	334	1427	0.188	268	75	0.0	0.2	3.133	A
2 - Langford Lane (E)	352	88	150	1594	0.221	350	452	0.0	0.3	2.963	A
3 - Oxford Motor Park	81	20	466	1356	0.059	80	35	0.0	0.1	2.821	A
4 - Langford Lane (W)	324	81	86	1891	0.172	324	461	0.0	0.2	2.338	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	321	80	400	1385	0.232	321	90	0.2	0.3	3.416	A
2 - Langford Lane (E)	420	105	180	1576	0.266	419	541	0.3	0.4	3.190	A
3 - Oxford Motor Park	96	24	558	1302	0.074	96	41	0.1	0.1	2.984	A
4 - Langford Lane (W)	387	97	102	1879	0.206	387	552	0.2	0.3	2.458	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	393	98	490	1327	0.296	393	110	0.3	0.4	3.889	A
2 - Langford Lane (E)	514	129	220	1550	0.332	514	662	0.4	0.5	3.555	A
3 - Oxford Motor Park	118	29	683	1229	0.096	118	51	0.1	0.1	3.239	A
4 - Langford Lane (W)	475	119	125	1863	0.255	474	675	0.3	0.3	2.641	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	393	98	490	1327	0.296	393	110	0.4	0.4	3.893	A
2 - Langford Lane (E)	514	129	220	1550	0.332	514	663	0.5	0.5	3.559	A
3 - Oxford Motor Park	118	29	684	1228	0.096	118	51	0.1	0.1	3.240	A
4 - Langford Lane (W)	475	119	126	1862	0.255	475	676	0.3	0.3	2.641	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	321	80	400	1384	0.232	321	90	0.4	0.3	3.421	A
2 - Langford Lane (E)	420	105	180	1575	0.267	420	542	0.5	0.4	3.194	A
3 - Oxford Motor Park	96	24	559	1302	0.074	96	41	0.1	0.1	2.986	A
4 - Langford Lane (W)	387	97	103	1879	0.206	388	553	0.3	0.3	2.461	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	269	67	335	1426	0.188	269	75	0.3	0.2	3.144	A
2 - Langford Lane (E)	352	88	151	1594	0.221	352	454	0.4	0.3	2.970	A
3 - Oxford Motor Park	81	20	468	1355	0.059	81	35	0.1	0.1	2.824	A
4 - Langford Lane (W)	324	81	86	1891	0.172	325	463	0.3	0.2	2.343	A

2025+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D9	2025+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	103	100.000
2 - Langford Lane (E)		ONE HOUR	✓	688	100.000
3 - Oxford Motor Park		ONE HOUR	✓	51	100.000
4 - Langford Lane (W)		ONE HOUR	✓	729	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	52	0	46
	2 - Langford Lane (E)	181	0	76	431
	3 - Oxford Motor Park	2	17	0	32
	4 - Langford Lane (W)	202	453	73	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	11	0	11
	2 - Langford Lane (E)	1	0	3	3
	3 - Oxford Motor Park	0	0	0	7
	4 - Langford Lane (W)	2	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.09	3.48	0.1	A	94	142
2 - Langford Lane (E)	0.47	4.35	0.9	A	631	947
3 - Oxford Motor Park	0.05	3.28	0.1	A	47	71
4 - Langford Lane (W)	0.45	3.71	0.8	A	669	1003

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	77	19	409	1379	0.056	77	292	0.0	0.1	3.056	A
2 - Langford Lane (E)	518	129	93	1630	0.318	516	392	0.0	0.5	3.298	A
3 - Oxford Motor Park	39	10	498	1338	0.029	39	112	0.0	0.0	2.888	A
4 - Langford Lane (W)	549	137	154	1842	0.298	547	383	0.0	0.4	2.826	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	92	23	489	1327	0.070	92	349	0.1	0.1	3.220	A
2 - Langford Lane (E)	618	155	112	1618	0.382	618	470	0.5	0.6	3.676	A
3 - Oxford Motor Park	46	12	596	1280	0.036	46	134	0.0	0.0	3.040	A
4 - Langford Lane (W)	655	164	184	1821	0.360	654	458	0.4	0.6	3.141	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	113	28	599	1257	0.090	113	428	0.1	0.1	3.477	A
2 - Langford Lane (E)	757	189	137	1602	0.473	756	575	0.6	0.9	4.344	A
3 - Oxford Motor Park	57	14	729	1202	0.047	57	164	0.0	0.1	3.275	A
4 - Langford Lane (W)	802	201	225	1791	0.448	801	561	0.6	0.8	3.700	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	113	28	599	1257	0.090	113	428	0.1	0.1	3.479	A
2 - Langford Lane (E)	757	189	137	1602	0.473	757	576	0.9	0.9	4.354	A
3 - Oxford Motor Park	57	14	730	1201	0.047	57	164	0.1	0.1	3.277	A
4 - Langford Lane (W)	802	201	225	1791	0.448	802	562	0.8	0.8	3.707	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	92	23	490	1327	0.070	93	350	0.1	0.1	3.225	A
2 - Langford Lane (E)	618	155	112	1618	0.382	620	471	0.9	0.6	3.688	A
3 - Oxford Motor Park	46	12	597	1279	0.036	46	134	0.1	0.0	3.045	A
4 - Langford Lane (W)	655	164	184	1820	0.360	656	459	0.8	0.6	3.150	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	77	19	410	1378	0.056	78	293	0.1	0.1	3.061	A
2 - Langford Lane (E)	518	129	94	1629	0.318	519	394	0.6	0.5	3.313	A
3 - Oxford Motor Park	39	10	500	1336	0.029	39	112	0.0	0.0	2.891	A
4 - Langford Lane (W)	549	137	154	1842	0.298	549	384	0.6	0.4	2.838	A

2025+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Langford Lane/The Blvd Roundabout	Standard Roundabout		1, 2, 3, 4	3.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D10	2025+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D4+D6

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - The Blvd		ONE HOUR	✓	367	100.000
2 - Langford Lane (E)		ONE HOUR	✓	480	100.000
3 - Oxford Motor Park		ONE HOUR	✓	110	100.000
4 - Langford Lane (W)		ONE HOUR	✓	439	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	4	180	2	181
	2 - Langford Lane (E)	60	3	27	390
	3 - Oxford Motor Park	2	48	0	60
	4 - Langford Lane (W)	37	384	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - The Blvd	2 - Langford Lane (E)	3 - Oxford Motor Park	4 - Langford Lane (W)
From	1 - The Blvd	0	1	0	1
	2 - Langford Lane (E)	12	100	0	1
	3 - Oxford Motor Park	0	0	0	0
	4 - Langford Lane (W)	10	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - The Blvd	0.31	3.97	0.4	A	337	506
2 - Langford Lane (E)	0.34	3.62	0.5	A	440	660
3 - Oxford Motor Park	0.10	3.28	0.1	A	101	152
4 - Langford Lane (W)	0.26	2.66	0.4	A	403	605

