



Proposed Commercial Development
Unit K6 Lower Road, Northfleet

Updated Transport Assessment

For

Jackson Lift Group

Document Control Sheet

Proposed Commercial Development

Unit K6 Lower Road, Northfleet

Jackson Lift Group

This document has been issued and amended as follows:

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1.0 Introduction

- 1.1 This Transport Assessment has been prepared on behalf of Jackson Lifts Group to accompany a planning application for a proposed commercial development at Unit K6 Lower Road, Northfleet (herein referred to as 'the site'). This report considers highways and transport matters in respect to the proposed development.

Revised application

- 1.2 A planning application for a site redevelopment was submitted in 2022 and this was refused, and a subsequent planning appeal was dismissed on the basis of lack of ecology details. A pre-application consultation for a revised submission identified that the 2022 Transport Assessment was out-of-date for a 2024 planning submission and it was requested that the document be updated. Discussions with KCC officers identified the following in particular:

- „ Update Parking Surveys – record 'snapshots' of parking demands on the local roads (0830-100, 1400 and 1800); and
- „ Update traffic surveys on Galley Hill Road/Lower Road approaches to align with 2024 flows.

Background

- 1.3 The site is situated approximately 3.2 kilometres west of Gravesend and approximately 7.3 kilometres east of Dartford within Northfleet Industrial Estate. The site is located to the east of Lower Road and to the south of an unnamed road which connects with Lower Road to the west. The site falls within the administrative boundaries of Gravesham Borough Council (Local Authority) and Kent County Council (County Highway Authority).
- 1.4 Jackson Lifts Group is currently located within an existing industrial estate (Ropery Business Park, Charlton), with the use class B2/B8 warehouse. The existing warehouse employees 80 office-based staff with 35 car parking spaces. The proposals seek planning permission to relocate the existing warehouse and office space to Unit K6 Lower Road, Northfleet.
- 1.5 The site currently comprises a single storey building which accommodates an industrial unit with ancillary office space to the front. An area of hardstanding to the rear of the building is also included within the site boundary, this is accessed via an existing access road which connects with the unnamed road to the east of the site. The proposals seek to retain the existing warehouse on the ground floor to be used by Jackson Lift Group, with an office extension above resulting in two additional storeys. Access to the site will be achieved from the existing access road which links to the unnamed road to the east of the site. The proposals also include a multi-storey car park on the area of hardstanding to the rear of the building. Appropriate levels of car and cycle parking will be provided in accordance with relevant standards.
- 1.6 The 2022 application proposals were subject to pre-application discussions with Kent County Council (KCC). The pre-application dialogue has been a key part in developing the proposals for the site and ensuring the assessment of the proposals is appropriate in view of the current planning context. KCC's pre-application response is included at [Appendix A](#).
- 1.7 This Transport Assessment has been prepared having regard to advice received at pre-application stage as well as relevant guidance. In summary, this report demonstrates that:
- „ The proposals accord with national and local policies relevant to transport;
 - „ The site is accessible by public transport, walking and cycling, with bus services to be improved. This offers future employees a real choice of more sustainable modes;
 - „ Safe and suitable access to the site can be achieved for all users;

- 11 Appropriate provision is made for car and cycle parking having regard to the relevant guidance;
- 11 The proposals include appropriate provision for servicing activity; and,
- 11 The levels of traffic associated with the proposals will not lead to any harm to the existing operation and free-flow of traffic on the adjoining highway network.

1.8 Following this introduction, this Transport Assessment is split into 6 sections as follows:

- 11 Section 2 outlines the transport planning policies that are considered to be relevant to this application;
- 11 Section 3 provides information on the site and planning background, reviews the accessibility of the site by all modes of transport and assess existing traffic and road safety conditions;
- 11 Section 4 provides an overview of the proposed development, including details of the proposed access, parking and servicing arrangements;
- 11 Section 5 considers the trip generating potential of the proposals by all modes and considers this in comparison to the previous uses occupying the site;
- 11 Section 6 sets out the junction analysis of the local road network;
- 11 Section 7 sets out the objections, measures and monitoring of the Outline Travel Plan; and,
- 11 Section 8 summarises the key findings and conclusions of this report.

2.0 Policy Context

Overview

- 2.1 There are a number of documents that contain planning policies relevant to transport. The key policy documents which set the context for the development proposals are as follows:

- „ National Planning Policy Framework – December 2023;
- „ Gravesham Local Plan Core Strategy – September 2014; and,
- „ Kent and Medway Structure Plan SPG4 – Vehicle Parking Standards – July 2006.

National Policy

National Planning Policy Framework

- 2.2 The National Planning Policy Framework (NPPF) was revised in December 2023, setting out the Government's planning policies for England and how they are expected to be applied.

- 2.3 Section 9 of the NPPF deals with 'Promoting Sustainable Transport', with Paragraph 108 stating:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

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

- 2.4 Paragraph 109 suggests that the planning system should:

“Actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.”

- 2.5 Paragraph 110 states that planning policies should:

- “a) support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;*
- b) be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;*

- c) identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;*
- d) provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans); and*
- e) provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements."*

2.6 Paragraph 112 states:

"Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport."

2.7 Paragraph 114 addresses the relationship between development and sustainable transport as follows:

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

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users;*
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.8 Furthermore, Paragraph 115 states that:

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

2.9 Paragraph 116 suggests that, within this context, applications for development should:

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

Local Policy

Gravesham Local Plan Core Strategy

- 2.10 The Gravesham Borough Council was adopted in September 2014. It sets out key planning policies for the Borough. Policy CS11 relates to Transport and states that:

"New developments should mitigate their impact on the highway and public transport networks as required. As appropriate, transport assessments and travel plans should be provided and implemented to ensure the delivery of travel choice and sustainable opportunities for travel. Transport assessment work is required to be undertaken in accordance with national and local policy guidance, and to identify detailed highway and public transport network requirements and management arising from the development.

Sufficient parking in new development will be provided in accordance with adopted parking standards which will reflect the availability of alternative means of transport and accessibility to services and facilities.

The Council will support proposals which improve public transport provision and facilities in the Borough. In particular, it will:

- „ seek to maintain and expand, where justified, segregation lanes for Fastrack and existing bus priority measures elsewhere;*
- „ require Key Sites to include provision for buses;*
- „ support the development of transport hubs at Gravesend Town Centre and Ebbsfleet (in Dartford Borough Council area) to provide high quality interchange facilities between bus, rail, walking and cycling; and*
- „ ensure an adequate supply of public car parking.*

The Council will seek improvements to walking and cycling facilities and networks in the Borough including provision in new development as appropriate. These should provide improved access to Gravesend Town Centre and Ebbsfleet and to other services and facilities in the Borough. In particular, the Council will seek the provision of pedestrian and cycle links between Northfleet and Ebbsfleet stations and along the River Thames, as part of the proposed Thames Estuary Path."

Kent and Medway Structure Plan 2006 SPG4 – Vehicle Parking Standards

- 2.11 Gravesham Borough Council refer to Kent County Council for car and cycle parking standards. Car parking standards for new developments within Kent are contained within the Kent and Medway Structure Plan 2006 SPG4 – Vehicle Parking Standards. The current commercial standards are set out in Table 2.1.

Land use	Cars (maximum)	Goods Vehicles
Office up to 500 sqm	1 space / 20 sqm	Adequate provision for delivery vehicles
Office up to 500 sqm – 2,500 sqm	1 space / 25 sqm	Adequate provision for delivery vehicles
Office over 2,500 sqm	1 space / 30 sqm	Adequate provision for delivery vehicles
High Tech/Research/Light Ind	1 space / 35 sqm	1 space / 200 sqm
Storage and Distribution	1 space / 110 sqm	1 space / 300 sqm

Table 2.1: Kent County Council – Summary of maximum car parking provision

- 2.12 The parking guidance states that car parks with 40 to 200 spaces should provide 4 designated accessible spaces or 5% of the total capacity, whichever is greater.

Summary

- 2.13 On the basis of the above review, it is evident that the location of a site in relation to sustainable modes of transport is a key consideration when assessing the acceptability of a proposal. Furthermore, appropriate provision should be made for parking and facilitating access by more sustainable forms of travel by providing connections to existing networks.
- 2.14 The following sections of this report review the accessibility of the site and evaluate whether the development proposals will encourage sustainable modes of transport. In addition to this, a further assessment had been undertaken to establish the impact of the proposals upon the local highway network.

3.0 Baseline Conditions

Overview

- 3.1 To put the site into context, a detailed review of the study area has been carried out. The following section provides a summary of the results of this review and refers to the location of the site, along with the accessibility of the site by different modes of transport.

