

fenley

APPENDIX I. Walking, Cycling and Horse Riding Assessment

ITB16329-017A R

**Walking, Cycling and Horse-Riding
Assessment Report**

Job No: ITB16329

CONTENTS

1. Scheme Details	3
1.1. SCHEME CLIENT / DEVELOPER.....	3
1.2. LEAD ASSESSOR.....	3
1.3. OTHER ASSESSMENT TEAM MEMBERS.....	3
1.4. DESIGN TEAM LEADER.....	3
1.5. SCHEME LOCATION AND DESCRIPTION OF HIGHWAY WORKS.....	3
1.6. WCHAR STUDY AREA.....	4
2. WCHAR Assessment	6
2.1. ASSESSMENT OF WALKING, CYCLING AND HORSE-RIDING POLICIES AND STRATEGIES.....	6
2.2. COLLISION DATA.....	6
2.3. MULTI-MODAL TRANSPORT SERVICES AND INTERCHANGE INFORMATION.....	8
2.4. TRIP GENERATORS.....	9
2.5. SITE VISITS.....	9
2.6. LIAISON WITH KEY STAKEHOLDERS.....	9
2.7. EXISTING PEDESTRIAN, CYCLIST AND EQUESTRIAN FACILITIES.....	9
2.8. WALKING, CYCLING AND HORSE-RIDING SURVEY DATA (LARGE SCHEMES ONLY).....	9
2.9. LIAISON WITH LOCAL USER GROUPS AND WIDER PUBLIC (LARGE SCHEMES ONLY).....	11
3. User Opportunities	12
3.1. GENERAL.....	12
3.2. STRATEGIC OPPORTUNITIES.....	12
3.3. WALKING SPECIFIC OPPORTUNITIES.....	12
3.4. CYCLING SPECIFIC OPPORTUNITIES.....	12
3.5. HORSE-RIDING SPECIFIC OPPORTUNITIES.....	12
4. Walking, Cycling and Horse-Riding Assessment Team Statement	13
Appendix A – NMU Review and Potential Improvements (ITB16329-009 TN)	14
Appendix B – HCC Pre-Application Meeting Minutes and Pre-Application Comments	15
Appendix C – Proposed Access Arrangements	16

1. Scheme Details

1.1. Scheme Client / Developer

Name: Matt Hill
Organisation: Birdworld Ltd
Email: matt.hill@birdworld.co.uk
Tel: 07464 546029

1.2. Lead Assessor

Name: Duncan Findlay
Organisation: i-Transport LLP
Email: duncan.findlay@i-transport.co.uk
Tel: 01256 898 366

1.3. Other Assessment Team Members

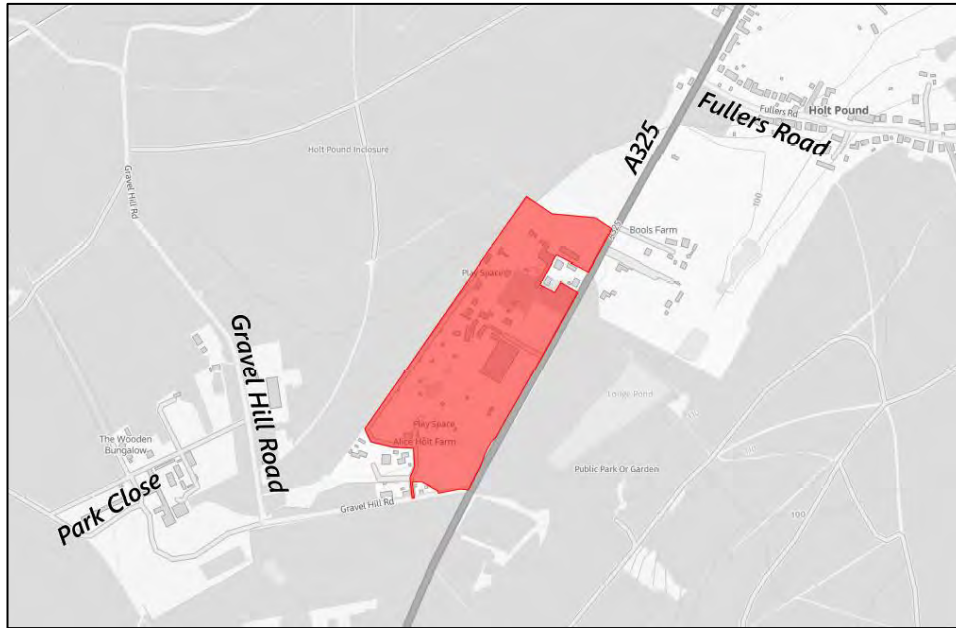
Name: Harry Cherrill
Organisation: i-Transport LLP
Email: harry.cherrill@i-transport.co.uk
Tel: 01256 898 366

1.4. Design Team Leader

Name: Simon Webb
Organisation: i-Transport LLP
Email: simon.webb@i-transport.co.uk
Tel: 01256 898 366

1.5. Scheme Location and Description of Highway Works

Redevelopment of the Forest Lodge Garden Centre and Birdworld to be served via a 3-arm roundabout (agreed with HCC). The new access will feature a 2m footway on all arms, linking to the bus stops to the south of the site and PRow 50 to the east of the site and uncontrolled crossings with dropped kerbs and tactile paving on each junction arm.



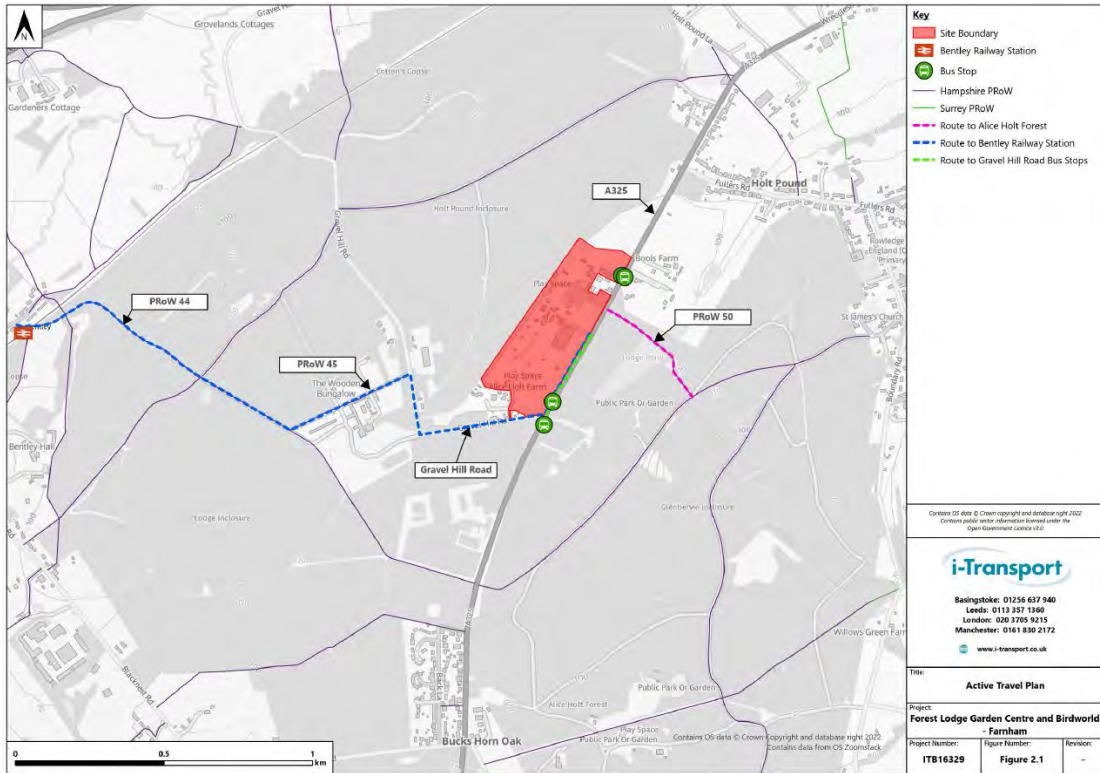
1.6. WCHAR Study Area

The scheme is for retail and leisure facilities and thus falls into the 'Large Scheme' size.

The WCHAR study area is shown below, and the assessment has considered:

- *Pedestrian/cycle facilities along the site frontage (including the facilities in place at the Gravel Hill Road bus stops);*
- *The walking route to Bentley railway station via Gravel Hill Road, Footpath 45 and Footpath 44 (this section of Footpath 44 is also designated as NCN224); and*
- *The walking route to Alice Holt (via Footpath 50).*

The above routes are shown on Figure 2.1 (an extract is provided below).



2. WCHAR Assessment

2.1. Assessment of walking, cycling and horse-riding policies and strategies

The Manual for Streets has been reviewed which states:

“The number of external connections that a development provides depends on the nature of its surroundings” (Ref: MfS 4.2.7).

Hampshire County Council TG19 - Walking, Cycling and Horse-Riding Assessment and Review (WCHAR) has been reviewed which states:

“The Assessment is the first stage of the process and should be carried out during the initial stages of planning a scheme, to investigate the existing infrastructure and identify potential opportunities to improve conditions for people walking, cycling and where appropriate, riding horses. This shall include the needs of all potential users such as people using mobility aids, prams/buggies and the range of cycles available. It is important to identify these issues at an early stage as this will help the Design Team to achieve the best possible outcome for these users.” (Ref: TG19 1.3).

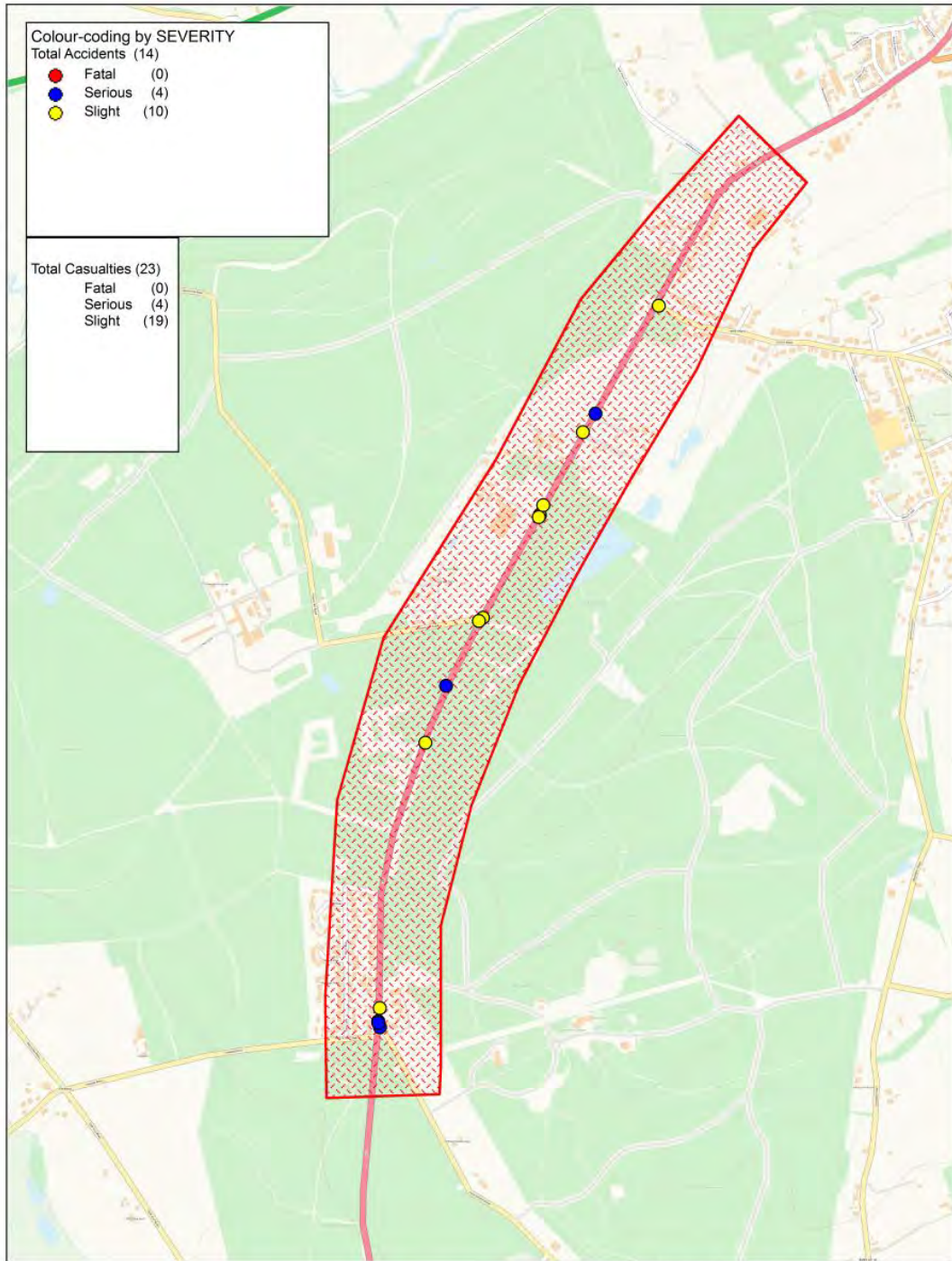
In addition, TG19 states:


“The Design Manual for Roads and Bridges General Principles document GG 142 sets out the procedure for undertaking a Walking, Cycling and Horse-Riding Assessment and Review.” (Ref: TG19 2.1).

East Hampshire District Local Plan: Joint Core Strategy Policy CP31 focuses on transport, noting that through implementation of the Hampshire Local Transport Plan (2011 – 2031), “the fullest possible use of sustainable modes of transport (including cycling, walking and public and community transport) and reduced dependence on the private car will be encouraged”.

2.2. Collision data

Personal Injury Accident (PIA) data has been obtained from Hampshire Constabulary for the most recent five-year period between 01/03/2018 and 28/02/2023. Overall, 14 accidents have occurred. Four of these were of serious severity, and 10 were of slight severity. Two serious and one slight accident involved either a pedestrian or cyclist. The accidents that occurred in this time are summarised in table below.



	© Crown copyright. All rights reserved	1 : 13340
	Hampshire Police	DATE 27/09/2023
	Selected map area Licence No. 01021C 2023	DRAWING No.
		DRAWN BY

Severity	Pedestrian / Cyclist	Description	Casualties
A325 Farnham Road			
Slight	No	Loss of control	Driver

Severity	Pedestrian / Cyclist	Description	Casualties
Serious	Pedestrian	Vehicle collided with a pedestrian walking in the carriageway	Pedestrian
Serious	No	Rear end shunt	2 drivers, 2 passengers
Serious	No	Poor manoeuvre when overtaking resulting in a multi vehicle collision	2 drivers
Slight	No	Loss of control and collision with a tree	1 driver
A325 Farnham Road, Gravel Hill Road Junction			
Slight	No	Failure to give way	Driver
Slight	Cyclist	Failure to give way	Cyclist
Slight	No	Failure to give way	Driver
A325 Farnham Road, Dockenfield Road Junction			
Serious	Cyclist	Failure to give way	1 Cyclist
Slight	No	Rear end shunt	Driver
A325 Farnham Road, Forest Lodge Garden Centre Access			
Slight	No	A rear end shunt where a bus failed collided with rear of a car turning into the garden centre	1 driver
Slight	No	Rear end shunt with multiple vehicles	Driver
A325 Farnham Road, Birdworld Access			
Slight	No	Failure to give way	3 passengers
A325 Farnham Road, Fullers Road Junction			
Slight	No	Rear end shunt	1 driver, 1 passenger

2.3. Multi-modal transport services and interchange information

The nearest bus stops to the sites are the 'Gravel Hill Road' bus stops located on the A325 to the south of the Forest Lodge access and the 'Birdworld' bus stops located adjacent to the Birdworld access. These stops are all within easy walking distance of both Forest Lodge and Birdworld, however there is limited footway provision to enable pedestrians to walk safely to the bus stops. There are no footways connecting the Forest Lodge and Birdworld sites and there are no footways connecting the Forest Lodge site to the Gravel Hill Road bus stops.

The Gravel Hill Road bus stops are both off-line with a bus shelter also in place at the northbound stop. The northbound Birdworld bus stop is located offline in an area that partially functions as both a deceleration lane for the Birdworld access and a bus layby, but the southbound bus stop is located online.

The bus stops are served by the 17 and 18 bus services. The number 18 bus service provides the highest frequency of one service per hour, providing access to/from Aldershot and Bordon Camp hourly Monday – Saturday and every other hour on Sundays.

2.4. Trip generators

Primary trip generators include:

- Forest Lodge Garden Centre
- Birdworld
- Nearby residential properties
- A325 Site Frontage and Gravel Hill Road Bus Stops

To the South - The northbound bus stop is a layby with a shelter and short, narrow footway. There is a 1.2m wide footway in front of the bus stop which extends southwards to Gravel Hill Road, with an embankment and drainage ditches situated to the west (some 1m – 1.5m below the footway).

To the north of the Gravel Hill Road junction with the A325 there is an informal dropped kerb crossing of the A325 to provide pedestrian access to the southbound Gravel Hill Road bus stop. The footway on the eastern side of the carriageway is 1.2m wide and there is a steep embankment some 2m down to a drainage ditch to the east of the footway.

The southbound bus stop is also a layby, however there is no shelter in place and the footway further narrows to 1m in front of the bus stop.

2.5. Site Visits

A site visit to assess walking, cycling and horse riding was completed in February 2023. The following was assessed as summarised in the i-Transport document ITB16329-009 TN – NMU Review and Potential Improvements (**Appendix A**):

- Pedestrian connections to Footpath 50 (a Public Right of Way (PRoW)) for routes to Alice Holt Forest and potential improvements;
- Pedestrian access to the Gravel Hill Road bus stops on the A325 (including a crossing facility) and potential improvements;
- Waiting facilities at the Gravel Hill Road bus stops and potential improvements;
- Pedestrian and cycle connections to Bentley railway station and potential improvements; and
- Cycle connections to National Cycle Network route 224 (NCN224) and potential improvements.

2.6. Liaison with key stakeholders

The proposal has been subject to pre-application discussions with Hampshire County Council (HCC), as the local highway authority, at meetings on 26 July 2022 and 6 October 2022. Meeting notes are included at **Appendix B**.

2.7. Existing pedestrian, cyclist and equestrian facilities

There is currently limited pedestrian provision along the A325 site frontage, with no footways on either side of the carriageway linking the site to the Gravel Hill Road bus stops

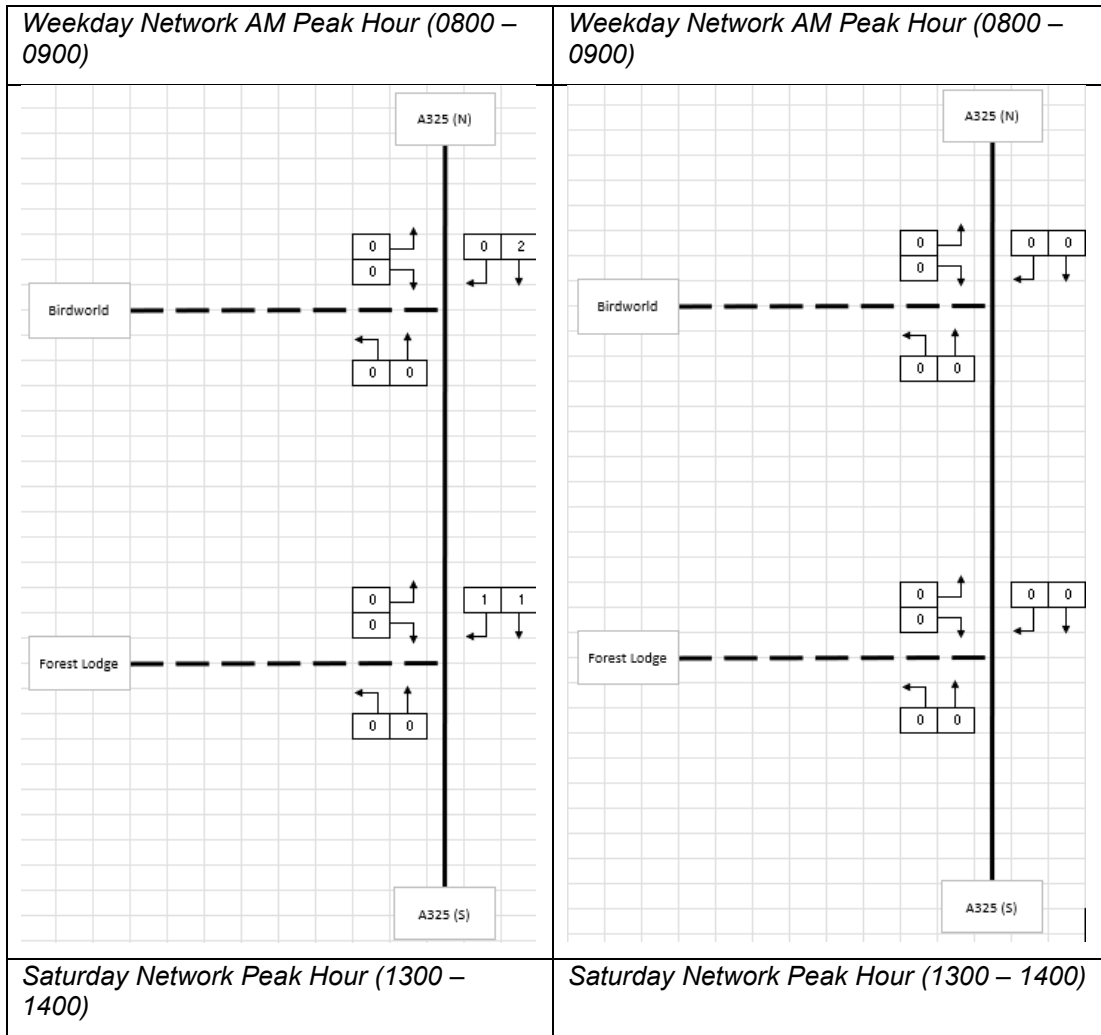
The existing pedestrian facilities within the WCHAR study area include:

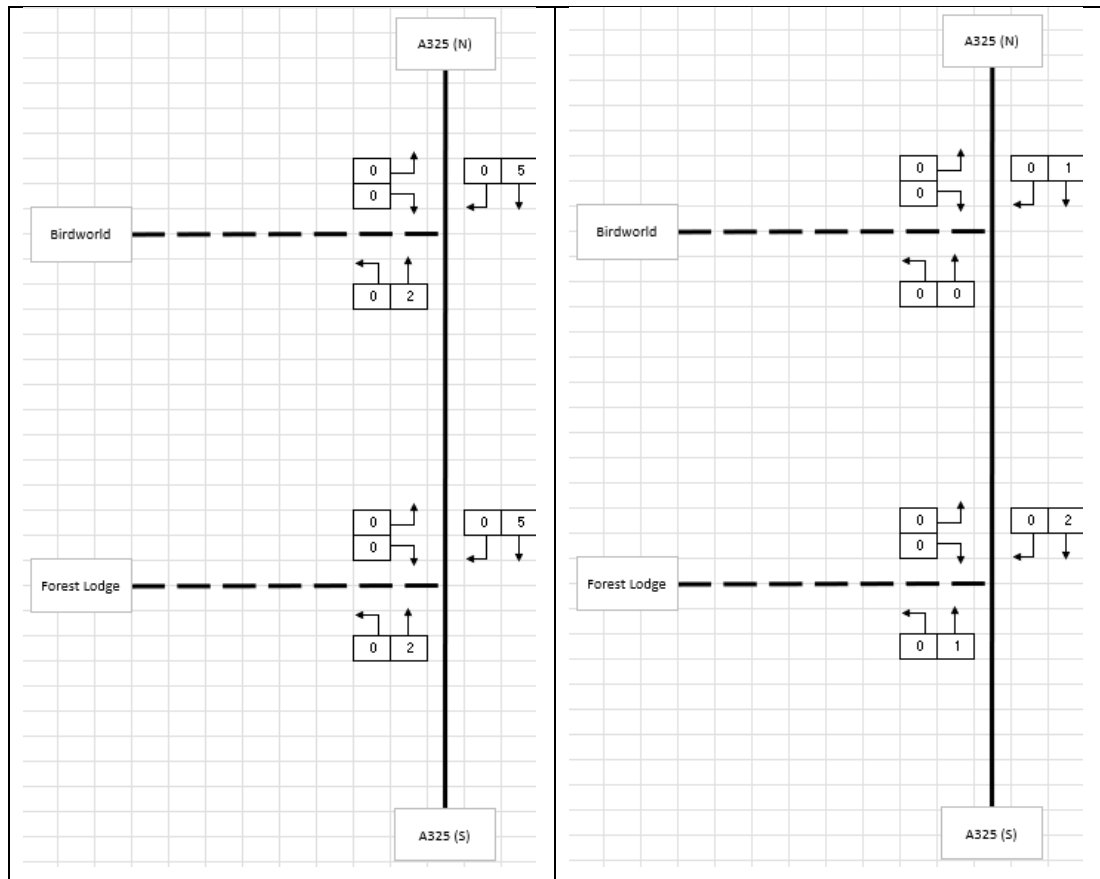
1. Footway on the western and eastern side of the A325 to the south of the site
2. PRoW Footpath 44
3. PRoW Footpath 45
4. PRoW Footpath 50

2.8. Walking, cycling and horse-riding survey data (Large schemes only)

No recorded walking, cycling and horse-riding survey data is available and is considered unnecessary at this time.

2022 observed cycle flows are shown below:





2.9. Liaison with local user groups and wider public (Large schemes only)

*Pre-application discussions have been undertaken with officers at Hampshire County Council (HCC) with meeting minutes and pre-application comments included at **Appendix B**.*

A public consultation took place at Birdworld in November 2023 (including liaison with the local Parish Council) where the proposed scheme was received positively.

3. User Opportunities

The opportunities highlighted below are deemed to be relevant to the highway scheme/works and should be considered by the design team leader throughout the progression of the highway scheme design in addition to any further opportunities that may arise through the ongoing development of the design.

3.1. General

The proposed site access comprises an all-movement vehicular access 3-arm roundabout junction from the A325. The proposed site access is shown in drawing ITB16329-GA-106. The access design includes:

- *44m ICD;*
- *A 3m footway/ cycleway on all arms, enabling cyclists to circumnavigate the roundabout safely without remaining in the carriageway and linking pedestrians to the bus stops to the south of the site and PRow 50 to the east of the site;*
- *Uncontrolled crossings with dropped kerbs and tactile paving on each junction arm;*
- *Access to both Forest Lodge Garden Centre and Birdworld from the same access on the A325, with internal road layout mini-roundabout provided; and*
- *Bus stop improvements to the south.*

*The proposed access arrangements are included at **Appendix C**.*

3.2. Strategic Opportunities

Improved link between PRow 50 and PRow 45.

Continuous footway link between the site and Gravel Hill Road bus stops.

3.3. Walking Specific Opportunities

Improved link between PRow 50 and PRow 45.

Continuous footway link between the site and Gravel Hill Road bus stops

Uncontrolled crossings with dropped kerbs and tactile paving on each junction arm.

3.4. Cycling Specific Opportunities

Greater provision of cycle parking included within the proposals, including 3m shared footway/ cycleways provided around the roundabout to connect the crossings, enabling cyclist to circumnavigate the roundabout safely without remaining in the carriageway.


3.5. Horse-Riding Specific Opportunities

N/A.

4. Walking, Cycling and Horse-Riding Assessment Team Statement

Lead Assessor

As Lead Assessor, I confirm that this walking, cycling and horse-riding assessment report has been compiled in accordance with HCC Technical Guidance Note TG19.

Name & Title:	Duncan Findlay
Title/Position:	Associate
Organisation:	i-Transport LLP
Signature:	
Date:	14/12/2023

Scheme Client Team Leader

As the Scheme Client Team Leader, I confirm that the assessment has been undertaken at the appropriate stage of the highway scheme development.

I confirm that in my professional opinion the appointed Lead Assessor has the appropriate experience for the role making reference to the expected competencies contained in GG 142.

Name & Title:	Simon Webb
Title/Position:	Managing Partner
Organisation:	i-Transport LLP
Signature:	
Date:	14/12/2023

Appendix A – NMU Review and Potential Improvements (ITB16329-009 TN)

[PROVIDED DIGITALLY ON REQUEST]

Appendix B – HCC Pre-Application Meeting Minutes and Pre-Application Comments

Meeting Agenda

Project No: ITB16329
Project Title: Forest Lodge Garden Centre and Birdworld
Date: 26 July 2022
Venue: Microsoft Teams – 1pm

Attendees

Chris Hirst	—	Hampshire County Council (CH)
Holly Drury	—	Hampshire County Council (HD)
Matt Dyer	—	Hampshire County Council (MD)
Sophie Osbourne	—	Hampshire County Council (SO)
Julian Winfield	—	Haskins (JW)
Warren Haskins	—	Haskins (WH)
Simon Webb	—	i-Transport (SAW)
Duncan Findlay	—	i-Transport (DF)
Matt Craddy	—	i-Transport (MC)
Harry Cherrill	—	i-Transport (HC)

Item	Actions
1.0 Introductions	
2.0 Haskins and Project Background	
2.1 WH provided an overview of Haskins as a business, outlining how Haskins' Garden Centres operate, detailing the strategic importance of the redevelopment of Birdworld to secure its long-term future.	
2.2 DF briefly summarised the planning history of the Forest Lodge / Birdworld site.	

Item	Actions
<p>3.0 Access</p>	
<p>3.1 DF outlined existing sub-standard T-junction accesses to both Birdworld and Forest Lodge noting the constraints regarding horizontal/vertical visibility, lack of right turn lanes and the confusion with the layby bus stop at the Birdworld access.</p>	
<p>3.2 DF summarised the previously agreed 3-arm signalised junction, noting that it now no longer works for Haskins given the wider changes to the proposed development.</p>	
<p>3.3 DF outlined the proposed four arm roundabout and detailed how it complies with design guidance. DF also set out the following benefits:</p> <ul style="list-style-type: none"> • Improved walking/cycling provision (including access to bus stops on the A325). • Dedicated access to both Birdworld and Forest Lodge with efficient operation of both sites (including access by service vehicles). • Reducing the number of junctions on the A325 and closing the sub-standard current Birdworld access. • Speed reduction measure on the A325. 	
<p>3.4 CH requested further information on why a revised scheme is now to be progressed and why the previous scheme no longer works for Haskins, in particular requesting an evidence base as to why the proposal has changed from the 3-arm signalised junction to the 4-arm roundabout.</p>	i-T
<p>3.5 DF/SAW agreed to produce a Technical Note for onward forwarding to HCC setting out the access options reviewed for the proposed development, detailing the evidence base for progressing the 4-arm roundabout.</p>	
<p>3.6 HD/CH/MD noting the following points:</p> <ul style="list-style-type: none"> • The previous signalised junction could be programmed to allow a more constant flow on the A325; • It would be beneficial to see the internal context with regards to the site, to ensure pedestrian permeability; • The vertical profile of the proposed access arrangements needs to be checked against recorded speeds and SSD calculator (TG3); • A smaller roundabout design will reduce maintenance and build costs. MD suggested reviewing a compact roundabout. • Vehicle tracking should be provided and an RSA will be required once an access strategy is agreed in principle. 	i-T
<p>3.7 SAW/DF agreed to consider the above points as part of the Technical Note.</p>	
<p>4.0 Sustainable Transport</p>	
<p>4.1 DF briefly summarised the site's location to sustainable travel modes, referring to local PROWs and the nearby bus stops.</p>	

Item	Actions
4.2 DF noted that we have surveyed the use of the bus stops and that current usage is very low (less than 10 people per day).	
4.3 DF outlined that a Travel Plan will be prepared to accompany the application, but that it will reflect the nature and location of the site, primarily focusing on staff as customers are still likely to drive to the site due to the bulky nature of goods sold at Forest Lodge.	
4.4 CH stated there is potentially a suppressed demand to the bus stops due to the existing pedestrian infrastructure between the site and the bus stops. An improved connection could increase bus service use.	
4.5 CH requested that upgrades for southbound bus stop, (including tactile paving and waiting facilities) are reviewed as part of the development proposals. DF/SAW agreed.	
4.6 HD noted that the walking route from Alice Holt could be a viable active travel opportunity for future customers / café customers, with a potential leisure route through site from Alice Holt to the PROW to the east of the A325.	i-T
5.0 Traffic Generation and Impact	
5.1 DF set out the proposed traffic impact assessment methodology for the proposal and note that this is in line with the previously agreed methodology. Traffic data has been collected in May on this basis as this is a 'peak' month.	
5.2 CH agreed to the assessment methodology, distribution and assignment, and data collection in principle, but requested evidence that May is a peak month. DF agreed to provide as part of any further assessment work.	i-T
5.3 CH stated junction assessment years typically required are the year of opening plus a further 5 year assessment. Currently this is planned for 2026 and 2031. DF agreed.	
5.4 CH will clarify committed developments to consider in formal response.	HCC
5.5 HD noted that further clarification may be needed with regards to the use of historic cross-visitation and pass-by data. This could include re-surveys, sensitivity tests or the use of a 'worst case' assessment. i-T to consider further.	
5.6 HD will clarify any public transport or highways improvements in the vicinity of the site.	HCC
5.7 HD asked whether SCC as the neighbouring highway authority would be consulted. SAW said that from memory they had not been consulted on the previous applications. DF/SAW to consider, subject to the outcome of the trip generation analysis.	HCC
5.8 HD to confirm the nearby Bordon development junction improvement contributions (4).	
6.0 Structure and Content of the TA	
6.1 CH to confirm TA structure requirements in HCC's formal response, but noted that it is acceptable in principle.	CH

Item	Actions
7.0 Timescales / Next Steps	
7.1 CH/HD to prepare a formal HCC response following receipt of additional technical note.	HCC
7.2 SAW/DF to prepare a Technical Note reviewing the site access options to provide context for the proposed 4-arm roundabout access.	i-T
7.3 Following the submission of the access options Technical Note a further meeting is to be held to discuss matters. HD suggested that this takes place in September.	ALL
8.0 AOB	

Meeting Record

Project No: ITB16329
Project Title: Forest Lodge Garden Centre and Birdworld
Date: 6 October 2022
Venue: Hampshire County Council Office, Winchester – 1:30pm

Attendees

Chris Hirst — Hampshire County Council (CH)
Matt Dyer — Hampshire County Council (MD)
Julian Winfield — Haskins (JW)
Warren Haskins — Haskins (WH)
Matt Hill — Haskins (MH)
Simon Webb — i-Transport (SAW)
Matt Craddy — i-Transport (MC)
Harry Cherrill — i-Transport (HC)

CC Mary Davidson — MDA
CC Duncan Findlay - i-Transport

Item	Actions
1.0 Introductions	
2.0 Overview of Access Options Appraisal 2.1 SAW provided an overview of the access options appraisal (ITB16329-006B TN – Access options [ISSUE], detailing the seasonality of both sites' operations, scope of the traffic surveys undertaken in May 2022 and the observed peak hour flows, sensitivity tests undertaken, and subsequent proposed trip generation flows and distribution. He briefly summarised the ARCADY and LINSIG junction assessment outputs as well as outlining the pros and cons of each access option. The work had been undertaken at a high level for optioneering and CH said this was acceptable. 2.2 CH commented on the LINSIG outputs, stating the pedestrian phasing could be slightly adjusted to allow greater vehicle volumes throughput however, he stated that HCC was 'more onboard' with the roundabout options.	