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	277	69	341	1422	0.194	276	77	0.0	0.2	3.166	A
2 - Langford Lane (E)	361	90	154	1591	0.227	360	462	0.0	0.3	2.992	A
3 - Oxford Motor Park	83	21	479	1349	0.061	83	36	0.0	0.1	2.843	A
4 - Langford Lane (W)	331	83	88	1889	0.175	330	473	0.0	0.2	2.351	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	330	83	408	1379	0.239	330	92	0.2	0.3	3.464	A
2 - Langford Lane (E)	431	108	185	1572	0.274	431	553	0.3	0.4	3.231	A
3 - Oxford Motor Park	99	25	573	1293	0.077	99	43	0.1	0.1	3.013	A
4 - Langford Lane (W)	395	99	105	1877	0.211	395	567	0.2	0.3	2.474	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	405	101	499	1321	0.306	404	113	0.3	0.4	3.964	A
2 - Langford Lane (E)	528	132	226	1546	0.342	528	677	0.4	0.5	3.619	A
3 - Oxford Motor Park	121	30	702	1218	0.100	121	52	0.1	0.1	3.282	A
4 - Langford Lane (W)	484	121	129	1860	0.260	484	694	0.3	0.4	2.665	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	405	101	500	1321	0.306	405	113	0.4	0.4	3.968	A
2 - Langford Lane (E)	528	132	227	1546	0.342	528	678	0.5	0.5	3.622	A
3 - Oxford Motor Park	121	30	703	1217	0.100	121	52	0.1	0.1	3.283	A
4 - Langford Lane (W)	484	121	129	1860	0.260	484	695	0.4	0.4	2.665	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	330	83	408	1379	0.240	331	93	0.4	0.3	3.468	A
2 - Langford Lane (E)	431	108	185	1572	0.274	432	554	0.5	0.4	3.238	A
3 - Oxford Motor Park	99	25	575	1292	0.077	99	43	0.1	0.1	3.016	A
4 - Langford Lane (W)	395	99	106	1877	0.211	395	568	0.4	0.3	2.476	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - The Blvd	277	69	342	1422	0.195	277	78	0.3	0.2	3.178	A
2 - Langford Lane (E)	361	90	155	1591	0.227	362	464	0.4	0.3	3.000	A
3 - Oxford Motor Park	83	21	481	1347	0.062	83	36	0.1	0.1	2.846	A
4 - Langford Lane (W)	331	83	88	1889	0.175	331	476	0.3	0.2	2.355	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: 226698B-Site Access Junction-V1.j9
Path: P:\Projects\220000\226698B - OTP Units 8 to 11\Technical\B - Transport Assessment\Modelling
Report generation date: 08/03/2023 14:57:26

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2022					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2025					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2022+Dev					
Stream B-C	0.1	6.86	0.06	0.7	13.56	0.41
Stream B-A	0.1	16.40	0.12	0.9	22.26	0.49
Stream C-AB	0.5	9.25	0.34	0.1	7.03	0.07
	2025+Dev					
Stream B-C	0.1	6.90	0.06	0.7	13.88	0.42
Stream B-A	0.1	16.84	0.12	1.0	23.12	0.50
Stream C-AB	0.5	9.32	0.34	0.1	7.10	0.07

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	12/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\taylor.davis
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				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 segment length (min)	Run automatically	Relationship type	Relationship
D1	2022	AM	ONE HOUR	07:45	09:15	15	✓		
D2	2022	PM	ONE HOUR	16:30	18:00	15	✓		
D3	2025	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*1.0287
D4	2025	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2*1.0292
D5	Development	AM	ONE HOUR	07:45	09:15	15			
D6	Development	PM	ONE HOUR	16:30	18:00	15			
D7	2022+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1+D5
D8	2022+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2+D6
D9	2025+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5
D10	2025+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D4+D6

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Langford Lane (E)		Major
B	Technology Drive		Minor
C	Langford 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 - Langford Lane (W)	6.85		✓	3.70	106.3	✓	6.00

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 - Technology Drive	One lane plus flare	10.00	10.00	6.20	5.00	4.50	✓	3.00	54	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	544	0.095	0.241	0.152	0.345
B-C	686	0.101	0.256	-	-
C-B	739	0.276	0.276	-	-

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)	Run automatically
D1	2022	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	348	100.000
B - Technology Drive		ONE HOUR	✓	0	100.000
C - Langford Lane (W)		ONE HOUR	✓	683	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	348
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	683	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.00	0.00	0.0	A	0	0
C-A					627	940
A-B					0	0
A-C					319	479

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	619	0.000	0	0.0	0.0	0.000	A
B-A	0	0	403	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1347	0.000	0	0.0	0.0	0.000	A
C-A	514	129			514				
A-B	0	0			0				
A-C	262	65			262				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	606	0.000	0	0.0	0.0	0.000	A
B-A	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1319	0.000	0	0.0	0.0	0.000	A
C-A	614	154			614				
A-B	0	0			0				
A-C	313	78			313				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	588	0.000	0	0.0	0.0	0.000	A
B-A	0	0	338	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1280	0.000	0	0.0	0.0	0.000	A
C-A	752	188			752				
A-B	0	0			0				
A-C	383	96			383				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	588	0.000	0	0.0	0.0	0.000	A
B-A	0	0	338	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1280	0.000	0	0.0	0.0	0.000	A
C-A	752	188			752				
A-B	0	0			0				
A-C	383	96			383				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	606	0.000	0	0.0	0.0	0.000	A
B-A	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1319	0.000	0	0.0	0.0	0.000	A
C-A	614	154			614				
A-B	0	0			0				
A-C	313	78			313				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	619	0.000	0	0.0	0.0	0.000	A
B-A	0	0	403	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1347	0.000	0	0.0	0.0	0.000	A
C-A	514	129			514				
A-B	0	0			0				
A-C	262	65			262				

2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically
D2	2022	PM	ONE HOUR	16:30	18:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	583	100.000
B - Technology Drive		ONE HOUR	✓	0	100.000
C - Langford Lane (W)		ONE HOUR	✓	290	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	583
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	290	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.00	0.00	0.0	A	0	0
C-A					266	399
A-B					0	0
A-C					535	802

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	574	0.000	0	0.0	0.0	0.000	A
B-A	0	0	405	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1249	0.000	0	0.0	0.0	0.000	A
C-A	218	55			218				
A-B	0	0			0				
A-C	439	110			439				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	552	0.000	0	0.0	0.0	0.000	A
B-A	0	0	378	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1201	0.000	0	0.0	0.0	0.000	A
C-A	261	65			261				
A-B	0	0			0				
A-C	524	131			524				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	522	0.000	0	0.0	0.0	0.000	A
B-A	0	0	341	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1136	0.000	0	0.0	0.0	0.000	A
C-A	319	80			319				
A-B	0	0			0				
A-C	642	160			642				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	522	0.000	0	0.0	0.0	0.000	A
B-A	0	0	341	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1136	0.000	0	0.0	0.0	0.000	A
C-A	319	80			319				
A-B	0	0			0				
A-C	642	160			642				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	552	0.000	0	0.0	0.0	0.000	A
B-A	0	0	378	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1201	0.000	0	0.0	0.0	0.000	A
C-A	261	65			261				
A-B	0	0			0				
A-C	524	131			524				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	574	0.000	0	0.0	0.0	0.000	A
B-A	0	0	405	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1249	0.000	0	0.0	0.0	0.000	A
C-A	218	55			218				
A-B	0	0			0				
A-C	439	110			439				

2025, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D3	2025	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*1.0287

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	358	100.000
B - Technology Drive		ONE HOUR	✓	0	100.000
C - Langford Lane (W)		ONE HOUR	✓	703	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	358
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	703	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.00	0.00	0.0	A	0	0
C-A					645	967
A-B					0	0
A-C					328	493

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	617	0.000	0	0.0	0.0	0.000	A
B-A	0	0	399	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1343	0.000	0	0.0	0.0	0.000	A
C-A	529	132			529				
A-B	0	0			0				
A-C	270	67			270				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	604	0.000	0	0.0	0.0	0.000	A
B-A	0	0	371	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1314	0.000	0	0.0	0.0	0.000	A
C-A	632	158			632				
A-B	0	0			0				
A-C	322	80			322				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	585	0.000	0	0.0	0.0	0.000	A
B-A	0	0	332	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1274	0.000	0	0.0	0.0	0.000	A
C-A	774	193			774				
A-B	0	0			0				
A-C	394	99			394				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	585	0.000	0	0.0	0.0	0.000	A
B-A	0	0	332	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1274	0.000	0	0.0	0.0	0.000	A
C-A	774	193			774				
A-B	0	0			0				
A-C	394	99			394				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	604	0.000	0	0.0	0.0	0.000	A
B-A	0	0	371	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1314	0.000	0	0.0	0.0	0.000	A
C-A	632	158			632				
A-B	0	0			0				
A-C	322	80			322				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	617	0.000	0	0.0	0.0	0.000	A
B-A	0	0	399	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1343	0.000	0	0.0	0.0	0.000	A
C-A	529	132			529				
A-B	0	0			0				
A-C	270	67			270				

2025, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D4	2025	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2*1.0292

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	600	100.000
B - Technology Drive		ONE HOUR	✓	0	100.000
C - Langford Lane (W)		ONE HOUR	✓	298	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	600
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	298	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.00	0.00	0.0	A	0	0
C-A					274	411
A-B					0	0
A-C					551	826