Site Location and Details

- 3.2 The site is situated approximately 3.2 kilometres west of Gravesend and approximately 7.3 kilometres east of Dartford within Northfleet Industrial Estate. The site is located to the east of Lower Road and to the south of an unnamed road which connects with Lower Road to the west. The administrative authorities are Gravesham Borough Council and Kent County Council. The site location is shown in Figure 3.1 below.

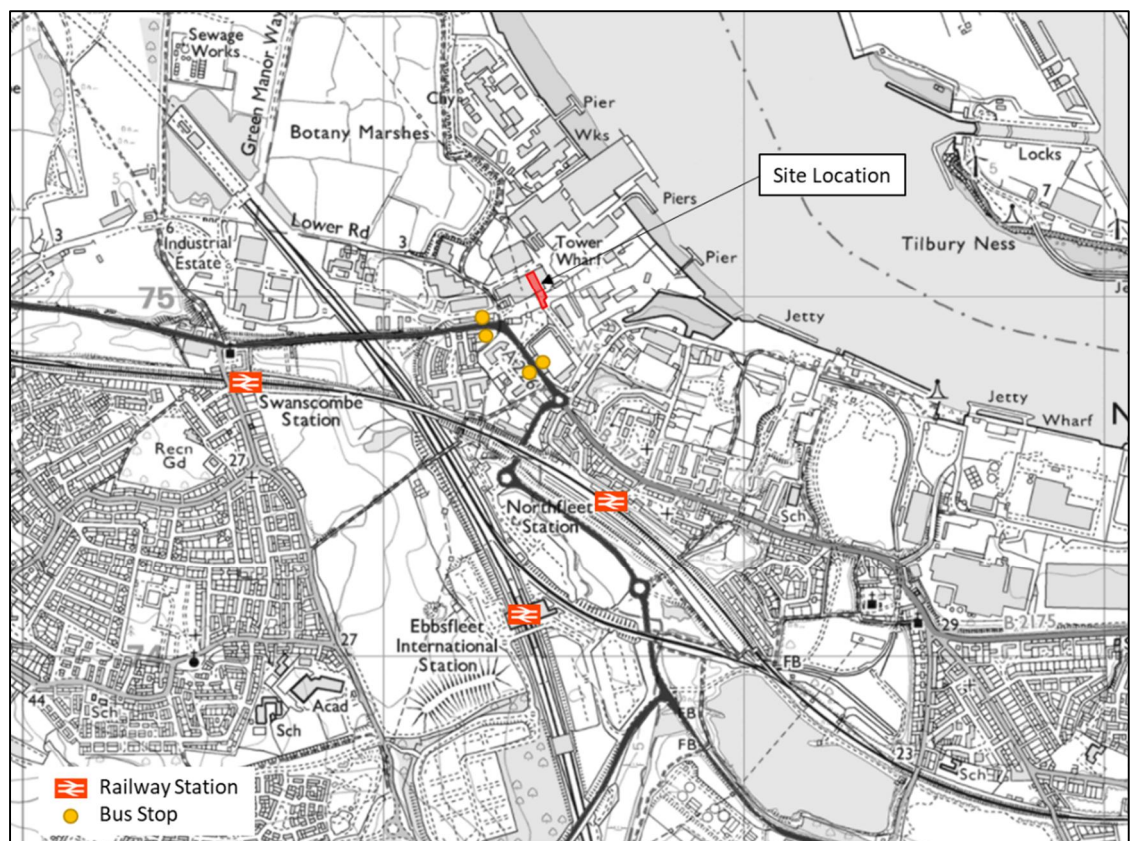


Figure 3-1: Site Location Plan

- 3.3 The site is located within a largely commercial/industrial area, with a number of industrial units surrounding the site. The site currently comprises a single storey building which accommodates an industrial unit with ancillary office space to the rear of the site. An area of hardstanding to the rear of the building is also included within the site boundary, this is accessed via an existing access road which connects with the unnamed road to the east of the site.

Highway Network

- 3.4 Vehicular access to the site will be achieved via an unnamed road which connects with Lower Road to the west. Lower Road passes through Northfleet Industrial Estate and connects with Manor Way to the

north which is a no through road. Parking within Northfleet Industrial Estate is largely unrestricted with some areas reserved for private parking.

- 3.5 Lower Road connects with the A226 Galley Hill Road/Stonebridge Road to the south of the site via a signalised priority junction. To the southeast the A226 provides access to the centre of Northfleet and connects with the B2175 which links Northfleet to Gravesend. Whilst to the west the A226 provides access to Greenhithe and further to Dartford. The A2 is located approximately 2.5 kilometres south of the site, the A2 connects with the M2 to the east and the M25 to the west.

Existing On-Street Parking Opportunities

- 3.6 The existing on-street car parking levels, or “stress”, surrounding the development site have been assessed through undertaking manual surveys in accordance with the ‘Lambeth Council Parking Survey Guidance Note’ (Lambeth Council, 2009).
- 3.7 Lambeth Council’s parking survey methodology is broadly accepted across Greater London. For commercial uses the Lambeth methodology states that parking surveys should be undertaken during the proposed opening hours on an hourly beat basis. This is intended to capture the maximum commercial parking demand within a 500-metre radius of the identified site.
- 3.8 Additionally, for sites located close to other commercial units’ additional morning and early evening surveys may also be required due to conflict with commuter parking. This includes surveys between the hours of 0700-0800 and 1800-1900, noting the amount of parking on a 15-minute basis over this time. The local parking network is deemed “stressed” when on-street parking occupancy exceeds 85% capacity.
- 3.9 In accordance with the above guidance parking surveys were undertaken on Wednesday 31st January 2024 between 07:00 hours and 19:00 hours. Beats were taken every 15 minutes between the hours of 07:00 and 08:30 and between the hours of 18:00 and 19:00. To capture the off-peak hours two snapshot surveys were taken at 10:45 hours and 14:00 hours.
- 3.10 The Lambeth methodology requires a 500-metre distance from commercial sites to be surveyed. Where the 500-metre boundary occurs part-way along a street, the survey area should be shortened or extended to the nearest junction. The survey area has been designed to extend 500 metres from the site, with the 500-metre radius comprising of the following roads:
- ” Grove Road;
 - ” Stonebridge Road;
 - ” Eagle Way;
 - ” Taunton Road;
 - ” Snowden Hill;
 - ” Robinson Way;
 - ” Black Eagle Drive;
 - ” Industrial Estate;
 - ” Galley Hill Road; and,
 - ” Lower Road.