<p>3.0 Access</p> <p>3.1 The roundabout options had been presented as single or double lane entry options, with each lane of the roundabout having either one or two lane entries. SAW suggested that the 4-arm roundabout design could be refined to incorporate single lane entries on the Forest Lodge and Birdworld arms and two lanes entries on both the A325 north and south arms.</p> <p>3.2 MC confirmed a 4-arm roundabout design incorporating single lane entry on the Forest Lodge and Birdworld arms but two lanes of entry on both the A325 north and south arms would have a greater ICD than the single lane entry design, but less than the all double entry design. It could be delivered if HCC so desired.</p> <p>3.3 CH shared no preference of roundabout access design at this stage however, noted the signalised junction design offers a potentially safer option for pedestrian and cyclist connectivity between the site and Alice Holt Forest (PRoW 50) to the south of the site albeit one with a lower capacity. Also, with the current roundabout access designs, pedestrians would have to cross two lanes of the A325, which is currently subject to a 50mph speed limit in the vicinity of the site. An extension of the 40mph speed limit was then discussed, as well as noting that the implementation of the roundabout would likely result in reduced vehicle speeds across the stie frontage on the A325.</p> <p>3.4 JW noted that the Parish Council had shown that they were in favour of reducing speeds in the area and along the A325.</p> <p>3.5 CH confirmed an extension to the 40mph speed limit would be a positive for pedestrian crossing safety but would need to be discussed with the HCC traffic management team. CH also suggested the possibility of planting / landscaping in the middle of the roundabout. It would reduce vehicle speeds but its impact on forward visibility would need to be considered.</p> <p>3.6 MD confirmed the maintenance of the roundabout planting would be the responsibility of the local area team.</p> <p>3.7 MC queried if the forward visibility of the roundabout junction arms are required to be provided in accordance with DMRB, noting the planting may impact this. MC also confirmed vertical alignment not an issue albeit subject to further work.</p> <p>3.8 CH confirmed the principle of a roundabout is accepted based on the further work and that HCC is comfortable in principle with what is being shown.</p> <p>3.9 CH outlined HCC’s view on the 4-arm roundabout option:</p> <ul style="list-style-type: none"> • 4-arm roundabout agreed in principle. • Comfortable with junction assessment modelling results. • Applicant needs to explore measures to be introduced to reduce speeds at the access/ site frontage. • Applicant needs to explore how to shift away from vehicle dominance for accessing the site. 	<p>i-T</p>
---	------------

Item	Actions
<ul style="list-style-type: none"> • Applicant needs to look at the soft modes connectivity of the site to the existing infrastructure provision. • Applicant needs to explore the feasibility of linking to the National Cycle Network. <p>3.10 SAW agreed greater focus on the pedestrian and cycle links will be undertaken once the masterplan has been updated.</p> <p>3.11 CH confirmed applicant to engage with LPA for pre-application advice while HCC considers the two lane / one lane approaches matter.</p>	
<p>4.0 Timescales / Next Steps</p> <p>4.1 CH to advise the applicant on the need or otherwise for two lane approaches on the A325 arms. SAW said that this could be done by Teams or over the phone.</p> <p>4.2 CH to prepare a formal HCC response.</p> <p>4.3 JW is to look at booking in LPA pre-application advice service with the LPA.</p>	<p>HCC</p> <p>HCC</p> <p>Haskins</p>
<p>5.0 AOB</p>	

Meeting Agenda

Project No: ITB16329
Project Title: Forest Lodge Garden Centre and Birdworld
Date: 17 July 2023
Venue: HCC Offices – 1pm

Attendees

Chris Hirst	—	Hampshire County Council (CH)
Matt Dyer	—	Hampshire County Council (MD)
Julian Winfield	—	Haskins (JW)
Matt Hill	—	Haskins (MH)
Simon Webb	—	i-Transport (SAW)
Duncan Findlay	—	i-Transport (DF)
Matt Craddy	—	i-Transport (MC)

Item		
1.0	Introductions	
2.0	Planning Update	
2.1	MH/JW provided an update on planning matters following a positive meeting with East Hants during w/c 10/07/2023 and noted that officers at East Hants were receptive to the highways work undertaken to date (in particular regarding the PROW connections).	
2.2	MH/JW confirmed that a planning application is planned for submission in November 2023.	N.B.
3.0	Summary of Previous Discussions to Date	
3.1	DF summarised the previous technical discussions with HCC as follows: <ul style="list-style-type: none"> • July 2023 – Submission of initial scoping note and preliminary discussions with HCC. Following these discussions, HCC requested further clarification on the decision to proceed with a site access roundabout. • October 2022 – Submission of a site access options appraisal and subsequent discussions with HCC. Further to these discussions, the following was agreed: <ul style="list-style-type: none"> ▪ Access, in principle, via a new roundabout was acceptable; ▪ Traffic assessment parameters (including trip generation, distribution and assignment); ▪ The scope and structure of the Transport Assessment; and ▪ Further work on sustainable transport was to be undertaken. 	
3.2	CH confirmed agreement to the above.	N.B.

Item	
<p>4.0 Revised Access Arrangements – 3-Arm Roundabout</p>	
<p>4.1 DF outlined the reasons behind the change in access arrangement from 4-arm to 3-arm roundabout (as set out in Technical Note ITB16329-005B TN) and confirmed that there is no change in the quantum of development. Principal reasons for the change include:</p> <ul style="list-style-type: none"> • Amended internal layout allows for slight reorientation of a building enabling sufficient space to include an internal junction; • Significantly reduced ICD in line with previous HCC comments; • Reduced construction and maintenance costs; and • More direct pedestrian access. 	N.B.
<p>4.2 CH confirmed agreement to the above.</p>	N.B.
<p>4.3 MC/MD then discussed HCC’s technical review of the design issued on 6 July 2023.</p>	
<p>4.4 MC/SAW queried MD’s request to use 100kph design speed in the technical review, given the results of the speed surveys which showed that dry weather 85th %ile observed speeds are less than 85kph. MC/SAW said that the results accorded with the requirements of both DMRB and HCC’s TG3 – Stopping Sight Distances and Visibility Splays. Further, application of HCC’s own speed calculator further confirmed a design speed of 85 kph was appropriate.</p>	N.B.
<p>4.5 MD then confirmed that subsequent checking of the recorded speeds through HCC’s Stopping Sight Distance (SSD) calculator confirms that the design speed should be 85kph. The design speed of 85kph (160m SSD) was then agreed by all.</p>	N.B.
<p>4.6 MD requested that drawings showing the 160m forward visibility envelopes are provided in both the horizontal and vertical planes (including 1.5 x SSD 2.00m to 0.26m object height). MC agreed to re-provide.</p>	i-T
<p>4.7 MC thanked MD for his comments and confirmed that all other matters raised in the technical review are acceptable and/or can be addressed at the appropriate stage (e.g. utilities, extension of adopted highway). MC confirmed that a Stage 1 Road Safety Audit (RSA) will be provided as part of the application submission.</p>	N.B. i-T
<p>4.8 CH/MD confirmed that the proposed 3-arm roundabout arrangements are acceptable in principle and agreed, subject to the provision of the visibility information detailed at 4.6 above.</p>	N.B.
<p>4.9 CH confirmed that ‘design check’ comments in line with the above will be included in HCC’s formal pre-application response (once visibility information provided).</p>	
<p>5.0 Sustainable Transport Improvements</p>	
<p>5.1 Further to the October 2022 discussions, DF outlined that a review/audit of the local walking routes and facilities had been undertaken (set out in Technical Note ITB16329-009 TN).</p>	

Item	
<p>5.2 As a result of the review, the following improvements were proposed in conjunction with the site access arrangements (details set out in Technical Note ITB16329-005B TN):</p> <ul style="list-style-type: none"> • Improved A325 crossing to Footpath 50; and • Improvements to the Gravel Hill Road bus stops. 	N.B.
<p>5.3 CH confirmed agreement to the above improvements.</p>	
<p>5.4 CH noted that he is awaiting comments from HCC passenger transport regarding the proposed improvements to the bus stops (in relation to the provision of real time information and shelters). CH to provide these comments when available.</p>	HCC
<p>5.5 CH/DF also agreed that no improvements are required to the route to Bentley railway station which is of high quality.</p>	N.B.
<p>5.6 All noted that Active Travel England (ATE) is likely to be consulted on the application. CH noted that HCC is aware of an ATE contact for the area.</p>	N.B.
<p>6.0 Traffic Generation and Impact</p>	
<p>6.1 CH confirmed that all traffic assessment parameters presented in presented in the Technical Notes ITB16329-005B TN remain agreed including:</p> <ul style="list-style-type: none"> • Traffic generation (including the assessment scenarios accounting for the seasonality of the proposed development); • Traffic distribution/assignment (based on observed turning proportions); • Study area (comprising solely the site access roundabout); and • Future year assessment (2031) and TEMPRO growth factors. 	N.B.
<p>6.2 CH confirmed that no committed developments are required to be included in the assessment from HCC's point of view.</p>	N.B.
<p>6.3 CH/DF agreed that SCC would need to be consulted for their view given the proximity to the County border.</p>	N.B.
<p>7.0 Timescales / Next Steps</p>	
<p>7.1 CH confirmed that a formal pre-application response from HCC will be issued once the additional drawings confirming vertical visibility splays have been received. This will include 'Design Check' comments.</p>	HCC
<p>7.2 Noted that a planning application submission is targeted for November 2023. DF confirmed that this would be accompanied with a full Transport Assessment (including a Stage 1 Road Safety Audit) and Travel Plan.</p>	i-T
<p>8.0 AOB</p>	
<p>8.1 MD advised that in terms of construction and timing, the principal issues will be in regard to:</p> <ul style="list-style-type: none"> • Utilities; 	N.B.

Item	
<ul style="list-style-type: none">• The Christmas embargo on construction works; and• Possible summer construction restrictions in July/August due to a religious event to the south at the car boot sale site. <p>8.2 MD noted that Haskin’s development programme will need to allow sufficient time for the service diversions and processing of the S278 Agreement, detailed design and technical approvals which will be subject to internal consultations at HCC.</p>	

Circulation

- Attendees plus Harry Cherrill (i-Transport), Holly Drury (HCC), Sophie Osbourne (HCC) and Mary Davidson (MDA Planning).



Duncan Findlay
I-Transport
Duncan.Findlay@i-transport.co.uk

Enquiries to

Chris Hirst

My reference

6/3/6/450

Direct Line

0370 779 0563

Your reference

ITB16329

Date

1st November 2022

Email

Chris.Hirst@hants.gov.uk

For the attention of Duncan Findlay

Dear Sir,

Thank you for your pre-application enquiry into the proposed expansion of Birdworld and Forest Lodge garden centre located to the north of Bucks Horn Oak.

A Scoping Note (SN) has been provided, alongside initial site access drawings for a proposed roundabout on the A325. A meeting was held between the Highway Authority, I-Transport and Haskins (the applicant) on 26th July 2022 to discuss the scoping note and access proposals in more detail ahead of the pre-app response being issued. Following this meeting, a Technical Note (TN) was produced to provide further details regarding the access option appraisal process. A further meeting was held between the aforementioned parties on 6th October to discuss this appraisal note in more detail and to begin reviewing which access option could come forward.

Following a review of the submitted pre-app material and the subsequent discussions, the Highway Authority has formulated the following pre-app response to set out its position.

Planning History

Birdworld and Forest Lodge have been subject to a number of planning applications to redevelop the site and provide a new joint site access in the form of a signal junction with the A325.

Throughout these planning proposals, the new point of access into the site was consistently provided as a signal junction. From the original planning application through to the most recent proposal (granted permission in December 2018), the Highway Authority had accepted the principle of the signal junction, subject to approval through the Section 278 process.

The TN provides rationale behind the change in access form. The changes in access have been dictated by the internal site layout and the need to disaggregate movements between Forest Lodge garden centre and Birdworld. The previously approved signal junction does not allow for the segregation required by the applicant between the two sites. The alternative access proposals have been presented in the form of a new 3 or 4 arm roundabout with the A325.

During the initial meeting, the Highway Authority queried the size of the roundabout and asked the applicant to investigate a scheme which provided a reduced ICD whilst maintaining capacity across the junction. Further commentary is provided on these points within this response.

Existing Conditions

Birdworld and Forest Lodge are located to the north of Bucks Horn Oak and approximately 5km southwest of Farnham, close to the county boundary. Access is currently provided to the sites via two priority junctions onto the A325, each serving a separate car park. It is noted that the visibility splays for the Birdworld access are substandard as a result of the crest of the hill to the north and the boundary wall to the south which both restrict the access from achieving DMRB compliant visibility splays.

The A325 is subject to a 50mph speed limit stretching from the north of Bucks Horn Oak to the north of Birdworld as you head down the hill. To the east of the site and the A325, Footpath 50 branches off through Forestry Commission land towards Alice Holt.

Sustainable Transport Provision

Walking and Cycling

The SN considers that people are unlikely to walk to the site given that purchases made at the garden centre will consist of bulky goods, making it more important to focus on the pedestrian linkages to the bus stops on the A325, surrounding recreational areas and between the two sites. Whilst the Highway Authority agree that it is important to provide direct and continuous connections to the local bus stops, it is not agreed that pedestrians will only choose to visit the garden centre to purchase bulky goods as experience of other sites operated by Haskins shows a more diverse offer than bulky goods.

As noted above, there are a network of local public footpaths to the east of the site which connect to Alice Holt to the south. Pedestrians may therefore choose to combine recreational activities at Alice Holt with a visit to the garden centre to use the café facilities or browse the store. There are opportunities through the existing footpath connections to facilitate these linked trips sustainably. To the north of the existing access into Forest Lodge garden centre, there is an informal pedestrian route through to the A325 which could be utilised to provide a pedestrian connection point to these footpaths.

Potential linkages into the footpath were discussed with the applicant during the first pre-app meeting. A footway connection was subsequently incorporated into the roundabout design work presented in the access appraisal note, shown in drawing number ITB16329-GA-011. The Highway Authority will require this connection to be provided as part of the eventual access junction which is brought forward as part of the planning application.

Alongside the proposed roundabout, a new footway is proposed to the south of the existing Forest Lodge access to connect to the northbound bus stop, which the Highway Authority agrees would be beneficial for improving access to this facility. To the south of the bus stop, there is an existing footway which continues along the western side of the A325 before terminating at the junction with Gravel Hill Road, at which point it crosses to the eastern side of the road to access the bus stop. It is noted that the existing pedestrian crossing point at this location is substandard and should be improved to provide access to the nearest southbound bus stop to the south of the junction between the A325/Gravel Hill Road. The applicant should therefore investigate improving the crossing point to include within the Section 278 works package for the site.

There are no dedicated cycle facilities in the vicinity of the site, meaning cyclists are required to travel on carriageway should they wish to reach the facilities. However, NCN 224 runs in an east-west alignment to the south of the site, providing wider cycle access to Bentley train station and leisure routes around the Alice Holt area. The improved facilities at Forest Lodge are likely to attract cyclists who are on a longer cycle route to stop and utilise the facilities. The applicant should therefore investigate what improvements can be made to better facilitate this desire line from NCN 224.

Bus

As discussed under the pedestrian and cycle facilities, the nearest bus stops to the site are located on the A325, south of the access into Forest Lodge. However, there is currently no footway connection between the northbound bus stop and the garden centre, making the facility inaccessible. There are both northbound and southbound bus stops available to the south of the existing Birdworld access, although these would not be utilised by visitors to the site should the new access be implemented in its current location.

The proposed footway will help to facilitate pedestrian access to the northbound stop and the improved crossing point would cater for pedestrians wishing to utilise the southbound facility. Based on the current location of the garden centre, the stops are located a circa 325m and 430m walking distance from the site.

The southbound bus stop currently consists of a flag pole and timetable only. The applicant should investigate whether it is possible to provide a bus shelter in this location which would help to encourage the uptake of bus provision by providing dedicated waiting facilities. This would be especially beneficial given the current infrequency of the bus service.

Rail

The SN notes that the nearest rail facility to the site is located within Bentley, circa 2km west of the site. As noted within this response, the applicant should investigate improved pedestrian and cycle links around the site to nearby areas, such as Bentley.

Personal Injury Accident Data

Personal Injury Accident (PIA) data will be obtained from Hampshire Constabulary for the most recent five year period. The scope of the data (between Bucks Horn Oak and south of Wrecclesham) is considered acceptable.

It should be noted that there was a recent serious accident to the north of the Birdworld access involving 4 vehicles which will not appear on the accident statistics. HCC's Safety Engineering team have been monitoring a wider safety improvement scheme which was implemented in September 2018. Whilst the scheme is still being monitored, it has been noted that the frequency of accidents has decreased since the scheme went live, notwithstanding the most recent accident on the A325.

Proposed Development

The proposed development is described as the redevelopment and expansion of Forest Lodge garden centre and enhancement of Birdworld. No specific details are given in terms of the scale of expansion, but it is understood that Forest Lodge garden centre will be located to the south west corner of the site, Birdworld will be reorientated to maximise efficiency within the site and new car parking arrangements will be implemented to improve internal circulation. The development will be accessed via a new junction onto the A325 which combines the existing separate accesses into the two sites.

Site Access

The site access proposals have developed through pre-application discussions with the applicant. Through the original SN, access into both Forest Lodge and Birdworld was proposed via a new 4-arm roundabout located to the south of the existing priority junction into Forest Lodge. The south western and north western arms of the roundabout would provide internal access to the two sites, meaning the access which currently serves Birdworld would be closed. The Highway Authority raised initial concerns with the size of the junction and the requirement for a roundabout given the previously approved signal junction,

The follow up TN went on to re-evaluate the merits of providing the previously approved signal junction, alongside a 3-arm roundabout, a 4-arm, 2 lane entry roundabout and a 4-arm, single entry roundabout. All parties acknowledged during discussions that any in principle preference given to a certain access option would be subject to further design work and a Road Safety Audit to demonstrate that a workable engineering solution could be provided.

The TN determined that the signal junction access arrangement was no longer considered suitable by the applicant as a result of the internal queuing and lack of stacking capacity back to the internal roundabout. The Highway Authority acknowledges the rationale behind the applicant seeking to improve the internal operation of the site but also notes that the Linsig model for the signal scheme could be optimised by reducing the frequency of the pedestrian phase, bringing the junction operation more in line with the outputs shown for the roundabout proposals. This scheme would maximise the safety for pedestrians looking to cross the A325 via the provision of dedicated signal crossing facilities.

Notwithstanding the above, the roundabout access proposals were reviewed and discussed at the most recent pre-application meeting. It was acknowledged that the roundabout options worked in modelling terms but concerns were raised over the size of the ICD and whether a smaller scheme could be provided which maintains two lane approaches on the A325. Whilst the roundabout can still incorporate uncontrolled pedestrian crossing facilities, the provision is a step back from the signalised crossing proposals previously being provided.

To help improve the safety for pedestrians crossing the roundabout, the Highway Authority has raised the potential for reducing the speed limit on the A325. During the planning application stage, the applicant will therefore need to investigate an extension to the 40mph speed limit to the south of Fullers Road which is located north of the development. Additional speed surveys will need to be undertaken as part of this process in between Fullers Road and the access into Birdworld and in between the access into Forest Lodge and Bucks Horn Oak. The speed surveys should be undertaken roughly in the middle of the stated locations to gauge the mean average speeds in support of the speed limit reduction.

Furthermore, and as noted above, there are wider pedestrian and cycle improvements which should be investigated to offset the disbenefits provided by moving from the signal junction. These improvements should be outlined as part of the planning proposal.

At this stage, the Highway Authority's still considers the signal junction option to provide the best crossing provision for pedestrians on the A325 and therefore remains the preference in accordance with HCC's emerging LTP4 policy. In terms of potential access options which include the roundabout, a 4-arm roundabout with the A325 which provides two lane entry on both the northbound and southbound approaches to the A325 is currently the preferred option. The Highway Authority expects the ICD for this roundabout to be less than the 60m shown on drawing number ITB16329-GA-004 Rev B whilst maintaining the two-lane approaches. Revised modelling outputs will need to be provided to demonstrate that the A325 still operates with minimal queuing across the scenarios provided within the Trip Generation note. As noted previously, further details regarding improved pedestrian and cycle links to the site should be provided as part of the planning application given the move

away from the signalised crossing facilities on the A325 secured through extant planning consents.

As part of the planning process, the Highway Authority will require further engineering details which have previously been set out in the pre-application meetings. For clarity, this has also been listed below:

- Dimensions for the roundabout included on all drawings;
- Visibility will need to be demonstrated to 332m for the northbound and southbound approaches;
- The SSD for northbound traffic may be reduced by potential overgrown vegetation. Landscape drawings should be provided to demonstrate that the visibility will remain unobstructed;
- Planting within the centre of the roundabout will need to be considered to reduce vehicle speeds on the approach to the roundabout. The planting regime will need to be agreed with the Highway Authority.
- Swept path drawings for all movements at the new roundabout;
- A Stage 1 Road Safety Audit supported by a Designer's Response;
- Any potential overrun area will need to be agreed with Hampshire County Council's Asset Management team;
- Existing shallow ditches may require realignment either side of the carriageway which will require Ordinary Watercourse Consent;
- Provision of a drainage design to account for the increase in surface water run off; and
- Consideration towards street lighting on the approaches to the roundabout.

Based on the provision and review of the above information, further details and clarity may be sought by the Highway Authority. Drawings should also be provided to demonstrate the wider context of the access arrangement with the re-developed site, including how the pedestrian facilities will connect to Forest Lodge and Birdworld.

Car Parking

In their capacity as local parking authority, East Hants District Council should confirm whether the proposed quantum of parking meets adopted parking standards.

Trip Generation

To ascertain the trip generation associated with the proposed development, the original SN proposed to undertake traffic surveys in May 2022, which was considered to be the peak period, with the view to uplifting the surveyed flows to take account of the increased footfall generated by the expansion. The Highway Authority accepted this approach, subject to the provision of further rationale from the applicant to demonstrate why this was considered to be the peak period for operation.

The subsequent Trip Generation note further set out the justification behind the May surveys and outlined the scenarios to be utilised for the modelling work. Following a review of the note, it was agreed that May represented a 'busy' month for the two businesses which provided a sufficient basis for calculating the trip rates. The surveys looked at a typical bank holiday, weekday and weekend and also took account of the turning movements to derive the trip distribution from the site. No pass by or cross visitation allowances have been made within the assessment, partially to ensure a robust assessment but also because the surveys undertaken in May will have accounted for an element of pass by and cross visitation between the existing sites. The Highway Authority accepts this approach.

In total, 5 scenarios were investigated which took account of a range of conditions at different times of the week. This included consideration of a 90th percentile operation sensitivity test in the morning and afternoon peak hours to understand the operation of the network when assuming a higher level of activity at both sites. The Highway Authority agreed that the methodology was robust for considering the future traffic implications of the site.

Trip Distribution

Trip distribution from the site has been determined by utilising the existing turning count data gathered from the site accesses during the May surveys. This approach has been accepted through previous applications and is considered suitable for determining the distribution of traffic from the redeveloped site.

Traffic Impact

To growth the baseline traffic flows, the SN proposes to utilise TEMPRO data which is considered acceptable. Table 5.1 of the TN forecasts the growth to 2026; however, this will need to cover a predicted year of opening + 5 year scenario, rather than 2026 which does not cover a future 5 year period even if it was assumed that the site was opened following expansion this year. The growth factors will therefore need to be revisited to reflect the required scenario above.

To begin formulating a preference on access options, the Highway Authority reviewed the range of modelling outputs submitted within the Access Options note. This modelling work assessed the 5 scenarios against each access option to provide a comparison between junction operation. Scenario 4 was taken as a reasonable assumption for future junction operation given that it represents 90th percentile operation of both sites during the AM and PM peak hours. This scenario identified that the signal junction would create a 19 PCU queue on the A325 southbound approach in the AM peak future year scenario. The queueing in the PM peak was not as pronounced but still demonstrated that 13 and 11 PCU's would queue on the respective northbound and southbound approaches on the A325.

In comparison, the 4-arm, two lane entry roundabout was forecast to operate with minimal queueing on the mainline, with the worst case queueing across

any scenario 4 PCU's. Whilst it was identified that the Linsig model for the signal junction could be tweaked to optimise the performance, the initial modelling work demonstrates that the 4-arm, two lane entry roundabout operates with minimal queueing when compared to the signal junction.

The revised roundabout design will need to demonstrate that the queuing on the A325 remains comparable to the initial results presented within the TN. The correct future year scenarios should also be applied to forecast the operation of the junction 5 years post occupation of the re-developed site.

Whilst the Highway Authority appreciates that a robust assessment has been undertaken to demonstrate that the roundabouts would operate in capacity terms, an appropriate assessment criteria will ultimately need to be considered at the planning stage to ensure that an over engineered design solution is avoided which would come at the detriment of the crossing facilities on the A325.

Structure of the Transport Assessment

Section 6 of the SN sets out the proposed structure for the Transport Assessment which is considered suitable.

Summary

Based on the information presented to date, the Highway Authority's preferred option for access into the re-developed Forest Lodge and Birdworld development out of the roundabout options presented is a 4-arm roundabout, containing two lane entries on the A325 northbound and southbound approaches. A revised scheme should be presented as part of any planning application which reduces the size of the ICD whilst meeting the engineering requirements outlined within this response. Acceptance of this access option is predicated on the modelling outputs demonstrating minimal queueing on the A325 and the provision of a suitable scheme to progress through a Section 278 design check with the Highway Authority. A pedestrian and cycle strategy should also be provided to demonstrate how improved sustainable transport infrastructure can be provided as part of the application to reduce reliance on travel to the site via the private car.

Yours Sincerely,

Chris Hirst – Senior Transport Planner.



Duncan Findlay
By email only

Enquiries to	Chris Hirst	My reference	6/3/6/450
Direct Line	0370 779 0563	Your reference	ITB16329
Date	28 th September 2023	Email	Chris.Hirst@hants.gov.uk

For the attention of Duncan Findlay

Dear Sir,

Thank you for your pre-application enquiry into the proposed expansion of Birdworld and Forest Lodge garden centre located to the north of Bucks Horn Oak.

The pre-app submission follows on from the original discussions held with the Highway Authority in 2022, which culminated in a response dated 1st November 2022. The response summarised that the Highway Authority's preference for access to the site was a 4-arm roundabout which included two lane entries from both approaches on the A325; however, the applicant was requested to investigate a design which reduced the size of the ICD, and to develop a pedestrian and cycle access strategy to the re-developed site.

The second pre-app submission includes the provision of a Scoping Note (SN) which includes an NMU audit, along with updated site access drawings. This information was discussed at a meeting between the Highway Authority, I-Transport and Haskins on 17th July 2023, which led to further discussions around the SSD at the roundabout.

Following a review of this information, and with consideration to the previous pre-app response, the Highway Authority wishes to make the following comments.

Previous Pre-App Response

Within the Highway Authority's previous pre-app response, a number of assessment parameters were agreed, including:

- The requirement to assess the most recent accident data from Hampshire Constabulary;

- The approach to trip generation by utilising existing trip rates to the sites and uplifting this based on additional forecast footfall figures;
- The approach to trip distribution by utilising existing turning count data;
- The principle of the access strategy working within capacity, subject to further investigation into the design to ensure that an over engineered solution is not being provided; and
- The scope of the Transport Assessment as part of any future planning application.

The second pre-app does not look to change the scale of the proposed development, meaning that the trip generation and distribution approach remains valid. The changes pertain to amendments to the internal site layout, which has led to subsequent changes to the site access strategy and the modelling work previously undertaken. This response will therefore focus on the latest changes to the proposed development, namely: the pedestrian and cycle access strategy and the vehicular access strategy.

Pedestrian and Cycle Access Strategy

An NMU audit has been undertaken to review the walking and cycling routes nearby to Forest Lodge and Birdworld, primarily covering Footpath 50 which provides access to the footways in and around Alice Holt, and Footpaths 44 and 45 which provide access to Bentley train station.

Access to Bentley train station is provided via Gravel Hill Road which is a wide, shared surface road. Whilst no formal footway facilities are provided, it is acknowledged that the route is subject to low vehicle speeds and the good visibility available to pedestrians provides a pleasant walking environment. Alongside the improvements proposed in the vicinity of the site (discussed later on within this section) the Highway Authority are satisfied that the existing route does not have to be upgraded to provide pedestrians with safe and suitable access to the A325.

Access to the wider footpath network around Alice Holt is provided via Footpath 50, which currently terminates at the point at which it connects to the A325. Footpath 50 itself is unsurfaced but can offer a future walking route to Forest Lodge, alongside the improvements discussed below.

Alongside the proposed roundabout on the A325, the latest scoping note provides new footway facilities on the A325 to connect to the Footpaths noted above, and the existing bus stop facilities to the southwest of Forest Lodge.

A new footway is proposed on the southern side of the A325 which connects to the point at which Footpath 50 joins the road to the crossing facilities provided on the northern arm of the roundabout, shown in drawing number ITB16329-GA-100. The footway is proposed at a width of 2m and whilst it requires pedestrians to cross two lanes of traffic on the A325, the Highway Authority notes that good visibility is afforded at the crossing point to anticipate any approaching vehicles. Furthermore, the Highway Authority requires any future planning application to be supported by a TRO to reduce the existing

50mph speed limit on the A325 to 40mph, extending the existing 40mph limit at Holt Pound to the south past Forest Lodge and Birdworld. The TRO will need to be supported by additional speed surveys to the south of Fullers Road and in between Forest Lodge and Buck Horns Oak to confirm whether the mean speeds are conducive for supporting a speed limit reduction along the route. By reducing the speed limit along this section of the A325, pedestrian safety at the crossing point will be improved further.

To connect to the bus stops to the south of Forest Lodge, the applicant is proposing a further footway connection from the roundabout. The footway provides access to the northbound stop before crossing at an upgraded tactile paving/dropped kerb crossing point to access the southbound stop. The NMU also proposes to upgrade both of the bus stops to bus shelters, with RTI also provided. These measures have been discussed with Hampshire County Council's Passenger Transport Team who agree with the principle of the works, but have also requested that an additional southbound bus stop facility is provided as part of the roundabout design. By implementing a southbound stop near to the roundabout, bus patrons will have a reduced walking distance to both sites. Given the low level of future queuing at the roundabout identified through the junction modelling, the Highway Authority accepts that a dedicated layby may not need to be provided depending on the constraints of the design adjacent to the ditch. The applicant is therefore required to investigate the provision of an additional southbound bus shelter near to the roundabout as part of any future planning application. The future maintenance of the improved bus facilities will be subject between discussions between HCC and EHDC.