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	570	0.000	0	0.0	0.0	0.000	A
B-A	0	0	401	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1242	0.000	0	0.0	0.0	0.000	A
C-A	225	56			225				
A-B	0	0			0				
A-C	452	113			452				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	548	0.000	0	0.0	0.0	0.000	A
B-A	0	0	373	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1193	0.000	0	0.0	0.0	0.000	A
C-A	268	67			268				
A-B	0	0			0				
A-C	539	135			539				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	517	0.000	0	0.0	0.0	0.000	A
B-A	0	0	335	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1125	0.000	0	0.0	0.0	0.000	A
C-A	329	82			329				
A-B	0	0			0				
A-C	661	165			661				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	517	0.000	0	0.0	0.0	0.000	A
B-A	0	0	335	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1125	0.000	0	0.0	0.0	0.000	A
C-A	329	82			329				
A-B	0	0			0				
A-C	661	165			661				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	548	0.000	0	0.0	0.0	0.000	A
B-A	0	0	373	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1193	0.000	0	0.0	0.0	0.000	A
C-A	268	67			268				
A-B	0	0			0				
A-C	539	135			539				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	0	570	0.000	0	0.0	0.0	0.000	A
B-A	0	0	401	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	1242	0.000	0	0.0	0.0	0.000	A
C-A	225	56			225				
A-B	0	0			0				
A-C	452	113			452				

2022+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		1.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D7	2022+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1+D5

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	499	100.000
B - Technology Drive		ONE HOUR	✓	59	100.000
C - Langford Lane (W)		ONE HOUR	✓	864	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	151	348
	B - Technology Drive	27	0	32
	C - Langford Lane (W)	683	181	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	6.86	0.1	A	29	44
B-A	0.12	16.40	0.1	C	25	37
C-AB	0.34	9.25	0.5	A	166	249
C-A					627	940
A-B					139	208
A-C					319	479

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	606	0.040	24	0.0	0.0	6.184	A
B-A	20	5	341	0.060	20	0.0	0.1	11.222	B
C-AB	136	34	636	0.214	135	0.0	0.3	7.179	A
C-A	514	129			514				
A-B	114	28			114				
A-C	262	65			262				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	587	0.049	29	0.0	0.1	6.445	A
B-A	24	6	302	0.080	24	0.1	0.1	12.941	B
C-AB	163	41	616	0.264	162	0.3	0.4	7.936	A
C-A	614	153			614				
A-B	136	34			136				
A-C	313	78			313				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	561	0.063	35	0.1	0.1	6.851	A
B-A	30	7	249	0.119	30	0.1	0.1	16.359	C
C-AB	200	50	589	0.339	199	0.4	0.5	9.207	A
C-A	752	188			752				
A-B	166	42			166				
A-C	383	96			383				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	560	0.063	35	0.1	0.1	6.855	A
B-A	30	7	249	0.119	30	0.1	0.1	16.396	C
C-AB	200	50	589	0.339	200	0.5	0.5	9.249	A
C-A	752	188			752				
A-B	166	42			166				
A-C	383	96			383				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	587	0.049	29	0.1	0.1	6.454	A
B-A	24	6	302	0.080	24	0.1	0.1	12.975	B
C-AB	163	41	616	0.264	163	0.5	0.4	7.969	A
C-A	614	153			614				
A-B	136	34			136				
A-C	313	78			313				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	605	0.040	24	0.1	0.0	6.196	A
B-A	20	5	340	0.060	20	0.1	0.1	11.254	B
C-AB	136	34	636	0.214	137	0.4	0.3	7.217	A
C-A	514	129			514				
A-B	114	28			114				
A-C	262	65			262				

2022+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		4.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D8	2022+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D2+D6

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	614	100.000
B - Technology Drive		ONE HOUR	✓	310	100.000
C - Langford Lane (W)		ONE HOUR	✓	327	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	31	583
	B - Technology Drive	141	0	169
	C - Langford Lane (W)	290	37	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.41	13.56	0.7	B	155	233
B-A	0.49	22.26	0.9	C	129	194
C-AB	0.07	7.03	0.1	A	34	51
C-A					266	399
A-B					28	43
A-C					535	802

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	32	539	0.236	126	0.0	0.3	8.696	A
B-A	106	27	388	0.274	105	0.0	0.4	12.654	B
C-AB	28	7	612	0.046	28	0.0	0.0	6.162	A
C-A	218	55			218				
A-B	23	6			23				
A-C	439	110			439				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	152	38	505	0.301	151	0.3	0.4	10.170	B
B-A	127	32	358	0.354	126	0.4	0.5	15.446	C
C-AB	33	8	587	0.057	33	0.0	0.1	6.500	A
C-A	261	65			261				
A-B	28	7			28				
A-C	524	131			524				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	186	47	453	0.411	185	0.4	0.7	13.403	B
B-A	155	39	317	0.490	154	0.5	0.9	21.880	C
C-AB	41	10	553	0.074	41	0.1	0.1	7.029	A
C-A	319	80			319				
A-B	34	9			34				
A-C	642	160			642				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	186	47	451	0.412	186	0.7	0.7	13.558	B
B-A	155	39	317	0.490	155	0.9	0.9	22.264	C
C-AB	41	10	553	0.074	41	0.1	0.1	7.029	A
C-A	319	80			319				
A-B	34	9			34				
A-C	642	160			642				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	152	38	504	0.302	153	0.7	0.4	10.295	B
B-A	127	32	359	0.353	128	0.9	0.6	15.732	C
C-AB	33	8	587	0.057	33	0.1	0.1	6.504	A
C-A	261	65			261				
A-B	28	7			28				
A-C	524	131			524				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	32	538	0.237	128	0.4	0.3	8.791	A
B-A	106	27	388	0.274	107	0.6	0.4	12.843	B
C-AB	28	7	612	0.046	28	0.1	0.0	6.165	A
C-A	218	55			218				
A-B	23	6			23				
A-C	439	110			439				

2025+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		1.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D9	2025+Dev	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	509	100.000
B - Technology Drive		ONE HOUR	✓	59	100.000
C - Langford Lane (W)		ONE HOUR	✓	884	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	151	358
	B - Technology Drive	27	0	32
	C - Langford Lane (W)	703	181	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	6.90	0.1	A	29	44
B-A	0.12	16.84	0.1	C	25	37
C-AB	0.34	9.32	0.5	A	166	249
C-A					645	967
A-B					139	208
A-C					328	493

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	604	0.040	24	0.0	0.0	6.206	A
B-A	20	5	337	0.060	20	0.0	0.1	11.354	B
C-AB	136	34	634	0.215	135	0.0	0.3	7.206	A
C-A	529	132			529				
A-B	114	28			114				
A-C	270	67			270				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	585	0.049	29	0.0	0.1	6.474	A
B-A	24	6	297	0.082	24	0.1	0.1	13.168	B
C-AB	163	41	613	0.265	162	0.3	0.4	7.985	A
C-A	632	158			632				
A-B	136	34			136				
A-C	322	80			322				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	557	0.063	35	0.1	0.1	6.893	A
B-A	30	7	244	0.122	30	0.1	0.1	16.805	C
C-AB	200	50	586	0.341	199	0.4	0.5	9.292	A
C-A	773	193			773				
A-B	166	42			166				
A-C	394	99			394				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	557	0.063	35	0.1	0.1	6.897	A
B-A	30	7	243	0.122	30	0.1	0.1	16.843	C
C-AB	200	50	586	0.341	200	0.5	0.5	9.321	A
C-A	773	193			773				
A-B	166	42			166				
A-C	394	99			394				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	584	0.049	29	0.1	0.1	6.481	A
B-A	24	6	297	0.082	24	0.1	0.1	13.201	B
C-AB	163	41	613	0.265	163	0.5	0.4	8.012	A
C-A	632	158			632				
A-B	136	34			136				
A-C	322	80			322				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	603	0.040	24	0.1	0.0	6.215	A
B-A	20	5	336	0.060	20	0.1	0.1	11.396	B
C-AB	136	34	634	0.215	137	0.4	0.3	7.247	A
C-A	529	132			529				
A-B	114	28			114				
A-C	270	67			270				