3.11 The above roads within 500 metres of the site are shown in Figure 3.2.

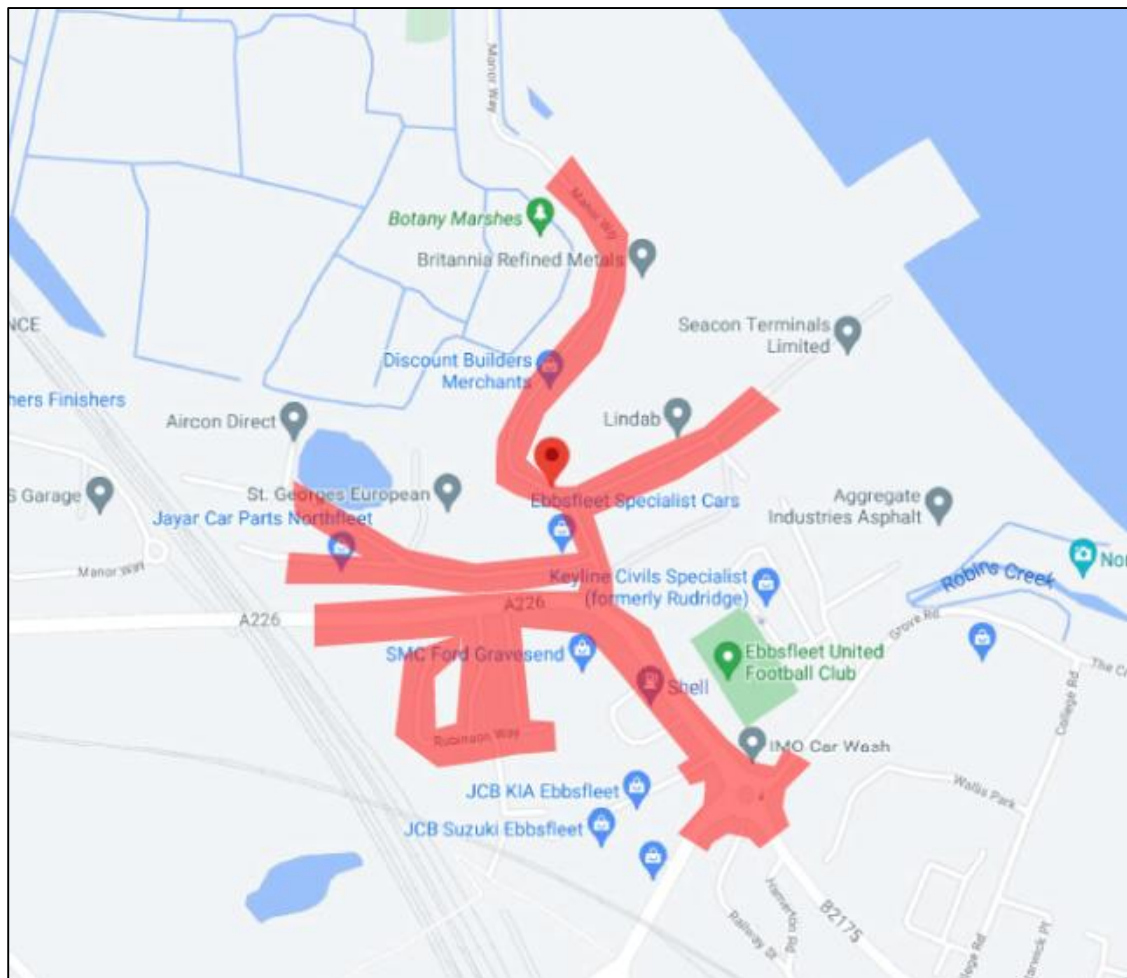


Figure 3-2: Site Location Plan

3.12 The number of existing parking spaces in the survey area were identified from on-street observations and site measurement as part of the analysis. For the purposes of calculating parking stress as defined by the Lambeth guidance document, it is assumed that each vehicle takes up an average kerb space of 5 metres. Therefore, where parking bays are not physically marked out, lengths of kerb space were measured and split into increments of 5 metres. Physical bays have been divided into 5 metre intervals and rounded down to the nearest whole number to calculate the capacity of each space. Any locations with a length of kerb shorter than 5 metres or along vehicle crossovers, have been eliminated from the available kerb space, in accordance with the guidance.

On-Street Parking Analysis

2021 Parking Surveys

- 3.13 The previous parking surveys were undertaken by K&M Traffic Surveys on 8th September 2021. The survey company provided a summary of the observed parking within the 500-metre study area on the aforementioned date.
- 3.14 The outputs indicate that across the assessment area there are equivalent of 319 spaces along unrestricted kerblines. However, 36 of these are located within a lay-by which is restricted for the use of HGV only with all other vehicles not permitted to park. Therefore, resulting in a total of 283 spaces

available along unrestricted kerblines of which one is a blue badge bay. Additionally, any private parking has been excluded from the analysis.

- 3.15 Where carriageway widths were too narrow for parking on both sides of the carriageway, measurements were taken on the side where vehicles were found to be parked. The opposite side of the road was deemed unacceptable to park on and was not included within the analysis.
- 3.16 Available parking spaces are based on observations made on overnight and daytime parking site surveys ('observed spaces'). The number of spaces observed during a snapshot survey does vary based on how efficiently people park. If parking takes place inefficiently then the number of available spaces added to the occupied spaces will not reach the 'observed space' numbers. If parking takes place more efficiently then the number of available spaces could likely exceed the 'observed spaces'.
- 3.17 In terms of car parking occupancy, the daytime survey results for the 500-metre area from the site are set out in Table 3.1 and Table 3.2 for the morning peak period, Table 3.3 for the off-peak snapshots and Table 3.4 for the evening peak period.

Road	07:00			07:15			07:30			07:45		
	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress
Grove Road	2	0	100 %	2	0	100 %	2	0	100 %	2	0	100 %
Stonebridge Road	29	23	56%	32	19	63%	33	18	65%	32	21	60%
Eagle Way	16	6	73%	16	6	73%	16	6	73%	19	3	86%
Taunton Road	21	8	72%	21	8	72%	21	8	72%	17	12	59%
Snowden Hill	15	2	88%	14	3	82%	14	3	82%	13	4	76%
Robinson Way	16	1	94%	16	1	94%	15	2	88%	15	2	88%
Black Eagle Drive	11	2	85%	12	1	92%	12	1	92%	12	1	92%
Industrial Estate	41	8	84%	46	5	90%	46	5	90%	47	4	92%
Lower Road	12	27	31%	14	25	36%	14	25	36%	19	20	49%
TOTAL	163	77	68 %	173	68	72 %	173	68	72 %	176	67	72 %

Table 3.1: Summary of Parking Survey for the Morning Peak Period: 07:00-07:45 (8th September 2021)

Road	08:00			08:15			08:30		
	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress
Grove Road	2	0	100%	2	0	100%	2	0	100%
Stonebridge Road	29	23	56%	32	19	63%	33	18	65%
Eagle Way	16	6	73%	16	6	73%	16	6	73%
Taunton Road	21	8	72%	21	8	72%	21	8	72%
Snowden Hill	15	2	88%	14	3	82%	14	3	82%
Robinson Way	16	1	94%	16	1	94%	15	2	88%
Black Eagle Drive	11	2	85%	12	1	92%	12	1	92%
Industrial Estate	41	8	84%	46	5	90%	46	5	90%
Lower Road	12	27	31%	14	25	36%	14	25	36%
TOTAL	180	62	74 %	180	62	74 %	183	60	75 %

Table 3.2: Summary of Parking Survey for the Morning Peak Period: 08:00-08:30 (8th September 2021)

- 3.18 Table 3.1 and Table 3.2 indicates there is an average of 66 spaces available within the morning peak period. The overall parking occupancy averages at 73% along unrestricted kerblines, below the 85% "stress" threshold.

Road	10:45			14:00		
	Parked	Observed	% Stress	Parked	Observed	% Stress
Grove Road	2	0	100%	2	0	100%
Stonebridge Road	44	8	85%	40	12	77%
Eagle Way	18	7	72%	18	7	72%
Taunton Road	15	12	56%	15	12	56%
Snowden Hill	17	1	94%	18	0	100%
Robinson Way	18	3	86%	20	1	95%
Black Eagle Drive	13	0	100%	13	0	100%
Industrial Estate	49	3	94%	46	6	88%
Lower Road	25	13	66%	29	9	76%
TOTAL	201	47	81 %	201	47	81 %

Table 3.3: Summary of Parking Survey for the Off-Peak Snapshots (8th September 2021)

- 3.19 Table 3.3 indicates there is an average of 47 spaces available within the off-peak period. The overall parking occupancy averages at 81% along unrestricted kerblines, below the 85% “stress” threshold.

Road	18:00			18:15			18:30			18:45			19:00		
	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress
Grove Road	2	0	100%	2	0	100%	1	1	50%	1	1	50%	2	0	100%
Stonebridge Road	22	30	42%	26	25	51%	25	26	49%	20	32	38%	18	34	35%
Eagle Way	17	8	68%	19	5	79%	19	5	79%	19	5	79%	19	5	79%
Taunton Road	20	8	71%	19	9	68%	18	10	64%	19	9	68%	19	9	68%
Snowden Hill	18	0	100%	18	0	100%	18	0	100%	18	0	100%	18	0	100%
Robinson Way	20	1	95%	19	2	90%	21	0	100%	21	0	100%	21	0	100%
Black Eagle Drive	13	0	100%	13	0	100%	13	0	100%	13	0	100%	13	0	100%
Industrial Estate	20	32	38%	14	38	27%	14	35	29%	9	40	18%	9	40	18%
Lower Road	7	30	19%	6	31	16%	7	30	19%	7	30	19%	7	30	19%
TOTAL	139	109	56 %	136	110	55 %	136	107	56 %	127	117	52 %	126	118	52 %

Table 3.4: Summary of Parking Survey for the Evening Peak Period: 18:00-19:00 (8th September 2021)

- 3.20 Table 3.4 indicates there is an average of 112 spaces available within the morning peak period. The overall parking occupancy averages at 54% along unrestricted kerblines, below the 85% “stress” threshold.
- 3.21 A summary of the parking occupancy and observed spaces (available spaces) for each time period assessed is set out in Table 3.5.