The proposed pedestrian access strategy will provide new continuous facilities to Footpath 50 to the north and the existing bus stops and Gravel Hill Road to the south. The Highway Authority is therefore satisfied that the proposed improvements would sufficiently encourage the uptake of sustainable modes of transport to the site, alongside a Travel Plan for both businesses.

Site Access

Following changes to the internal layout, the proposed access to the site has been revised from a 4-arm to a 3-arm roundabout which maintains two lane approaches from the north and south on the A325. Upon entering the site, traffic is split between Forest Lodge and Birdworld via a smaller roundabout which can now be provided given the separation available between the two junctions.

By reducing the number of roundabout arms, the size of the ICD has also reduced to 44m from the 60m previously proposed as part of the 4-arm design. SSD to the roundabout has been demonstrated in accordance with recorded speeds i.e. 260m northbound and 235.5m southbound. Swept path drawings have also been provided for an articulated vehicle navigating the junction which confirms that there is sufficient space around the circulatory for these manoeuvres to be undertaken.

To support the revised junction form, updated junction modelling has been undertaken to a future year of 2031 which is taken as the year of opening +5 years, as requested by the Highway Authority. Within the updated modelling, the worst case RFC across the roundabout is observed on the A325 (S) within the bank holiday peak hour with an RFC of 0.59, relating to a queue of 1 PCU. The updated junction modelling therefore demonstrates that the 3-arm roundabout works in modelling terms with minimal delay on the A325.

The Highway Authority is therefore satisfied with the principle of the 3-arm roundabout design shown within drawing number ITB16329-GA-100. A Stage 1 Road Safety Audit for the whole scheme will need to be undertaken to confirm whether there are any safety issues which need to be addressed through the design. Further details such as material usage, tree loss, potential re-alignment of existing ditches and drainage will also need to be addressed.

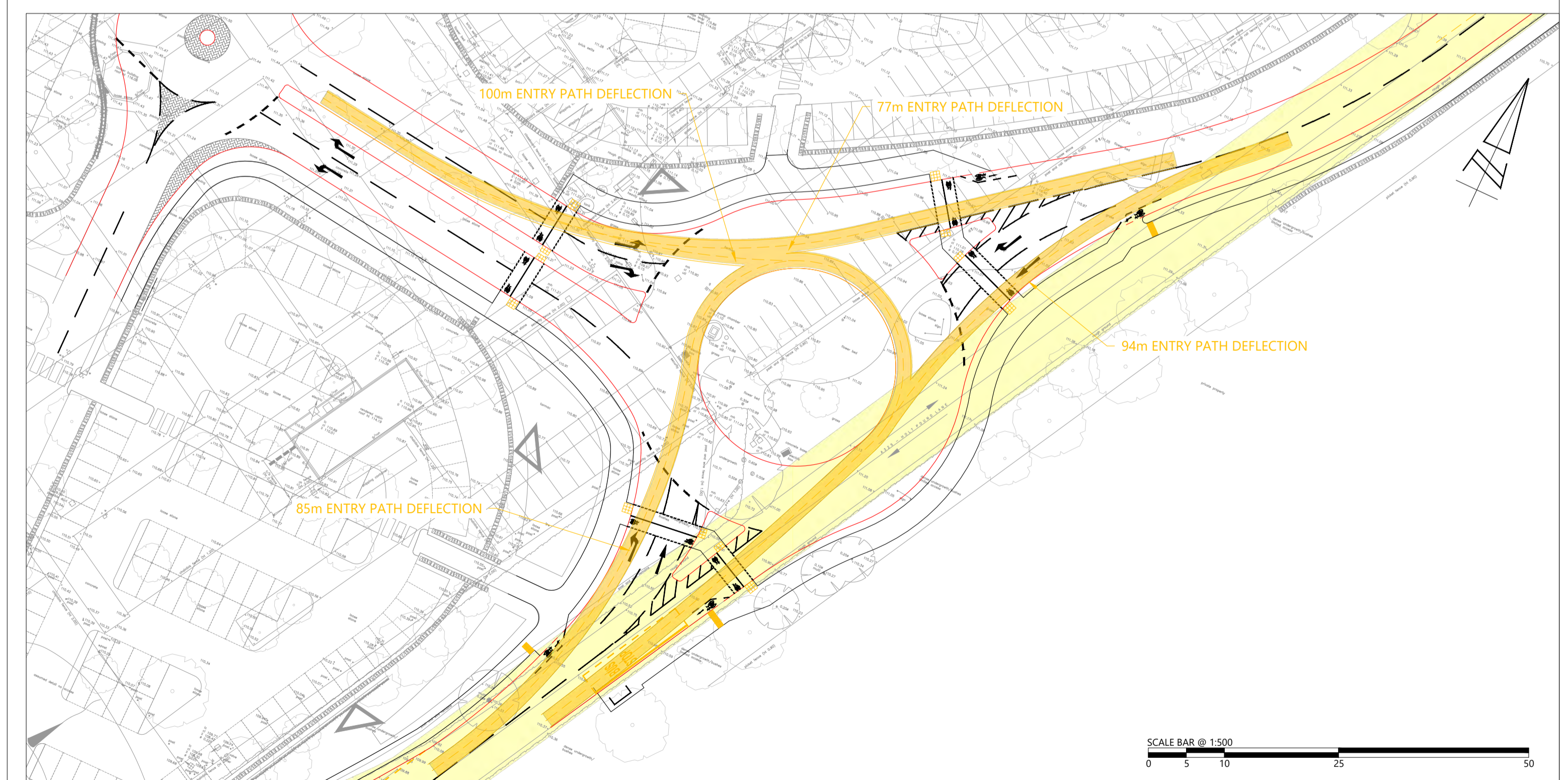
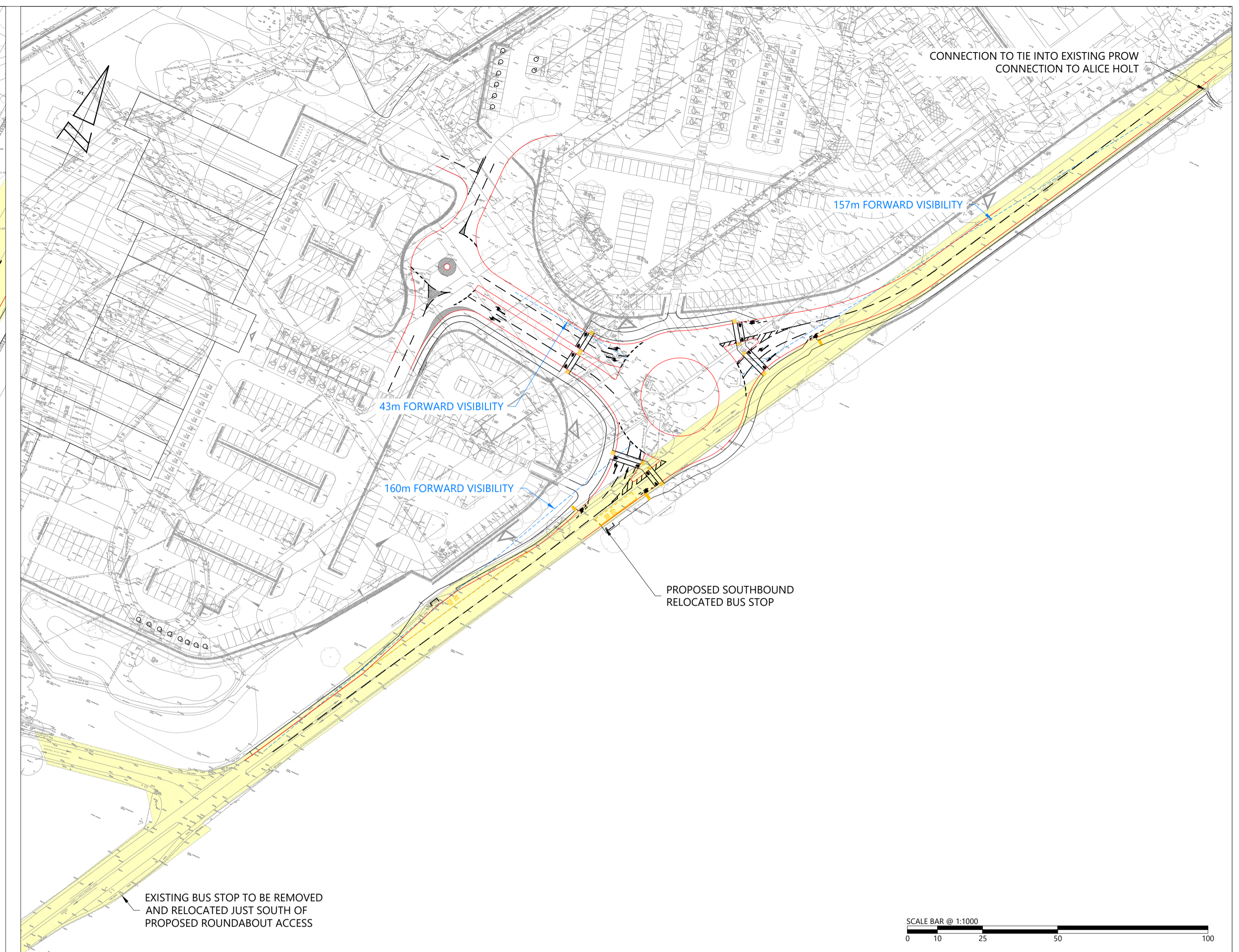
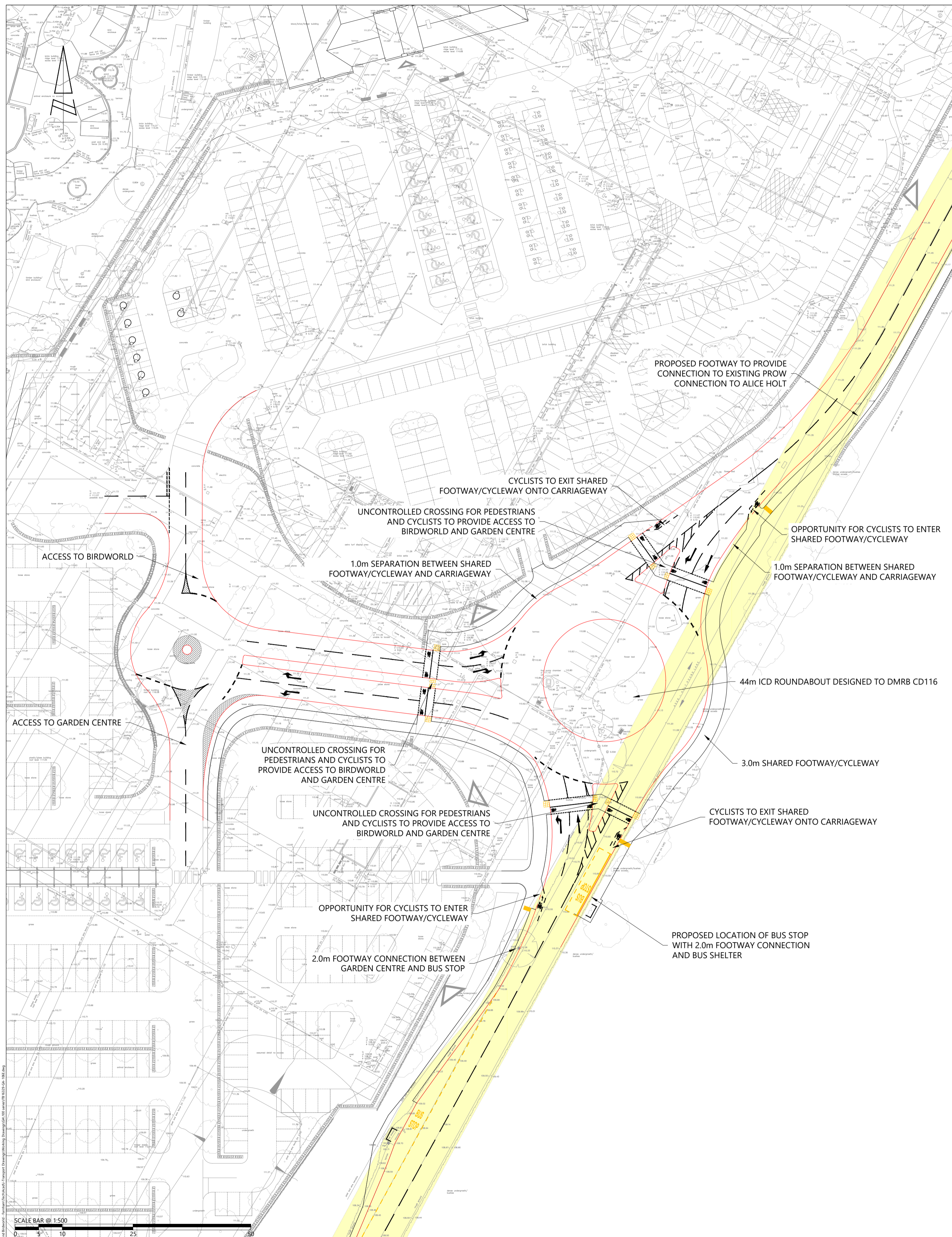
Recommendation

Following the second round of pre-app discussions, the Highway Authority are satisfied with the principle of a 3-arm roundabout which provides two lane approaches to the north and south on the A325. Furthermore, the new footways will help to link the site to the Alice Holt public footpaths and the nearby bus stops. Given that there is an opportunity through the roundabout design to reduce the walking distance for bus patrons to the sites, the applicant is required to investigate the provision of an additional southbound bus shelter prior to the southbound entry to the roundabout.

Yours Sincerely,

Chris Hirst – Senior Transport Planner
Hampshire 2050

Appendix C – Proposed Access Arrangements



APPENDIX J. Technical Note ITB16329-007 TN

Technical Note

Project No: ITB16329
Project Title: Forest Lodge Garden Centre and Birdworld
Title: Trip Generation
Ref: SAW/DF/HC/ITB16329 TN
Date: 31 August 2022

SECTION 1 Introduction

1.1 This Technical Note sets out the traffic generation of the proposed redevelopment of the Forest Lodge Garden Centre ('Forest Lodge') and Birdworld. This is based on analysis of:

- The seasonality of the operation at both Forest Lodge and Birdworld;
- Recorded traffic survey data collected in May 2022; and
- The predicted increase in transactions/visitor numbers as a result of the proposed redevelopment.

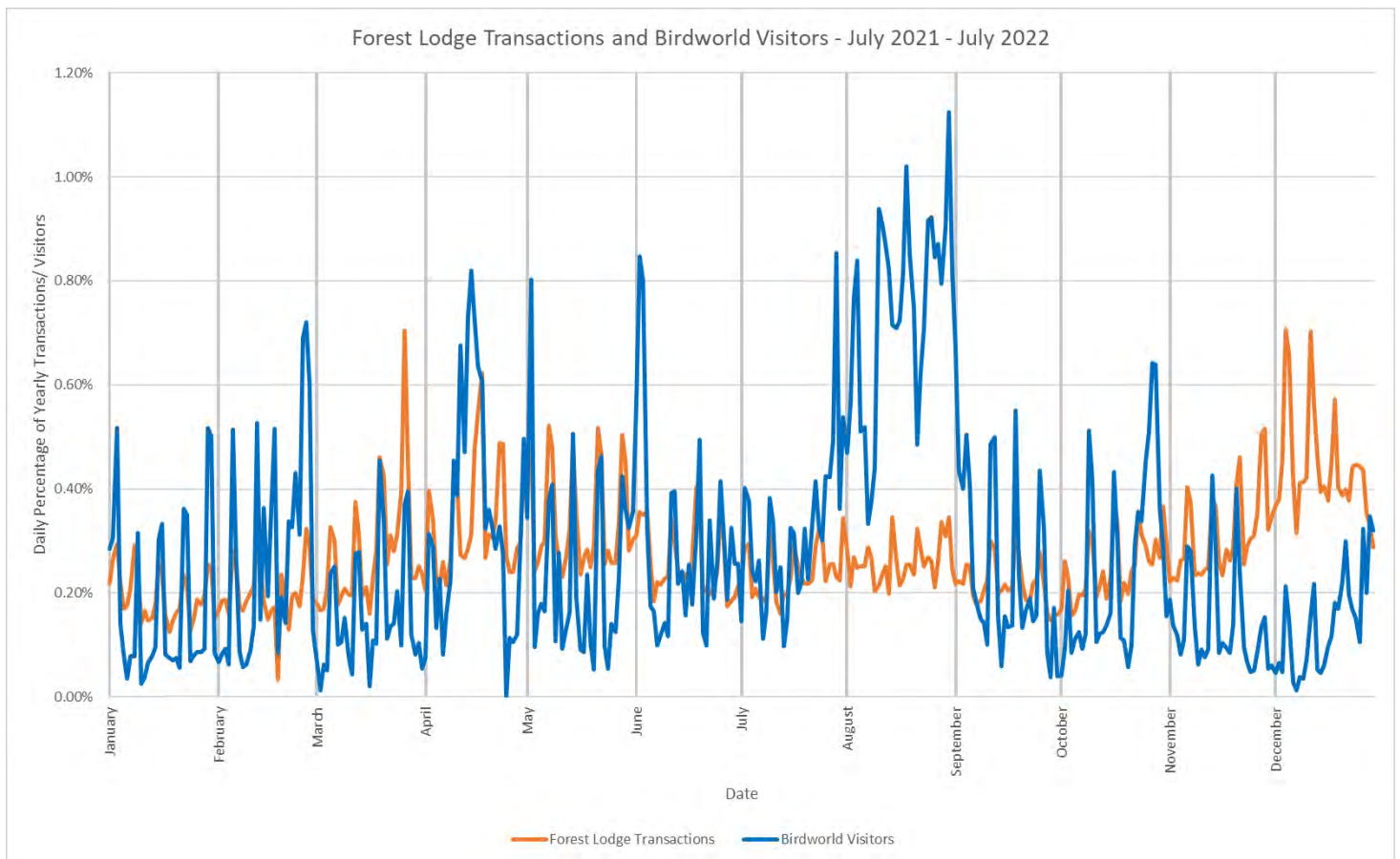
1.2 The remainder of this note is structure as follows:

- Section 2 outlines the seasonality of the operations at Forest Lodge and Birdworld based on data provided by Haskins;
- Section 3 presents the survey data at the sites collected in May 2022;
- Section 4 details the proposed assessment scenarios/days based on the survey data collected and analysis of the seasonality of the site's operation;
- Section 5 sets out the predicted trip generation of the proposed redevelopment based on the analysis detailed at Section 4 and the predicted increase in transactions/visitor numbers; and
- Section 6 provides a summary and conclusions.

SECTION 2 Seasonality of Site Uses

- 2.1 Both Forest Lodge and Birdworld are subject to seasonal variations in their operation due to the nature of the site uses. The garden centre operation at Forest Lodge is primarily busiest at weekends or Bank Holidays in the Spring or during the run-up to Christmas whilst as an outdoor tourist attraction, Birdworld is busiest primarily during the school holidays and at weekends during the Spring/Summer months.
- 2.2 Any traffic generation assessment of both site uses must therefore take account of their seasonal variations throughout the year, considering the implications of traffic generation during 'typical' weekday peak hours on the local highway network as well as traffic generation at busy times operational times of either/both uses (e.g. at Bank Holidays and Weekends).
- 2.3 Haskins has provided recorded transaction data for Forest Lodge and recorded visitor number data for Birdworld from July 2021 to July 2022. This is presented at **Graph 2.1** below as proportions of the total transaction and visitor numbers (actual transaction/visitor data is confidential).

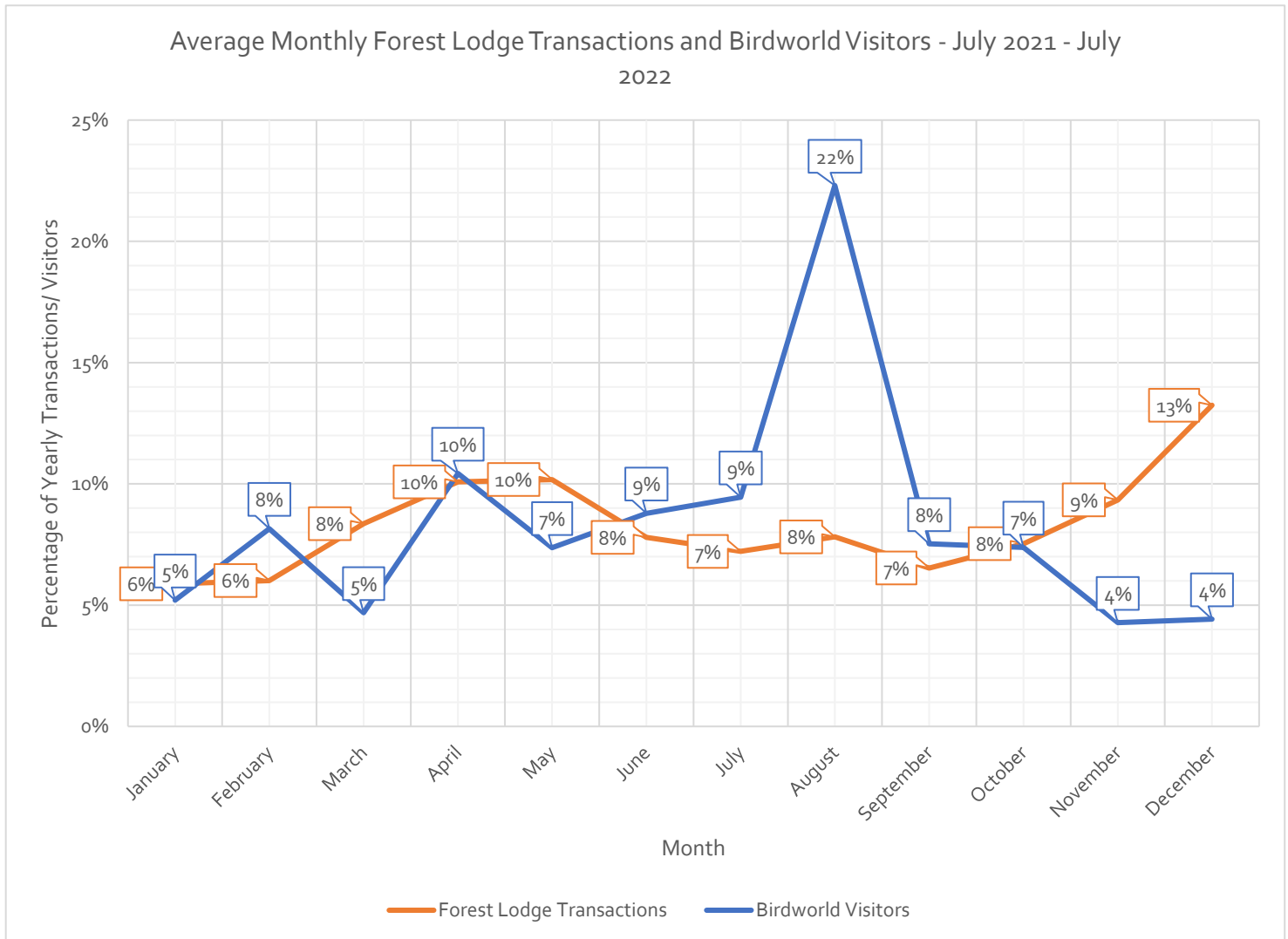
Graph 2.1: Forest Lodge Transaction and Birdworld Visitor Data



2.4 **Graph 2.1** confirms that Birdworld is busiest during the Spring/Summer months during school holidays and that Forest Lodge has operational peaks during Spring and in the run-up to Christmas. The data demonstrates that both uses experience busy operational days on Bank Holidays and at weekends, and highlights that the months of April and May are typically busy months for both site uses.

2.5 This is further supported by **Graph 2.2** which presents the average monthly Forest Lodge transactions and Birdworld visitor figures. The full visitor numbers and transaction data are included as **Annex A**.

Graph 2.2: Average Monthly Forest Lodge Transactions and Birdworld Visitors



2.6 **Graph 2.2** shows the following:

Forest Lodge

- The peak month for Forest Lodge transactions is December which can be attributed largely to Christmas shopping habits; and
- May is the second busiest month for Forest Lodge transactions across the year.

Birdworld

- The peak month for Birdworld visitors is August, predominantly due to the school Summer holidays;
- May was the eighth busiest month for Birdworld visitors across the whole year. Busier months tended to be in the summer or months with school holidays, noting only two days of the summer term half-term were in May due to the Platinum Jubilee.

2.7 Due to the differing nature of site operations between Forest Lodge and Birdworld, the peaks of uses vary at different times of the year, however, May is a 'busy' month for both uses that occurs within school term time. Traffic data was therefore collected in May 2022 (further details are provided at Section 3).

SECTION 3 Surveyed Trip Generation

3.1 Survey Scope

3.1.1 A suite of traffic surveys was undertaken by an independent data collection company (Advanced Transport Research) in May 2022 on the following days:

- **Monday 2 May 2022** – A Bank Holiday in spring (i.e. a busy operational day for both uses);
- **Thursday 12 May 2022** – A ‘Typical’ Weekday in a busy month for both uses, but within school term time in a ‘neutral’ month; and
- **Saturday 14 May 2022** – A ‘Typical’ Weekend Day in a busy month for both uses, but again within school term time in a ‘neutral’ month.

3.1.2 The surveys included 12-hour (0700 – 1900) Classified Traffic Counts (CTC) undertaken at the existing Forest Lodge and Birdworld accesses on the above days.

3.2 Surveyed Trip Generation

3.2.1 **Table 3.1** and **Table 3.2** summarises the surveyed trip generation of Forest Lodge and Birdworld for:

- The highway network morning and evening peak hours on a weekday (0715 – 0815 and 1630 – 1730);
- A Saturday peak hour (1300 – 1400);
- A Bank Holiday peak hour (1115 – 1215); and
- Daily trip generation for all surveyed days between 0700 – 1900.

3.2.2 The above peak hours are similar to those assessed in previous application, albeit with the addition of a Bank Holiday peak hour. The most recent application in 2016 considered 0800 – 0900 and 1700 – 1800 on a weekday, as well as 1115 – 1215 on a Saturday.

Table 3.1: Forest Lodge Surveyed Peak Trip Generation

Forest Lodge	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
Weekday AM Peak (0715-0815)	28	0	28	-	-	-	-	-	-
Weekday PM Peak (1630-1730)	27	50	77	-	-	-	-	-	-
Saturday Peak (1300-1400)	-	-	-	118	130	248	-	-	-
Bank Holiday Peak (1115-1215)	-	-	-	-	-	-	171	134	305
12hr Daily (0700-1900)	584	567	1,151	851	855	1,706	934	933	1,867

Source: A-T-R Traffic Surveys, May 2022

Table 3.2: Birdworld Surveyed Peak Trip Generation

Birdworld	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
Weekday AM Peak (0715-0815)	2	1	3	-	-	-	-	-	-
Weekday PM Peak (1630-1730)	1	5	6	-	-	-	-	-	-
Saturday Peak (1300-1400)	-	-	-	29	32	61	-	-	-
Bank Holiday Peak (1115-1215)	-	-	-	-	-	-	76	11	87
12hr Daily (0700-1900)	94	94	188	242	242	484	355	355	710

Source: A-T-R Traffic Surveys, May 2022

3.2.3 The surveyed trip numbers across a day are also set out in **Annex B**. The raw traffic data is available on request.

3.2.4 The surveyed Forest Lodge and Birdworld trip generation set out in **Table 3.1** and **Table 3.2** at the site access junctions is shown on the following figures:

- **Figure 3.1** – Weekday AM Peak Hour (0715 – 0815);
- **Figure 3.2** – Weekday PM Peak Hour (1630 – 1730);
- **Figure 3.3** – Weekend Peak Hour (1300 – 1400); and
- **Figure 3.4** – Bank Holiday Peak Hour (1115 – 1215).

SECTION 4 Trip Generation Assessment Scenarios

4.1 Overview

4.1.1 Due to the seasonal variation of the site operations (detailed at Section 2), it is appropriate to consider a variety of trip generation scenarios to ensure a robust assessment. This section reviews the trip generation scenarios proposed for assessment based on the transaction/visitor data for Forest Lodge and Birdworld detailed in Section 2.

4.1.2 This section therefore:

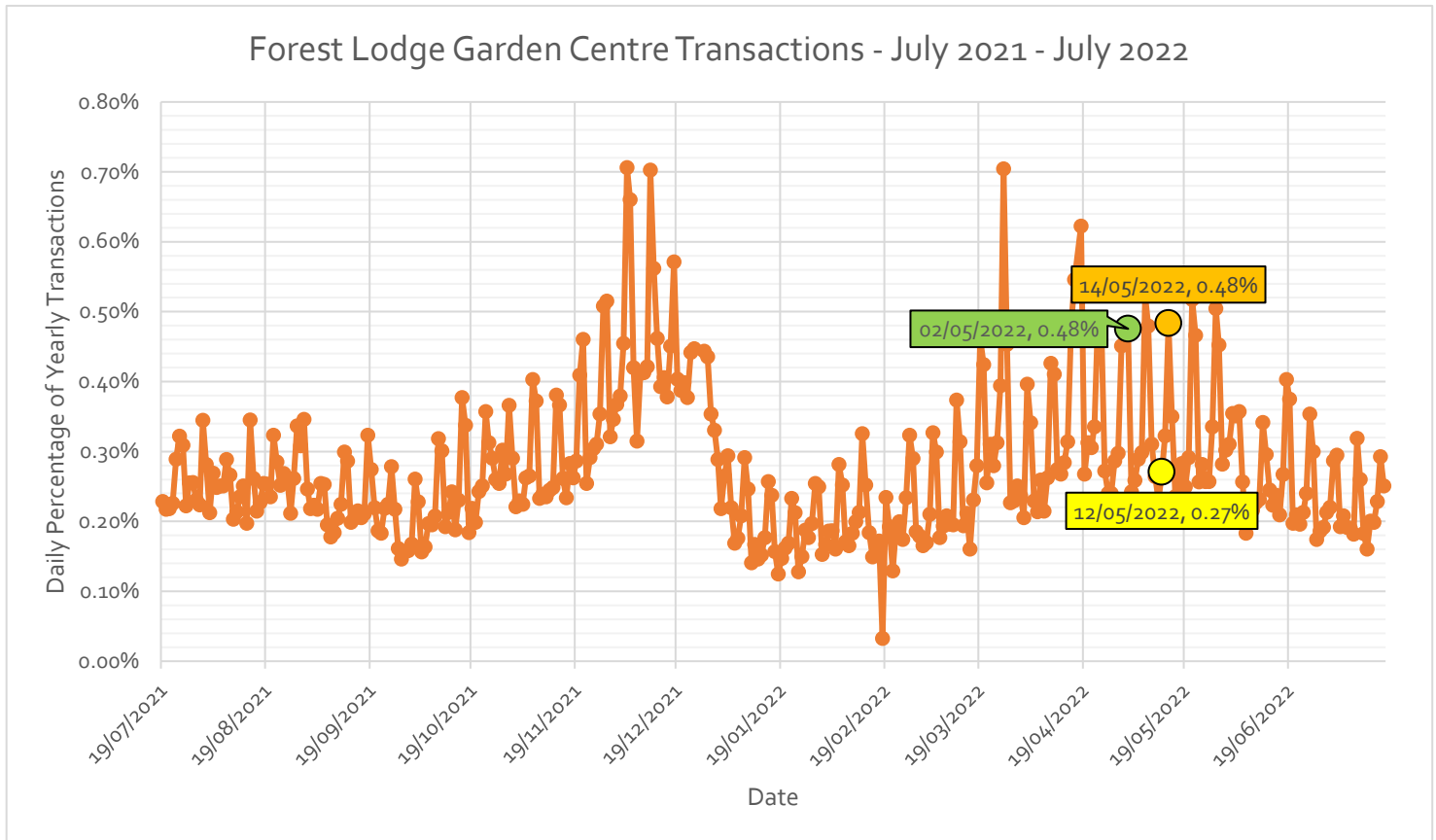
- Analyses the surveyed trip generation for Forest Lodge and Birdworld against the intensity of the sites' operations on that day (based on visitor numbers and transaction data); and
- Presents additional scenarios for assessment on a 90th percentile operational weekday and a 90th percentile operational weekday end for both sites as sensitivity tests.

4.2 Operational Analysis of Surveyed Days

Forest Lodge

4.2.1 The days on which traffic surveys were undertaken are plotted on the day-to-day Forest Lodge transaction data, along with their corresponding recorded transactions (as proportions of total annual transactions), are shown at **Graph 4.1**.

Graph 4.1: Forest Lodge Transaction Proportions – Traffic Surveys Plotted



4.2.2 **Table 4.1** summarises the Forest Lodge transaction data on the days in which traffic surveys were undertaken and details the equivalent percentile operational day at Forest Lodge (based on July 2021 – July 2022 data).