2025+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D9 - 2025+Dev, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access Junction	T-Junction	Two-way		4.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

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)	Run automatically	Relationship type	Relationship
D10	2025+Dev	PM	ONE HOUR	16:30	18:00	15	✓	Simple	D4+D6

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Langford Lane (E)		ONE HOUR	✓	631	100.000
B - Technology Drive		ONE HOUR	✓	310	100.000
C - Langford Lane (W)		ONE HOUR	✓	335	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	31	600
	B - Technology Drive	141	0	169
	C - Langford Lane (W)	298	37	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Langford Lane (E)	B - Technology Drive	C - Langford Lane (W)
From	A - Langford Lane (E)	0	0	1
	B - Technology Drive	0	0	0
	C - Langford Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.42	13.88	0.7	B	155	233
B-A	0.50	23.12	1.0	C	129	194
C-AB	0.07	7.10	0.1	A	34	51
C-A					274	411
A-B					28	43
A-C					551	826

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	32	535	0.238	126	0.0	0.3	8.769	A
B-A	106	27	384	0.277	105	0.0	0.4	12.834	B
C-AB	28	7	608	0.046	28	0.0	0.0	6.199	A
C-A	225	56			225				
A-B	23	6			23				
A-C	452	113			452				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	152	38	500	0.304	151	0.3	0.4	10.299	B
B-A	127	32	354	0.358	126	0.4	0.5	15.769	C
C-AB	33	8	583	0.057	33	0.0	0.1	6.550	A
C-A	268	67			268				
A-B	28	7			28				
A-C	539	135			539				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	186	47	446	0.417	185	0.4	0.7	13.711	B
B-A	155	39	311	0.500	154	0.5	1.0	22.681	C
C-AB	41	10	548	0.074	41	0.1	0.1	7.101	A
C-A	329	82			329				
A-B	34	9			34				
A-C	661	165			661				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	186	47	445	0.418	186	0.7	0.7	13.881	B
B-A	155	39	311	0.500	155	1.0	1.0	23.116	C
C-AB	41	10	548	0.074	41	0.1	0.1	7.101	A
C-A	329	82			329				
A-B	34	9			34				
A-C	661	165			661				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	152	38	499	0.304	153	0.7	0.4	10.433	B
B-A	127	32	354	0.358	128	1.0	0.6	16.081	C
C-AB	33	8	583	0.057	33	0.1	0.1	6.554	A
C-A	268	67			268				
A-B	28	7			28				
A-C	539	135			539				

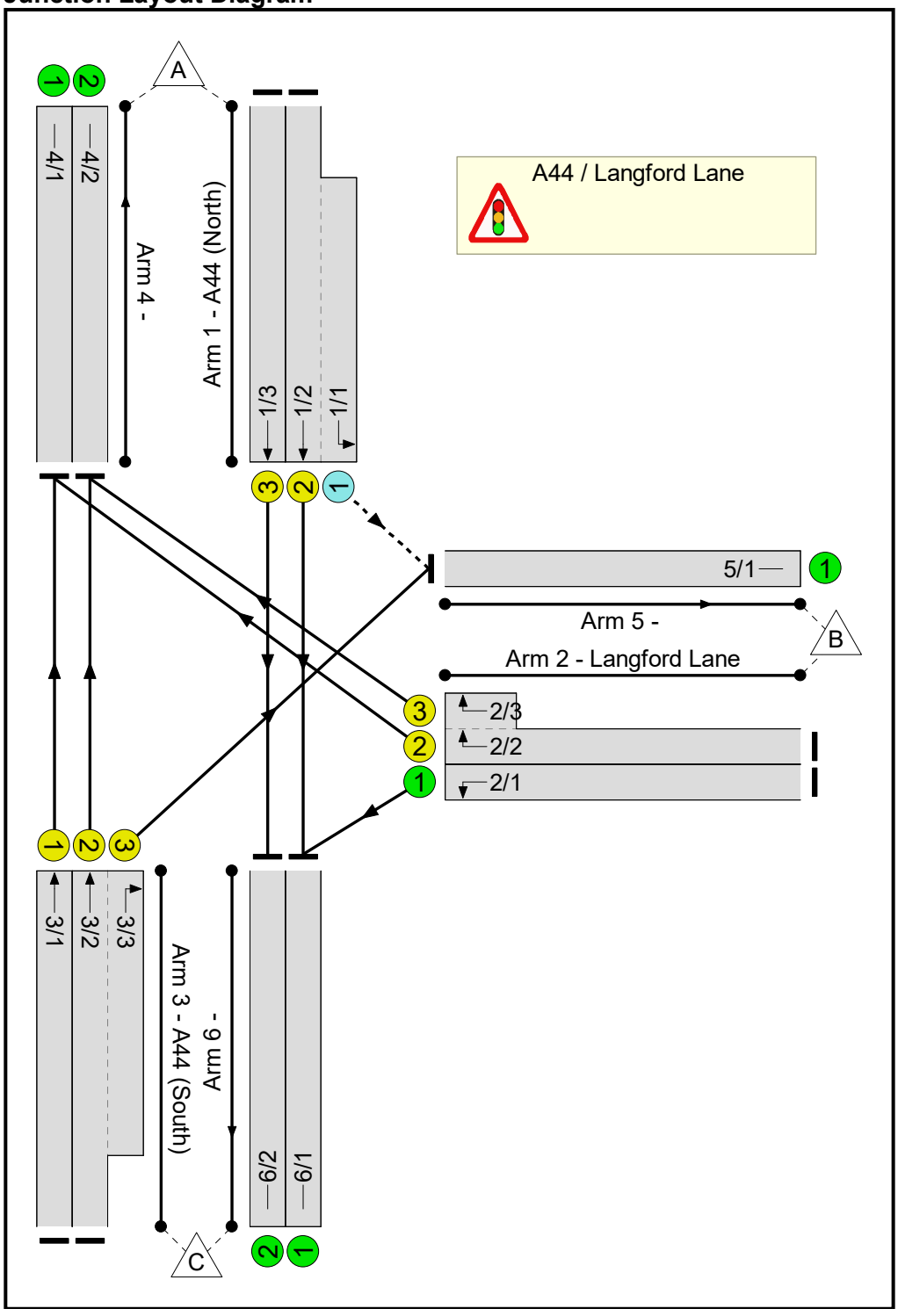
17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	32	534	0.238	128	0.4	0.3	8.871	A
B-A	106	27	384	0.277	107	0.6	0.4	13.032	B
C-AB	28	7	608	0.046	28	0.1	0.0	6.203	A
C-A	225	56			225				
A-B	23	6			23				
A-C	452	113			452				

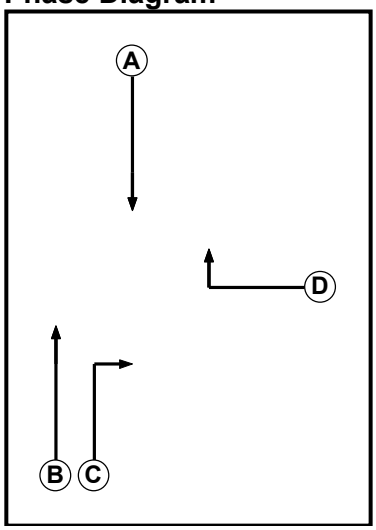
User and Project Details

Project:	**226698B - The Moors, Kidlington**
Title:	**A44 / Langford Lane**
Design Layout Ref:	Existing Junction Layout
File name:	A44_Langford (Existing) v1.1.lsg3x
Author:	David Noyce
Company:	Vectos / SLR
Address:	The Cursitor, 38 Chancery Lane, London WC2A 1EN