Time	Observed Spaces / Available Spaces	% Stress
07:00	77	68%
07:15	68	72%
07:30	68	72%
07:45	67	72%
08:00	62	74%
08:15	62	74%
08:30	60	75%
10:45	47	81%
14:00	47	81%
18:00	109	56%
18:15	110	55%
18:30	107	56%
18:45	117	52%
19:00	118	52%

Table 3.5: Summary of Parking Survey (8th September 2021)

- 3.22 The three study periods have been assessed and under the existing conditions, the 500 metre study area has a parking demand averaging 67% over all study periods (morning, daytime and evening). The off-peak periods have the highest parking demand with 81% occupancy, whilst the evening peak period has the lowest parking demand with 52% occupancy.
- 3.23 Within the busiest period (off-peak daytime) a total of 47 spaces are available along unrestricted kerblines, 9-13 of which are located along Lower Road adjacent to the site. Furthermore, within the morning peak period an average of 21 spaces were available along Lower Road between 07:00 and 18:30 hours and an average of 30 spaces were available along Lower Road within the evening peak period between 18:00 and 19:00 hours.
- 3.24 In summary, the occupancy within 500 metres of the site does not exceed the 85% threshold at which network are considered “stressed”. Resulting in a number of unrestricted spaces being available throughout an average weekday.
- Supplementary 2024 On-street Parking Survey*
- 3.25 Additional parking surveys were undertaken by K&M Traffic Surveys on 31th January 2024. The survey company provided a summary of the observed parking within the 500-metre study area on the aforementioned date. The parking survey outputs are included for reference at [Appendix B](#).
- 3.26 The outputs indicate that across the assessment area there are equivalent of 282 spaces along unrestricted kerblines. Additionally, any private parking has been excluded from the analysis.
- 3.27 Available parking spaces are based on observations made on overnight and daytime parking site surveys ('observed spaces'). The number of spaces observed during a snapshot survey does vary based on how efficiently people park. If parking takes place inefficiently then the number of available spaces added to the occupied spaces will not reach the 'observed space' numbers. If parking takes place more efficiently then the number of available spaces could likely exceed the 'observed spaces'.
- 3.28 In terms of car parking occupancy, the latest daytime survey results for the 500 metre area from the site are set out in Table 3.6.

Road	08:30			10:00			14:00			18:00		
	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress	Parked	Observed	% Stress
Grove Road	2	0	100 %	2	0	100 %	2	0	100 %	2	0	100 %
Stonebridge Road	34	9	79%	37	6	86%	36	7	84%	26	20	57%
Eagle Way	24	2	92%	22	4	85%	21	5	78%	22	4	85%
Taunton Road	12	17	41%	10	19	34%	12	17	41%	18	10	64%
Snowden Hill	10	3	77%	13	0	100 %	12	1	92%	13	0	100 %
Robinson Way	14	4	78%	15	2	88%	15	2	88%	18	1	95%
Black Eagle Drive	13	0	100 %	13	0	100 %	12	1	92%	13	0	100 %
Industrial Estate	56	0	100 %	56	0	100 %	55	1	98%	27	29	48%
Lower Road	37	15	71%	40	14	74%	48	6	89%	28	26	52%
TOTAL	202	50	75%	208	45	78%	213	40	81%	167	90	54%

Table 3.6: Summary of Snapshot Parking Survey for morning and evening peak hours and off-peak hours (31st January 2024)

- 3.29 Table 3.6 above indicates that an average of 50 spaces are available within the morning peak period and an average of 90 spaces are available within the evening peak period, equating to 75% and 54% parking occupancy along unrestricted kerblines, below the 85% "stress" threshold.
- 3.30 In addition to this, Table 3.6 indicates that an average of 45 spaces were available at 10:00 and an average of 40 spaces were available at 14:00, equating to 78% and 81% parking occupancy along unrestricted kerblines, below the 85% "stress" threshold.
- 3.31 A summary of the parking occupancy and observed spaces (available spaces) for each time period assessed is set out in Table 3.7.

Time	Observed Spaces	Stress
08:30	50	75%
10:00	45	78%
14:00	40	81%
18:00	90	54%

Table 3.7: Summary of Parking Survey (31st January 2024)

- 3.32 The study periods have been assessed and under the existing conditions, the 500-metre study area has a parking demand average of 72% over all study periods. The off-peak periods have the highest parking demand with 81% occupancy, whilst the evening peak period has the lowest parking demand with 52% occupancy.
- 3.33 In summary, further to the 2024 parking survey, the occupancy within 500 metres of the site does not exceed to 85% threshold at which highway networks are considered "stressed", resulting in a number of

unrestricted spaces being available throughout an average weekday. The updated parking survey does not change the findings of the original Transport Assessment.

KCC pre-app comment - Parking

- 3.34 The KCC pre-app response specifically questioned the validity of the parking survey (Point 8). The recorded data was collected on a 'typical' day but there is no reason to indicated that this was any different from normal. There may be subtle differences with the on-street demands but these changes are not considered large enough to significantly alter the findings of the parking study.

Sustainable Transport Accessibility

Walking and Cycling

- 3.35 It is generally accepted that walking and cycling provide important alternatives to the private car and should be encouraged to form part of longer journeys via public transport. The Chartered Institution of Highways and Transportation released two documents, 'Planning for Walking' in April 2015 and 'Planning for Cycling' in October 2014. The documents provide an insight into the sustainable methods of transport, including:
- „ *“Across Britain about 80% of journeys shorter than 1 mile are made wholly on foot...but beyond that distance cars are the dominant modes” (Planning for Walking, 2015).*
 - „ *“Majority of cycling trips are used for short distances, with 80% being less than five miles and with 40% being less than two miles” (Planning for Cycling, 2014).*
- 3.36 The NPPF recognises that *“the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel”*. Within Manual for Streets, it is noted that 800 metres is not considered the maximum walking distance for pedestrians, highlighting that walking can replace short car trips, particularly those under 2 kilometres. The National Travel Survey 2020 (NTS) also noted that *“81% of all trips under one mile are walks”*, making it the most frequent mode of travel for very short distances.
- 3.37 The site is easily accessible on foot via adjacent footways on all local roads. Lit footways are provided on both sides of the unnamed road and Lower Road providing direct access towards local bus stops, railways stations and local towns.
- 3.38 A signalised pedestrian crossing, with dropped kerbs and tactile paving, is located approximately 100 metres west of the junction between Lower Road and Galley Hill Road/Stonebridge Road. This provides a safe route across the A226 towards local bus stops and Ebbsfleet International railway station. On the southern side of the A226, west of the pedestrian crossing, Snowden Hill and Black Eagle Drive provide access to a foot/cycleway which connects Northfleet with Swanscombe to the west. This lit route also provides access to Ebbsfleet International railway station.
- 3.39 Lit footways are also provided along Stonebridge Road to the south of the site providing access towards Northfleet railway station. Informal pedestrian crossing points in the form of dropped kerbs and tactile paving are provided along this route to facilitate pedestrian movement.

Accessibility by Bus

- 3.40 As illustrated in Figure 3.1, the nearest bus stops are located along Galley Hill Road approximately 300 metres south-west of the site. These stops provide access to services 480 Sapphire, 490 Sapphire and B Fastrack. A summary of the destinations served, and the frequency of the local bus services is provided below in Table 3.6.

Service	Destinations Served	Approximate Frequency	
		Weekday AM Peak	Weekday PM Peak
480 Sapphire	Dartford – Bluewater – Swanscombe – Northfleet – Gravesend – Riverview Park	Every 20-25 minutes	Every 20-25 minutes
490 Sapphire	Dartford – Horns Cross – Bluewater – Swanscombe – Northfleet – Gravesend – Milton – Kings Farm – Singlewell	Every 20-25 minutes	Every 20-25 minutes
B Fastrack	Gravesend – Northfleet – Ebbsfleet International Railway Station – Swanscombe – Ingress Park – Greenhithe Railway Station – Bluewater Bus Station – Dartford – Temple Hill	Every 15-20 minutes	Every 15-20 minutes

Table 3.6: Bus Services in Close Proximity to the Site

Accessibility by Rail

- 3.41 The nearest railway station to the site is Northfleet located approximately 900 metres south of the site (12 minute walk). Northfleet railway station is located on the Thameslink Line which runs between Rainham and Luton, as well as the Southeastern services which run between London Charing Cross and Gravesend.
- 3.42 In addition, Ebbsfleet International railway station is located within a 15 minute walk of the site (1.2 kilometres). Ebbsfleet International railway station provides services towards Margate, London St Pancras International, Faversham, Dover Priory, Maidstone West, Sandwich and Ramsgate. A summary of the direct rail services from both stations are provided in Table 3.7 and Table 3.8.