Table 4.1: Forest Lodge Transaction Data Percentiles on Traffic Survey Days

Key	Forest Lodge Survey Days	% of Total Annual Transactions	Percentile Operational Day (All Days)	Percentile Operational Day (Equivalent Days*)	
	Bank Holiday Monday	02/05/2022	0.475%	95%	-
	Typical Weekday – Thursday	12/05/2022	0.271%	60%	76%
	Typical Weekend – Saturday	14/05/2022	0.483%	96%	86%

Note: *Equivalent Days = Percentile of Weekdays and Percentile of Weekend Days Only. Percentile of Bank Holidays only not provided as the data sample is too small.

4.2.3 **Table 4.1** demonstrates that:

- The Bank Holiday on Monday 2 May 2022 was a 95th percentile operational day at Forest Lodge (taking into account all days) and therefore the traffic data collected over robustly represents an extremely busy day at the site;

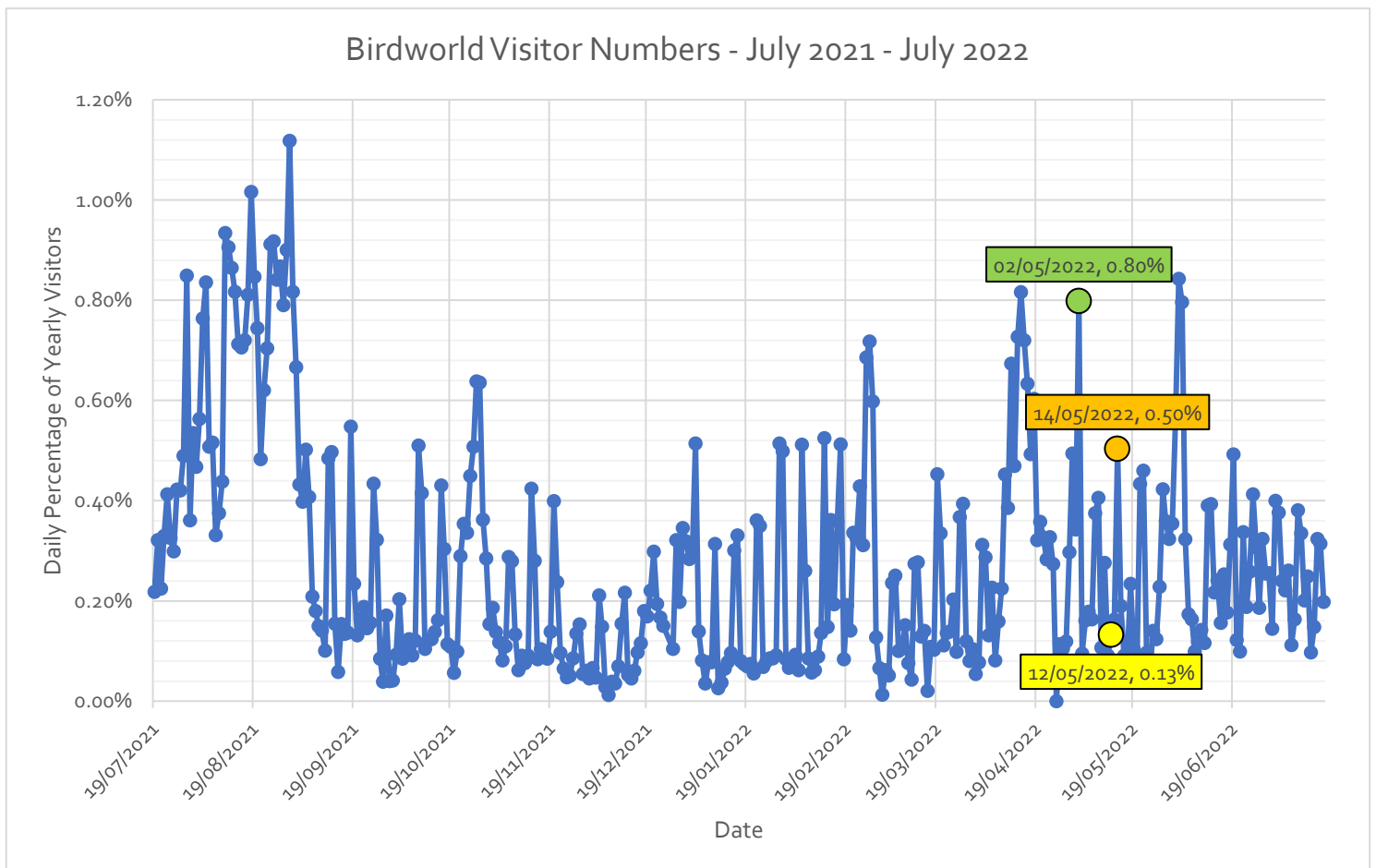
- Thursday 12 May 2022 was a 76th percentile operational day (considering weekdays only). The traffic data collected on this day therefore robustly represents a typical busy weekday at Forest lodge; and
- Saturday 14 May 2022 was an 86th percentile operational day at weekends. The traffic data collected on this day therefore represents a busy operational, 85th percentile Saturday at Forest Lodge.

4.2.4 Full calculations are included as **Annex C**.

Birdworld

4.2.5 The days on which traffic surveys were undertaken are plotted on the day-to-day Birdworld visitor numbers as shown at **Graph 4.2** (again as proportions).

Graph 4.2: Birdworld Visitor Number Proportions – Traffic Surveys Plotted



4.2.6 **Table 4.2** summarises the Birdworld visitor on the days in which traffic surveys were undertaken and details the equivalent percentile operational day at Birdworld (based on July 2021 – July 2022 data).

Table 4.2: Birdworld Visitor Data Percentiles on Traffic Survey Days

Key	Birdworld Survey Days		% of Total Annual Visitor Numbers	Percentile of All Days	Percentile of Equivalent Days*
	Bank Holiday Monday	02/05/2022	0.798%	95%	86%
	Typical Weekday - Thursday	12/05/2022	0.132%	35%	48%
	Typical Weekend - Saturday	14/05/2022	0.503%	86%	86%

Note: *Equivalent Days = Percentile of Weekdays and Percentile of Weekend Days Only. Percentile of Bank Holidays only not provided as the data sample is too small.

4.2.7 **Table 4.2** demonstrates that:

- The Bank Holiday on Monday 2 May 2022 was a 95th percentile operational day at Birdworld (taking into account all days) and therefore the traffic data collected over robustly represents an extremely busy day at Birdworld;
- Thursday 12 May 2022 was a 48th percentile operational day (considering weekdays only). The traffic data collected on this day therefore accurately represents a typical average weekday at Birdworld; and
- Saturday 14 May 2022 was an 86th percentile operational day at weekends. The traffic data collected on this day therefore accurately represents a busy operational Saturday at Birdworld.

4.2.8 Full calculations are included at **Annex D**.

Summary

4.2.9 The above analyses demonstrate that assessing the trip generation of the development based on the surveyed traffic data will provide a robust assessment for the following days:

- A typical/average weekday (allows for a 75th percentile operational weekday at Forest Lodge and a 48th percentile operational weekday at Birdworld);
- A busy/typical Saturday (allows for an 86th percentile operational weekend day at both Birdworld and Forest Lodge); and
- An extremely busy Bank Holiday at both Forest Lodge and Birdworld.

4.2.10 However, in order to add an additional level of robustness, it is also proposed to assess the following trip generation scenarios as sensitivity tests:

- A 90th percentile weekday operation at both Birdworld and Forest Lodge; and
- A 90th percentile weekend day operation at both Birdworld and Forest Lodge on a Saturday.

4.2.11 Detail/analysis on the sensitivity tests is provided at the next section.

4.3 90th Percentile Sensitivity Tests – Weekday and Saturday

Forest Lodge

4.3.1 **Table 4.3** summarises the percentile operation (equivalent to transaction numbers as proportions) of the surveyed days at Forest Lodge and notes the date and corresponding transaction numbers (as proportions) for the 90th percentile operational weekday and weekend days.

Table 4.3: Forest Lodge Percentile Operation Summary

Survey Days	% of Total Annual Transactions	Percentile of Equivalent Days*
Typical Weekday Surveyed Thursday (12/05/2022)	0.271%	76%
90th %tile Weekday	0.329%	90%
Typical Weekend Surveyed Saturday (14/05/2022)	0.483%	86%
90th %tile Weekend Day	0.508%	90%

Note: *Equivalent Days = Weekdays Only and Weekend Days Only

4.3.2 Factors can therefore be generated from proportion of transactions and applied to the surveyed day trip generation to derive the estimated trip generation of the current site on a 90th percentile weekday and a 90th percentile weekend day. The factors are as follows:

- Surveyed Thursday to 90th percentile weekday: $0.329/0.271 = 1.22$
- Surveyed Saturday to 90th percentile weekday: $0.508/0.483 = 1.05$

4.3.3 The above factors have been applied to the observed weekday and Saturday trips detailed in **Table 3.1**. **Table 4.4** summarises the estimated trip generation of the current Forest Lodge site on a 90th percentile operational weekday and Saturday.

Table 4.4: Forest Lodge Estimated 90th Percentile Trip Generation (Current Site) – Sensitivity Test

Forest Lodge	90 th Percentile Weekday			90 th Percentile Weekend		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
Weekday AM Peak (0715-0815)	34	0	34	-	-	-
Weekday PM Peak (1630-1730)	33	61	94	-	-	-
Saturday Peak (1300-1400)	-	-	-	124	137	261
12hr Daily (0700-1900)	710	689	1,399	895	899	1,794

Source: Consultant's Calculations

Birdworld

4.3.4 **Table 4.5** summarises the percentile operation (equivalent to proportional visitor numbers) of the surveyed days at Birdworld and notes the date and corresponding visitor number proportions for the 90th percentile operational weekday and weekend days.

Table 4.5: Birdworld Percentile Operation Summary

Survey Days	% of Total Annual Visitor Numbers	Percentile of Equivalent Days*
Typical Weekday Surveyed Thursday (12/05/2022)	0.132%	48%
90th %tile Weekday	0.563%	90%
Typical Weekend Surveyed Saturday (14/05/2022)	0.503%	86%
90th %tile Weekend Day	0.525%	90%

Note: *Equivalent Days = Bank Holidays, Weekdays and Weekend Days

4.3.5 Factors can therefore be generated from number of visitors and applied to the surveyed day trip generation to derive the estimated trip generation of the current site on a 90th percentile weekday and a 90th percentile weekend day. The factors are as follows:

- Surveyed Thursday to 90th percentile weekday: $0.563 / 0.132 = 4.25$
- Surveyed Saturday to 90th percentile weekday: $0.525 / 0.503 = 1.04$

4.3.6 The above factors have been applied to the recorded weekday and Saturday trips detailed in **Table 3.1**. **Table 4.6** summarises the estimated trip generation of the current Forest Lodge site on a 90th percentile operational weekday and Saturday.

Table 4.6: Birdworld Estimated 90th Percentile Trip Generation (Current Site) – Sensitivity Test

Forest Lodge	90 th Percentile Weekday			90 th Percentile Weekend		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
Weekday AM Peak (0715-0815)	9	4	13	-	-	-
Weekday PM Peak (1630-1730)	4	21	26	-	-	-
Saturday Peak (1300-1400)	-	-	-	30	33	63
12hr Daily (0700-1900)	400	400	799	252	252	504

Source: Consultant's Calculations

4.4 Summary of Assessment Scenarios

4.4.1 Further to the above analyses, it is therefore proposed to assess the trip generation of the proposed development for the following scenarios:

- A typical/average weekday during the morning and evening peak hours (based on the recorded survey data at Birdworld and Forest Lodge). This is equivalent to a 75th percentile operational weekday at Forest Lodge and a 48th percentile operational weekday at Birdworld;
- A busy/typical Saturday peak hour (based on the recorded survey data at Birdworld and Forest Lodge). This is equivalent to an 86th percentile operational weekend day at both Birdworld and Forest Lodge;
- A busy Bank Holiday at both Forest Lodge and Birdworld (based on the recorded survey data at Birdworld and Forest Lodge);
- A 90th percentile operational weekday sensitivity test at both sites during the morning and evening peak hours (derived from factoring the surveyed traffic to a 90th percentile operational weekday); and
- A 90th percentile operational weekend day sensitivity test at both sites during the Saturday peak hour (derived from factoring the surveyed traffic to a 90th percentile operational weekend day)

4.4.2 The trip generation of the current Forest Lodge and Birdworld sites is summarised in **Tables 4.7** and **4.8**.

Table 4.7: Trip Generation – Current Forest Lodge Site

Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
Typical Average Weekday	Arr	28	27	-	-	584
	Dep	0	50	-	-	567
	TOTAL	28	77	-	-	1,151
90 th Percentile Sensitivity Test Weekday (estimated)	Arr	34	33	-	-	710
	Dep	0	61	-	-	689
	TOTAL	34	94	-	-	1,399
Typical Busy Saturday	Arr	-	-	118	-	851
	Dep	-	-	130	-	855
	TOTAL	-	-	248	-	1,706
	Arr	-	-	124	-	895

Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
90 th Percentile Sensitivity Test Weekend (estimated)	Dep	-	-	137	-	899
	TOTAL	-	-	261	-	1,794
Bank Holiday	Arr	-	-	-	171	934
	Dep	-	-	-	134	933
	TOTAL	-	-	-	305	1,867

Source: Survey Data and Consultant's Calculations (**Annex E**)

Table 4.8: Trip Generation – Current Birdworld Site

Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
Typical Average Weekday	Arr	2	1	-	-	94
	Dep	1	5	-	-	94
	TOTAL	3	6	-	-	188
90 th Percentile Sensitivity Test Weekday (estimated)	Arr	9	4	-	-	400
	Dep	4	22	-	-	400
	TOTAL	13	26	-	-	800
Typical Busy Saturday	Arr	-	-	29	-	242
	Dep	-	-	32	-	242
	TOTAL	-	-	61	-	484
90 th Percentile Sensitivity Test Weekend (estimated)	Arr	-	-	30	-	252
	Dep	-	-	33	-	252
	TOTAL	-	-	63	-	404
Bank Holiday	Arr	-	-	-	76	355
	Dep	-	-	-	11	355
	TOTAL	-	-	-	87	710

Source: Survey Data and Consultant's Calculations (**Annex E**)

4.4.3 Full calculations are included in **Annex E**.

SECTION 5 Trip Generation – Proposed Development

5.1 Overview

5.1.1 This section sets out the trip generation of the proposed development, allowing for the proposed expansion of both the Forest Lodge and Birdworld operations. The trip generation of the proposed expansion has been derived from the predicted increase in transactions and visitor numbers.

5.2 Forest Lodge

5.2.1 As a result of the proposed expansion, data provided by Haskins predicts that the number of customer transactions at Forest Lodge will increase by 78% (a factor of 1.78).

5.2.2 This factor has been applied to the current trip generation of Forest Lodge (detailed in **Table 4.7**) for all scenarios. The estimated trip generation of the expanded Forest Lodge site is for the assessment hours is detailed in **Table 5.1**. Full calculations are included at **Annex F**.

Table 5.1: Total Trip Generation – Proposed Forest Lodge Expansion

Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
Typical Average Weekday	Arr	50	48	-	-	1,040
	Dep	0	89	-	-	1,009
	TOTAL	50	137	-	-	2,049
90 th Percentile Sensitivity Test Weekday	Arr	61	58	-	-	1,263
	Dep	0	108	-	-	1,227
	TOTAL	61	166	-	-	2,490
Typical Busy Saturday	Arr	-	-	210	-	1,515
	Dep	-	-	231	-	1,522
	TOTAL	-	-	441	-	3,037
90 th Percentile Sensitivity Test Weekend	Arr	-	-	221	-	1,593
	Dep	-	-	243	-	1,600
	TOTAL	-	-	464	-	3,193
Bank Holiday	Arr	-	-	-	304	1,663
	Dep	-	-	-	239	1,661
	TOTAL	-	-	-	543	3,324

Source: Survey Data and Consultant's Calculations (**Annex F**)

5.3 Birdworld

5.3.1 As a result of the proposed development, data provided by Haskins predicts that the annual number of Birdworld visitors will increase from by 114% (a factor of 2.14). This factor has been applied to the current trip generation of Birdworld (detailed in **Table 4.8**). The estimated trip generation of the expanded Forest Lodge site is for the assessment hours is detailed in **Table 5.2**.

Table 5.2: Total Trip Generation – Proposed Birdworld Expansion

Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
Typical Average Weekday	Arr	4	2	-	-	201
	Dep	2	11	-	-	201
	TOTAL	6	13	-	-	402
90 th Percentile Sensitivity Test Weekday	Arr	18	9	-	-	855
	Dep	9	46	-	-	855
	TOTAL	27	55	-	-	1,710
Typical Busy Saturday	Arr	-	-	62	-	518
	Dep	-	-	69	-	518
	TOTAL	-	-	131	-	1,036
90 th Percentile Sensitivity Test Weekend	Arr	-	-	65	-	539
	Dep	-	-	71	-	539
	TOTAL	-	-	136	-	1,078
Bank Holiday	Arr	-	-	-	163	760
	Dep	-	-	-	24	760
	TOTAL	-	-	-	187	1,519

Source: Survey Data and Consultant's Calculations (**Annex F**)

5.4 Cross-Visitation and Pass-by Trips

5.4.1 It is recognised that there will be an element of cross-visitation between the proposed site uses (i.e. visitors/customers who use both the Forest Lodge and Birdworld sites). Previous data collected at Forest Lodge and Birdworld indicated that 22% of weekday and 27% of weekend Birdworld visitors also visited the garden centre (i.e. cross-visitation).

5.4.2 However, at this stage, no further assessment on this matter is proposed as:

- This will ensure a very robust assessment (i.e. no trips are discounted); and
- The traffic surveys at the sites are likely to have accounted for some of the cross-visitation through either:
 - Vehicles exiting one site and then entering another; or
 - Visitors exiting their vehicle at one site and then walking to the other site.

5.4.3 It is also recognised that there will be a number of pass-by trips to the sites from vehicles already on the local highway network. Previous data collected at Forest Lodge indicated that 13% of weekday trips and 21% of weekend trips to Forest Lodge are pass-by (negligible pass-by trips to Birdworld were recorded).

5.4.4 As with cross-visitation, no further assessment on this matter is proposed at this stage as:

- This will ensure a very robust assessment (i.e. no trips are discounted); and
- The traffic surveys will have recorded any pass-by trips entering the site as these will have been inherent in the data collection at the site accesses by turning in or out of the site, although it is noted that the actual number of pass-by trips is an unknown.

5.5 Summary of Trip Generation

5.5.1 **Table 5.3** summarises the total estimated trip generation of the proposed Forest Lodge and Birdworld expansions (i.e. **Table 5.1** plus **Table 5.2**).

Table 5.3: Total Trip Generation – Proposed Forest and Birdworld Expansion

Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
Typical Average Weekday	Arr	54	50	-	-	1,241
	Dep	2	100	-	-	1,210
	TOTAL	56	150	-	-	2,451
90 th Percentile Sensitivity Test Weekday	Arr	79	67	-	-	2,118
	Dep	9	154	-	-	2,082
	TOTAL	88	220	-	-	4,200
Typical Busy Saturday	Arr	-	-	272	-	2,033
	Dep	-	-	300	-	2,040
	TOTAL	-	-	572	-	4,073
90 th Percentile Sensitivity Test Weekend	Arr	-	-	286	-	2,132
	Dep	-	-	314	-	2,139
	TOTAL	-	-	600	-	4,271
Bank Holiday	Arr	-	-	-	467	2,423
	Dep	-	-	-	262	2,421
	TOTAL	-	-	-	729	4,844

Source: Survey Data and Consultant's Calculations (**Annex F**)

SECTION 6 Summary

6.1 Overview

6.1.1 This note sets out the predicted traffic generation of the proposed redevelopment of the Forest Lodge Garden Centre ('Forest Lodge') and Birdworld. This is based on analysis of:

- The seasonality of the operation and both Forest Lodge and Birdworld;
- Recorded traffic survey data collected in May 2022; and
- The predicted increase in transactions/visitor numbers as a result of the proposed redevelopment.

6.2 Seasonality of Site uses

6.2.1 Both Forest Lodge and Birdworld are subject to seasonal variations in their operations due to the nature of the site uses. The garden centre operation at Forest Lodge is busiest primarily at weekends or Bank Holidays in the Spring or during the run-up to Christmas whilst as an outdoor tourist attraction Birdworld is busiest primarily during the school holidays and at weekends during the Spring/Summer months.

6.2.2 The traffic generation assessment of both site uses took into account their seasonal variations throughout the year, considering the implications of traffic generation during 'typical' weekday peak hours on the local highway network as well as traffic generation at busy times operational times of either/both uses (e.g. at Bank Holidays and Weekends).

6.2.3 Due to the differing nature of site operations between Forest Lodge and Birdworld, the peaks of uses vary at different times of the year, however, May is a 'busy' month for both uses within school term time. Traffic data was therefore collected in May 2022.

6.3 Surveyed Trip Generation

6.3.1 A suite of traffic surveys was undertaken by an independent data collection company (Advanced Transport Research) in May 2022 on the following days:

- **Monday 2 May 2022** – A Bank Holiday (i.e. a busy operational day for both uses);
- **Thursday 12 May 2022** – A 'Typical' Weekday in a busy month for both uses, but within school term time in a 'neutral' month; and
- **Saturday 14 May 2022** – A 'Typical' Weekend Day in a busy month for both uses, but again within school term time in a 'neutral' month.

6.3.2 The surveys included 12-hour (0700-1900) Classified Traffic Counts (CTC) undertaken at the existing Forest Lodge and Birdworld accesses on the above days.

6.4 Trip Generation Assessment Scenarios

6.4.1 Due to the seasonal variations of the site operations, it is appropriate to consider a variety of trip generation scenarios and consider the trip generation scenarios for assessment based on the transaction/visitor data for Forest Lodge and Birdworld.

6.4.2 As well as assessing the surveyed Bank Holiday, typical weekday and typical weekend day trip generation, sensitivity tests have been undertaken for a 90th percentile operational weekday and a 90th percentile operational weekday end for both sites.

6.5 Trip Generation – Proposed Development

6.5.1 The trip generation of the proposed expansion has been derived from the predicted increase in transactions and visitor numbers.

6.5.2 As a result of the proposed expansion, data provided by Haskins predicts that the number of customer transactions at Forest Lodge and will increase by 78% increase (a factor of 1.78) and that the annual number of Birdworld visitors will increase by 114% increase (a factor of 2.14).

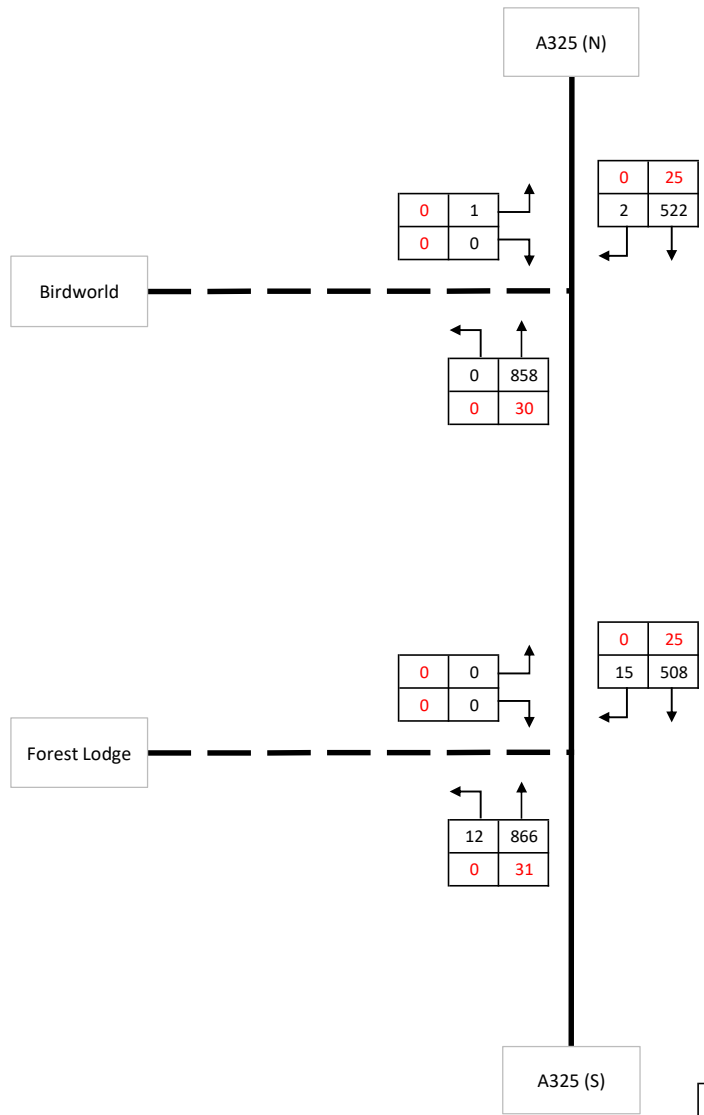
6.5.3 **Table 6.1** summarises the total estimated trip generation of the proposed Forest Lodge and Birdworld expansions, applying the transactions and visitor number growth factors to bank holiday, typical weekday and typical weekend day trip generation and 90th percentile sensitivity test operational weekday and a 90th percentile sensitivity test operational weekday scenarios.


Table 6.1: Total Trip Generation – Proposed Forest and Birdworld Expansion

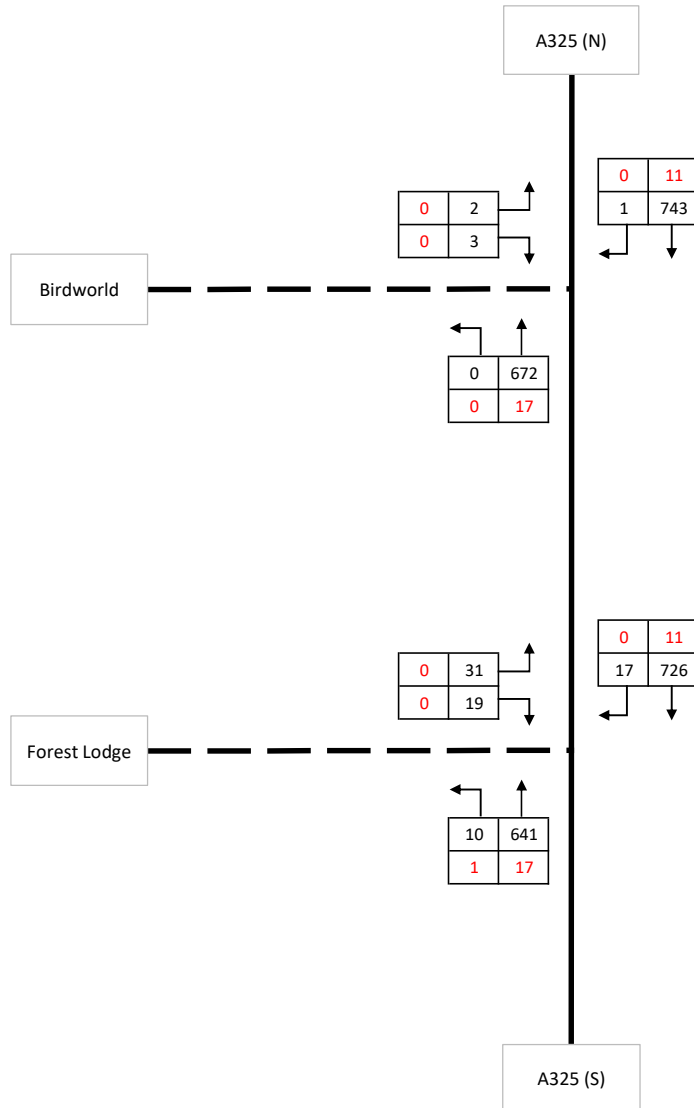
Scenario		AM Peak (0715 – 0815)	PM Peak (1630 – 1730)	Saturday Peak (1300 – 1400)	Bank Holiday Peak (1115 – 1215)	Daily (0700 – 1900)
Typical Average Weekday	Arr	54	50	-	-	1,241
	Dep	2	100	-	-	1,210
	TOTAL	56	150	-	-	2,451
90 th Percentile Weekday	Arr	79	67	-	-	2,118
	Dep	9	154	-	-	2,082
	TOTAL	88	220	-	-	4,200
Typical Busy Saturday	Arr	-	-	272	-	2,033
	Dep	-	-	300	-	2,040
	TOTAL	-	-	572	-	4,073
90 th Percentile Weekend	Arr	-	-	286	-	2,132
	Dep	-	-	314	-	2,139
	TOTAL	-	-	600	-	4,271
Bank Holiday	Arr	-	-	-	467	2,423
	Dep	-	-	-	262	2,421
	TOTAL	-	-	-	729	4,844


Source: Survey Data and Consultant's Calculations (**Annex F**)

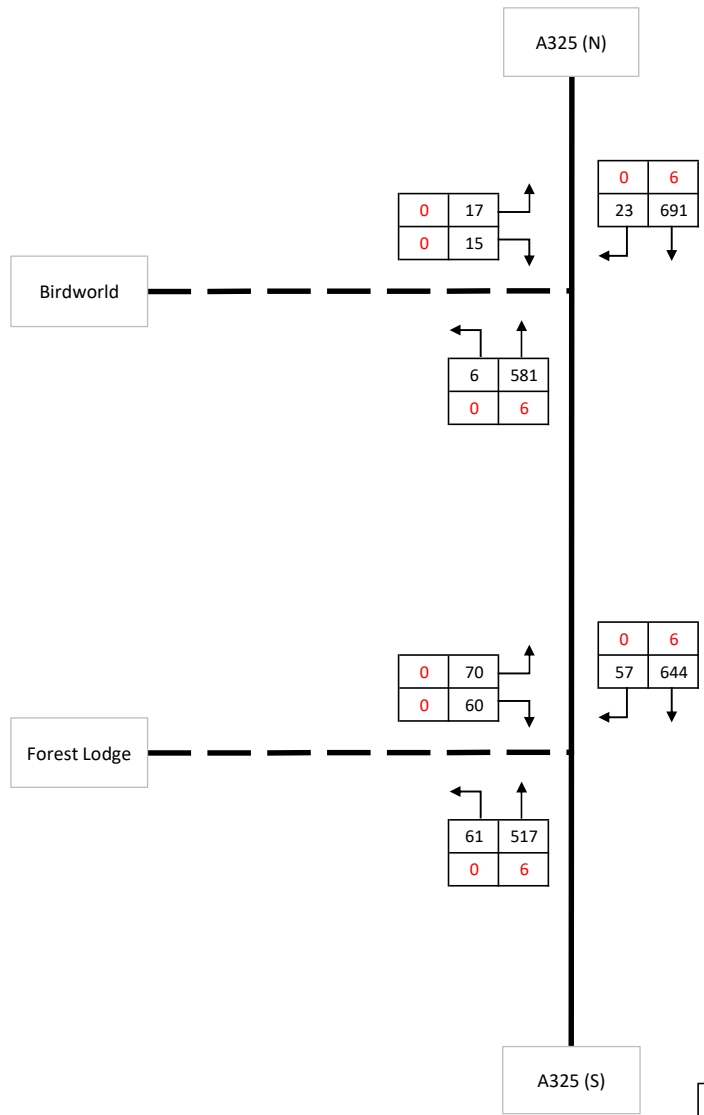
FIGURES



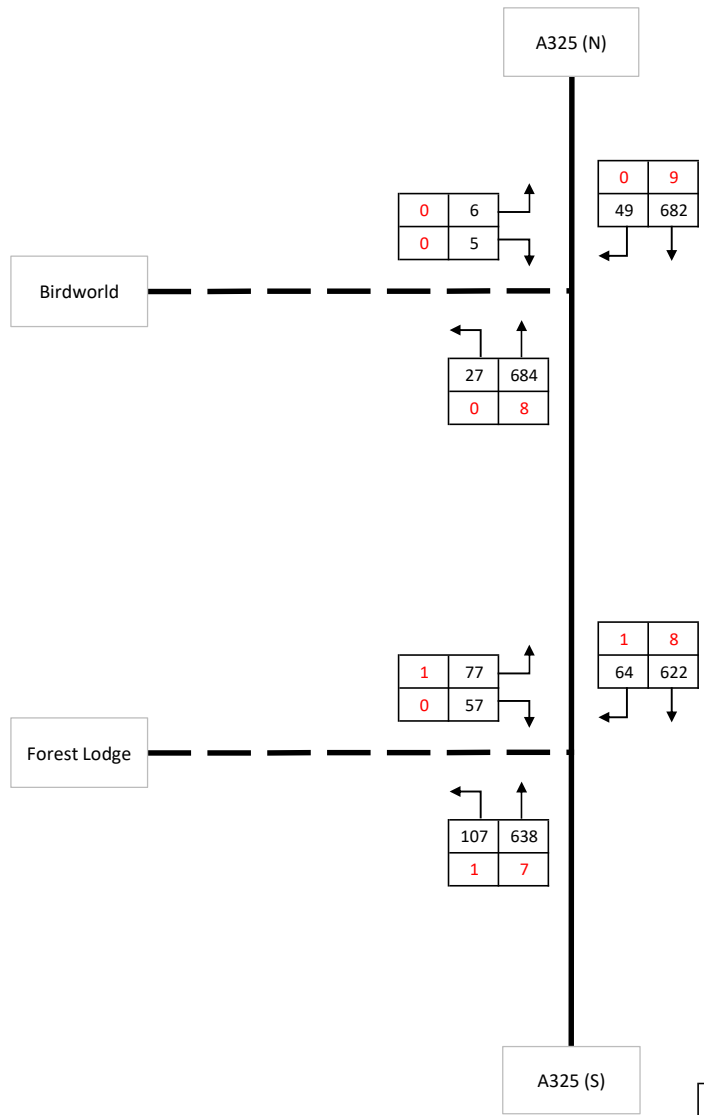
<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		The Square, Basing View, Basingstoke, RG21 4EB Tel: 01256 637940 www.i-transport.co.uk
	Forest Lodge Garden Centre and Birdworld Observed Flows	
	Figure 3.1	
	2022 Observed Weekday AM Peak Hour (0715-0815)	