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Traffic		-9999	7

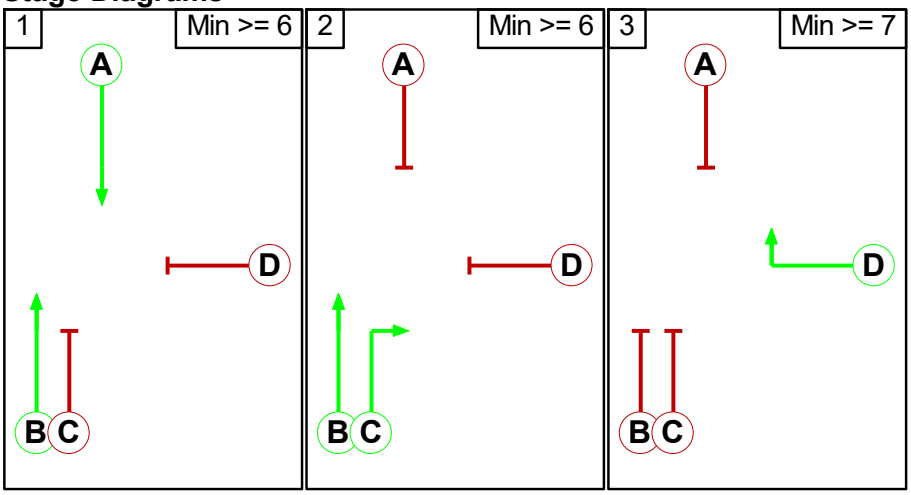
Intergreens

		Starting Phase			
		A	B	C	D
Terminating Phase	A		-	8	8
	B	-		-	6
	C	7	-		7
	D	7	8	7	

Stage Data

Stage No.	Phases in Stage
1	A B
2	B C
3	D

Stage Diagrams



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	B	Losing	2	2

Lane Input Data

Junction: A44 / Langford Lane

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A44 (North))	O		2	3	15.1	Inf	-	-	-	-	-	-
1/2 (A44 (North))	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
1/3 (A44 (North))	U	A	2	3	60.0	Geom	-	3.65	0.00	N	Arm 6 Ahead	Inf
2/2 (Langford Lane)	U	D	2	3	60.0	Geom	-	3.50	0.00	N	Arm 4 Right	25.00
2/3 (Langford Lane)	U	D	2	3	3.0	Geom	-	2.50	0.00	N	Arm 4 Right	25.00
3/1 (A44 (South))	U	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 4 Ahead	Inf
3/2 (A44 (South))	U	B	2	3	60.0	Geom	-	3.65	0.00	N	Arm 4 Ahead	Inf
3/3 (A44 (South))	U	C	2	3	15.0	Geom	-	3.50	0.00	Y	Arm 5 Right	25.00

Give-Way Lane Input Data

Junction: A44 / Langford Lane

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A44 (North))	5/1 (Left)	1323	0	3/3	0.40	All	-	-	-	-	-

Scenario 1: '2022 Base, AM'
(FG1: '2022 Base, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	214	836	1050
	B	155	0	187	342
	C	746	319	0	1065
	Tot.	901	533	1023	2457

Stage Timings

Stage	1	2	3
Duration	16	14	7
Change Point	0	24	46

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**72.2%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**72.2%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	17	7:	24:	643	1980: Inf	594+296	72.2 : 72.2%	19.7	7.6
1/3	A44 (North) Ahead	A	17	7	24	407	2120	636	64.0%	26.0	6.6
2/2+2/3	Langford Lane Right	D	7	53	0	155	1986:1892	220+212	35.9 : 35.9%	30.0	1.5
3/1	A44 (South) Ahead	B	38	8	46	746	1980	1287	58.0%	9.2	7.5
3/2+3/3	A44 (South) Ahead Right	B C	38:14	8:32	46	319	2120:1854	0+464	0.0 : 68.8%	32.7	5.9

C1 PRC for Signalled Lanes (%): 24.6 Total Delay for Signalled Lanes (pcuHr): 12.56 Cycle Time (s): 60
PRC Over All Lanes (%): 24.6 Total Delay Over All Lanes(pcuHr): 12.56

Scenario 2: '2022 Base, PM'
(FG2: '2022 Base, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	121	625	746
	B	228	0	383	611
	C	870	369	0	1239
	Tot.	1098	490	1008	2596

Stage Timings

Stage	1	2	3
Duration	13	17	7
Change Point	0	21	46

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**67.6%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**67.6%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	14	7:	21:	442	1980: Inf	495+187	64.8 : 64.8%	22.1	5.6
1/3	A44 (North) Ahead	A	14	7	21	304	2120	530	57.4%	27.6	5.1
2/2+2/3	Langford Lane Right	D	7	53	0	228	1986:1892	223+211	52.5 : 52.5%	32.6	2.3
3/1	A44 (South) Ahead	B	38	8	46	870	1980	1287	67.6%	10.9	10.0
3/2+3/3	A44 (South) Ahead Right	B C	38:17	8:29	46	369	2120:1854	0+556	0.0 : 66.3%	27.9	6.3

C1 PRC for Signalled Lanes (%): 33.1 Total Delay for Signalled Lanes (pcuHr): 12.59 Cycle Time (s): 60
PRC Over All Lanes (%): 33.1 Total Delay Over All Lanes(pcuHr): 12.59

Scenario 3: '2022 Base + Dev, AM'
(FG5: '2022 Base + Dev, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	304	836	1140
	B	171	0	203	374
	C	746	410	0	1156
	Tot.	917	714	1039	2670

Stage Timings

Stage	1	2	3
Duration	14	16	7
Change Point	0	22	46

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**81.4%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**81.4%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	15	7:	22:	734	1980: Inf	528+373	81.4 : 81.4%	22.6	8.8
1/3	A44 (North) Ahead	A	15	7	22	406	2120	565	71.8%	31.1	7.3
2/2+2/3	Langford Lane Right	D	7	53	0	171	1986:1892	224+211	39.3 : 39.3%	30.4	1.6
3/1	A44 (South) Ahead	B	38	8	46	746	1980	1287	58.0%	9.2	7.5
3/2+3/3	A44 (South) Ahead Right	B C	38:16	8:30	46	410	2120:1854	0+525	0.0 : 78.1%	34.9	8.0

C1 PRC for Signalled Lanes (%): 10.5 Total Delay for Signalled Lanes (pcuHr): 15.44 Cycle Time (s): 60
PRC Over All Lanes (%): 10.5 Total Delay Over All Lanes(pcuHr): 15.44

Scenario 4: '2022 Base + Dev, PM'
(FG6: '2022 Base + Dev, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	139	625	764
	B	312	0	468	780
	C	870	387	0	1257
	Tot.	1182	526	1093	2801

Stage Timings

Stage	1	2	3
Duration	12	17	8
Change Point	0	20	45

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**69.7%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**69.7%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	13	7:	20:	461	1980: Inf	462+199	69.7 : 69.7%	23.6	6.0
1/3	A44 (North) Ahead	A	13	7	20	303	2120	495	61.3%	29.9	5.2
2/2+2/3	Langford Lane Right	D	8	52	0	312	1986:1892	239+227	66.9 : 66.9%	35.1	3.4
3/1	A44 (South) Ahead	B	37	8	45	870	1980	1254	69.4%	11.9	10.6
3/2+3/3	A44 (South) Ahead Right	B C	37:17	8:28	45	387	2120:1854	0+556	0.0 : 69.6%	29.1	6.8

C1 PRC for Signalled Lanes (%): 29.1 Total Delay for Signalled Lanes (pcuHr): 14.57 Cycle Time (s): 60
PRC Over All Lanes (%): 29.1 Total Delay Over All Lanes(pcuHr): 14.57

Scenario 5: '2025 Base, AM'
(FG7: '2025 Base, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	220	860	1080
	B	159	0	192	351
	C	767	328	0	1095
	Tot.	926	548	1052	2526

Stage Timings

Stage	1	2	3
Duration	16	14	7
Change Point	0	24	46

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**74.1%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**74.1%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	17	7:	24:	660	1980: Inf	594+297	74.1 : 74.1%	20.3	7.9
1/3	A44 (North) Ahead	A	17	7	24	420	2120	636	66.0%	26.6	7.0
2/2+2/3	Langford Lane Right	D	7	53	0	159	1986:1892	220+212	36.8 : 36.8%	30.1	1.5
3/1	A44 (South) Ahead	B	38	8	46	767	1980	1287	59.6%	9.5	8.0
3/2+3/3	A44 (South) Ahead Right	B C	38:14	8:32	46	328	2120:1854	0+464	0.0 : 70.8%	33.6	6.1