Service	Destinations Served	Approximate Frequency	
		Weekday AM Peak	Weekday PM Peak
Northfleet Station			
Gravesend	Northfleet – Gravesend	Every 10-20 minutes	Every 10-20 minutes
London Charing Cross via Sidcup	Northfleet – Swanscombe – Greenhithe for Bluewater – Stone Crossing – Dartford – Crayford – Bexley – Albany Park – Sidcup – New Eltham – Mottingham – Lee (London_ - Hither Green – London Bridge – London Waterloo East – London Charing Cross	Every 30 minutes	Every 20-30 minutes
St Albans City	Northfleet – Swanscombe – Greenhithe for Bluewater – Stone Crossing – Dartford – Slade Green – Abbey Wood – Plumstead – Woolwich Arsenal – Charlton – Westcombe Park – Maze Hill – Greenwich – Deptford – London Bridge – London Blackfriars – City Thameslink – Farringdon – London St Pancras International – West Hampstead Thameslink – Mill Hill Broadway – Elstree & Borehamwood – Radlett – St Albans City	Every hour	Every hour
Rainham (Kent)	Northfleet – Gravesend – Higham – Strood (Kent) – Rochester – Chatham – Gillingham (Kent) – Rainham (Kent)	Every hour	Every hour

Table 3.7: Northfleet Rail Services

Service	Destinations Served	Approximate Frequency	
		Weekday AM Peak	Weekday PM Peak
Ebbsfleet International Station			
London St Pancras International	Ebbsfleet International – Stratford International – London St Pancras International	Every 10-15 minutes	Every 10-15 minutes
Ramsgate	Ebbsfleet International – Gravesend – Strood (Kent) – Rochester – Chatham – Gillingham (Kent) – Rainham (Kent) – Sittingbourne – Faversham – Whitstable – Herne Bay – Birchington-on-Sea – Margate – Broadstairs - Ramsgate	Every 1-2 hours	Every 1-2 hours
Sandwich	Ebbsfleet International – Ashford International – Folkestone West – Folkstone Central – Dover Priory – Martin Mill – Walmer – Deal - Sandwich	Every 1-2 hours	Every 1-2 hours

Table 3.8: Ebbsfleet International Rail Services

- 3.43 These services provide a convenient link to the transport hubs of London St Pancras and London Charing Cross, which in turn provide access to other London hubs for onward travel services across the country.

Road Safety Review

- 3.44 Consideration has been given to Crashmap.com to identify any incidents to have occurred on the surrounding road network over the last five years (up to the end of 2023 – most recent data available). Five incidents occurred at the Lower Road/A226 junction to the south of the site. All Crashmap reports are attached for reference at [Appendix C](#).
- 3.45 The incidents are summarised as follows;
- „ Wednesday 14th October 2020 - a car turning left out of Lower Road colliding with a car travelling south along the A229. 'Slight' injury severity;
 - „ Monday 15th March 2021 – 1 car only – hit bollard/refuge. 'Slight' injury severity;
 - „ Tuesday 30th March 2021 – limited data - collision involving 2 cars 'Slight' injury severity;
 - „ Saturday 30th March 2021 – A vehicle passing along the carriageway hit a parked car in the carriageway - 'Slight' injury severity; and
 - „ Sunday 7th November 2021 – 1 car only – driver/car left carriageway. 'Slight' injury severity.
- 3.46 The above accident record is not considered excessive over a five-year period. It is not considered that the accidents occurred as a result of an unsafe highway network, and more likely due to driver error. As a result, the increase in traffic associated with the proposals is unlikely to cause any road safety issues.

Summary of Baseline Conditions

- 3.47 The above review demonstrates that the site is accessible by transport modes that have the potential to reduce reliance upon the private car. In this regard, it is considered that the location of the site accords with paragraphs 105 of the National Planning Policy Framework as set out in Section 2 and as such gives future employees a genuine choice about how they travel.

4.0 Development Proposals

Overview

- 4.1 Jackson Lifts Group is currently located within an existing industrial estate (Ropery Business Park, Charlton), with the use class B2/B8 warehouse. The existing warehouse employees 80 office-based staff with 35 car parking spaces.
- 4.2 The proposals seek planning permission to relocate the existing warehouse and office business to the existing Unit K6 Lower Road, Northfleet. The proposals seek to retain the existing warehouse on the ground floor to be used by Jackson Lift Group, with an office extension above resulting in two additional storeys. The floor area for the warehouse will remain largely unchanged. The proposals also include a multi-storey car park containing 59 car parking spaces on the area of hardstanding to the rear of the building, plus 2 car parking spaces at the front of the site.
- 4.3 The proposals will result in a total of 120 members of staff with an 1,858.50 sqm of office floor space and 1,063.58 sqm of storage floor space. It is anticipated the number of staff will increase from the existing 80 to 120 overtime to accommodate growth within the company. As such, the site would not attract 120 staff members from the first occupation and the number of staff would increase gradually from the existing 80. However, the following sections assess the site based on the future demand of 120 staff members to be robust.
- 4.4 The architects site layout plan is attached at [Appendix D](#) for reference.

Access Arrangements

- 4.5 Vehicular access to the site will be achieved via the existing access road which links to the unnamed road east of the site. The access road measures circa 5.4 metres allowing two cars to pass at all times and provides access to the rear of the site where the proposed multi-storey car park will be situated. The design has been developed to provide a ramp access rather than car lifts further to feedback from KCC Highways (Pre-app comment 6).
- 4.6 Pedestrian access will primarily be achieved via the unnamed road which fronts the site as per the existing arrangement for customers and staff. An additional pedestrian access is provided between the proposed multi-storey car park and the site. This is provided via a walkway which links second floor of the car park with the proposed first floor of Unit K6. Lifts are provided in both the car park and Unit K6 to facilitate access for all users.

Car Parking Provision

- 4.7 Gravesham Borough Council refer to Kent County Council for car and cycle parking standards. Car parking standards for new developments within Kent are contained within the Kent and Medway Structure Plan 2006 SPG4 – Vehicle Parking Standards. The current commercial standards are set out in Table 4.1.

Land use	Cars (maximum)	Goods Vehicles
Office up to 500 sqm	1 space / 20 sqm	Adequate provision for delivery vehicles
Office up to 500 sqm – 2,500 sqm	1 space / 25 sqm	Adequate provision for delivery vehicles
Office over 2,500 sqm	1 space / 30 sqm	Adequate provision for delivery vehicles
High Tech/Research/Light Ind	1 space / 35 sqm	1 space / 200 sqm
Storage and Distribution	1 space / 110 sqm	1 space / 300 sqm

Table 4.1: Kent County Council – Summary of maximum car parking provision

- 4.8 The parking guidance states that car parks with 40 to 200 spaces should provide 4 designated accessible spaces or 5% of the total capacity, whichever is greater.
- 4.9 The site is located approximately 100 metres east of Ebbsfleet Garden City (EGC). A draft document titled "Connecting People and Places" (February 2020) adopted by the Ebbsfleet Development Corporation sets out parking requirements for the Ebbsfleet Garden City. The draft commercial standards within Ebbsfleet Garden City are set out in Table 4.2.

Land use	Cars
Office up to 500 sqm	1 space / 24 sqm
Office up to 500 sqm – 2,500 sqm	1 space / 30 sqm
High Tech/Research/Light Ind	1 space / 42 sqm
Storage and Distribution	No Standard

Table 4.2: Ebbsfleet Garden City – Summary of car parking provision

- 4.10 Table 4.2 demonstrates how neighbouring districts are trying to reduce the parking provision for B1/B8 uses. This is a shift many local authorities are pushing forward in order to encourage more sustainable modes of transport to meet the needs of the NPPF. The KCC standards are notably older than the draft 2020 standards set out by EGC. Therefore, the work EGC have undertaken provides a more up to date picture of parking demand and considers the aspirations of the NPPF (2021).
- 4.11 Gravesham Climate Change Strategy 2022-2030 (December 2021) sets out the council's approach to not only taking action against its own emissions but also supporting communities in the borough to reduce their emissions and carbon footprint. A priority 3 area for action states "Encourage active travel through the use of public transport, cycle routes and walking facilities across the borough, promoting the health and climate change benefits for all." As such, it is clear that Gravesham are also trying to promote more sustainable modes of transport.
- 4.12 As the proposals include 1,858.50 sqm of office floor space and 1,063.58 sqm of storage floor space, the guidance states the site should accommodate 75 car parking spaces for the office space plus 10 car parking spaces for the storage space. Resulting in an overall parking provision of 85 spaces. However, it should be noted that KCC standards are maximum standards and therefore allow for a reduced provision.
- 4.13 The existing warehouse use currently provides 2 car parking spaces on the forecourt at the front of the site, along with an area for larger vehicles to undertake deliveries. This results in 1 space per 531.79 sqm (based on the existing 1,063.58 sqm of warehouse). It is clear that the existing warehouse operates with significantly less on-site parking than the maximum standards set out by KCC and this must have been approved by the local authority at some point. Furthermore, it is evident that the existing operation does not cause a serve impact to on-street parking on the surrounding road network. On this basis 10 car parking spaces for the proposed storage use is considered extensive considering the operation will be similar to the existing use.
- 4.14 It is understood that most employees who have a base/desk at the Jacksons Lift Group existing warehouse at Ropery Business Park are in supervisory roles and are not regularly in the office but are servicing and visiting installation sites. Additionally, there is no occasion where all employees would be in the office at any one time, in fact many arrive fleetingly to pick up items or arrive for a meeting only. Jacksons Lift Group have confirmed that 25% of the staff are in the office for a full day, as they work in sales and customer service. Furthermore, since the pandemic work travel patterns have shifted resulting in a more flexible arrangement, with working from home becoming increasingly favourable for both staff and companies. As such, it is considered robust to assume that 50% of future staff (60) will be on-site at any one time. It should be reiterated that the site will not attract 120 staff from the first day of occupation, with a gradual increase likely to take place from the existing staff number. Therefore, 60 members of staff on-site at any given time would be a worst-case future scenario.