<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		<p>The Square, Basing View, Basingstoke, RG21 4EB Tel: 01256 637940 www.i-transport.co.uk</p>
	<p>Forest Lodge Garden Centre and Birdworld Observed Flows</p>	
	<p>Figure 3.2</p>	
	<p>2022 Observed Weekday PM Peak Hour (1630-1730)</p>	



<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		The Square, Basing View, Basingstoke, RG21 4EB Tel: 01256 637940 www.i-transport.co.uk
	Forest Lodge Garden Centre and Birdworld Observed Flows	
	Figure 3.3	
	2022 Observed Saturday Peak Hour (1300-1400)	



<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		<p>The Square, Basing View, Basingstoke, RG21 4EB Tel: 01256 637940 www.i-transport.co.uk</p>
	<p>Forest Lodge Garden Centre and Birdworld Observed Flows</p>	
	<p>Figure 3.4</p>	
	<p>2022 Observed Bank Holiday Peak Hour (1115 - 1215)</p>	

**ANNEX A – FOREST LODGE AND BIRDWORLD
TRANSACTION AND VISITOR NUMBERS**

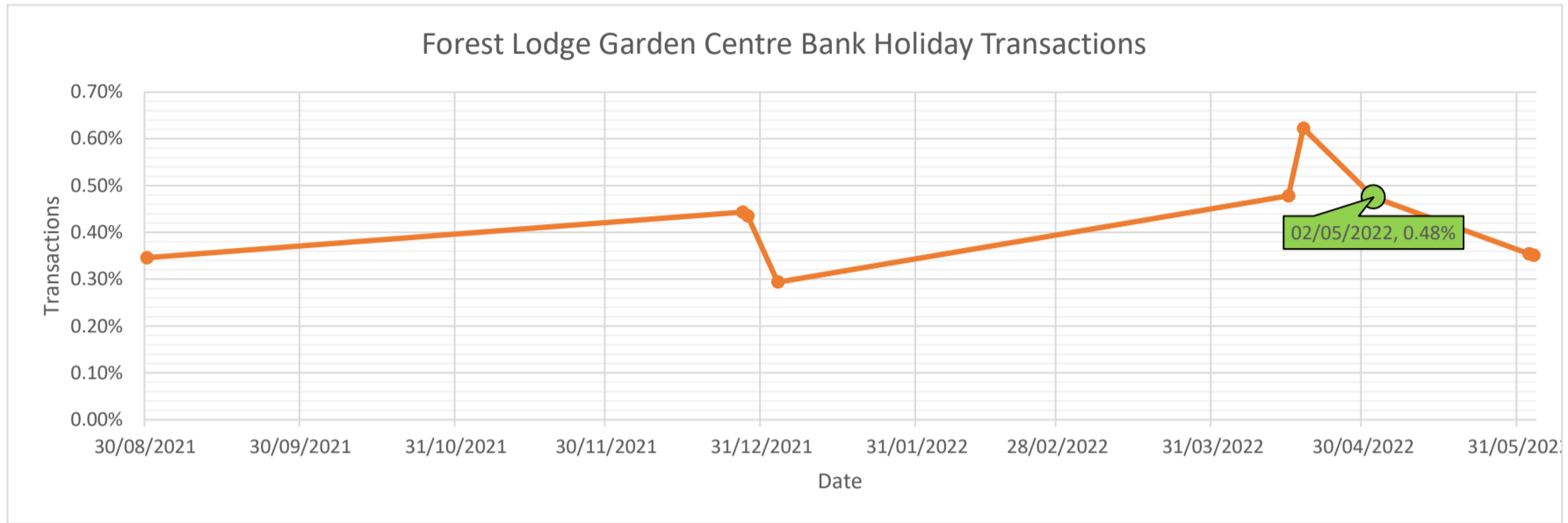
ANNEX B – SURVEYED DAILY TRIP GENERATION

ANNEX C – FOREST LODGE PERCENTILE CALCULATIONS

Year	Week	Forest Lodge				
		Transaction Date	Transaction Date	Percentile	Percentage	
2021/22	27	30/08/2021	Monday	22%	0.35%	
2021/22	44	27/12/2021	Monday	67%	0.44%	
2021/22	44	28/12/2021	Tuesday	56%	0.44%	
2021/22	45	03/01/2022	Monday	11%	0.29%	
2022/23	7	15/04/2022	Friday	89%	0.48%	
2022/23	8	18/04/2022	Monday	100%	0.62%	
2022/23	10	02/05/2022	Monday	78%	0.48%	
2022/23	14	02/06/2022	Thursday	44%	0.35%	
2022/23	14	03/06/2022	Friday	33%	0.35%	

Percentile	Forest Lodge Date
85th %tile	15/04/2022
90th %tile	02/05/2022

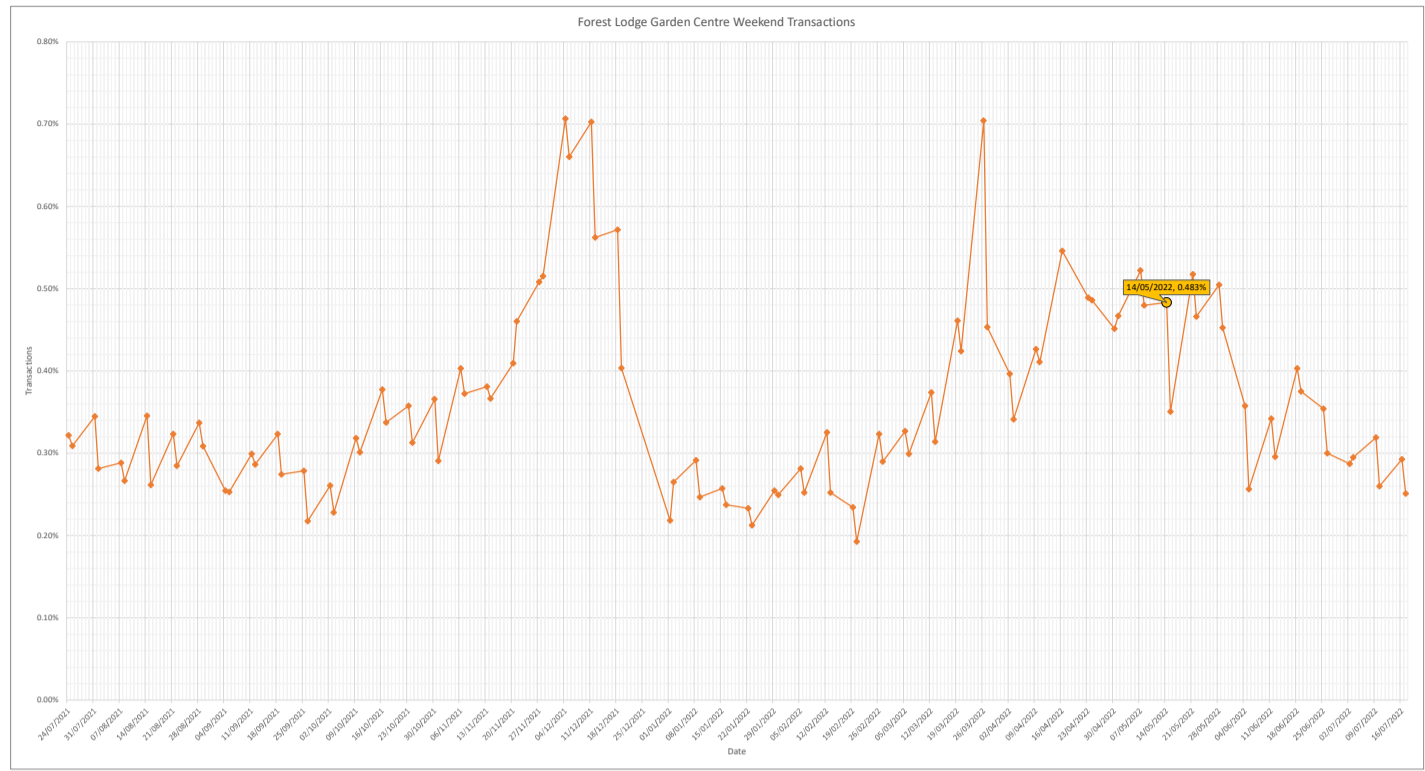
Survey Days	Forest Lodge Percentile
02/05/2022	78%



Year	Week	Transaction Date	Transaction Date	Percentile	Percentage
2021/22	21	24/07/2021	Saturday	48%	0.32%
2021/22	21	25/07/2021	Sunday	43%	0.31%
2021/22	22	31/07/2021	Saturday	57%	0.34%
2021/22	22	01/08/2021	Sunday	26%	0.28%
2021/22	23	07/08/2021	Saturday	31%	0.29%
2021/22	23	08/08/2021	Sunday	23%	0.27%
2021/22	24	14/08/2021	Saturday	58%	0.35%
2021/22	24	15/08/2021	Sunday	21%	0.26%
2021/22	25	21/08/2021	Saturday	49%	0.32%
2021/22	25	22/08/2021	Sunday	28%	0.28%
2021/22	26	28/08/2021	Saturday	53%	0.34%
2021/22	26	29/08/2021	Sunday	42%	0.31%
2021/22	27	04/09/2021	Saturday	15%	0.25%
2021/22	27	05/09/2021	Sunday	14%	0.25%
2021/22	28	11/09/2021	Saturday	38%	0.30%
2021/22	28	12/09/2021	Sunday	29%	0.29%
2021/22	29	18/09/2021	Saturday	49%	0.32%
2021/22	29	19/09/2021	Sunday	24%	0.27%
2021/22	30	25/09/2021	Saturday	25%	0.28%
2021/22	30	26/09/2021	Sunday	3%	0.22%
2021/22	31	02/10/2021	Saturday	20%	0.26%
2021/22	31	03/10/2021	Sunday	5%	0.23%
2021/22	32	09/10/2021	Saturday	46%	0.32%
2021/22	32	10/10/2021	Sunday	41%	0.30%
2021/22	33	16/10/2021	Saturday	68%	0.38%
2021/22	33	17/10/2021	Sunday	54%	0.34%
2021/22	34	23/10/2021	Saturday	61%	0.36%
2021/22	34	24/10/2021	Sunday	44%	0.31%
2021/22	35	30/10/2021	Saturday	63%	0.37%
2021/22	35	31/10/2021	Sunday	33%	0.29%
2021/22	36	06/11/2021	Saturday	71%	0.40%
2021/22	36	07/11/2021	Sunday	65%	0.37%
2021/22	37	13/11/2021	Saturday	69%	0.38%
2021/22	37	14/11/2021	Sunday	64%	0.37%
2021/22	38	20/11/2021	Saturday	74%	0.41%
2021/22	38	21/11/2021	Sunday	81%	0.46%
2021/22	39	27/11/2021	Saturday	90%	0.508%
2021/22	39	28/11/2021	Sunday	91%	0.52%
2021/22	40	05/12/2021	Saturday	100%	0.71%
2021/22	40	05/12/2021	Sunday	97%	0.66%
2021/22	41	11/12/2021	Saturday	98%	0.70%
2021/22	41	12/12/2021	Sunday	95%	0.56%
2021/22	42	18/12/2021	Saturday	96%	0.57%
2021/22	42	19/12/2021	Sunday	73%	0.40%
2021/22	44	01/01/2022	Saturday	4%	0.22%
2021/22	44	02/01/2022	Sunday	22%	0.27%
2021/22	45	08/01/2022	Saturday	34%	0.29%
2021/22	45	09/01/2022	Sunday	9%	0.25%
2021/22	46	15/01/2022	Saturday	18%	0.26%
2021/22	46	16/01/2022	Sunday	8%	0.24%
2021/22	47	22/01/2022	Saturday	6%	0.23%
2021/22	47	23/01/2022	Sunday	2%	0.21%
2021/22	48	29/01/2022	Saturday	15%	0.25%
2021/22	48	30/01/2022	Sunday	10%	0.25%
2021/22	49	05/02/2022	Saturday	26%	0.28%
2021/22	49	06/02/2022	Sunday	12%	0.25%
2021/22	50	12/02/2022	Saturday	51%	0.33%
2021/22	50	13/02/2022	Sunday	12%	0.25%
2021/22	51	19/02/2022	Saturday	7%	0.23%
2021/22	51	20/02/2022	Sunday	1%	0.19%
2021/22	52	26/02/2022	Saturday	49%	0.32%
2021/22	52	27/02/2022	Sunday	5%	0.29%
2022/23	1	05/03/2022	Saturday	52%	0.33%
2022/23	1	06/03/2022	Sunday	38%	0.30%
2022/23	2	12/03/2022	Saturday	66%	0.37%
2022/23	2	13/03/2022	Sunday	45%	0.31%
2022/23	3	19/03/2022	Saturday	82%	0.46%
2022/23	3	20/03/2022	Sunday	76%	0.42%
2022/23	4	26/03/2022	Saturday	99%	0.70%
2022/23	4	27/03/2022	Sunday	80%	0.45%
2022/23	5	02/04/2022	Saturday	70%	0.40%
2022/23	5	03/04/2022	Sunday	55%	0.34%
2022/23	6	09/04/2022	Saturday	77%	0.43%
2022/23	6	10/04/2022	Sunday	75%	0.41%
2022/23	7	16/04/2022	Saturday	94%	0.55%
2022/23	8	23/04/2022	Saturday	88%	0.49%
2022/23	8	24/04/2022	Sunday	87%	0.49%
2022/23	9	30/04/2022	Saturday	78%	0.45%
2022/23	9	01/05/2022	Sunday	84%	0.47%
2022/23	10	07/05/2022	Saturday	93%	0.52%
2022/23	10	08/05/2022	Sunday	85%	0.48%
2022/23	11	14/05/2022	Saturday	86%	0.483%
2022/23	11	15/05/2022	Sunday	59%	0.35%
2022/23	12	21/05/2022	Saturday	92%	0.52%
2022/23	12	22/05/2022	Sunday	83%	0.47%
2022/23	13	28/05/2022	Saturday	89%	0.50%
2022/23	13	29/05/2022	Sunday	79%	0.45%
2022/23	14	04/06/2022	Saturday	61%	0.36%
2022/23	14	05/06/2022	Sunday	17%	0.26%
2022/23	15	11/06/2022	Saturday	56%	0.34%
2022/23	15	12/06/2022	Sunday	37%	0.30%
2022/23	16	18/06/2022	Saturday	71%	0.40%
2022/23	16	19/06/2022	Sunday	67%	0.38%
2022/23	17	25/06/2022	Saturday	60%	0.35%
2022/23	17	26/06/2022	Sunday	40%	0.30%
2022/23	18	02/07/2022	Saturday	30%	0.29%
2022/23	18	03/07/2022	Sunday	36%	0.29%
2022/23	19	09/07/2022	Saturday	47%	0.32%
2022/23	19	10/07/2022	Sunday	19%	0.26%
2022/23	20	16/07/2022	Saturday	35%	0.29%
2022/23	20	17/07/2022	Sunday	11%	0.25%

Percentile	Forest Lodge Date
85th %ile	08/05/2022
90th %ile	27/11/2022

Survey Days	Forest Lodge Percentile
14/05/2022	86%



Year	Week	Transaction Date	Transaction Date	Percentile	Percentage
2021/22	21	19/07/2021	Monday	51%	0.23%
2021/22	21	20/07/2021	Tuesday	43%	0.22%
2021/22	21	21/07/2021	Wednesday	43%	0.22%
2021/22	21	22/07/2021	Thursday	40%	0.23%
2021/22	21	23/07/2021	Friday	82%	0.29%
2021/22	22	26/07/2021	Monday	46%	0.22%
2021/22	22	27/07/2021	Tuesday	67%	0.26%
2021/22	22	28/07/2021	Wednesday	68%	0.26%
2021/22	22	29/07/2021	Thursday	53%	0.23%
2021/22	22	30/07/2021	Friday	47%	0.22%
2021/22	23	02/08/2021	Monday	38%	0.21%
2021/22	23	03/08/2021	Tuesday	76%	0.27%
2021/22	23	04/08/2021	Wednesday	63%	0.25%
2021/22	23	05/08/2021	Thursday	63%	0.25%
2021/22	23	06/08/2021	Friday	63%	0.25%
2021/22	24	09/08/2021	Monday	32%	0.20%
2021/22	24	10/08/2021	Tuesday	40%	0.21%
2021/22	24	11/08/2021	Wednesday	56%	0.24%
2021/22	24	12/08/2021	Thursday	63%	0.23%
2021/22	24	13/08/2021	Friday	28%	0.20%
2021/22	25	16/08/2021	Monday	40%	0.21%
2021/22	25	17/08/2021	Tuesday	50%	0.23%
2021/22	25	18/08/2021	Wednesday	66%	0.25%
2021/22	25	19/08/2021	Thursday	66%	0.25%
2021/22	25	20/08/2021	Friday	56%	0.24%
2021/22	26	23/08/2021	Monday	65%	0.25%
2021/22	26	24/08/2021	Tuesday	76%	0.27%
2021/22	26	25/08/2021	Wednesday	72%	0.26%
2021/22	26	26/08/2021	Thursday	37%	0.21%
2021/22	26	27/08/2021	Friday	71%	0.26%
2021/22	27	31/08/2021	Monday	62%	0.25%
2021/22	27	01/09/2021	Tuesday	43%	0.22%
2021/22	27	02/09/2021	Wednesday	47%	0.22%
2021/22	27	03/09/2021	Thursday	42%	0.22%
2021/22	28	06/09/2021	Monday	26%	0.20%
2021/22	28	07/09/2021	Tuesday	16%	0.18%
2021/22	28	08/09/2021	Wednesday	45%	0.21%
2021/22	28	09/09/2021	Thursday	32%	0.20%
2021/22	28	10/09/2021	Friday	48%	0.22%
2021/22	29	13/09/2021	Monday	40%	0.21%
2021/22	29	14/09/2021	Tuesday	32%	0.20%
2021/22	29	15/09/2021	Wednesday	43%	0.22%
2021/22	29	16/09/2021	Thursday	33%	0.21%
2021/22	29	17/09/2021	Friday	36%	0.21%
2021/22	30	20/09/2021	Monday	44%	0.22%
2021/22	30	21/09/2021	Tuesday	21%	0.19%
2021/22	30	22/09/2021	Wednesday	17%	0.18%
2021/22	30	23/09/2021	Thursday	48%	0.22%
2021/22	30	24/09/2021	Friday	48%	0.22%
2021/22	31	27/09/2021	Monday	8%	0.16%
2021/22	31	28/09/2021	Tuesday	6%	0.16%
2021/22	31	29/09/2021	Wednesday	6%	0.16%
2021/22	31	30/09/2021	Thursday	6%	0.16%
2021/22	31	01/10/2021	Friday	11%	0.17%
2021/22	32	04/10/2021	Monday	5%	0.16%
2021/22	32	05/10/2021	Tuesday	9%	0.16%
2021/22	32	06/10/2021	Wednesday	4%	0.16%
2021/22	32	07/10/2021	Thursday	26%	0.20%
2021/22	32	08/10/2021	Friday	34%	0.21%
2021/22	33	11/10/2021	Monday	44%	0.22%
2021/22	33	12/10/2021	Tuesday	38%	0.21%
2021/22	33	13/10/2021	Wednesday	60%	0.24%
2021/22	33	14/10/2021	Thursday	22%	0.19%
2021/22	33	15/10/2021	Friday	53%	0.23%
2021/22	34	18/10/2021	Monday	19%	0.18%
2021/22	34	19/10/2021	Tuesday	43%	0.22%
2021/22	34	20/10/2021	Wednesday	29%	0.20%
2021/22	34	21/10/2021	Thursday	60%	0.24%
2021/22	34	22/10/2021	Friday	63%	0.25%
2021/22	35	25/10/2021	Monday	83%	0.29%
2021/22	35	26/10/2021	Tuesday	70%	0.26%
2021/22	35	27/10/2021	Wednesday	66%	0.25%
2021/22	35	28/10/2021	Thursday	85%	0.30%
2021/22	35	29/10/2021	Friday	75%	0.27%
2021/22	36	01/11/2021	Monday	46%	0.22%
2021/22	36	02/11/2021	Tuesday	51%	0.23%
2021/22	36	03/11/2021	Wednesday	48%	0.22%
2021/22	36	04/11/2021	Thursday	72%	0.26%
2021/22	36	05/11/2021	Friday	74%	0.27%
2021/22	37	08/11/2021	Monday	55%	0.22%
2021/22	37	09/11/2021	Tuesday	58%	0.24%
2021/22	37	10/11/2021	Wednesday	56%	0.24%
2021/22	37	11/11/2021	Thursday	61%	0.24%
2021/22	37	12/11/2021	Friday	62%	0.25%
2021/22	38	15/11/2021	Monday	71%	0.26%
2021/22	38	16/11/2021	Tuesday	55%	0.23%
2021/22	38	17/11/2021	Wednesday	79%	0.28%
2021/22	38	18/11/2021	Thursday	72%	0.26%
2021/22	38	19/11/2021	Friday	81%	0.29%
2021/22	39	22/11/2021	Monday	66%	0.25%
2021/22	39	23/11/2021	Tuesday	83%	0.29%
2021/22	39	24/11/2021	Wednesday	80%	0.30%
2021/22	39	25/11/2021	Thursday	86%	0.31%
2021/22	39	26/11/2021	Friday	92%	0.33%
2021/22	40	29/11/2021	Monday	89%	0.32%
2021/22	40	30/11/2021	Tuesday	91%	0.35%
2021/22	40	01/12/2021	Wednesday	92%	0.37%
2021/22	40	02/12/2021	Thursday	94%	0.38%
2021/22	40	03/12/2021	Friday	100%	0.45%
2021/22	41	06/12/2021	Monday	97%	0.42%
2021/22	41	07/12/2021	Tuesday	89%	0.31%
2021/22	41	08/12/2021	Wednesday	96%	0.41%
2021/22	41	09/12/2021	Thursday	96%	0.41%
2021/22	41	10/12/2021	Friday	97%	0.42%
2021/22	42	13/12/2021	Monday	100%	0.46%
2021/22	42	14/12/2021	Tuesday	94%	0.39%
2021/22	42	15/12/2021	Wednesday	96%	0.41%
2021/22	42	16/12/2021	Thursday	93%	0.38%
2021/22	42	17/12/2021	Friday	99%	0.45%
2021/22	43	20/12/2021	Monday	94%	0.39%
2021/22	43	21/12/2021	Tuesday	95%	0.40%
2021/22	43	22/12/2021	Wednesday	93%	0.38%
2021/22	43	23/12/2021	Thursday	98%	0.44%
2021/22	43	24/12/2021	Friday	99%	0.45%
2021/22	44	27/12/2021	Monday	98%	0.44%
2021/22	44	28/12/2021	Tuesday	98%	0.44%
2021/22	44	29/12/2021	Wednesday	92%	0.35%
2021/22	44	30/12/2021	Thursday	95%	0.39%
2021/22	44	31/12/2021	Friday	81%	0.29%
2021/22	45	04/01/2022	Tuesday	44%	0.22%
2021/22	45	05/01/2022	Wednesday	11%	0.17%
2021/22	45	06/01/2022	Thursday	14%	0.18%
2021/22	45	07/01/2022	Friday	34%	0.21%
2021/22	46	10/01/2022	Monday	2%	0.14%
2021/22	46	11/01/2022	Tuesday	10%	0.17%
2021/22	46	12/01/2022	Wednesday	2%	0.15%
2021/22	46	13/01/2022	Thursday	4%	0.15%
2021/22	46	14/01/2022	Friday	15%	0.18%
2021/22	47	17/01/2022	Monday	6%	0.16%
2021/22	47	18/01/2022	Tuesday	1%	0.13%
2021/22	47	19/01/2022	Wednesday	3%	0.15%
2021/22	47	20/01/2022	Thursday	1%	0.13%
2021/22	47	21/01/2022	Friday	11%	0.17%
2021/22	48	24/01/2022	Monday	1%	0.13%
2021/22	48	25/01/2022	Tuesday	4%	0.15%
2021/22	48	26/01/2022	Wednesday	22%	0.19%
2021/22	48	27/01/2022	Thursday	15%	0.18%
2021/22	48	28/01/2022	Friday	28%	0.20%
2021/22	49	31/01/2022	Monday	5%	0.15%
2021/22	49	01/02/2022	Tuesday	10%	0.17%
2021/22	49	02/02/2022	Wednesday	20%	0.19%
2021/22	49	03/02/2022	Thursday	21%	0.19%
2021/22	49	04/02/2022	Friday	7%	0.16%
2021/22	50	07/02/2022	Monday	13%	0.17%
2021/22	50	08/02/2022	Tuesday	9%	0.17%
2021/22	50	09/02/2022	Wednesday	17%	0.18%
2021/22	50	10/02/2022	Thursday	30%	0.20%
2021/22	50	11/02/2022	Friday	38%	0.21%
2021/22	51	14/02/2022	Monday	19%	0.18%
2021/22	51	15/02/2022	Tuesday	4%	0.15%
2021/22	51	16/02/2022	Wednesday	10%	0.17%
2021/22	51	17/02/2022	Thursday	13%	0.17%
2021/22	51	18/02/2022	Friday	0%	0.0%
2021/22	52	21/02/2022	Monday	2%	0.13%
2021/22	52	22/02/2022	Tuesday	25%	0.19%
2021/22	52	23/02/2022	Wednesday	30%	0.20%
2021/22	52	24/02/2022	Thursday	13%	0.17%
2021/22	52	25/02/2022	Friday	55%	0.23%
2022/23	1	28/02/2022	Monday	20%	0.19%
2022/23	1	01/03/2022	Tuesday	16%	0.18%
2022/23	1	02/03/2022	Wednesday	9%	0.17%
2022/23	1	03/03/2022	Thursday	12%	0.17%
2022/23	2	04/03/2022	Friday	36%	0.21%
2022/23	2	07/03/2022	Monday	15%	0.18%
2022/23	2	08/03/2022	Tuesday	25%	0.19%
2022/23	2	09/03/2022	Wednesday	34%	0.21%
2022/23	2	10/03/2022	Thursday	27%	0.20%
2022/23	2	11/03/2022	Friday	26%	0.20%
2022/23	3	14/03/2022	Monday	25%	0.19%
2022/23	3	15/03/2022	Tuesday	37%	0.21%
2022/23	3	16/03/2022	Wednesday	7%	0.16%
2022/23	3	17/03/2022	Thursday	53%	0.23%
2022/23	3	18/03/2022	Friday	79%	0.28%
2022/23	4	21/03/2022	Monday	67%	0.26%
2022/23	4	22/03/2022	Tuesday	86%	0.31%
2022/23	4	23/03/2022	Wednesday	78%	0.28%
2022/23	4	24/03/2022	Thursday	88%	0.31%
2022/23	4	25/03/2022	Friday	95%	0.39%
2022/23	5	28/03/2022	Monday	49%	0.23%
2022/23	5	29/03/2022	Tuesday	51%	0.23%
2022/23	5	30/03/2022	Wednesday	63%	0.25%
2022/23	5	31/03/2022	Thursday	57%	0.24%
2022/23	5	01/04/2022	Friday	33%	0.21%
2022/23	6	04/04/2022	Monday	51%	0.23%
2022/23	6	05/04/2022	Tuesday	40%	0.21%
2022/23	6	06/04/2022	Wednesday	70%	0.26%
2022/23	6	07/04/2022	Thursday	40%	0.21%
2022/23	6	08/04/2022	Friday	72%	0.26%
2022/23	7	11/04/2022	Monday	77%	0.27%
2022/23	7	12/04/2022	Tuesday	75%	0.27%
2022/23	7	13/04/2022	Wednesday	80%	0.28%
2022/23	7	14/04/2022	Thursday	89%	0.31%
2022/23	8	19/04/2022	Monday	75%	0.27%
2022/23	8	20/04/2022	Tuesday	88%	0.31%
2022/23	8	21/04/2022	Wednesday	86%	0.31%
2022/23	8	22/04/2022	Thursday	89%	0.31%
2022/23	8	23/04/2022	Friday	89%	0.31%
2022/23	9	26/04/2022	Monday	77%	0.27%
2022/23	9	27/04/2022	Tuesday	58%	0.24%
2022/23	9	28/04/2022	Wednesday	58%	0.24%
2022/23	9	29/04/2022	Thursday	81%	0.29%
2022/23	9	30/04/2022	Friday	84%	0.30%
2022/23	10	03/05/202			

ANNEX D – BIRDWORLD PERCENTILE CALCULATIONS

Day	Date	Percentile	Percentage
Mon	02-May-22	86%	0.80%
Mon	18-Apr-22	57%	0.60%
Fri	15-Apr-22	71%	0.72%
Mon	03-Jan-22	43%	0.51%
Tue	28-Dec-21	29%	0.32%
Mon	27-Dec-21	14%	0.10%
Mon	30-Aug-21	100%	1.12%

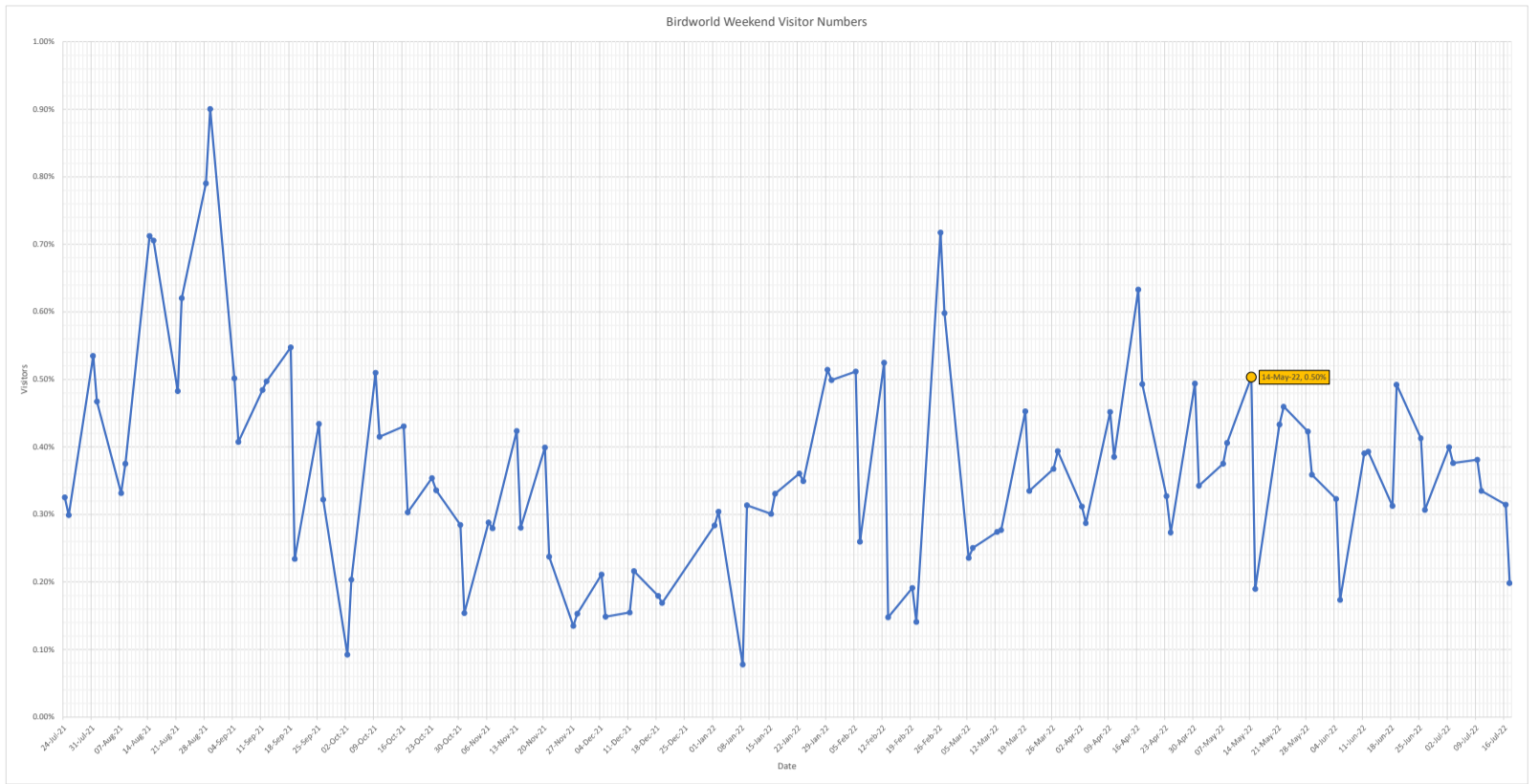
Date		
85th %tile	02-May-22	Mon
90th %tile	02-May-22	Mon