C1 PRC for Signalled Lanes (%): 21.5 Total Delay for Signalled Lanes (pcuHr): 13.23 Cycle Time (s): 60
PRC Over All Lanes (%): 21.5 Total Delay Over All Lanes(pcuHr): 13.23

Scenario 6: '2025 Base, PM'
(FG8: '2025 Base, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	125	643	768
	B	235	0	394	629
	C	895	380	0	1275
	Tot.	1130	505	1037	2672

Stage Timings

Stage	1	2	3
Duration	13	17	7
Change Point	0	21	46

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**69.5%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**69.5%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	14	7:	21:	455	1980: Inf	495+187	66.7 : 66.7%	22.5	5.9
1/3	A44 (North) Ahead	A	14	7	21	313	2120	530	59.1%	28.0	5.2
2/2+2/3	Langford Lane Right	D	7	53	0	235	1986:1892	221+212	54.3 : 54.3%	33.1	2.4
3/1	A44 (South) Ahead	B	38	8	46	895	1980	1287	69.5%	11.3	10.6
3/2+3/3	A44 (South) Ahead Right	B C	38:17	8:29	46	380	2120:1854	0+556	0.0 : 68.3%	28.6	6.6

C1 PRC for Signalled Lanes (%): 29.4 Total Delay for Signalled Lanes (pcuHr): 13.27 Cycle Time (s): 60
PRC Over All Lanes (%): 29.4 Total Delay Over All Lanes(pcuHr): 13.27

Scenario 7: '2025 Base + Dev, AM'
(FG9: '2025 Base + Dev, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	310	860	1170
	B	175	0	208	383
	C	767	419	0	1186
	Tot.	942	729	1068	2739

Stage Timings

Stage	1	2	3
Duration	14	16	7
Change Point	0	22	46

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**83.3%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**83.3%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	15	7:	22:	750	1980: Inf	528+372	83.3 : 83.3%	23.8	9.3
1/3	A44 (North) Ahead	A	15	7	22	420	2120	565	74.3%	32.3	7.7
2/2+2/3	Langford Lane Right	D	7	53	0	175	1986:1892	224+211	40.2 : 40.2%	30.5	1.7
3/1	A44 (South) Ahead	B	38	8	46	767	1980	1287	59.6%	9.5	8.0
3/2+3/3	A44 (South) Ahead Right	B C	38:16	8:30	46	419	2120:1854	0+525	0.0 : 79.8%	36.3	8.3

C1 PRC for Signalled Lanes (%): 8.0 Total Delay for Signalled Lanes (pcuHr): 16.44 Cycle Time (s): 60
PRC Over All Lanes (%): 8.0 Total Delay Over All Lanes(pcuHr): 16.44

Scenario 8: '2025 Base + Dev, PM'
(FG10: '2025 Base + Dev, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	143	643	786
	B	319	0	479	798
	C	895	398	0	1293
	Tot.	1214	541	1122	2877

Stage Timings

Stage	1	2	3
Duration	12	17	8
Change Point	0	20	45

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**71.6%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**71.6%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	13	7:	20:	473	1980: Inf	462+200	71.4 : 71.4%	24.2	6.3
1/3	A44 (North) Ahead	A	13	7	20	313	2120	495	63.3%	30.5	5.5
2/2+2/3	Langford Lane Right	D	8	52	0	319	1986:1892	238+227	68.6 : 68.6%	35.8	3.6
3/1	A44 (South) Ahead	B	37	8	45	895	1980	1254	71.4%	12.3	11.2
3/2+3/3	A44 (South) Ahead Right	B C	37:17	8:28	45	398	2120:1854	0+556	0.0 : 71.6%	29.9	7.1

C1 PRC for Signalled Lanes (%): 25.8 Total Delay for Signalled Lanes (pcuHr): 15.37 Cycle Time (s): 60
PRC Over All Lanes (%): 25.8 Total Delay Over All Lanes(pcuHr): 15.37

Scenario 9: '2025 + Previously Consented Dev, AM'
(FG11: '2025 + Previously Consented Dev, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	624	939	1563
	B	185	0	244	429
	C	736	684	0	1420
	Tot.	921	1308	1183	3412

Stage Timings

Stage	1	2	3
Duration	26	40	7
Change Point	0	34	82

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**86.4%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**86.4%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	27	7:	34:	1116	1980: Inf	578+732	85.2 : 85.2%	23.4	15.1
1/3	A44 (North) Ahead	A	27	7	34	447	2120	618	72.3%	40.9	12.0
2/2+2/3	Langford Lane Right	D	7	89	0	185	1986:1892	139+132	68.1 : 68.1%	62.7	3.5
3/1	A44 (South) Ahead	B	74	8	82	736	1980	1547	47.6%	5.9	7.2
3/2+3/3	A44 (South) Ahead Right	B C	74:40	8:42	82	684	2120:1854	0+792	0.0 : 86.4%	40.8	19.5

C1 PRC for Signalled Lanes (%): 4.2 Total Delay for Signalled Lanes (pcuHr): 24.49 Cycle Time (s): 96
PRC Over All Lanes (%): 4.2 Total Delay Over All Lanes(pcuHr): 24.49

Scenario 10: '2025 + Previously Consented Dev, PM'
(FG12: '2025 + Previously Consented Dev, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	176	718	894
	B	509	0	581	1090
	C	1204	210	0	1414
	Tot.	1713	386	1299	3398

Stage Timings

Stage	1	2	3
Duration	12	8	17
Change Point	0	20	36

Link Results

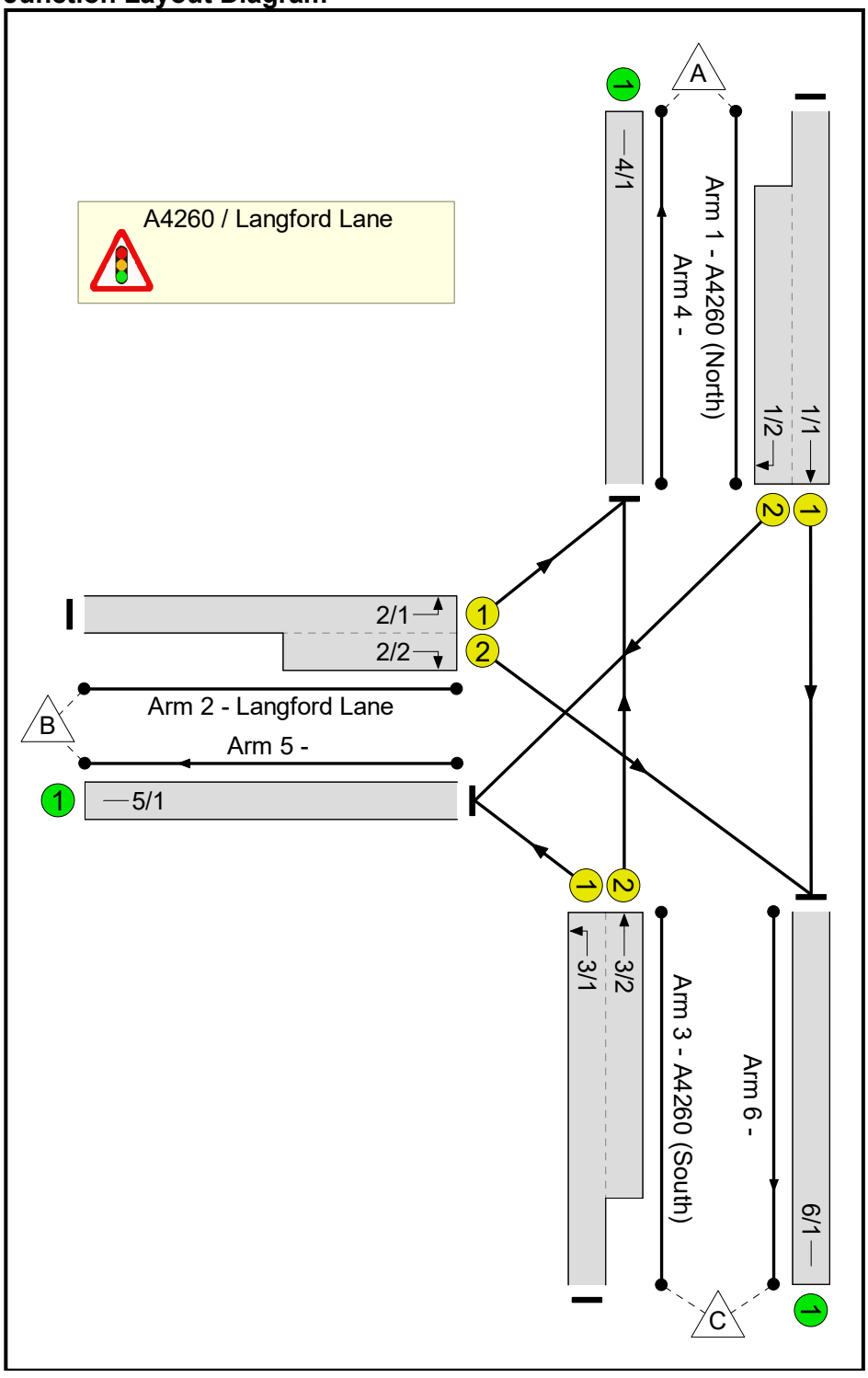
Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A44 / Langford Lane	-	-	-	-	-	-	-	-	**80.2%**	-	-
A44 / Langford Lane	-	-	-	-	-	-	-	-	**80.2%**	-	-
1/2+1/1	A44 (North) Left Ahead	A -	13	7:	20:	540	1980: Inf	462+223	78.8 : 78.8%	26.6	7.5
1/3	A44 (North) Ahead	A	13	7	20	354	2120	495	71.6%	33.8	6.6
2/2+2/3	Langford Lane Right	D	17	43	0	509	1986:1892	552+82	80.2 : 80.2%	32.8	9.2
3/1	A44 (South) Ahead	B	28	8	36	552	1980	957	57.7%	15.5	7.1
3/2+3/3	A44 (South) Ahead Right	B C	28:8	8:28	36	862	2120:1854	1003+278	65.0 : 75.5%	19.0	9.0