- 4.15 To provide an indication of the likely modal split for the proposed staff, a review of census data for the category 'Method of travel to work (Workday population)' has been investigated for the workplace population of the output area within which the proposed site is located within (2011 output). The 2011 Census data is the most up to date census available and this is considered to provide a reasonable indication of travel modes for businesses in this area. It may be noted that existing Jackson Lifts staff travel to and from work by sustainable modes including public transport and would expect to do so with the proposed relocation. A large proportion of existing staff members reside within London and therefore have access to a number of rail services to access the site. Furthermore, 75% of existing staff members reside within Bexley, Dartford, Gravesham and the Medway Towns, all of which are accessible via local rail services. The redevelopment of this site will be for Jackson Lifts but may also be for another future occupier therefore the available Census Data is the most appropriate method to determine the predicted mode-share for the development of this site (this addresses KCC pre-app comment 3 & 4).
- 4.16 Table 4.3 summarises the modal split for the workplace population within the Gravesham 001 super output area, it also provides an indication of the number of employees likely to travel by each mode based on 60 staff members.

Mode of Travel	% Modal Split	Proposed Modal Split – 50 % Staff
Driving a car or van	73.8%	44
On foot	7.0%	4
Bus, minibus or coach	5.9%	4
Passenger in a car or van	5.7%	3
Train	2.6%	2
Bicycle	2.4%	1
Motorcycle, scooter or moped	1.6%	1
Other method of travel to work	0.5%	1
Taxi	0.4%	0
Underground, metro, light rail or tram	0.2%	0
TOTAL	100 %	60

Table 4.3: Workplace Population Modal Split - Gravesham 001 super output area

- 4.17 Table 4.3 indicates that 73.8% of the workplace population travel to the output area by car, with 7% travelling on-foot and 8.7% travel by public transport. Based on the proposed 60 employees likely to be on-site at any one-time, a total of 44 could travel to the site by car. This is considered to be a robust approach since no allowance has been made for staff working at home which is now more widely undertaken due to general workplace evolution over the last few years due to the Covid-19 pandemic
- 4.18 As such, the proposals include a multi-storey car park which accommodates 59 car parking spaces within the multi-storey car parking plus 2 car parking spaces at the front of the site. 5% (3 spaces) of the proposed spaces are allocated to disabled users and are located on the ground floor of the multi-storey car park, with lifts providing access to the walkway into the building. As KCC's standards are maximum requirements the proposals accord with the relevant guidance and will meet the need for future staff based on the operation of Jackson Lift Group.
- 4.19 This approach provides a balance between encouraging employees to travel to the site by sustainable modes of travel and ensures that on-street parking does not occur to any significant degree. It also accords with aspirations set out within the NPPF and the aims of Gravesham's Climate Change Strategy.

Swept Path Analysis

- 4.20 Swept path analysis has been carried out using AutoTurn for a large car, shown for reference at [Appendix E](#). This demonstrates that a large car can enter the multi-storey car park in a forward gear, pass another car (including on ramps) and exit in forward gear. This is considered robust, as a large car within AutoTurn measures 4.8 metres in length and therefore represents a realistic worst case.

Cycle Parking Provision

- 4.21 Cycle parking standards for new developments within Kent are also contained within the Kent and Medway Structure Plan 2006 SPG4 – Vehicle Parking Standards. The current commercial standards are set out in Table 4.4.

Land Use	Cycle parking (minimum)
Office up to 500 sqm	1 space / 200 sqm
Office up to 500 sqm – 2,500 sqm	1 space / 200 sqm
Office over 2,500 sqm	1 space / 200 sqm
High Tech/Research/Light Ind	1 space / 200 sqm
Storage and Distribution	1 space / 200 sqm

Table 4.4: Kent County Council – Summary of minimum cycle parking provision

- 4.22 Based on 1,858.50 sqm of office floor space and 1,063.58 sqm of storage floor space a minimum of 15 cycle parking spaces should be provided in accordance with the above standards. The proposals include a covered secure cycle store to the rear of the building providing cycle parking for 20 bicycles. This address KCC Highways Pre-app comment 7.

Servicing Arrangements

- 4.23 Servicing activity will be undertaken within 2 car parking spaces on the forecourt at the front of the site, as per the existing arrangement. The TRICS database suggests that a warehouse use could attract 11 servicing vehicles across an average day, whilst the office use could attract 8 servicing vehicles. As such, the proposed use could attract circa 19 servicing vehicles across an average day, which equates to 1-2 vehicles an hour, which is considered minimal over a daily profile.
- 4.24 Therefore, it is evident that the 2 parking spaces with the forecourt to the front of the site have more than sufficient capacity to accommodate the expected servicing demand associated with the development and servicing activity associated with the development will not have a material effect on the highway network local to the site. Swept path analysis for a delivery van entering the forecourt area, parking within the car parking spaces and exiting in forward gear is attached at [Appendix F](#).
- 4.25 There is also space on the forecourt for vehicles to load/unload goods to/from the warehouse. The swept path analysis attached at [Appendix F](#) illustrates an 8m rigid vehicle reversing onto the forecourt and returning to the carriageway in forward gear. Any larger vehicles will unload on the highway and use forecourt area to turn. Delivery and servicing will be managed internally to ensure no more than 2 vehicles require parking on-site at any given time and deliveries requiring larger vehicles are scheduled such that there is sufficient space on the forecourt to accommodate loading/unloading.
- 4.26 Refuse collection will be undertaken on-street along the unnamed road as per the existing arrangement. A bin store is located within the forecourt to the front of the site within an appropriate drag distance from the carriageway.

Summary

- 4.27 This section demonstrates that the proposal makes provision for safe and suitable access for private cars, pedestrians and cyclists and integrate with the existing highway network. In addition, appropriate provision will be made for parking and servicing in accordance with relevant standards and guidance.

5.0 Trip Generation

Overview

- 5.1 This section sets out the effect of the development proposals on the highway network local to the site. The assessment focuses on the weekday morning and evening hours of 08:00-09:00 and 17:00-18:00, which constitutes the key trip generation periods for employment developments.

Existing Use

- 5.2 As the existing warehouse on the ground floor will remain as an industrial warehouse/storage area, it is not expected that existing trip rates will be altered. However, the trip generation for the existing warehouse has been assessed based on trip rates derived from the TRICS database using the category '02 Employment: F – Warehousing (Commercial)', for site within England, excluding Greater London.
- 5.3 A summary of the peak hour vehicular trip rates and resultant trips for 1,063.58 sqm of existing warehouse space are provided in Table 5.1 below and the full TRICS output included at [Appendix G](#).

Mode of Travel	Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)		Weekday Daily Movements	
	Arr	Dep	Arr	Dep	Arr	Dep
Vehicular Trip Rates	0.102	0.043	0.057	0.067	1.121	1.104
Vehicular Trips (OGV/LGV/Servicing Vehicles)	1 (0)	0 (0)	1 (0)	1 (0)	12 (11)	12 (10)

Table 5.1: Existing Warehouse Use – Trip Rates and Resultant Trips

- 5.4 Table 5.1 indicates that the existing use could generate up to 2 vehicular trips within the weekday morning and evening peak periods. Over an average weekday, the existing use could generate 21 two-way total vehicular trips, the majority of these vehicle movements (21) are undertaken by servicing vehicles.