Survey Days	Percentile
02/05/2022	86%



Day	Date	Percentile	Percentage
Sun	29-Aug-21	100%	0.90%
Sat	28-Aug-21	99%	0.79%
Sat	26-Feb-22	98%	0.72%
Sat	14-Aug-21	97%	0.71%
Sun	15-Aug-21	96%	0.71%
Sat	16-Apr-22	95%	0.63%
Sun	22-Aug-21	94%	0.62%
Sun	27-Feb-22	93%	0.60%
Sat	18-Sep-21	92%	0.55%
Sat	31-Jul-21	91%	0.53%
Sat	14-May-22	86%	0.50%
Sat	28-May-21	85%	0.50%
Sun	30-Jan-22	84%	0.50%
Sun	12-Sep-21	83%	0.50%
Sat	30-Apr-22	82%	0.49%
Sun	17-Apr-22	81%	0.49%
Sun	19-Jun-22	80%	0.49%
Sat	11-Sep-21	79%	0.48%
Sat	21-Aug-21	78%	0.48%
Sun	01-Aug-21	77%	0.47%
Sun	22-May-22	76%	0.46%
Sat	19-Mar-22	75%	0.453%
Sat	09-Apr-22	75%	0.452%
Sat	25-Sep-21	74%	0.43%
Sat	21-May-22	73%	0.43%
Sat	16-Oct-21	72%	0.43%
Sat	13-Nov-21	71%	0.42%
Sat	28-May-22	70%	0.42%
Sun	10-Oct-21	69%	0.42%
Sat	25-Jan-22	68%	0.41%
Sun	05-Sep-21	67%	0.41%
Sun	08-May-22	66%	0.41%
Sat	02-Jul-22	65%	0.40%
Sat	20-Nov-21	64%	0.40%
Sun	27-Mar-22	63%	0.39%
Sun	12-Jun-22	62%	0.39%
Sat	11-Jan-22	61%	0.39%
Sun	10-Apr-22	60%	0.39%
Sat	09-Jul-22	59%	0.38%
Sun	03-Jul-22	58%	0.38%
Sat	07-May-22	56%	0.38%
Sun	08-Aug-21	56%	0.38%
Sat	26-Mar-22	55%	0.37%
Sat	22-Jan-22	54%	0.36%
Sun	29-May-22	53%	0.33%
Sat	23-Oct-21	52%	0.35%
Sun	23-Jan-22	51%	0.35%
Sun	01-May-22	50%	0.34%
Sun	24-Oct-21	49%	0.34%
Sun	10-Jul-22	47%	0.33%
Sun	20-Mar-22	47%	0.33%
Sat	07-Aug-22	46%	0.33%
Sun	16-Jan-22	45%	0.33%
Sat	23-Apr-22	44%	0.33%
Sat	24-Jul-21	43%	0.33%
Sat	04-Jun-22	42%	0.32%
Sun	26-Sep-21	41%	0.32%
Sat	16-Jul-22	40%	0.31%
Sun	09-Jan-22	39%	0.31%
Sat	18-Jun-22	38%	0.31%
Sat	02-Apr-22	37%	0.31%
Sun	26-Jun-22	36%	0.31%
Sun	02-Jan-22	35%	0.30%
Sun	17-Oct-21	34%	0.30%
Sat	15-Jan-22	33%	0.30%
Sun	25-Jul-21	32%	0.30%
Sat	06-Nov-21	31%	0.29%
Sun	03-Apr-22	30%	0.29%
Sat	30-Oct-21	29%	0.28%
Sat	01-Jan-22	28%	0.28%
Sun	14-Nov-21	27%	0.28%
Sun	07-Nov-21	26%	0.28%
Sun	13-Mar-22	25%	0.28%
Sat	13-Mar-22	25%	0.27%
Sun	24-Apr-22	24%	0.27%
Sun	06-Feb-22	23%	0.26%
Sun	06-Mar-22	22%	0.25%
Sun	21-Nov-21	21%	0.24%
Sat	05-Mar-22	20%	0.24%
Sun	19-Sep-21	19%	0.23%
Sun	13-Dec-21	18%	0.22%
Sat	04-Dec-21	17%	0.21%
Sun	03-Oct-21	16%	0.20%
Sun	17-Jul-22	15%	0.20%
Sat	19-Feb-22	14%	0.19%
Sun	15-May-22	13%	0.19%
Sat	18-Dec-21	12%	0.18%
Sun	05-Jan-22	11%	0.17%
Sun	19-Dec-21	10%	0.17%
Sat	11-Dec-21	9%	0.15%
Sun	31-Oct-21	8%	0.15%
Sun	28-Nov-21	7%	0.15%
Sun	05-Dec-21	6%	0.15%
Sun	13-Feb-22	5%	0.15%
Sun	20-Feb-22	4%	0.14%
Sat	27-Nov-21	3%	0.13%
Sat	02-Oct-21	2%	0.09%
Sat	08-Jan-22	1%	0.08%

Survey Days	Percentile
14/05/2022	86%

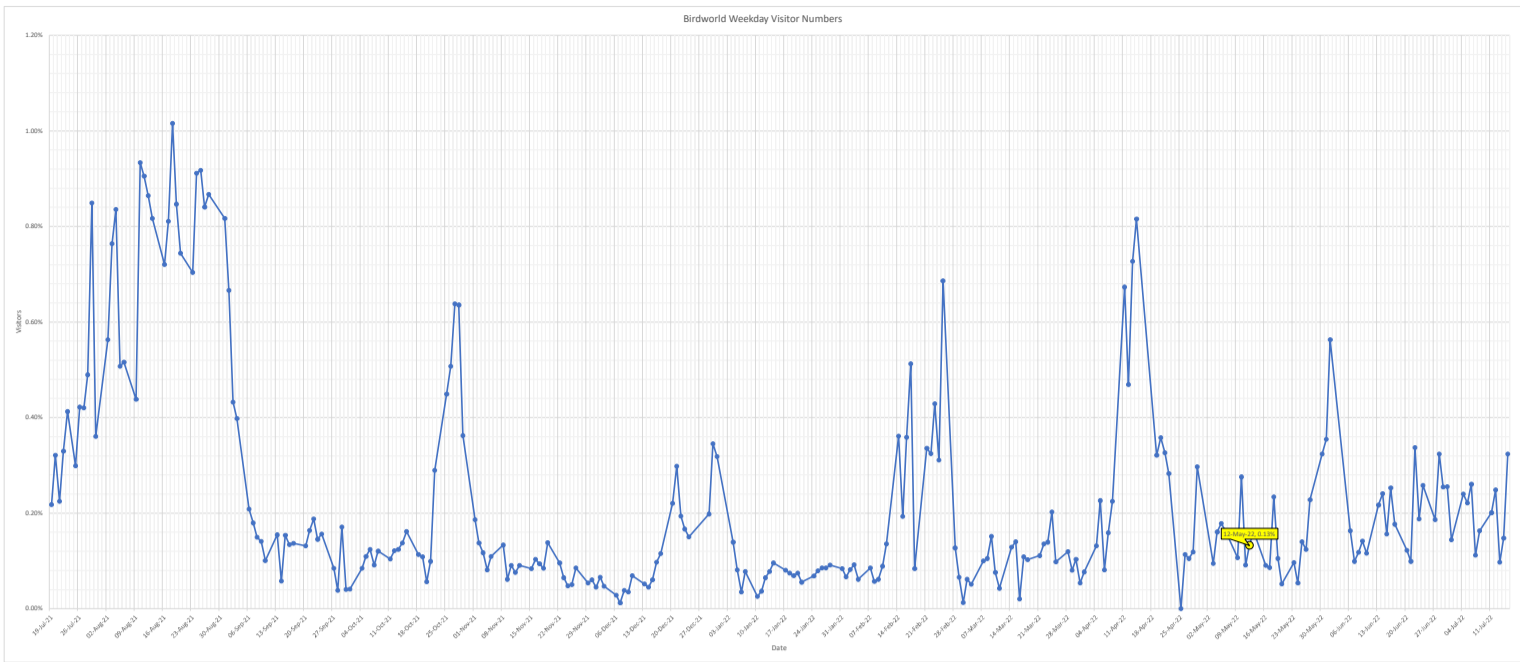


Day	Date	Perchente	Percentage
Wed	18-Aug-21	100%	1.03%
Tue	10-Aug-21	100%	0.93%
Wed	25-Aug-21	99%	0.92%
Tue	24-Aug-21	99%	0.91%
Wed	11-Aug-21	99%	0.91%
Fri	27-Aug-21	98%	0.87%
Thu	12-Aug-21	98%	0.86%
Thu	29-Jul-21	97%	0.85%
Thu	19-Aug-21	97%	0.85%
Thu	26-Aug-21	96%	0.84%
Wed	04-Aug-21	96%	0.84%
Fri	13-Aug-21	95%	0.82%
Tue	31-Aug-21	95%	0.82%
Thu	14-Apr-22	95%	0.82%
Tue	17-Aug-21	94%	0.81%
Tue	03-Aug-21	94%	0.78%
Fri	20-Aug-21	94%	0.74%
Wed	13-Apr-22	93%	0.73%
Mon	16-Aug-21	93%	0.72%
Fri	23-Aug-21	92%	0.70%
Fri	25-Feb-22	92%	0.69%
Mon	15-Apr-22	92%	0.67%
Wed	01-Sep-21	91%	0.67%
Wed	27-Oct-21	91%	0.64%
Thu	28-Oct-21	90%	0.64%
Mon	02-Aug-21	90%	0.563%
Wed	05-Jun-22	89%	0.56%
Fri	05-Aug-21	89%	0.52%
Thu	17-Feb-22	89%	0.51%
Thu	05-Aug-21	88%	0.51%
Tue	24-Oct-21	88%	0.51%
Wed	28-Jul-21	88%	0.49%
Tue	12-Apr-22	87%	0.47%
Mon	25-Oct-21	87%	0.46%
Mon	09-Aug-21	87%	0.44%
Thu	02-Sep-21	86%	0.43%
Wed	23-Feb-22	86%	0.43%
Mon	26-Jul-21	85%	0.42%
Tue	27-Jul-21	85%	0.41%
Fri	23-Jul-21	85%	0.41%
Fri	03-Sep-21	84%	0.40%
Fri	26-Oct-21	84%	0.38%
Mon	14-Feb-22	83%	0.36%
Fri	30-Jul-21	83%	0.36%
Wed	16-Feb-22	83%	0.36%
Wed	20-Apr-22	82%	0.36%
Tue	31-May-22	82%	0.35%
Thu	30-Dec-21	81%	0.35%
Wed	22-Jun-22	81%	0.34%
Mon	23-Feb-22	81%	0.34%
Thu	22-Jul-21	80%	0.33%
Thu	21-Apr-22	80%	0.33%
Tue	22-Feb-22	79%	0.32%
Mon	15-May-22	79%	0.32%
Tue	28-Jun-22	78%	0.32%
Fri	15-Jul-22	78%	0.32%
Tue	19-Apr-22	77%	0.32%
Fri	30-Dec-21	77%	0.32%
Thu	24-Feb-22	77%	0.31%
Sun	25-Jul-21	76%	0.30%
Fri	26-Oct-21	76%	0.30%
Tue	29-Apr-22	76%	0.30%
Fri	22-Oct-21	75%	0.29%
Fri	23-Aug-22	75%	0.28%
Tue	10-May-22	74%	0.28%
Wed	06-Jul-22	74%	0.26%
Thu	24-Jun-22	73%	0.26%
Wed	29-Jun-22	73%	0.25%
Thu	16-Jun-22	72%	0.25%
Tue	12-Jul-22	72%	0.25%
Tue	14-Jun-22	71%	0.24%
Mon	07-Jul-22	71%	0.24%
Wed	18-May-22	71%	0.23%
Fri	27-May-22	70%	0.23%
Tue	02-Apr-22	70%	0.23%
Wed	21-Jul-21	69%	0.22%
Fri	09-Apr-22	69%	0.22%
Tue	05-Jul-22	69%	0.22%
Mon	20-Dec-21	68%	0.22%
Mon	19-Jul-21	68%	0.22%
Mon	15-Jun-22	67%	0.22%
Mon	06-Sep-21	67%	0.21%
Thu	24-Mar-22	67%	0.20%
Mon	13-Jul-22	66%	0.20%
Wed	29-Dec-21	66%	0.20%
Wed	22-Dec-21	65%	0.19%
Tue	24-Feb-22	65%	0.19%
Wed	22-Sep-21	64%	0.19%
Thu	23-Jun-22	64%	0.19%
Mon	01-Nov-21	63%	0.19%
Mon	27-Jun-22	63%	0.19%
Tue	07-Sep-21	63%	0.18%
Thu	02-May-22	63%	0.18%
Fri	17-Jun-22	62%	0.18%
Wed	29-Sep-21	62%	0.17%
Thu	23-Dec-21	62%	0.17%
Tue	21-Sep-21	61%	0.16%
Fri	04-May-22	60%	0.16%
Mon	06-Jun-22	60%	0.16%
Fri	08-Jul-22	60%	0.16%
Fri	13-May-22	60%	0.16%
Fri	15-Oct-21	59%	0.16%
Wed	04-May-22	59%	0.16%
Thu	07-Apr-22	58%	0.16%
Fri	24-Sep-21	58%	0.16%
Wed	15-Jun-22	58%	0.16%
Mon	13-Sep-21	57%	0.15%
Wed	15-Sep-21	57%	0.15%
Wed	09-Mar-22	56%	0.15%
Fri	24-Dec-21	56%	0.15%
Wed	08-Sep-21	56%	0.15%
Thu	14-Jul-22	55%	0.15%
Thu	23-Sep-21	55%	0.15%
Fri	03-Jul-22	54%	0.14%
Thu	09-Jun-22	54%	0.14%
Thu	09-Sep-21	54%	0.14%
Tue	19-Mar-22	53%	0.14%
Wed	25-May-22	53%	0.14%
Tue	02-Jun-22	53%	0.14%
Wed	23-Mar-22	52%	0.14%
Fri	19-Nov-21	52%	0.14%
Thu	14-Oct-21	51%	0.14%
Tue	02-Nov-21	51%	0.14%
Fri	13-Sep-21	50%	0.14%
Fri	11-Feb-22	50%	0.14%
Tue	22-Mar-22	50%	0.14%
Thu	30-Sep-21	49%	0.13%
Mon	08-Nov-21	49%	0.13%
Thu	14-May-22	48%	0.13%
Mon	20-Sep-21	48%	0.13%
Mon	04-Apr-22	47%	0.13%
Mon	14-Mar-22	47%	0.13%
Mon	28-Feb-22	47%	0.13%
Wed	06-Oct-21	46%	0.12%
Wed	13-Oct-21	46%	0.12%
Thu	29-May-22	46%	0.12%
Mon	20-Jun-22	45%	0.12%
Tue	12-Oct-21	45%	0.12%
Fri	24-Dec-21	44%	0.12%
Mon	28-Mar-22	44%	0.12%
Thu	28-Apr-22	44%	0.12%
Wed	05-Jun-22	43%	0.12%
Wed	08-Nov-21	43%	0.12%
Fri	19-Jun-22	42%	0.12%
Fri	17-Dec-21	42%	0.12%
Mon	18-Oct-21	41%	0.11%
Tue	29-Apr-22	41%	0.11%
Thu	07-Jul-22	41%	0.11%
Mon	21-Mar-22	40%	0.11%
Tue	09-Oct-21	40%	0.11%
Fri	02-Nov-21	40%	0.11%
Tue	18-Oct-21	39%	0.11%
Mon	14-Mar-22	39%	0.11%
Mon	09-May-22	38%	0.11%
Tue	08-Mar-22	37%	0.11%
Wed	27-Apr-22	37%	0.11%
Thu	19-May-22	37%	0.11%
Mon	11-Oct-21	37%	0.10%
Tue	16-Nov-21	36%	0.10%
Wed	30-Mar-22	36%	0.10%
Fri	18-Mar-22	36%	0.10%
Fri	20-Sep-21	35%	0.10%
Mon	07-May-22	35%	0.10%
Thu	21-Oct-21	34%	0.10%
Tue	07-Jun-22	34%	0.10%
Tue	21-Jun-22	34%	0.10%
Fri	25-Mar-22	33%	0.10%
Thu	16-Dec-21	33%	0.10%
Wed	13-Jul-22	33%	0.10%
Mon	21-May-22	32%	0.10%
Mon	22-Nov-21	31%	0.10%
Fri	14-Jan-22	31%	0.10%
Tue	03-May-22	31%	0.09%
Wed	17-Nov-21	31%	0.09%
Thu	03-Feb-22	30%	0.09%
Thu	07-Oct-21	29%	0.09%
Fri	28-Jan-22	29%	0.09%
Wed	14-May-22	29%	0.09%
Wed	10-Nov-21	28%	0.09%
Fri	12-Nov-21	28%	0.09%
Mon	16-May-22	28%	0.09%
Thu	10-Feb-22	27%	0.09%
Tue	17-May-22	27%	0.09%
Fri	26-Nov-21	25%	0.09%
Wed	26-Jan-22	25%	0.09%
Thu	27-Jan-22	25%	0.09%
Mon	07-Feb-22	25%	0.09%
Mon	27-Sep-21	24%	0.08%
Mon	06-Oct-21	24%	0.08%
Thu	18-Nov-21	24%	0.08%
Mon	15-Nov-21	23%	0.08%
Mon	11-Jan-22	23%	0.08%
Fri	18-Feb-22	23%	0.08%
Wed	02-Feb-22	23%	0.08%
Thu	04-Nov-21	21%	0.08%
Wed	05-Jan-22	21%	0.08%
Wed	06-Apr-22	21%	0.08%
Thu	17-Jan-22	21%	0.08%
Tue	29-Mar-22	21%	0.08%
Tue	23-Jan-22	20%	0.08%
Fri	07-Jan-22	19%	0.08%
Thu	13-Jan-22	19%	0.08%
Fri	01-Apr-22	19%	0.08%
Thu	11-Nov-21	18%	0.08%
Thu	10-Mar-22	18%	0.08%
Tue	18-Jan-22	17%	0.07%
Thu	20-Jan-22	17%	0.07%
Fri	19-Dec-21	17%	0.07%
Wed	19-Jan-22	17%	0.07%
Mon	24-Jan-22	16%	0.07%
Tue	01-Feb-22	16%	0.07%
Thu	02-Dec-21	15%	0.07%
Tue	01-Mar-22	15%	0.07%
Wed	23-Nov-21	14%	0.06%
Wed	12-Jan-22	14%	0.06%
Tue	08-Nov-21	13%	0.06%
Fri	04-Feb-22	13%	0.06%
Wed	09-Feb-22	13%	0.06%
Thu	03-Mar-22	13%	0.06%
Wed	30-Nov-21	12%	0.06%
Wed	12-Dec-21	12%	0.06%
Tue	14-Sep-21	12%	0.06%
Tue	08-Feb-22	11%	0.06%
Wed	20-Oct-21	11%	0.06%
Fri	21-Jan-22	10%	0.06%
Mon	29-Nov-21	9%	0.05%
Thu	15-Mar-22	9%	0.05%
Tue	24-May-22	9%	0.05%
Mon	10-Dec-21	8%	0.05%
Fri	20-May-22	8%	0.05%
Fri	04-Mar-22	8%	0.05%
Thu	25-Nov-21	8%	0.05%
Wed	24-Nov-21	7%	0.05%
Fri	03-Dec-21	7%	0.05%
Wed	01-Dec-21	6%	0.05%
Tue	14-Dec-21	6%	0.05%
Fri	11-Mar-22	6%	0.04%
Fri	01-Oct-21	5%	0.04%
Thu	30-Sep-21	5%	0.04%
Tue	28-Sep-21	4%	0.04%
Wed	02-Dec-21	4%	0.04%
Tue	11-Jan-22	4%	0.04%
Thu	09-Dec-21	3%	0.04%
Thu	06-Jan-22	3%	0.04%
Mon	06-Dec-21	2%	0.03%
Mon	10-Jan-22	2%	0.03%
Wed	18-May-22	2%	0.03%
Wed	02-Mar-22	1%	0.02%
Tue	07-Dec-21	1%	0.02%
Mon	21-Apr-22	0%	0.00%

Date	Perchente	Percentage
27.07.21	Tuesday	1.03%
01.08.22	Wednesday	0.93%
19.07.22	Friday	0.87%

Survey Date: 19/07/22

Perchente: 48%



**ANNEX E – DERIVATION OF 90TH PERCENTILE TRIP
GENERATION (EXISTING SITE)**

FL TRIP GEN AT FL/BW NETWORK PEAK HOURS

Forest Lodge @ FL/BW Network Peak Hours	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	28	0	28						
WEEKDAY PM Peak (1630-1730)	27	50	77						
SAT Peak (1300-1400)				118	130	248			
BANK HOL (1115-1215)							171	134	305
12hr Daily (0700-1900)	584	567	1151	851	855	1706	934	933	1867

Forest Lodge @ FL/BW Network Peak Hours (90th %tile Growthed)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	34	0	34						
WEEKDAY PM Peak (1630-1730)	33	61	94						
SAT Peak (1300-1400)				124	137	261			
BANK HOL (1115-1215)							171	134	305
12hr Daily (0700-1900)	710	689	1399	895	899	1794	934	933	1867

90th %TILE UPLIFT FACTORS	463	381	1.22	715	680	1.05
---------------------------	-----	-----	------	-----	-----	------

BW TRIP GEN AT FL/BW NETWORK PEAK HOURS

Birdworld @ FL/BW Network Peak Hours	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	2	1	3						
WEEKDAY PM Peak (1630-1730)	1	5	6						
SAT Peak (1300-1400)				29	32	61			
BANK HOL (1115-1215)							76	11	87
12hr Daily (0700-1900)	94	94	188	242	242	484	355	355	710

Birdworld @ FL/BW Network Peak Hours (90th %tile Growthed)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	9	4	13						
WEEKDAY PM Peak (1630-1730)	4	21	26						
SAT Peak (1300-1400)				30	33	63			
BANK HOL (1115-1215)							76	11	87
12hr Daily (0700-1900)	400	400	800	252	252	504	355	355	710

90th %TILE UPLIFT FACTORS	659	155	4.25	613	589	1.04
---------------------------	-----	-----	------	-----	-----	------

BW & FL TOTAL TRIP GEN AT FL/BW NETWORK PEAK HOURS

Birdworld & Forest Lodge @ FL/BW Network Peak Hours	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	30	1	31						
WEEKDAY PM Peak (1630-1730)	28	55	83						
SAT Peak (1300-1400)				147	162	309			
BANK HOL (1115-1215)							247	145	392
12hr Daily (0700-1900)	678	661	1339	1093	1097	2190	1289	1288	2577

Birdworld & Forest Lodge @ FL/BW Network Peak Hours (90th %tile Growthed)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	43	4	47						
WEEKDAY PM Peak (1630-1730)	37	82	119						
SAT Peak (1300-1400)				154	170	324			
BANK HOL (1115-1215)							247	145	392
12hr Daily (0700-1900)	1109	1089	2199	1147	1151	2298	1289	1288	2577

ANNEX F – TRIP GENERATION CALCULATIONS (PROPOSED DEVELOPMENT)

FL TRIP GEN AT FL/BW NETWORK PEAK HOURS

Forest Lodge @ FL Network Peak Hours	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	28	0	28						
WEEKDAY PM Peak (1630-1730)	27	50	77						
SAT Peak (1300-1400)				118	130	248			
BANK HOL (1115-1215)							171	134	305
12hr Daily (0700-1900)	584	567	1151	851	855	1706	934	933	1867

Forest Lodge @ FL Network Peak Hours (Growthed with Yearly Transaction Data)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
1.78									
WEEKDAY AM Peak (0715-0815)	50	0	50						
WEEKDAY PM Peak (1630-1730)	48	89	137						
SAT Peak (1300-1400)				210	231	441			
BANK HOL (1115-1215)							304	239	543
12hr Daily (0700-1900)	1040	1009	2049	1515	1522	3037	1663	1661	3324

Forest Lodge @ FL Network Peak Hours (Transaction Data + 90th %tile Growthed)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	61	0	61						
WEEKDAY PM Peak (1630-1730)	58	108	167						
SAT Peak (1300-1400)				221	243	464			
BANK HOL (1115-1215)							304	239	543
12hr Daily (0700-1900)	1263	1226	2490	1593	1600	3193	1663	1661	3324

90th %TILE UPLIFT FACTORS	463	381	1.22	715	680	1.05
---------------------------	-----	-----	------	-----	-----	------

BW TRIP GEN AT FL/BW NETWORK PEAK HOURS

Birdworld @ FL/BW Network Peak Hours	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	2	1	3						
WEEKDAY PM Peak (1630-1730)	1	5	6						
SAT Peak (1300-1400)				29	32	61			
BANK HOL (1115-1215)							76	11	87
12hr Daily (0700-1900)	94	94	188	242	242	484	355	355	710

Birdworld @ FL/BW Network Peak Hours (Growthed with Projected Customer Growth)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
2.14									
WEEKDAY AM Peak (0715-0815)	4	2	6						
WEEKDAY PM Peak (1630-1730)	2	11	13						
SAT Peak (1300-1400)				62	69	131			
BANK HOL (1115-1215)							163	24	186
12hr Daily (0700-1900)	201	201	402	518	518	1036	760	760	1519

Birdworld @ FL Network Peak Hours (Customer + 90th %tile Growthed)	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	18	9	27						
WEEKDAY PM Peak (1630-1730)	9	46	55						
SAT Peak (1300-1400)				65	71	136			
BANK HOL (1115-1215)							163	24	187
12hr Daily (0700-1900)	855	855	1710	539	539	1078	760	760	1520

90th %TILE UPLIFT FACTORS	659	155	4.25	613	589	1.04
---------------------------	-----	-----	------	-----	-----	------

BW & FL TOTAL TRIP GEN AT FL/BW NETWORK PEAK HOURS

Birdworld & Forest Lodge @ FL/BW Network Peak Hours	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	30	1	31						
WEEKDAY PM Peak (1630-1730)	28	55	83						
SAT Peak (1300-1400)				147	162	309			
BANK HOL (1115-1215)							247	145	392
12hr Daily (0700-1900)	678	661	1339	1093	1097	2190	1289	1288	2577

Birdworld & Forest Lodge @ FL/BW Network Peak Hours (Growthed with	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	54	2	56						
WEEKDAY PM Peak (1630-1730)	50	100	150						
SAT Peak (1300-1400)				272	300	572			
BANK HOL (1115-1215)							467	262	729
12hr Daily (0700-1900)	1241	1210	2451	2033	2040	4073	2423	2421	4844

Birdworld & Forest Lodge @ FL Network Peak Hours (Customer + 90th %tile	Weekday			Weekend			Bank Holiday		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
WEEKDAY AM Peak (0715-0815)	79	9	88						
WEEKDAY PM Peak (1630-1730)	67	154	221						
SAT Peak (1300-1400)				286	314	600			
BANK HOL (1115-1215)							467	262	729
12hr Daily (0700-1900)	2118	2082	4200	2132	2139	4271	2423	2421	4844

APPENDIX K. Junction Assessment Outputs

<h1>Junctions 10</h1>
<h2>ARCADY 10 - Roundabout Module</h2>
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A325 - Forest Lodge - Birdworld - 3-arm.j10

Path: T:\Projects\16000 Series\16329ITB - Forest Lodge Garden Centre and Birdworld - Farnham\Tech\Junction Assessments\Junctions 10

Report generation date: 07/12/2023 16:56:21

-
- »2022, AM
 - »2022, PM
 - »2022, Weekend
 - »2022, Bank Holiday
 - »2026 + Dev (90th %tile Weekday), AM
 - »2026 + Dev (90th %tile Weekday), PM
 - »2026 + Dev, AM
 - »2026 + Dev, PM
 - »2026 + Dev (90th %tile Weekend), Weekend
 - »2026 + Dev, Weekend
 - »2026 + Dev, Bank Holiday
 - »2031 + Dev (90th %tile Weekday), AM
 - »2031 + Dev (90th %tile Weekday), PM
 - »2031 + Dev, AM
 - »2031 + Dev, PM
 - »2031 + Dev (90th %tile Weekend), Weekend
 - »2031 + Dev, Weekend
 - »2031 + Dev, Bank Holiday

Summary of junction performance

	AM				PM				Weekend				Bank Holiday			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2022																
1 - A325 (N)	0.5	2.82	0.30	A	0.8	3.40	0.43	A	0.8	3.41	0.43	A	0.8	3.43	0.43	A
2 - A325 (S)	1.0	3.62	0.48	A	0.6	2.90	0.36	A	0.5	2.78	0.33	A	0.8	3.38	0.44	A
3 - Forest Lodge & Birdworld Access	0.0	0.00	0.00	A	0.0	2.48	0.04	A	0.1	2.52	0.11	A	0.1	2.67	0.11	A
2026 + Dev (90th %tile Weekday)																
1 - A325 (N)	0.5	2.94	0.33	A	0.9	3.71	0.47	A								
2 - A325 (S)	1.1	3.91	0.52	A	0.6	3.03	0.38	A								
3 - Forest Lodge & Birdworld Access	0.0	2.75	0.01	A	0.1	2.72	0.11	A								
2026 + Dev																
1 - A325 (N)	0.5	2.89	0.32	A	0.9	3.58	0.46	A	1.0	3.99	0.50	A	1.1	4.12	0.52	A
2 - A325 (S)	1.1	3.83	0.51	A	0.6	3.00	0.38	A	0.6	3.11	0.38	A	1.2	4.33	0.55	A
3 - Forest Lodge & Birdworld Access	0.0	0.00	0.00	A	0.1	2.60	0.07	A	0.3	2.86	0.21	A	0.2	2.99	0.19	A
2026 + Dev (90th %tile Weekend)																
1 - A325 (N)									1.0	4.04	0.50	A				
2 - A325 (S)									0.6	3.14	0.39	A				
3 - Forest Lodge & Birdworld Access									0.3	2.90	0.22	A				
2031 + Dev (90th %tile Weekday)																
1 - A325 (N)	0.5	2.99	0.34	A	1.0	3.84	0.49	A								
2 - A325 (S)	1.2	4.07	0.53	A	0.7	3.10	0.40	A								
3 - Forest Lodge & Birdworld Access	0.0	2.80	0.01	A	0.1	2.76	0.11	A								
2031 + Dev																
1 - A325 (N)	0.5	2.94	0.33	A	0.9	3.70	0.48	A	1.1	4.14	0.52	A	1.2	4.28	0.54	A
2 - A325 (S)	1.2	3.98	0.53	A	0.7	3.07	0.39	A	0.7	3.18	0.40	A	1.3	4.51	0.56	A
3 - Forest Lodge & Birdworld Access	0.0	0.00	0.00	A	0.1	2.64	0.07	A	0.3	2.90	0.21	A	0.2	3.05	0.20	A
2031 + Dev (90th %tile Weekend)																
1 - A325 (N)									1.1	4.20	0.52	A				
2 - A325 (S)									0.7	3.21	0.40	A				
3 - Forest Lodge & Birdworld Access									0.3	2.94	0.22	A				

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	A325/ Forest Lodge/ Birdworld
Location	
Site number	
Date	07/12/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ITB16329
Enumerator	I-TRANSPORT\londonhotdesk
Description	3-Arm Roundabout

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	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓					0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	Observed Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓
D2	2022	PM	Observed Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓
D3	2022	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓
D4	2022	Bank Holiday	Observed Saturday PM Peak Hour	ONE HOUR	11:00	12:30	15	✓
D5	2026 + Dev (90th %tile Weekday)	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓
D6	2026 + Dev (90th %tile Weekday)	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓
D7	2026 + Dev	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓
D8	2026 + Dev	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓
D9	2026 + Dev (90th %tile Weekend)	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓
D10	2026 + Dev	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓
D11	2026 + Dev	Bank Holiday	Observed Saturday PM Peak Hour	ONE HOUR	11:00	12:30	15	✓
D12	2031 + Dev (90th %tile Weekday)	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓
D13	2031 + Dev (90th %tile Weekday)	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓
D14	2031 + Dev	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓
D15	2031 + Dev	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓
D16	2031 + Dev (90th %tile Weekend)	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓
D17	2031 + Dev	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓
D18	2031 + Dev	Bank Holiday	Observed Saturday PM Peak Hour	ONE HOUR	11:00	12:30	15	✓