C1 PRC for Signalled Lanes (%): 12.2 Total Delay for Signalled Lanes (pcuHr): 18.89 Cycle Time (s): 60
PRC Over All Lanes (%): 12.2 Total Delay Over All Lanes(pcuHr): 18.89

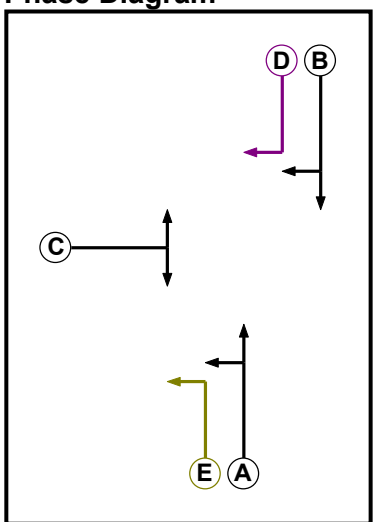
User and Project Details

Project:	**226698B - The Moors, Kidlington**
Title:	**A4260 / Langford Lane**
Design Layout Ref:	Existing Junction Layout
File name:	A4260_Langford (Existing) v1.1.lsg3x
Author:	David Noyce
Company:	Vectos / SLR
Address:	The Cursitor, 38 Chancery Lane, London WC2A 1EN

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Ind. Arrow	B	-9999	5
E	Filter	A	-9999	5

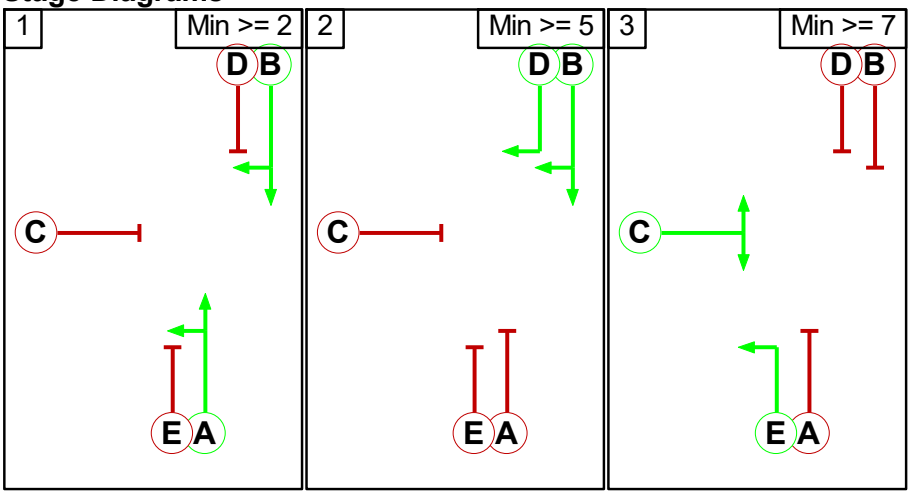
Intergreens

		Starting Phase				
		A	B	C	D	E
Terminating Phase	A		-	8	7	-
	B	-		8	-	6
	C	6	6		6	-
	D	6	-	6		6
	E	-	5	-	5	

Stage Data

Stage No.	Phases in Stage
1	A B
2	B D
3	C E

Stage Diagrams



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Lane Input Data

Junction: A4260 / Langford Lane

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A4260 (North))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
1/2 (A4260 (North))	U	B D	2	3	20.9	Geom	-	3.50	0.00	N	Arm 5 Right	20.00
2/1 (Langford Lane)	U	C	2	3	60.0	Geom	-	3.15	0.00	Y	Arm 4 Left	21.50
2/2 (Langford Lane)	U	C	2	3	7.0	Geom	-	3.15	0.00	N	Arm 6 Right	20.00
3/1 (A4260 (South))	U	A E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	21.50
3/2 (A4260 (South))	U	A	2	3	11.5	Geom	-	3.50	0.00	N	Arm 4 Ahead	Inf

Give-Way Lane Input Data

Junction: A4260 / Langford Lane
There are no Opposed Lanes in this Junction

Scenario 1: '2022 Base, AM'
(FG1: '2022 Base, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	260	378	638
	B	41	0	288	329
	C	450	250	0	700
	Tot.	491	510	666	1667

Stage Timings

Stage	1	2	3
Duration	15	5	14
Change Point	0	26	38

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**62.1%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**62.1%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	27	11	38	638	1965:1958	917+694	41.2 : 37.5%	12.1	4.4
2/1+2/2	Langford Lane Left Right	C	14	46	0	329	1804:1926	68+476	60.5 : 60.5%	27.9	4.9
3/1+3/2	A4260 (South) Ahead Left	A	42:20	44:6	26	700	1837:2105	403+725	62.1 : 62.1%	15.6	6.9

C1 PRC for Signalled Lanes (%): 44.9 Total Delay for Signalled Lanes (pcuHr): 7.72 Cycle Time (s): 60
PRC Over All Lanes (%): 44.9 Total Delay Over All Lanes(pcuHr): 7.72

Scenario 2: '2022 Base, PM'
(FG2: '2022 Base, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	49	230	279
	B	510	0	369	879
	C	290	483	0	773
	Tot.	800	532	599	1931

Stage Timings

Stage	1	2	3
Duration	5	5	24
Change Point	0	16	28

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**82.6%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**82.6%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	17	11	28	279	1965:1958	590+126	39.0 : 39.0%	20.5	3.3
2/1+2/2	Langford Lane Left Right	C	24	36	0	879	1804:1926	617+447	82.6 : 82.6%	23.1	9.1
3/1+3/2	A4260 (South) Ahead Left	A	42:10	34:6	16	773	1837:2105	643+386	75.1 : 75.1%	17.7	6.0

C1 PRC for Signalled Lanes (%): 8.9 Total Delay for Signalled Lanes (pcuHr): 11.03 Cycle Time (s): 60
PRC Over All Lanes (%): 8.9 Total Delay Over All Lanes(pcuHr): 11.03