Proposed Use

Proposed Warehouse Use

- 5.5 As the ground floor will continue to operate as a warehouse within ownership of Jackson Lift Group, it is anticipated that the vehicle and servicing movements will remain in line with the existing situation, set out above.

Proposed Office Use

- 5.6 The proposed office extension will result in an additional 1,858.50 sqm of office space. The trip generation potential for the proposed office use has been assessed based on trip rates derived from the TRICS database using the category '02 – Employment: A Office', with the following criteria:
- » Sites located in England, excluding Greater London;
 - » Sites with a high parking ratio; and
 - » Sites in areas classed as Edge of Town Centre.
- 5.7 All selected sites have a parking provision similar to the proposals. As the proposals include 3.5 parking spaces per 100sqm, (based on 64 proposed spaces) sites were selected with a parking ratio of 4 car parking spaces per 100sqm or above.

- 5.8 A summary of the peak hour vehicular and total person trip rates and resultant trips for 1,858.50 sqm office use are provided in Table 5.2 below and the full TRICS output included at [Appendix H](#).

Mode of Travel	Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)		Weekday Daily Movements	
	Arr	Dep	Arr	Dep	Arr	Dep
Total Person Trip Rates	4.280	0.310	0.392	4.672	21.534	21.045
Total Person Trips	80	6	7	87	400	391
Vehicular Trip Rates	3.104	0.408	0.490	3.365	15.978	15.55
Vehicular Trips (OGV/LGV)	58 (1)	8 (1)	9 (0)	63 (0)	297 (8)	289 (7)

Table 5.2: Proposed Office Use – Trip Rates and Resultant Trips

- 5.9 Table 5.2 indicates that the proposed office use could generate 86 total person trips in the weekday morning peak hour, with 66 being vehicular trips. In the evening peak hour, the development could generate 94 total person trips, of which 72 could be vehicular trips. Over an average weekday, the office use could generate 791 two-way total person trips, of which 586 could be vehicular. The office use could attract up to 8 servicing vehicles (OGV/LGV) across an average day.
- 5.10 To support the above trip attraction, the census data for the category 'Method of travel to work (Workday population)' has been used. The Census modal split of travel is summarised in Table 5.3 below. The total person trips identified in Table 5.2 for both the weekday morning and evening peak hours have been assigned based on the Census modal split percentages and are also summarised in Table 5.3 below.

Mode of Travel	Census Modal Split	Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)		Weekday Daily Movements	
		Arr	Dep	Arr	Dep	Arr	Dep
Driving a car or van	73.8%	59	4	5	64	295	289
On foot	7.0%	6	0	0	6	28	27
Bus, minibus or coach	5.9%	5	0	0	5	24	23
Passenger in a car or van	5.7%	5	0	0	5	23	22
Train	2.6%	2	0	0	2	10	10
Bicycle	2.4%	2	0	0	2	10	9
Motorcycle, scooter or moped	1.6%	1	0	0	1	6	6
Other method of travel to work	0.5%	0	0	0	0	2	2
Taxi	0.4%	0	0	0	0	2	2
Underground, metro, light rail or tram	0.2%	0	0	0	0	1	1
TOTAL	100 %	80	6	7	87	400	391

Table 5.3: Census Data Modal Split - Gravesham 001 super output area

- 5.11 The Gravesham 001 super output area experiences a similar proportion of car driver trips in comparison with site selected within TRICS.

Traffic Distribution and Assignment

Previous Analysis

- 5.12 As the ground floor will continue to operate as a warehouse/storage area for Jackson Lift Group, the vehicle movements associated with the ground floor use have not been distributed onto the local highway network. The vehicle trips associated with the warehouse/storage area will already be on the local highway network. As such, the vehicle trips associated with the proposed office use have been distributed onto the local highway network as set out below.
- 5.13 In order to address KCC Pre-app comment 10, preliminary analysis has been carried out. Development related traffic has been distributed on the network with reference to relevant Census data (2011 output) for 'Location of Usual Residence and Place of Work'. The location of place of work is restricted to the 'Gravesham 001 super output area- middle layer' within the Gravesham district. This is the most detailed level of census data available for assessing travel patterns.
- 5.14 The above census output enables an understanding of all output areas that employees within Gravesham 001 reside at. A summary of all key destinations (those that attract less than 10 movements have been excluded for the purposes of this assessment) is shown within [Appendix I](#).
- 5.15 The census data suggests that 50.3% of employees within the Gravesham 001 output area reside within Gravesham district. The site is located at the western extent of Gravesham district as such all employees who live within Gravesham district will enter/exit the site from the east. Other key destinations include Medway, Sevenoaks, Maidstone, Bexley, Swale and Tonbridge and Malling.
- 5.16 Analysis of the census data provides an understanding of the likely direction the employees would take at the Lower Road/A229 junction in order to travel to work. This has been verified via Google Maps journey times during peak periods. Table 5.4 below demonstrates percentage split of vehicular trips at the Lower Road/A229 junction based on the aforementioned census data.

Direction of Travel	Percentage Split of Trips
East along the A229	86.7%
West along the A229	13.3%
TOTAL	100 %

Table 5.4: Census Data - 'Location of Usual Residence and Place of Work'

- 5.17 Table 5.5 below summarises the distribution of vehicular trips associated with the proposed development. To be robust the vehicular trips are based on the census modal split summarised in Table 5.3.

Direction of Travel	Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)	
	Arr	Dep	Arr	Dep
East along the A229	51	3	4	55
West along the A229	8	1	1	9
TOTAL	59	4	5	64

Table 5.5: Development Traffic Distribution

- 5.18 Table 5.5 demonstrates that the majority of development related traffic will travel east along the A229. The proposed development could generate circa 54 two-way vehicle movements travelling east along Stonebridge Road within the weekday morning peak and 9 two-way vehicle movements travelling west along Galley Hill Road. Whilst in the evening peak hour, the proposed development could generate circa 59 two-way vehicle movements east along Stonebridge Road and 10 west along Galley Hill Road. A breakdown of the movements through the junction is presented in Table 5.6.

Junction Approach	Movement	Weekday AM Peak (08:00-09:00)	Weekday PM Peak (17:00-18:00)
A229 Galley Hill Road	Left turn	51	1
A229 Stonebridge Road	Right turn	8	4
Lower Road	Left turn	3	55
	Right turn	1	9

Table 5.6: Development Traffic at A229 / Lower Road junction (2021 Data)

- 5.19 When the flows are assigned to the junction the key increases will be on the right turn lane on A229 Stonebridge Road in the AM peak (51 vehicles) and the left turn lane from Lower Road in the PM peak (55 vehicles). The Lower Road/A229 junction has a signal cycle time in the order of 90 seconds per cycle, therefore in the peak times, this would amount to just over one additional vehicle on the Stonebridge Road right turn and Lower Road left turn lane per cycle.

6.0 Junction Modelling

Traffic Network Review

- 6.1 As requested by Kent County Council, an additional traffic survey was conducted on 31st January 2024 to understand any changes in the baseline traffic flows. It should be noted that a road closure is currently in force on A226 Galley Hill Road following a landslip between B259 High Street and Snowden Hill as demonstrated in Figure 6.1 below.