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 Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.32	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.32	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A325 (N)		
2	A325 (S)		
3	Forest Lodge & Birdworld Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A325 (N)	3.61	8.10	23.0	25.0	44.0	35.0		
2 - A325 (S)	3.66	8.80	18.7	36.0	44.0	25.0		
3 - Forest Lodge & Birdworld Access	6.00	7.70	4.6	20.0	44.0	39.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A325 (N)	0.671	1916
2 - A325 (S)	0.704	2012
3 - Forest Lodge & Birdworld Access	0.679	1990

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	Observed Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	525	100.000
2 - A325 (S)		ONE HOUR	✓	878	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
1 - A325 (N)	0	508	17
2 - A325 (S)	866	0	12
3 - Forest Lodge & Birdworld Access	1	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
1 - A325 (N)	0	5	0
2 - A325 (S)	4	0	0
3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.30	2.82	0.5	1.8	A	482	723
2 - A325 (S)	0.48	3.62	1.0	1.5	A	806	1209
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.0	~1	A	0	0

Main Results for each time segment

07:00 - 07:15

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 - A325 (N)	395	99	0	1916	0.206	394	650	0.0	0.3	2.479	A
2 - A325 (S)	661	165	13	2003	0.330	659	381	0.0	0.5	2.780	A
3 - Forest Lodge & Birdworld Access	0	0	650	1549	0.000	0	22	0.0	0.0	0.000	A

07:15 - 07:30

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 - A325 (N)	472	118	0	1916	0.246	472	778	0.3	0.3	2.613	A
2 - A325 (S)	789	197	15	2001	0.394	789	456	0.5	0.7	3.083	A
3 - Forest Lodge & Birdworld Access	0	0	778	1462	0.000	0	26	0.0	0.0	0.000	A

07:30 - 07:45

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 - A325 (N)	578	145	0	1916	0.302	578	952	0.3	0.5	2.820	A
2 - A325 (S)	967	242	19	1999	0.484	966	559	0.7	1.0	3.618	A
3 - Forest Lodge & Birdworld Access	0	0	952	1344	0.000	0	32	0.0	0.0	0.000	A

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 - A325 (N)	578	145	0	1916	0.302	578	953	0.5	0.5	2.820	A
2 - A325 (S)	967	242	19	1999	0.484	967	559	1.0	1.0	3.623	A
3 - Forest Lodge & Birdworld Access	0	0	953	1343	0.000	0	32	0.0	0.0	0.000	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 - A325 (N)	472	118	0	1916	0.246	472	780	0.5	0.3	2.614	A
2 - A325 (S)	789	197	15	2001	0.394	790	457	1.0	0.7	3.092	A
3 - Forest Lodge & Birdworld Access	0	0	780	1461	0.000	0	26	0.0	0.0	0.000	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 - A325 (N)	395	99	0	1916	0.206	396	653	0.3	0.3	2.484	A
2 - A325 (S)	661	165	13	2003	0.330	662	383	0.7	0.5	2.790	A
3 - Forest Lodge & Birdworld Access	0	0	653	1547	0.000	0	22	0.0	0.0	0.000	A

Queue Variation Results for each time segment

07:00 - 07:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - A325 (S)	0.51	0.00	0.00	0.51	0.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:15 - 07:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - A325 (S)	0.67	0.10	0.85	1.42	1.49			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:30 - 07:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.45	0.03	0.26	0.48	0.50			N/A	N/A
2 - A325 (S)	0.97	0.03	0.26	0.97	0.97			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.45	0.03	0.33	1.43	1.78			N/A	N/A
2 - A325 (S)	0.97	0.03	0.28	0.97	1.08			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - A325 (S)	0.68	0.57	1.04	1.46	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - A325 (S)	0.51	0.00	0.00	0.51	0.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.14	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022	PM	Observed Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	744	100.000
2 - A325 (S)		ONE HOUR	✓	651	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
1 - A325 (N)	0	726	18
2 - A325 (S)	641	0	10
3 - Forest Lodge & Birdworld Access	33	22	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	2	0
	2 - A325 (S)	3	0	10
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.43	3.40	0.8	2.2	A	683	1024
2 - A325 (S)	0.36	2.90	0.6	2.7	A	597	896
3 - Forest Lodge & Birdworld Access	0.04	2.48	0.0	0.5	A	50	76

Main Results for each time segment

16:15 - 16:30

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 - A325 (N)	560	140	17	1905	0.294	558	506	0.0	0.4	2.722	A
2 - A325 (S)	490	123	14	2003	0.245	489	561	0.0	0.3	2.449	A
3 - Forest Lodge & Birdworld Access	41	10	481	1663	0.025	41	21	0.0	0.0	2.219	A

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 - A325 (N)	669	167	20	1903	0.352	668	606	0.4	0.5	2.971	A
2 - A325 (S)	585	146	16	2001	0.292	585	672	0.3	0.4	2.621	A
3 - Forest Lodge & Birdworld Access	49	12	576	1599	0.031	49	25	0.0	0.0	2.322	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 - A325 (N)	819	205	24	1900	0.431	818	741	0.5	0.8	3.390	A
2 - A325 (S)	717	179	20	1998	0.359	716	823	0.4	0.6	2.893	A
3 - Forest Lodge & Birdworld Access	61	15	705	1511	0.040	61	31	0.0	0.0	2.481	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 - A325 (N)	819	205	24	1900	0.431	819	742	0.8	0.8	3.396	A
2 - A325 (S)	717	179	20	1998	0.359	717	824	0.6	0.6	2.895	A
3 - Forest Lodge & Birdworld Access	61	15	706	1511	0.040	61	31	0.0	0.0	2.481	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 - A325 (N)	669	167	20	1903	0.352	670	607	0.8	0.6	2.980	A
2 - A325 (S)	585	146	16	2001	0.293	586	673	0.6	0.4	2.625	A
3 - Forest Lodge & Birdworld Access	49	12	577	1598	0.031	49	25	0.0	0.0	2.325	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 - A325 (N)	560	140	17	1905	0.294	561	508	0.6	0.4	2.731	A
2 - A325 (S)	490	123	14	2003	0.245	490	564	0.4	0.3	2.456	A
3 - Forest Lodge & Birdworld Access	41	10	483	1662	0.025	41	21	0.0	0.0	2.222	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - A325 (S)	0.33	0.00	0.00	0.33	0.33			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.03	0.00	0.00	0.03	0.03			N/A	N/A

16:30 - 16:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.55	0.07	0.73	1.37	1.45			N/A	N/A
2 - A325 (S)	0.42	0.00	0.00	0.42	0.42			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.03	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.77	0.03	0.26	0.77	0.77			N/A	N/A
2 - A325 (S)	0.57	0.03	0.26	0.57	0.57			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.04	0.03	0.25	0.45	0.48			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.77	0.03	0.28	0.77	2.19			N/A	N/A
2 - A325 (S)	0.58	0.03	0.30	1.35	2.69			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.56	0.56	1.02	1.43	1.48			N/A	N/A
2 - A325 (S)	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.03	0.00	0.00	0.03	0.03			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - A325 (S)	0.34	0.00	0.00	0.34	0.34			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.03	0.00	0.00	0.03	0.03			N/A	N/A

2022, Weekend

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.06	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	724	100.000
2 - A325 (S)		ONE HOUR	✓	584	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	162	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
1 - A325 (N)	0	644	80
2 - A325 (S)	517	0	67
3 - Forest Lodge & Birdworld Access	87	75	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.43	3.41	0.8	2.3	A	664	997
2 - A325 (S)	0.33	2.78	0.5	2.2	A	536	804
3 - Forest Lodge & Birdworld Access	0.11	2.52	0.1	0.5	A	149	223

Main Results for each time segment

12:45 - 13:00

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 - A325 (N)	545	136	56	1878	0.290	543	454	0.0	0.4	2.717	A
2 - A325 (S)	440	110	60	1970	0.223	439	540	0.0	0.3	2.371	A
3 - Forest Lodge & Birdworld Access	122	30	388	1726	0.071	122	110	0.0	0.1	2.243	A

13:00 - 13:15

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 - A325 (N)	651	163	67	1871	0.348	650	543	0.4	0.5	2.974	A
2 - A325 (S)	525	131	72	1962	0.268	525	646	0.3	0.4	2.527	A
3 - Forest Lodge & Birdworld Access	146	36	464	1675	0.087	146	132	0.1	0.1	2.354	A

13:15 - 13:30

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 - A325 (N)	797	199	83	1860	0.428	796	665	0.5	0.8	3.409	A
2 - A325 (S)	643	161	88	1950	0.330	642	791	0.4	0.5	2.777	A
3 - Forest Lodge & Birdworld Access	178	45	569	1604	0.111	178	162	0.1	0.1	2.524	A

13:30 - 13:45

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 - A325 (N)	797	199	83	1860	0.428	797	665	0.8	0.8	3.414	A
2 - A325 (S)	643	161	88	1950	0.330	643	792	0.5	0.5	2.777	A
3 - Forest Lodge & Birdworld Access	178	45	569	1604	0.111	178	162	0.1	0.1	2.525	A

13:45 - 14:00

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 - A325 (N)	651	163	67	1871	0.348	652	543	0.8	0.5	2.981	A
2 - A325 (S)	525	131	72	1962	0.268	526	647	0.5	0.4	2.531	A
3 - Forest Lodge & Birdworld Access	146	36	465	1674	0.087	146	132	0.1	0.1	2.355	A

14:00 - 14:15

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 - A325 (N)	545	136	56	1878	0.290	546	455	0.5	0.4	2.726	A
2 - A325 (S)	440	110	60	1970	0.223	440	542	0.4	0.3	2.375	A
3 - Forest Lodge & Birdworld Access	122	30	390	1726	0.071	122	111	0.1	0.1	2.244	A

Queue Variation Results for each time segment

12:45 - 13:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - A325 (S)	0.29	0.00	0.00	0.29	0.29			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

13:00 - 13:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.54	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.09	0.03	0.25	0.45	0.48			N/A	N/A

13:15 - 13:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.75	0.03	0.26	0.75	0.75			N/A	N/A
2 - A325 (S)	0.49	0.03	0.25	0.49	0.49			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.12	0.03	0.26	0.46	0.49			N/A	N/A

13:30 - 13:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.75	0.03	0.28	0.75	2.27			N/A	N/A
2 - A325 (S)	0.50	0.03	0.31	1.42	2.19			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.12	0.00	0.00	0.12	0.12			N/A	N/A

13:45 - 14:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.54	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.10	0.00	0.00	0.10	0.10			N/A	N/A

14:00 - 14:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - A325 (S)	0.29	0.00	0.00	0.29	0.29			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2022, Bank Holiday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.34	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2022	Bank Holiday	Observed Saturday PM Peak Hour	ONE HOUR	11:00	12:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	735	100.000
2 - A325 (S)		ONE HOUR	✓	772	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	145	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	622	113
	2 - A325 (S)	638	0	134
	3 - Forest Lodge & Birdworld Access	83	62	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	1
	2 - A325 (S)	1	0	1
	3 - Forest Lodge & Birdworld Access	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.43	3.43	0.8	2.2	A	674	1012
2 - A325 (S)	0.44	3.38	0.8	2.0	A	708	1063
3 - Forest Lodge & Birdworld Access	0.11	2.67	0.1	0.5	A	133	200

Main Results for each time segment

11:00 - 11:15

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 - A325 (N)	553	138	47	1885	0.294	552	541	0.0	0.4	2.724	A
2 - A325 (S)	581	145	85	1953	0.298	579	513	0.0	0.4	2.644	A
3 - Forest Lodge & Birdworld Access	109	27	479	1665	0.066	109	185	0.0	0.1	2.326	A

11:15 - 11:30

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 - A325 (N)	661	165	56	1878	0.352	660	648	0.4	0.5	2.982	A
2 - A325 (S)	694	174	102	1941	0.358	693	614	0.4	0.6	2.913	A
3 - Forest Lodge & Birdworld Access	130	33	573	1601	0.081	130	222	0.1	0.1	2.461	A

11:30 - 11:45

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 - A325 (N)	809	202	68	1870	0.433	808	793	0.5	0.8	3.421	A
2 - A325 (S)	850	212	124	1925	0.442	849	752	0.6	0.8	3.376	A
3 - Forest Lodge & Birdworld Access	160	40	702	1514	0.105	160	272	0.1	0.1	2.673	A

11:45 - 12:00

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 - A325 (N)	809	202	68	1870	0.433	809	794	0.8	0.8	3.426	A
2 - A325 (S)	850	212	124	1925	0.442	850	753	0.8	0.8	3.382	A
3 - Forest Lodge & Birdworld Access	160	40	702	1513	0.106	160	272	0.1	0.1	2.674	A

12:00 - 12:15

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 - A325 (N)	661	165	56	1878	0.352	662	649	0.8	0.6	2.991	A
2 - A325 (S)	694	174	102	1941	0.358	695	616	0.8	0.6	2.922	A
3 - Forest Lodge & Birdworld Access	130	33	574	1600	0.081	130	222	0.1	0.1	2.463	A

12:15 - 12:30

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 - A325 (N)	553	138	47	1885	0.294	554	543	0.6	0.4	2.732	A
2 - A325 (S)	581	145	85	1952	0.298	582	515	0.6	0.4	2.653	A
3 - Forest Lodge & Birdworld Access	109	27	481	1664	0.066	109	186	0.1	0.1	2.330	A

Queue Variation Results for each time segment

11:00 - 11:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - A325 (S)	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.07	0.00	0.00	0.07	0.07			N/A	N/A

11:15 - 11:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.55	0.07	0.73	1.36	1.44			N/A	N/A
2 - A325 (S)	0.56	0.08	0.76	1.36	1.44			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.09	0.03	0.26	0.47	0.50			N/A	N/A

11:30 - 11:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.77	0.03	0.26	0.77	0.77			N/A	N/A
2 - A325 (S)	0.79	0.03	0.26	0.79	0.79			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.12	0.03	0.26	0.47	0.49			N/A	N/A

11:45 - 12:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.77	0.03	0.28	0.77	2.18			N/A	N/A
2 - A325 (S)	0.80	0.03	0.28	0.80	2.01			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.12	0.00	0.00	0.12	0.12			N/A	N/A

12:00 - 12:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.55	0.55	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.57	0.56	1.01	1.41	1.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.09	0.00	0.00	0.09	0.09			N/A	N/A

12:15 - 12:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - A325 (S)	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.07	0.00	0.00	0.07	0.07			N/A	N/A

2026 + Dev (90th %tile Weekday), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.53	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 + Dev (90th %tile Weekday)	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	578	100.000
2 - A325 (S)		ONE HOUR	✓	923	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	526	52
	2 - A325 (S)	896	0	27
	3 - Forest Lodge & Birdworld Access	9	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	5	0
	2 - A325 (S)	4	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.33	2.94	0.5	2.3	A	530	796
2 - A325 (S)	0.52	3.91	1.1	1.5	A	847	1270
3 - Forest Lodge & Birdworld Access	0.01	2.75	0.0	0.5	A	8	12

Main Results for each time segment

07:00 - 07:15

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 - A325 (N)	435	109	0	1916	0.227	434	679	0.0	0.3	2.536	A
2 - A325 (S)	695	174	39	1985	0.350	693	395	0.0	0.6	2.889	A
3 - Forest Lodge & Birdworld Access	7	2	672	1534	0.004	7	59	0.0	0.0	2.357	A

07:15 - 07:30

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 - A325 (N)	520	130	0	1916	0.271	519	813	0.3	0.4	2.694	A
2 - A325 (S)	830	207	47	1979	0.419	829	473	0.6	0.7	3.249	A
3 - Forest Lodge & Birdworld Access	8	2	805	1444	0.006	8	71	0.0	0.0	2.507	A

07:30 - 07:45

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 - A325 (N)	636	159	0	1916	0.332	636	995	0.4	0.5	2.938	A
2 - A325 (S)	1016	254	57	1972	0.515	1015	579	0.7	1.1	3.901	A
3 - Forest Lodge & Birdworld Access	10	2	985	1321	0.008	10	87	0.0	0.0	2.744	A

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 - A325 (N)	636	159	0	1916	0.332	636	996	0.5	0.5	2.940	A
2 - A325 (S)	1016	254	57	1972	0.515	1016	579	1.1	1.1	3.912	A
3 - Forest Lodge & Birdworld Access	10	2	986	1320	0.008	10	87	0.0	0.0	2.746	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 - A325 (N)	520	130	0	1916	0.271	520	815	0.5	0.4	2.696	A
2 - A325 (S)	830	207	47	1979	0.419	831	473	1.1	0.8	3.262	A
3 - Forest Lodge & Birdworld Access	8	2	807	1442	0.006	8	71	0.0	0.0	2.509	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 - A325 (N)	435	109	0	1916	0.227	435	682	0.4	0.3	2.542	A
2 - A325 (S)	695	174	39	1985	0.350	696	396	0.8	0.6	2.902	A
3 - Forest Lodge & Birdworld Access	7	2	675	1532	0.004	7	60	0.0	0.0	2.362	A

Queue Variation Results for each time segment

07:00 - 07:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - A325 (S)	0.56	0.56	1.04	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:15 - 07:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - A325 (S)	0.75	0.09	0.85	1.44	1.52			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.01	0.25	0.45	0.48			N/A	N/A

07:30 - 07:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.52	0.03	0.26	0.52	0.52			N/A	N/A
2 - A325 (S)	1.09	0.03	0.27	1.09	1.09			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.52	0.03	0.32	1.46	2.33			N/A	N/A
2 - A325 (S)	1.10	0.03	0.28	1.10	1.21			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - A325 (S)	0.75	0.57	1.04	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - A325 (S)	0.56	0.07	0.74	1.39	1.48			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2026 + Dev (90th %tile Weekday), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.33	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 + Dev (90th %tile Weekday)	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	798	100.000
2 - A325 (S)		ONE HOUR	✓	685	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	153	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	752	46
	2 - A325 (S)	664	0	21
	3 - Forest Lodge & Birdworld Access	85	68	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	2	0
	2 - A325 (S)	3	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.47	3.71	0.9	1.5	A	732	1098
2 - A325 (S)	0.38	3.03	0.6	2.8	A	629	943
3 - Forest Lodge & Birdworld Access	0.11	2.72	0.1	0.5	A	140	211

Main Results for each time segment

16:15 - 16:30

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 - A325 (N)	601	150	51	1882	0.319	599	562	0.0	0.5	2.856	A
2 - A325 (S)	516	129	35	1988	0.259	514	615	0.0	0.4	2.511	A
3 - Forest Lodge & Birdworld Access	115	29	499	1652	0.070	115	50	0.0	0.1	2.342	A

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 - A325 (N)	717	179	61	1875	0.383	717	673	0.5	0.6	3.165	A
2 - A325 (S)	616	154	41	1983	0.311	615	737	0.4	0.5	2.708	A
3 - Forest Lodge & Birdworld Access	138	34	597	1585	0.087	137	60	0.1	0.1	2.486	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 - A325 (N)	879	220	75	1866	0.471	878	824	0.6	0.9	3.709	A
2 - A325 (S)	754	189	51	1977	0.382	754	902	0.5	0.6	3.027	A
3 - Forest Lodge & Birdworld Access	168	42	730	1494	0.113	168	74	0.1	0.1	2.714	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 - A325 (N)	879	220	75	1866	0.471	879	825	0.9	0.9	3.715	A
2 - A325 (S)	754	189	51	1977	0.382	754	903	0.6	0.6	3.029	A
3 - Forest Lodge & Birdworld Access	168	42	731	1494	0.113	168	74	0.1	0.1	2.715	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 - A325 (N)	717	179	61	1875	0.383	718	674	0.9	0.6	3.176	A
2 - A325 (S)	616	154	41	1983	0.311	616	738	0.6	0.5	2.711	A
3 - Forest Lodge & Birdworld Access	138	34	598	1584	0.087	138	60	0.1	0.1	2.488	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 - A325 (N)	601	150	51	1882	0.319	601	564	0.6	0.5	2.868	A
2 - A325 (S)	516	129	35	1988	0.259	516	618	0.5	0.4	2.517	A
3 - Forest Lodge & Birdworld Access	115	29	500	1650	0.070	115	50	0.1	0.1	2.344	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2 - A325 (S)	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.07	0.00	0.00	0.07	0.07			N/A	N/A

16:30 - 16:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.63	0.09	0.83	1.39	1.46			N/A	N/A
2 - A325 (S)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.09	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.90	0.03	0.26	0.90	0.90			N/A	N/A
2 - A325 (S)	0.63	0.03	0.26	0.63	0.63			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.13	0.03	0.26	0.46	0.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.90	0.03	0.27	0.90	1.47			N/A	N/A
2 - A325 (S)	0.63	0.03	0.30	1.13	2.75			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.13	0.00	0.00	0.13	0.13			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.64	0.56	1.02	1.43	1.48			N/A	N/A
2 - A325 (S)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.10	0.00	0.00	0.10	0.10			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2 - A325 (S)	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2026 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 + Dev	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	558	100.000
2 - A325 (S)		ONE HOUR	✓	918	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
1 - A325 (N)	0	526	32
2 - A325 (S)	896	0	22
3 - Forest Lodge & Birdworld Access	2	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	5	0
	2 - A325 (S)	4	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.32	2.89	0.5	2.1	A	512	768
2 - A325 (S)	0.51	3.83	1.1	1.5	A	842	1264
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.0	~1	A	0	0

Main Results for each time segment

07:00 - 07:15

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 - A325 (N)	420	105	0	1916	0.219	419	672	0.0	0.3	2.518	A
2 - A325 (S)	691	173	24	1995	0.346	689	395	0.0	0.5	2.858	A
3 - Forest Lodge & Birdworld Access	0	0	672	1534	0.000	0	41	0.0	0.0	0.000	A

07:15 - 07:30

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 - A325 (N)	502	125	0	1916	0.262	501	805	0.3	0.4	2.664	A
2 - A325 (S)	825	206	29	1992	0.414	825	473	0.5	0.7	3.202	A
3 - Forest Lodge & Birdworld Access	0	0	805	1444	0.000	0	49	0.0	0.0	0.000	A

07:30 - 07:45

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 - A325 (N)	614	154	0	1916	0.321	614	985	0.4	0.5	2.895	A
2 - A325 (S)	1011	253	35	1987	0.509	1009	579	0.7	1.1	3.819	A
3 - Forest Lodge & Birdworld Access	0	0	985	1321	0.000	0	59	0.0	0.0	0.000	A

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 - A325 (N)	614	154	0	1916	0.321	614	986	0.5	0.5	2.895	A
2 - A325 (S)	1011	253	35	1987	0.509	1011	579	1.1	1.1	3.828	A
3 - Forest Lodge & Birdworld Access	0	0	986	1320	0.000	0	59	0.0	0.0	0.000	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 - A325 (N)	502	125	0	1916	0.262	502	807	0.5	0.4	2.666	A
2 - A325 (S)	825	206	29	1992	0.414	827	473	1.1	0.7	3.212	A
3 - Forest Lodge & Birdworld Access	0	0	807	1442	0.000	0	49	0.0	0.0	0.000	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 - A325 (N)	420	105	0	1916	0.219	420	675	0.4	0.3	2.522	A
2 - A325 (S)	691	173	24	1995	0.346	692	396	0.7	0.6	2.873	A
3 - Forest Lodge & Birdworld Access	0	0	675	1532	0.000	0	41	0.0	0.0	0.000	A

Queue Variation Results for each time segment

07:00 - 07:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.29	0.00	0.00	0.29	0.29			N/A	N/A
2 - A325 (S)	0.55	0.55	1.04	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:15 - 07:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2 - A325 (S)	0.73	0.09	0.85	1.44	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:30 - 07:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.49	0.03	0.26	0.49	0.50			N/A	N/A
2 - A325 (S)	1.07	0.03	0.27	1.07	1.07			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.49	0.03	0.32	1.46	2.08			N/A	N/A
2 - A325 (S)	1.07	0.03	0.28	1.07	1.28			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2 - A325 (S)	0.74	0.57	1.04	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - A325 (S)	0.55	0.07	0.72	1.39	1.47			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2026 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 + Dev	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	784	100.000
2 - A325 (S)		ONE HOUR	✓	682	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	100	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	752	32
	2 - A325 (S)	664	0	18
	3 - Forest Lodge & Birdworld Access	60	40	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	2	0
	2 - A325 (S)	3	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.46	3.58	0.9	1.7	A	719	1079
2 - A325 (S)	0.38	3.00	0.6	2.8	A	626	939
3 - Forest Lodge & Birdworld Access	0.07	2.60	0.1	0.5	A	92	138

Main Results for each time segment

16:15 - 16:30

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 - A325 (N)	590	148	30	1896	0.311	588	544	0.0	0.5	2.803	A
2 - A325 (S)	513	128	24	1995	0.257	512	594	0.0	0.4	2.495	A
3 - Forest Lodge & Birdworld Access	75	19	499	1652	0.046	75	38	0.0	0.0	2.283	A

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 - A325 (N)	705	176	36	1892	0.373	704	650	0.5	0.6	3.087	A
2 - A325 (S)	613	153	29	1992	0.308	613	711	0.4	0.5	2.686	A
3 - Forest Lodge & Birdworld Access	90	22	597	1585	0.057	90	45	0.0	0.1	2.407	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 - A325 (N)	863	216	44	1886	0.458	862	796	0.6	0.9	3.579	A
2 - A325 (S)	751	188	35	1987	0.378	750	871	0.5	0.6	2.993	A
3 - Forest Lodge & Birdworld Access	110	28	730	1494	0.074	110	55	0.1	0.1	2.600	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 - A325 (N)	863	216	44	1886	0.458	863	797	0.9	0.9	3.585	A
2 - A325 (S)	751	188	35	1987	0.378	751	872	0.6	0.6	2.995	A
3 - Forest Lodge & Birdworld Access	110	28	731	1494	0.074	110	55	0.1	0.1	2.601	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 - A325 (N)	705	176	36	1892	0.373	706	652	0.9	0.6	3.095	A
2 - A325 (S)	613	153	29	1992	0.308	614	713	0.6	0.5	2.689	A
3 - Forest Lodge & Birdworld Access	90	22	598	1584	0.057	90	45	0.1	0.1	2.408	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 - A325 (N)	590	148	30	1896	0.311	591	545	0.6	0.5	2.812	A
2 - A325 (S)	513	128	24	1995	0.257	514	597	0.5	0.4	2.503	A
3 - Forest Lodge & Birdworld Access	75	19	500	1650	0.046	75	38	0.1	0.0	2.287	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - A325 (S)	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.05	0.00	0.00	0.05	0.05			N/A	N/A

16:30 - 16:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.60	0.09	0.82	1.39	1.46			N/A	N/A
2 - A325 (S)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.06	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.85	0.03	0.26	0.85	0.85			N/A	N/A
2 - A325 (S)	0.62	0.03	0.26	0.62	0.62			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.03	0.26	0.47	0.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.86	0.03	0.28	0.86	1.71			N/A	N/A
2 - A325 (S)	0.62	0.03	0.30	1.17	2.76			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.61	0.56	1.02	1.43	1.48			N/A	N/A
2 - A325 (S)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - A325 (S)	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.05	0.00	0.00	0.05	0.05			N/A	N/A

2026 + Dev (90th %tile Weekend), Weekend

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.51	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.51	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026 + Dev (90th %tile Weekend)	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	828	100.000
2 - A325 (S)		ONE HOUR	✓	668	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	314	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	671	157
	2 - A325 (S)	539	0	129
	3 - Forest Lodge & Birdworld Access	169	145	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.50	4.04	1.0	1.5	A	760	1140
2 - A325 (S)	0.39	3.14	0.6	2.7	A	613	919
3 - Forest Lodge & Birdworld Access	0.22	2.90	0.3	1.1	A	288	432

Main Results for each time segment

12:45 - 13:00

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 - A325 (N)	623	156	109	1843	0.338	621	532	0.0	0.5	2.966	A
2 - A325 (S)	503	126	118	1929	0.261	501	612	0.0	0.4	2.539	A
3 - Forest Lodge & Birdworld Access	236	59	405	1715	0.138	236	215	0.0	0.2	2.431	A

13:00 - 13:15

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 - A325 (N)	744	186	130	1828	0.407	744	636	0.5	0.7	3.344	A
2 - A325 (S)	601	150	141	1913	0.314	600	733	0.4	0.5	2.764	A
3 - Forest Lodge & Birdworld Access	282	71	484	1661	0.170	282	257	0.2	0.2	2.610	A

13:15 - 13:30

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 - A325 (N)	912	228	160	1809	0.504	910	779	0.7	1.0	4.033	A
2 - A325 (S)	735	184	173	1891	0.389	735	897	0.5	0.6	3.138	A
3 - Forest Lodge & Birdworld Access	346	86	593	1588	0.218	345	315	0.2	0.3	2.898	A

13:30 - 13:45

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 - A325 (N)	912	228	160	1809	0.504	912	780	1.0	1.0	4.045	A
2 - A325 (S)	735	184	173	1891	0.389	735	898	0.6	0.6	3.141	A
3 - Forest Lodge & Birdworld Access	346	86	593	1587	0.218	346	315	0.3	0.3	2.899	A

13:45 - 14:00

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 - A325 (N)	744	186	130	1828	0.407	746	637	1.0	0.7	3.357	A
2 - A325 (S)	601	150	141	1913	0.314	601	735	0.6	0.5	2.770	A
3 - Forest Lodge & Birdworld Access	282	71	485	1661	0.170	283	257	0.3	0.2	2.612	A

14:00 - 14:15

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 - A325 (N)	623	156	109	1843	0.338	624	533	0.7	0.5	2.979	A
2 - A325 (S)	503	126	118	1929	0.261	503	615	0.5	0.4	2.545	A
3 - Forest Lodge & Birdworld Access	236	59	406	1714	0.138	237	216	0.2	0.2	2.436	A

Queue Variation Results for each time segment

12:45 - 13:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.51	0.51	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.16	0.00	0.00	0.16	0.16			N/A	N/A

13:00 - 13:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.69	0.09	0.83	1.38	1.45			N/A	N/A
2 - A325 (S)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.20	0.00	0.00	0.20	0.20			N/A	N/A

13:15 - 13:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.02	0.03	0.26	1.02	1.02			N/A	N/A
2 - A325 (S)	0.64	0.03	0.25	0.64	0.64			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.28	0.03	0.25	0.45	0.48			N/A	N/A

13:30 - 13:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.02	0.03	0.27	1.02	1.42			N/A	N/A
2 - A325 (S)	0.64	0.03	0.29	1.04	2.71			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.28	0.03	0.29	0.74	1.12			N/A	N/A

13:45 - 14:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.70	0.55	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.21	0.00	0.00	0.21	0.21			N/A	N/A

14:00 - 14:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.52	0.05	0.57	1.32	1.42			N/A	N/A
2 - A325 (S)	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.16	0.00	0.00	0.16	0.16			N/A	N/A

2026 + Dev, Weekend

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.47	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026 + Dev	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	821	100.000
2 - A325 (S)		ONE HOUR	✓	661	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	299	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	671	150
	2 - A325 (S)	539	0	122
	3 - Forest Lodge & Birdworld Access	161	138	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.50	3.99	1.0	1.5	A	753	1130
2 - A325 (S)	0.38	3.11	0.6	2.7	A	607	910
3 - Forest Lodge & Birdworld Access	0.21	2.86	0.3	0.9	A	274	412

Main Results for each time segment

12:45 - 13:00

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 - A325 (N)	618	155	104	1846	0.335	616	526	0.0	0.5	2.945	A
2 - A325 (S)	498	124	113	1933	0.257	496	607	0.0	0.3	2.524	A
3 - Forest Lodge & Birdworld Access	225	56	405	1715	0.131	225	204	0.0	0.2	2.413	A

13:00 - 13:15

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 - A325 (N)	738	185	124	1833	0.403	737	629	0.5	0.7	3.312	A
2 - A325 (S)	594	149	135	1917	0.310	594	727	0.3	0.5	2.742	A
3 - Forest Lodge & Birdworld Access	269	67	484	1661	0.162	269	244	0.2	0.2	2.584	A

13:15 - 13:30

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 - A325 (N)	904	226	152	1814	0.498	903	770	0.7	1.0	3.976	A
2 - A325 (S)	728	182	165	1896	0.384	727	890	0.5	0.6	3.103	A
3 - Forest Lodge & Birdworld Access	329	82	593	1588	0.207	329	299	0.2	0.3	2.860	A

13:30 - 13:45

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 - A325 (N)	904	226	152	1814	0.498	904	771	1.0	1.0	3.988	A
2 - A325 (S)	728	182	165	1896	0.384	728	891	0.6	0.6	3.106	A
3 - Forest Lodge & Birdworld Access	329	82	593	1587	0.207	329	299	0.3	0.3	2.861	A

13:45 - 14:00

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 - A325 (N)	738	185	124	1833	0.403	739	630	1.0	0.7	3.325	A
2 - A325 (S)	594	149	135	1917	0.310	595	728	0.6	0.5	2.745	A
3 - Forest Lodge & Birdworld Access	269	67	485	1661	0.162	269	245	0.3	0.2	2.589	A