Scenario 3: '2022 Base + Dev, AM'
(FG5: '2022 Base + Dev, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	302	378	680
	B	49	0	307	356
	C	450	358	0	808
	Tot.	499	660	685	1844

Stage Timings

Stage	1	2	3
Duration	14	5	15
Change Point	0	25	37

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**64.1%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**64.1%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	26	11	37	680	1965:1958	884+835	42.7 : 36.2%	12.7	4.5
2/1+2/2	Langford Lane Left Right	C	15	45	0	356	1804:1926	80+502	61.1 : 61.1%	26.7	5.2
3/1+3/2	A4260 (South) Ahead Left	A	42:19	43:6	25	808	1837:2105	558+702	64.1 : 64.1%	14.7	7.1

C1 PRC for Signalled Lanes (%): 40.3 Total Delay for Signalled Lanes (pcuHr): 8.36 Cycle Time (s): 60
PRC Over All Lanes (%): 40.3 Total Delay Over All Lanes(pcuHr): 8.36

Scenario 4: '2022 Base + Dev, PM'
(FG6: '2022 Base + Dev, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	58	230	288
	B	550	0	471	1021
	C	290	505	0	795
	Tot.	840	563	701	2104

Stage Timings

Stage	1	2	3
Duration	4	5	25
Change Point	0	15	27

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**88.7%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**88.7%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	16	11	27	288	1965:1958	557+140	41.3 : 41.3%	21.5	3.4
2/1+2/2	Langford Lane Left Right	C	25	35	0	1021	1804:1926	620+531	88.7 : 88.7%	26.5	12.1
3/1+3/2	A4260 (South) Ahead Left	A	42:9	33:6	15	795	1837:2105	632+351	79.9 : 82.7%	20.3	6.7

C1 PRC for Signalled Lanes (%): 1.5 Total Delay for Signalled Lanes (pcuHr): 13.72 Cycle Time (s): 60
PRC Over All Lanes (%): 1.5 Total Delay Over All Lanes(pcuHr): 13.72

Scenario 5: '2025 Base, AM'
(FG7: '2025 Base, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	267	389	656
	B	42	0	296	338
	C	463	257	0	720
	Tot.	505	524	685	1714

Stage Timings

Stage	1	2	3
Duration	15	5	14
Change Point	0	26	38

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**63.9%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**63.9%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	27	11	38	656	1965:1958	917+692	42.4 : 38.6%	12.2	4.6
2/1+2/2	Langford Lane Left Right	C	14	46	0	338	1804:1926	68+476	62.2 : 62.2%	28.3	5.2
3/1+3/2	A4260 (South) Ahead Left	A	42:20	44:6	26	720	1837:2105	402+725	63.9 : 63.9%	15.9	7.2

C1 PRC for Signalled Lanes (%): 40.9 Total Delay for Signalled Lanes (pcuHr): 8.06 Cycle Time (s): 60
PRC Over All Lanes (%): 40.9 Total Delay Over All Lanes(pcuHr): 8.06

Scenario 6: '2025 Base, PM'
(FG8: '2025 Base, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	50	237	287
	B	525	0	380	905
	C	298	497	0	795
	Tot.	823	547	617	1987

Stage Timings

Stage	1	2	3
Duration	4	5	25
Change Point	0	15	27

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**84.9%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**84.9%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	16	11	27	287	1965:1958	557+117	42.6 : 42.6%	21.9	3.5
2/1+2/2	Langford Lane Left Right	C	25	35	0	905	1804:1926	635+460	82.7 : 82.7%	22.2	9.2
3/1+3/2	A4260 (South) Ahead Left	A	42:9	33:6	15	795	1837:2105	585+351	84.9 : 84.9%	23.5	7.5

C1 PRC for Signalled Lanes (%): 6.0 Total Delay for Signalled Lanes (pcuHr): 12.50 Cycle Time (s): 60
PRC Over All Lanes (%): 6.0 Total Delay Over All Lanes(pcuHr): 12.50

Scenario 7: '2025 Base + Dev, AM'
(FG9: '2025 Base + Dev, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	309	389	698
	B	50	0	315	365
	C	463	365	0	828
	Tot.	513	674	704	1891

Stage Timings

Stage	1	2	3
Duration	14	5	15
Change Point	0	25	37

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**66.0%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**66.0%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	26	11	37	698	1965:1958	884+829	44.0 : 37.3%	12.9	4.8
2/1+2/2	Langford Lane Left Right	C	15	45	0	365	1804:1926	80+502	62.7 : 62.7%	27.2	5.4
3/1+3/2	A4260 (South) Ahead Left	A	42:19	43:6	25	828	1837:2105	553+702	66.0 : 66.0%	15.1	7.5

C1 PRC for Signalled Lanes (%): 36.4 Total Delay for Signalled Lanes (pcuHr): 8.72 Cycle Time (s): 60
PRC Over All Lanes (%): 36.4 Total Delay Over All Lanes(pcuHr): 8.72

Scenario 8: '2025 Base + Dev, PM'
(FG10: '2025 Base + Dev, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	59	237	296
	B	565	0	482	1047
	C	298	519	0	817
	Tot.	863	578	719	2160

Stage Timings

Stage	1	2	3
Duration	5	5	28
Change Point	0	16	28

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**89.9%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**89.9%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	17	11	28	296	1965:1958	553+138	42.9 : 42.9%	23.0	3.8
2/1+2/2	Langford Lane Left Right	C	28	36	0	1047	1804:1926	629+536	89.9 : 89.9%	27.8	14.0
3/1+3/2	A4260 (South) Ahead Left	A	46:10	34:6	16	817	1837:2105	630+362	82.4 : 82.4%	21.4	7.3

C1 PRC for Signalled Lanes (%): 0.2 Total Delay for Signalled Lanes (pcuHr): 14.84 Cycle Time (s): 64
PRC Over All Lanes (%): 0.2 Total Delay Over All Lanes(pcuHr): 14.84

Scenario 9: '2025 + Previously Consented Dev, AM'
(FG11: '2025 + Previously Consented Dev, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	543	487	1030
	B	75	0	417	492
	C	323	681	0	1004
	Tot.	398	1224	904	2526

Stage Timings

Stage	1	2	3
Duration	14	5	15
Change Point	0	25	37

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**83.3%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**83.3%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	26	11	37	1030	1965:1958	884+881	55.1 : 61.6%	14.8	7.5
2/1+2/2	Langford Lane Left Right	C	15	45	0	492	1804:1926	90+501	83.3 : 83.3%	37.4	8.9
3/1+3/2	A4260 (South) Ahead Left	A	42:19	43:6	25	1004	1837:2105	1136+539	60.0 : 60.0%	10.3	5.9

C1 PRC for Signalled Lanes (%): 8.1 Total Delay for Signalled Lanes (pcuHr): 12.22 Cycle Time (s): 60
PRC Over All Lanes (%): 8.1 Total Delay Over All Lanes(pcuHr): 12.22

Scenario 10: '2025 + Previously Consented Dev, PM'
(FG12: '2025 + Previously Consented Dev, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	67	330	397
	B	463	0	666	1129
	C	556	404	0	960
	Tot.	1019	471	996	2486

Stage Timings

Stage	1	2	3
Duration	14	5	35
Change Point	0	25	37

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A4260 / Langford Lane	-	-	-	-	-	-	-	-	**105.7%**	-	-
A4260 / Langford Lane	-	-	-	-	-	-	-	-	**105.7%**	-	-
1/1+1/2	A4260 (North) Right Ahead	B	26	11	37	397	1965:1958	663+135	49.8 : 49.8%	25.1	6.3
2/1+2/2	Langford Lane Left Right	C	35	45	0	1129	1804:1926	440+633	105.2 : 105.2%	140.0	58.4
3/1+3/2	A4260 (South) Ahead Left	A	62:19	43:6	25	960	1837:2105	382+526	105.7 : 105.7%	147.3	49.3

C1 PRC for Signalled Lanes (%): -17.4 Total Delay for Signalled Lanes (pcuHr): 85.96 Cycle Time (s): 80
PRC Over All Lanes (%): -17.4 Total Delay Over All Lanes(pcuHr): 85.96

vectos. | PART OF SLR

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