14:00 - 14:15

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 - A325 (N)	618	155	104	1846	0.335	619	527	0.7	0.5	2.960	A
2 - A325 (S)	498	124	113	1933	0.257	498	610	0.5	0.4	2.532	A
3 - Forest Lodge & Birdworld Access	225	56	406	1714	0.131	225	205	0.2	0.2	2.419	A

Queue Variation Results for each time segment

12:45 - 13:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.50	0.50	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.15	0.00	0.00	0.15	0.15			N/A	N/A

13:00 - 13:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.68	0.09	0.83	1.38	1.45			N/A	N/A
2 - A325 (S)	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.19	0.00	0.00	0.19	0.19			N/A	N/A

13:15 - 13:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.99	0.03	0.26	0.99	0.99			N/A	N/A
2 - A325 (S)	0.62	0.03	0.25	0.62	0.62			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.26	0.03	0.25	0.46	0.48			N/A	N/A

13:30 - 13:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.00	0.03	0.27	1.00	1.48			N/A	N/A
2 - A325 (S)	0.63	0.03	0.29	1.11	2.72			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.26	0.03	0.27	0.49	0.92			N/A	N/A

13:45 - 14:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.68	0.55	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.19	0.00	0.00	0.19	0.19			N/A	N/A

14:00 - 14:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.51	0.51	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.15	0.00	0.00	0.15	0.15			N/A	N/A

2026 + Dev, Bank Holiday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	4.07	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.07	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026 + Dev	Bank Holiday	Observed Saturday PM Peak Hour	ONE HOUR	11:00	12:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	865	100.000
2 - A325 (S)		ONE HOUR	✓	915	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	263	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	648	217
	2 - A325 (S)	665	0	250
	3 - Forest Lodge & Birdworld Access	149	114	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.52	4.12	1.1	1.5	A	794	1191
2 - A325 (S)	0.55	4.33	1.2	1.5	A	840	1259
3 - Forest Lodge & Birdworld Access	0.19	2.99	0.2	0.5	A	241	362

Main Results for each time segment

11:00 - 11:15

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 - A325 (N)	651	163	86	1858	0.350	649	611	0.0	0.5	2.994	A
2 - A325 (S)	689	172	163	1898	0.363	687	572	0.0	0.6	2.989	A
3 - Forest Lodge & Birdworld Access	198	50	499	1651	0.120	197	350	0.0	0.1	2.476	A

11:15 - 11:30

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 - A325 (N)	778	194	102	1847	0.421	777	731	0.5	0.7	3.387	A
2 - A325 (S)	823	206	195	1875	0.439	822	684	0.6	0.8	3.439	A
3 - Forest Lodge & Birdworld Access	236	59	597	1585	0.149	236	419	0.1	0.2	2.669	A

11:30 - 11:45

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 - A325 (N)	952	238	125	1832	0.520	951	895	0.7	1.1	4.111	A
2 - A325 (S)	1007	252	239	1844	0.546	1006	838	0.8	1.2	4.315	A
3 - Forest Lodge & Birdworld Access	290	72	731	1494	0.194	289	513	0.2	0.2	2.988	A

11:45 - 12:00

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 - A325 (N)	952	238	126	1832	0.520	952	896	1.1	1.1	4.124	A
2 - A325 (S)	1007	252	239	1844	0.546	1007	839	1.2	1.2	4.333	A
3 - Forest Lodge & Birdworld Access	290	72	732	1493	0.194	290	514	0.2	0.2	2.990	A

12:00 - 12:15

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 - A325 (N)	778	194	103	1847	0.421	779	733	1.1	0.7	3.399	A
2 - A325 (S)	823	206	195	1875	0.439	824	686	1.2	0.8	3.456	A
3 - Forest Lodge & Birdworld Access	236	59	599	1583	0.149	237	421	0.2	0.2	2.675	A

12:15 - 12:30

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 - A325 (N)	651	163	86	1858	0.350	652	614	0.7	0.5	3.010	A
2 - A325 (S)	689	172	164	1897	0.363	690	574	0.8	0.6	3.004	A
3 - Forest Lodge & Birdworld Access	198	50	501	1650	0.120	198	352	0.2	0.1	2.481	A

Queue Variation Results for each time segment

11:00 - 11:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.54	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.57	0.55	1.01	1.41	1.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.14	0.00	0.00	0.14	0.14			N/A	N/A

11:15 - 11:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.73	0.09	0.83	1.40	1.48			N/A	N/A
2 - A325 (S)	0.78	0.08	0.82	1.33	1.33			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.17	0.00	0.00	0.17	0.17			N/A	N/A

11:30 - 11:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.08	0.03	0.26	1.08	1.08			N/A	N/A
2 - A325 (S)	1.20	0.03	0.26	1.20	1.20			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.24	0.03	0.25	0.46	0.48			N/A	N/A

11:45 - 12:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.09	0.03	0.27	1.09	1.21			N/A	N/A
2 - A325 (S)	1.21	0.03	0.27	1.21	1.21			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.24	0.03	0.26	0.47	0.49			N/A	N/A

12:00 - 12:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.74	0.55	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.79	0.52	0.99	1.41	1.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.18	0.00	0.00	0.18	0.18			N/A	N/A

12:15 - 12:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.55	0.07	0.70	1.35	1.43			N/A	N/A
2 - A325 (S)	0.58	0.07	0.74	1.36	1.43			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.14	0.00	0.00	0.14	0.14			N/A	N/A

2031 + Dev (90th %tile Weekday), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.65	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2031 + Dev (90th %tile Weekday)	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	597	100.000
2 - A325 (S)		ONE HOUR	✓	957	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	545	52
	2 - A325 (S)	930	0	27
	3 - Forest Lodge & Birdworld Access	9	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	5	0
	2 - A325 (S)	4	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.34	2.99	0.5	2.5	A	548	822
2 - A325 (S)	0.53	4.07	1.2	1.5	A	878	1317
3 - Forest Lodge & Birdworld Access	0.01	2.80	0.0	0.5	A	8	12

Main Results for each time segment

07:00 - 07:15

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 - A325 (N)	449	112	0	1916	0.235	448	705	0.0	0.3	2.562	A
2 - A325 (S)	720	180	39	1985	0.363	718	409	0.0	0.6	2.948	A
3 - Forest Lodge & Birdworld Access	7	2	698	1516	0.004	7	59	0.0	0.0	2.384	A

07:15 - 07:30

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 - A325 (N)	537	134	0	1916	0.280	536	843	0.3	0.4	2.728	A
2 - A325 (S)	860	215	47	1979	0.435	860	490	0.6	0.8	3.338	A
3 - Forest Lodge & Birdworld Access	8	2	835	1423	0.006	8	71	0.0	0.0	2.543	A

07:30 - 07:45

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 - A325 (N)	657	164	0	1916	0.343	657	1032	0.4	0.5	2.987	A
2 - A325 (S)	1054	263	57	1972	0.534	1052	600	0.8	1.2	4.059	A
3 - Forest Lodge & Birdworld Access	10	2	1022	1296	0.008	10	87	0.0	0.0	2.798	A

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 - A325 (N)	657	164	0	1916	0.343	657	1034	0.5	0.5	2.989	A
2 - A325 (S)	1054	263	57	1972	0.534	1054	600	1.2	1.2	4.072	A
3 - Forest Lodge & Birdworld Access	10	2	1024	1295	0.008	10	87	0.0	0.0	2.800	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 - A325 (N)	537	134	0	1916	0.280	537	846	0.5	0.4	2.730	A
2 - A325 (S)	860	215	47	1979	0.435	862	490	1.2	0.8	3.350	A
3 - Forest Lodge & Birdworld Access	8	2	838	1421	0.006	8	71	0.0	0.0	2.546	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 - A325 (N)	449	112	0	1916	0.235	450	708	0.4	0.3	2.569	A
2 - A325 (S)	720	180	39	1985	0.363	721	411	0.8	0.6	2.961	A
3 - Forest Lodge & Birdworld Access	7	2	701	1514	0.004	7	60	0.0	0.0	2.387	A

Queue Variation Results for each time segment

07:00 - 07:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2 - A325 (S)	0.59	0.57	1.04	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:15 - 07:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - A325 (S)	0.79	0.09	0.85	1.17	1.17			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.01	0.25	0.45	0.48			N/A	N/A

07:30 - 07:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.03	0.26	0.54	0.54			N/A	N/A
2 - A325 (S)	1.18	0.03	0.27	1.18	1.18			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.01	0.25	0.45	0.48			N/A	N/A

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.03	0.31	1.43	2.51			N/A	N/A
2 - A325 (S)	1.19	0.03	0.28	1.19	1.19			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - A325 (S)	0.80	0.55	1.03	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2 - A325 (S)	0.60	0.08	0.80	1.41	1.48			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 + Dev (90th %tile Weekday), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.43	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2031 + Dev (90th %tile Weekday)	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	828	100.000
2 - A325 (S)		ONE HOUR	✓	711	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	153	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	782	46
	2 - A325 (S)	690	0	21
	3 - Forest Lodge & Birdworld Access	85	68	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	2	0
	2 - A325 (S)	3	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.49	3.84	1.0	1.5	A	760	1140
2 - A325 (S)	0.40	3.10	0.7	2.7	A	652	979
3 - Forest Lodge & Birdworld Access	0.11	2.76	0.1	0.5	A	140	211

Main Results for each time segment

16:15 - 16:30

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 - A325 (N)	623	156	51	1882	0.331	621	582	0.0	0.5	2.905	A
2 - A325 (S)	535	134	35	1988	0.269	534	638	0.0	0.4	2.545	A
3 - Forest Lodge & Birdworld Access	115	29	518	1638	0.070	115	50	0.0	0.1	2.363	A

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 - A325 (N)	744	186	61	1875	0.397	744	696	0.5	0.7	3.241	A
2 - A325 (S)	639	160	41	1983	0.322	639	763	0.4	0.5	2.755	A
3 - Forest Lodge & Birdworld Access	138	34	620	1569	0.088	137	60	0.1	0.1	2.514	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 - A325 (N)	912	228	75	1866	0.489	910	853	0.7	1.0	3.835	A
2 - A325 (S)	783	196	51	1977	0.396	782	935	0.5	0.7	3.100	A
3 - Forest Lodge & Birdworld Access	168	42	759	1475	0.114	168	74	0.1	0.1	2.755	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 - A325 (N)	912	228	75	1866	0.489	912	853	1.0	1.0	3.844	A
2 - A325 (S)	783	196	51	1977	0.396	783	936	0.7	0.7	3.102	A
3 - Forest Lodge & Birdworld Access	168	42	760	1474	0.114	168	74	0.1	0.1	2.756	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 - A325 (N)	744	186	61	1875	0.397	746	697	1.0	0.7	3.253	A
2 - A325 (S)	639	160	41	1983	0.322	640	765	0.7	0.5	2.759	A
3 - Forest Lodge & Birdworld Access	138	34	621	1568	0.088	138	60	0.1	0.1	2.517	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 - A325 (N)	623	156	51	1882	0.331	624	584	0.7	0.5	2.917	A
2 - A325 (S)	535	134	35	1988	0.269	536	641	0.5	0.4	2.553	A
3 - Forest Lodge & Birdworld Access	115	29	520	1637	0.070	115	50	0.1	0.1	2.365	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.50	0.00	0.00	0.50	0.50			N/A	N/A
2 - A325 (S)	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

16:30 - 16:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.67	0.10	0.84	1.39	1.46			N/A	N/A
2 - A325 (S)	0.49	0.00	0.00	0.49	0.49			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.10	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.97	0.03	0.26	0.97	0.97			N/A	N/A
2 - A325 (S)	0.67	0.03	0.26	0.67	0.67			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.13	0.03	0.26	0.46	0.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.97	0.03	0.27	0.97	1.06			N/A	N/A
2 - A325 (S)	0.67	0.03	0.29	0.92	2.71			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.13	0.00	0.00	0.13	0.13			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.67	0.56	1.02	1.43	1.48			N/A	N/A
2 - A325 (S)	0.49	0.00	0.00	0.49	0.49			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.10	0.00	0.00	0.10	0.10			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.51	0.00	0.00	0.51	0.51			N/A	N/A
2 - A325 (S)	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2031 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.59	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2031 + Dev	AM	Weekday AM Peak Hour	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	577	100.000
2 - A325 (S)		ONE HOUR	✓	952	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	545	32
	2 - A325 (S)	930	0	22
	3 - Forest Lodge & Birdworld Access	2	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	5	0
	2 - A325 (S)	4	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.33	2.94	0.5	2.3	A	529	794
2 - A325 (S)	0.53	3.98	1.2	1.6	A	874	1310
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.0	~1	A	0	0

Main Results for each time segment

07:00 - 07:15

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 - A325 (N)	434	109	0	1916	0.227	433	698	0.0	0.3	2.539	A
2 - A325 (S)	717	179	24	1995	0.359	714	409	0.0	0.6	2.915	A
3 - Forest Lodge & Birdworld Access	0	0	698	1516	0.000	0	41	0.0	0.0	0.000	A

07:15 - 07:30

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 - A325 (N)	519	130	0	1916	0.271	518	835	0.3	0.4	2.697	A
2 - A325 (S)	856	214	29	1992	0.430	855	490	0.6	0.8	3.288	A
3 - Forest Lodge & Birdworld Access	0	0	835	1423	0.000	0	49	0.0	0.0	0.000	A

07:30 - 07:45

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 - A325 (N)	635	159	0	1916	0.332	635	1022	0.4	0.5	2.940	A
2 - A325 (S)	1048	262	35	1987	0.527	1047	600	0.8	1.1	3.969	A
3 - Forest Lodge & Birdworld Access	0	0	1022	1296	0.000	0	59	0.0	0.0	0.000	A

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 - A325 (N)	635	159	0	1916	0.332	635	1024	0.5	0.5	2.942	A
2 - A325 (S)	1048	262	35	1987	0.527	1048	600	1.1	1.2	3.982	A
3 - Forest Lodge & Birdworld Access	0	0	1024	1295	0.000	0	59	0.0	0.0	0.000	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 - A325 (N)	519	130	0	1916	0.271	519	837	0.5	0.4	2.701	A
2 - A325 (S)	856	214	29	1992	0.430	857	490	1.2	0.8	3.300	A
3 - Forest Lodge & Birdworld Access	0	0	837	1422	0.000	0	49	0.0	0.0	0.000	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 - A325 (N)	434	109	0	1916	0.227	435	701	0.4	0.3	2.545	A
2 - A325 (S)	717	179	24	1995	0.359	718	411	0.8	0.6	2.930	A
3 - Forest Lodge & Birdworld Access	0	0	701	1514	0.000	0	41	0.0	0.0	0.000	A

Queue Variation Results for each time segment

07:00 - 07:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - A325 (S)	0.58	0.57	1.04	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:15 - 07:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - A325 (S)	0.78	0.09	0.85	1.47	1.55			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:30 - 07:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.52	0.03	0.26	0.52	0.52			N/A	N/A
2 - A325 (S)	1.15	0.03	0.27	1.15	1.15			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.52	0.03	0.32	1.46	2.33			N/A	N/A
2 - A325 (S)	1.15	0.03	0.28	1.15	1.15			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - A325 (S)	0.79	0.56	1.03	1.45	1.51			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - A325 (S)	0.59	0.08	0.79	1.41	1.48			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.36	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031 + Dev	PM	Weekday PM Peak Hour	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	814	100.000
2 - A325 (S)		ONE HOUR	✓	708	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	100	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	782	32
	2 - A325 (S)	690	0	18
	3 - Forest Lodge & Birdworld Access	60	40	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	2	0
	2 - A325 (S)	3	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.48	3.70	0.9	1.5	A	747	1120
2 - A325 (S)	0.39	3.07	0.7	2.7	A	650	975
3 - Forest Lodge & Birdworld Access	0.07	2.64	0.1	0.5	A	92	138

Main Results for each time segment

16:15 - 16:30

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 - A325 (N)	613	153	30	1896	0.323	611	563	0.0	0.5	2.852	A
2 - A325 (S)	533	133	24	1995	0.267	532	617	0.0	0.4	2.529	A
3 - Forest Lodge & Birdworld Access	75	19	518	1638	0.046	75	38	0.0	0.0	2.302	A

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 - A325 (N)	732	183	36	1892	0.387	731	674	0.5	0.6	3.159	A
2 - A325 (S)	636	159	29	1992	0.320	636	738	0.4	0.5	2.732	A
3 - Forest Lodge & Birdworld Access	90	22	620	1569	0.057	90	45	0.0	0.1	2.433	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 - A325 (N)	896	224	44	1886	0.475	895	825	0.6	0.9	3.699	A
2 - A325 (S)	780	195	35	1987	0.392	779	904	0.5	0.7	3.064	A
3 - Forest Lodge & Birdworld Access	110	28	759	1475	0.075	110	55	0.1	0.1	2.637	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 - A325 (N)	896	224	44	1886	0.475	896	826	0.9	0.9	3.704	A
2 - A325 (S)	780	195	35	1987	0.392	780	905	0.7	0.7	3.066	A
3 - Forest Lodge & Birdworld Access	110	28	760	1474	0.075	110	55	0.1	0.1	2.638	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 - A325 (N)	732	183	36	1892	0.387	733	675	0.9	0.6	3.170	A
2 - A325 (S)	636	159	29	1992	0.320	637	740	0.7	0.5	2.735	A
3 - Forest Lodge & Birdworld Access	90	22	621	1568	0.057	90	45	0.1	0.1	2.434	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 - A325 (N)	613	153	30	1896	0.323	613	565	0.6	0.5	2.862	A
2 - A325 (S)	533	133	24	1995	0.267	533	619	0.5	0.4	2.536	A
3 - Forest Lodge & Birdworld Access	75	19	520	1637	0.046	75	38	0.1	0.0	2.304	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.05	0.00	0.00	0.05	0.05			N/A	N/A

16:30 - 16:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.64	0.10	0.84	1.39	1.46			N/A	N/A
2 - A325 (S)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.06	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.92	0.03	0.26	0.92	0.92			N/A	N/A
2 - A325 (S)	0.66	0.03	0.26	0.66	0.66			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.03	0.26	0.47	0.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.92	0.03	0.27	0.92	1.34			N/A	N/A
2 - A325 (S)	0.66	0.03	0.29	0.98	2.72			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.65	0.56	1.02	1.43	1.48			N/A	N/A
2 - A325 (S)	0.49	0.00	0.00	0.49	0.49			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.49	0.00	0.00	0.49	0.49			N/A	N/A
2 - A325 (S)	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.05	0.00	0.00	0.05	0.05			N/A	N/A

2031 + Dev (90th %tile Weekend), Weekend

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.62	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031 + Dev (90th %tile Weekend)	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	858	100.000
2 - A325 (S)		ONE HOUR	✓	692	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	314	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
1 - A325 (N)	0	701	157
2 - A325 (S)	563	0	129
3 - Forest Lodge & Birdworld Access	169	145	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.52	4.20	1.1	1.5	A	787	1181
2 - A325 (S)	0.40	3.21	0.7	2.7	A	635	952
3 - Forest Lodge & Birdworld Access	0.22	2.94	0.3	1.2	A	288	432

Main Results for each time segment

12:45 - 13:00

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 - A325 (N)	646	161	109	1843	0.351	644	550	0.0	0.5	3.022	A
2 - A325 (S)	521	130	118	1929	0.270	519	635	0.0	0.4	2.572	A
3 - Forest Lodge & Birdworld Access	236	59	423	1703	0.139	236	215	0.0	0.2	2.452	A

13:00 - 13:15

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 - A325 (N)	771	193	130	1828	0.422	771	658	0.5	0.7	3.429	A
2 - A325 (S)	622	156	141	1913	0.325	622	760	0.4	0.5	2.810	A
3 - Forest Lodge & Birdworld Access	282	71	506	1647	0.171	282	257	0.2	0.2	2.638	A

13:15 - 13:30

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 - A325 (N)	945	236	160	1809	0.522	943	805	0.7	1.1	4.186	A
2 - A325 (S)	762	190	173	1891	0.403	761	930	0.5	0.7	3.211	A
3 - Forest Lodge & Birdworld Access	346	86	619	1570	0.220	345	314	0.2	0.3	2.940	A

13:30 - 13:45

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 - A325 (N)	945	236	160	1809	0.522	945	806	1.1	1.1	4.200	A
2 - A325 (S)	762	190	173	1891	0.403	762	931	0.7	0.7	3.214	A
3 - Forest Lodge & Birdworld Access	346	86	620	1569	0.220	346	315	0.3	0.3	2.941	A

13:45 - 14:00

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 - A325 (N)	771	193	130	1828	0.422	773	659	1.1	0.7	3.444	A
2 - A325 (S)	622	156	141	1913	0.325	623	762	0.7	0.5	2.814	A
3 - Forest Lodge & Birdworld Access	282	71	507	1646	0.172	283	258	0.3	0.2	2.642	A

14:00 - 14:15

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 - A325 (N)	646	161	109	1843	0.351	647	552	0.7	0.5	3.036	A
2 - A325 (S)	521	130	118	1929	0.270	521	638	0.5	0.4	2.578	A
3 - Forest Lodge & Birdworld Access	236	59	424	1702	0.139	237	216	0.2	0.2	2.456	A

Queue Variation Results for each time segment

12:45 - 13:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.54	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.16	0.00	0.00	0.16	0.16			N/A	N/A

13:00 - 13:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.73	0.09	0.83	1.41	1.48			N/A	N/A
2 - A325 (S)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.21	0.00	0.00	0.21	0.21			N/A	N/A

13:15 - 13:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.09	0.03	0.26	1.09	1.09			N/A	N/A
2 - A325 (S)	0.68	0.03	0.25	0.68	0.68			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.28	0.03	0.25	0.45	0.48			N/A	N/A

13:30 - 13:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.10	0.03	0.27	1.10	1.22			N/A	N/A
2 - A325 (S)	0.68	0.03	0.28	0.84	2.65			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.28	0.03	0.29	0.80	1.15			N/A	N/A

13:45 - 14:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.74	0.53	1.00	1.41	1.46			N/A	N/A
2 - A325 (S)	0.49	0.00	0.00	0.49	0.49			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.21	0.00	0.00	0.21	0.21			N/A	N/A

14:00 - 14:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.55	0.07	0.69	1.35	1.43			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.16	0.00	0.00	0.16	0.16			N/A	N/A

2031 + Dev, Weekend

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	3.58	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.58	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2031 + Dev	Weekend	Observed Saturday Peak Hour	ONE HOUR	12:45	14:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	851	100.000
2 - A325 (S)		ONE HOUR	✓	685	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	299	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	701	150
	2 - A325 (S)	563	0	122
	3 - Forest Lodge & Birdworld Access	161	138	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.52	4.14	1.1	1.5	A	781	1171
2 - A325 (S)	0.40	3.18	0.7	2.7	A	629	943
3 - Forest Lodge & Birdworld Access	0.21	2.90	0.3	1.0	A	274	412

Main Results for each time segment

12:45 - 13:00

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 - A325 (N)	641	160	104	1846	0.347	639	544	0.0	0.5	3.000	A
2 - A325 (S)	516	129	113	1933	0.267	514	630	0.0	0.4	2.556	A
3 - Forest Lodge & Birdworld Access	225	56	423	1703	0.132	224	204	0.0	0.2	2.433	A

13:00 - 13:15

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 - A325 (N)	765	191	124	1833	0.417	764	650	0.5	0.7	3.396	A
2 - A325 (S)	616	154	135	1917	0.321	615	754	0.4	0.5	2.787	A
3 - Forest Lodge & Birdworld Access	269	67	506	1647	0.163	269	244	0.2	0.2	2.612	A

13:15 - 13:30

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 - A325 (N)	937	234	152	1814	0.517	936	796	0.7	1.1	4.125	A
2 - A325 (S)	754	189	165	1896	0.398	753	922	0.5	0.7	3.175	A
3 - Forest Lodge & Birdworld Access	329	82	619	1570	0.210	329	299	0.2	0.3	2.901	A

13:30 - 13:45

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 - A325 (N)	937	234	152	1814	0.517	937	797	1.1	1.1	4.138	A
2 - A325 (S)	754	189	165	1896	0.398	754	924	0.7	0.7	3.178	A
3 - Forest Lodge & Birdworld Access	329	82	620	1569	0.210	329	299	0.3	0.3	2.902	A

13:45 - 14:00

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 - A325 (N)	765	191	124	1833	0.417	766	652	1.1	0.7	3.408	A
2 - A325 (S)	616	154	135	1917	0.321	617	756	0.7	0.5	2.791	A
3 - Forest Lodge & Birdworld Access	269	67	507	1646	0.163	269	245	0.3	0.2	2.616	A

14:00 - 14:15

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 - A325 (N)	641	160	104	1846	0.347	641	546	0.7	0.5	3.014	A
2 - A325 (S)	516	129	113	1933	0.267	516	632	0.5	0.4	2.562	A
3 - Forest Lodge & Birdworld Access	225	56	424	1702	0.132	225	205	0.2	0.2	2.439	A

Queue Variation Results for each time segment

12:45 - 13:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.53	0.53	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.15	0.00	0.00	0.15	0.15			N/A	N/A

13:00 - 13:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.72	0.09	0.83	1.40	1.47			N/A	N/A
2 - A325 (S)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.19	0.00	0.00	0.19	0.19			N/A	N/A

13:15 - 13:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.07	0.03	0.26	1.07	1.07			N/A	N/A
2 - A325 (S)	0.66	0.03	0.25	0.66	0.66			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.26	0.03	0.25	0.46	0.48			N/A	N/A

13:30 - 13:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.07	0.03	0.27	1.07	1.28			N/A	N/A
2 - A325 (S)	0.66	0.03	0.29	0.92	2.68			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.26	0.03	0.28	0.50	0.99			N/A	N/A

13:45 - 14:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.73	0.55	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.20	0.00	0.00	0.20	0.20			N/A	N/A

14:00 - 14:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.54	0.06	0.67	1.34	1.43			N/A	N/A
2 - A325 (S)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.15	0.00	0.00	0.15	0.15			N/A	N/A

2031 + Dev, Bank Holiday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D9 - 2026 + Dev (90th %tile Weekend), Weekend	Demand Set 66: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Demand Sets	D16 - 2031 + Dev (90th %tile Weekend), Weekend	Demand Set 67: Scenario Name includes Time Period Name ('Weekend'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A325/ Birdworld/ Forest Lodge	Standard Roundabout		1, 2, 3	4.23	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.23	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2031 + Dev	Bank Holiday	Observed Saturday PM Peak Hour	ONE HOUR	11:00	12:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A325 (N)		ONE HOUR	✓	894	100.000
2 - A325 (S)		ONE HOUR	✓	945	100.000
3 - Forest Lodge & Birdworld Access		ONE HOUR	✓	263	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
From	1 - A325 (N)	0	677	217
	2 - A325 (S)	695	0	250
	3 - Forest Lodge & Birdworld Access	149	114	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		1 - A325 (N)	2 - A325 (S)	3 - Forest Lodge & Birdworld Access
	1 - A325 (N)	0	1	0
	2 - A325 (S)	1	0	0
	3 - Forest Lodge & Birdworld Access	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A325 (N)	0.54	4.28	1.2	1.5	A	820	1231
2 - A325 (S)	0.56	4.51	1.3	1.6	A	867	1301
3 - Forest Lodge & Birdworld Access	0.20	3.05	0.2	0.5	A	241	362

Main Results for each time segment

11:00 - 11:15

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 - A325 (N)	673	168	86	1858	0.362	671	633	0.0	0.6	3.049	A
2 - A325 (S)	711	178	163	1898	0.375	709	594	0.0	0.6	3.044	A
3 - Forest Lodge & Birdworld Access	198	50	521	1636	0.121	197	350	0.0	0.1	2.503	A

11:15 - 11:30

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 - A325 (N)	804	201	102	1847	0.435	803	758	0.6	0.8	3.468	A
2 - A325 (S)	850	212	195	1875	0.453	849	710	0.6	0.8	3.529	A
3 - Forest Lodge & Birdworld Access	236	59	624	1566	0.151	236	419	0.1	0.2	2.706	A

11:30 - 11:45

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 - A325 (N)	984	246	125	1832	0.537	983	928	0.8	1.2	4.264	A
2 - A325 (S)	1040	260	239	1844	0.564	1039	870	0.8	1.3	4.491	A
3 - Forest Lodge & Birdworld Access	290	72	764	1471	0.197	289	513	0.2	0.2	3.045	A

11:45 - 12:00

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 - A325 (N)	984	246	126	1832	0.537	984	929	1.2	1.2	4.280	A
2 - A325 (S)	1040	260	239	1844	0.564	1040	871	1.3	1.3	4.512	A
3 - Forest Lodge & Birdworld Access	290	72	765	1471	0.197	290	514	0.2	0.2	3.047	A

12:00 - 12:15

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 - A325 (N)	804	201	103	1847	0.435	805	760	1.2	0.8	3.488	A
2 - A325 (S)	850	212	195	1875	0.453	851	712	1.3	0.8	3.549	A
3 - Forest Lodge & Birdworld Access	236	59	626	1565	0.151	237	421	0.2	0.2	2.712	A

12:15 - 12:30

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 - A325 (N)	673	168	86	1858	0.362	674	636	0.8	0.6	3.064	A
2 - A325 (S)	711	178	164	1897	0.375	712	596	0.8	0.6	3.062	A
3 - Forest Lodge & Birdworld Access	198	50	524	1634	0.121	198	352	0.2	0.1	2.506	A

Queue Variation Results for each time segment

11:00 - 11:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.57	0.55	1.01	1.41	1.46			N/A	N/A
2 - A325 (S)	0.60	0.55	1.01	1.41	1.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.14	0.00	0.00	0.14	0.14			N/A	N/A

11:15 - 11:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.77	0.09	0.83	1.14	1.14			N/A	N/A
2 - A325 (S)	0.83	0.08	0.82	1.13	1.64			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.18	0.00	0.00	0.18	0.18			N/A	N/A

11:30 - 11:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.16	0.03	0.26	1.16	1.16			N/A	N/A
2 - A325 (S)	1.29	0.03	0.26	1.29	1.29			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.24	0.03	0.25	0.46	0.48			N/A	N/A

11:45 - 12:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	1.16	0.03	0.27	1.16	1.16			N/A	N/A
2 - A325 (S)	1.30	0.03	0.27	1.30	1.30			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.24	0.03	0.26	0.47	0.50			N/A	N/A

12:00 - 12:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.78	0.53	0.99	1.41	1.46			N/A	N/A
2 - A325 (S)	0.84	0.51	0.99	1.41	1.46			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.18	0.00	0.00	0.18	0.18			N/A	N/A

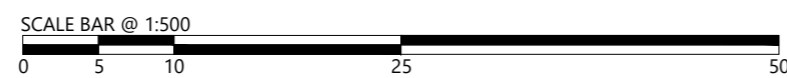
12:15 - 12:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A325 (N)	0.58	0.07	0.75	1.36	1.44			N/A	N/A
2 - A325 (S)	0.61	0.08	0.75	1.36	1.44			N/A	N/A
3 - Forest Lodge & Birdworld Access	0.14	0.00	0.00	0.14	0.14			N/A	N/A



REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE. LICENCE No. 100044286 © CROWN COPYRIGHT RESERVED.

DRAWING ISSUED FOR FEASIBILITY CONSIDERATION AND PLANNING PURPOSES ONLY. DRAWING NOT TO BE USED FOR CONSTRUCTION. I-TRANSPORT LLP ACCEPT NO RESPONSIBILITY FOR ERRORS MADE BY OTHERS IN SCALING FROM THIS DRAWING. MEASUREMENTS SHOULD BE TAKEN FROM FIGURED DIMENSIONS ONLY. CDM REQUIREMENTS CONSIDERED AT FEASIBILITY STAGE ONLY. FURTHER CONSIDERATION REQUIRED BY DETAILED DESIGN TEAM.



	SOUTHERN	SITE	NORTHERN
HALF WIDTH	3.66	6	3.61
ENTRY WIDTH	8.3	7.7	8.1
RADII	36	20	25
FLARE	18.65	4.6	22.95
ICD	44	44	44
CONFLICT	25°	39°	35°



The Square, Basingstoke, Hampshire, RG21 4EB
 Tel: 01256 637940
 www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD	PROJECT	TITLE	CLIENT	DRAWN	CHECKED	APPROVED	PROJECT No:	SCALE @ A2:	DATE:	DRAWING No:	REV:
			FOR INFORMATION			FOREST LODGE GARDEN CENTRE	PROPOSED ROUNDABOUT - GEOMETRY	HASKINS FARNHAM LTD	MC	MC	DF	ITB16329	1:500	07.12.23	ITB16329-GEOM-106	-

T:\Projects\16000_Series\16329\16329 - Forest Lodge Garden Centre and Buildings - Farnham\TaskArea\1 - Transport Drawings\Geometric\16329_Geom_106.dwg