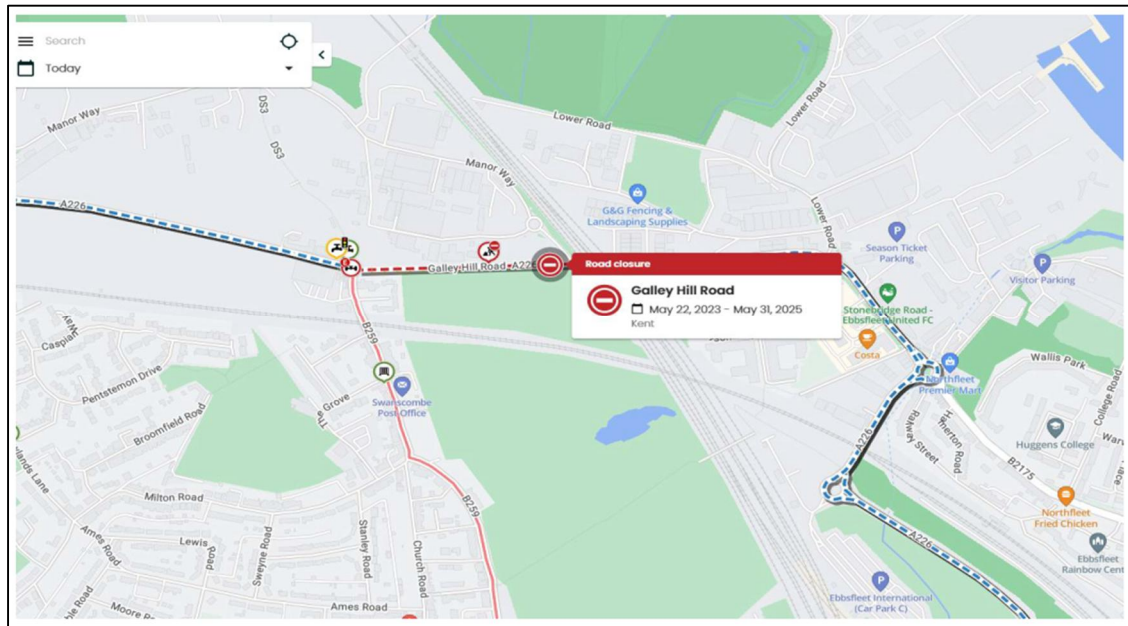


Figure 6-1: A226 Galley Hill Road Closure

- 6.2 The road closure will be in place until May 2025, however the survey has been undertaken to understand any changes in flow along Lower Road given this route is the only access route into the industrial area where the application site is located. As a result of the road closure, vehicles travelling eastbound towards Stonebridge Road cannot turn left onto Lower Road, nor can vehicles turn right from Lower Road onto A266 Galley Hill Road. A breakdown of the flows in and out of Lower Road recorded during the 2022 and 2024 survey are presented in Table 6.1. The 2024 traffic data is provide in Appendix J.

Date of survey	Junction Approach	Movement	Weekday AM Network Peak (0830-0930)		Weekday PM Network Peak (1615-1715)	
			Car	HGV	Car	HGV
2022	Lower Road	Inbound	200	39	107	39
		Outbound	72	42	208	2
2024	Lower Road	Inbound	208	39	91	8
		Outbound	71	45	241	13
Change	Lower Road	Inbound	+8	No change	-16	-31
		Outbound	-1	-3	+33	+11

Table 6.1 - Lower Road Traffic Flow comparison (2022-2024)

- 6.3 On review, there is little difference between the flows in and out of Lower Road (the industrial area). There has not been a material change in the flows during the critical AM peak when demands are highest and therefore the original junction modelling is considered robust.

Overview – Submitted Analysis

- 6.4 The Lower Road/Galley Hill Road/Stonebridge Road signalised junction has been assessed using LinSig software. The software expresses the relationship between traffic flow and the capacity of a junction as a ratio, referred to as the Degree of Saturation (% Sat or DoS). Based upon these results it also predicts the anticipated queue lengths (mean maximum queue, MMQ) and delays that are likely to occur at a junction. In addition, LinSig shows the Practical Reserve Capacity (PRC) of the junction as a percentage, which indicates the amount of residual capacity that a junction has. LinSig assumes that PRC is reached at 90% degree of saturation whereas a degree of saturation of 1 (or 100%) is the actual theoretical capacity of the junction. A positive PRC value indicates that the junction is operating at less than a 90% degree of saturation, whereas a negative PRC value indicates that the junction is operating at greater than a 90% degree of saturation.
- 6.5 The highway impact assessment presented in this section considers the impact of the additional traffic on the operation of the highway network local to the site during weekday morning and afternoon peak hours (07:30-08:30 and 16:15-17:15 hours). Modelling output results are included at [Appendix K](#).

Assessment Scenarios

- 6.6 The modelling includes an assessment of the 2022 baseline position during the weekday morning (AM) and afternoon (PM) peak hours based on recorded traffic flows. Modelling has then been completed for the future year 2027 both 'without' and 'with' development. Traffic surveys were carried out at the junction on Wednesday 11th May 2022 and survey information is available on request.
- 6.7 The 'without development' scenarios are based on observed traffic flows. Growth has then been applied to these flows (based on growth rates extracted from TEMPro). The development flows summarised in Table 2.5 have then been added to the 'without development' scenarios, to derive the 'with development' flows.

Growth

- 6.8 Growth rates from Trip End Model Presentation Program (TEMPro) have been extracted for the local area, which are summarised in the table below. Appropriate rates were applied to the 2022 traffic survey (baseline) data to establish the 2027 future year. These growth rates were agreed at pre-application stage.

Assessment Period	Forecast Period	TEMPro Growth Rate
Morning Peak Hour (07:30-08:30)	2022 to 2027	1.0407
Afternoon Peak Hour (16:15-17:15)	2022 to 2027	1.0430

Table 6.2: TEMPro Growth Rates for Northfleet

Modelling Results

2022 Baseline

- 6.9 The junction has been modelled in the base year (2022) and the results are presented in Table 6.3

Arm	AM Peak (07:30-08:30)				PM Peak (16:15-17:15)			
	PRC (%)	Degree Sat (%)	Total Delay (pcuHr)	Mean Max Queue (pcu)	PRC (%)	Degree Sat (%)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Lower Road	49.0	22.6	0.7	2	132.0	38.6	2.0	5
Stonebridge Road		60.4	2.2	4		38.8	1.4	4
Galley Hill Road		59.4	3.5	10		38.2	1.8	6

Table 6.3: Lower Road/Galley Hill Road/Stonebridge Road (2022 Operation AM & PM Peak Hours)

- 6.10 Table 6.3 shows that the existing junction operates well within its theoretical capacity, with the maximum recorded degree of saturation of 60.4% recorded on the Stonebridge Road arm in the weekday morning peak considerably lower than the 90% threshold. The maximum recorded queue is 9.7pcu on the Galley Hill Road arm in the weekday morning peak, however, given the low degree of saturation values this would be expected to clear during the green phase on this arm. Delays on all arms are negligible.

2027 Scenarios

- 6.11 The junction has also been modelled in 2027, both without and with traffic associated with the proposed development. The results are summarised in Table 6.4.

Arm	AM Peak (07:30-08:30)				PM Peak (16:15-17:15)			
	PRC (%)	Degree Sat (%)	Total Delay (pcuHr)	Mean Max Queue (pcu)	PRC (%)	Degree Sat (%)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Without Development								
Lower Road	43.4	23.5	0.8	2	122.7	40.2	2.1	5
Stonebridge Road		62.8	2.3	5		40.4	1.5	4
Galley Hill Road		61.8	3.8	10		39.9	1.9	6
With Development								
Lower Road	30.1	24.4	0.8	2	107.7	43.3	2.4	6
Stonebridge Road		69.2	2.9	7		43.1	1.7	5
Galley Hill Road		68.1	4.4	11		42.7	2.1	7

Table 6.4: Lower Road/Galley Hill Road/ Stonebridge Road (2027 Operation AM & PM Peak Hour)

- 6.12 Table 6.4 shows that the junction continues to operate well within its theoretical capacity in both the 2027 with and without development scenarios. The maximum recorded degree of saturation of 69.2% recorded on the Stonebridge Road arm in the weekday morning peak is considerably lower than the 90% threshold. The maximum recorded queue is 11.3pcu on the Galley Hill Road arm in the weekday morning peak, however, as with the existing scenario, this would be expected to clear during the green phase on the arm. Delays on all arms are negligible.
- 6.13 The maximum increase in degree of saturation is 6.4% on the Stonebridge Road arm in the weekday morning peak, the greatest increase in mean maximum queue is 2.2pcu on the same arm in weekday morning and the largest increase in delay is 0.6pcuHr on both the Stonebridge Road and Galley Hill Road arms in the weekday morning peak. The Stonebridge Road approach accommodates the right-turn inbound flows and the existing traffic lane can accommodate some 7 vehicles before it blocks the through-flow of traffic. The predicted maximum queue for both the ahead and right turn lane is 7 vehicles in 2027

(AM peak with development) therefore the proposed development will not impact on the operation of the junction.

- 6.14 These values will not result in any material adverse disruption to the free-flow of traffic on the local highway network and certainly not the 'severe' impact referenced in the NPPF.

7.0 Outline Travel Plan

Overview

- 7.1 A Framework Travel Plan (FTP) is a management tool that allows a coordinated strategy to bring together daily travel issues and achieve a more sustainable travel choice. A successfully implemented FTP can offer substantial gains towards the sustainable transport objectives of central and local government.
- 7.2 The main aim of the FTP is to put in place the management tools deemed necessary to enable staff to make informed choices about their travel to and from the site, which at the same time minimises the adverse impacts of travel on the environment. This is achieved by setting out a strategy for eliminating barriers that keep staff from making use of sustainable modes.

Objectives

- 7.3 Improving the transport choices available to people, rather than focusing on providing for the private car, will lead to a more equitable and sustainable development that provides travel options for all staff regardless of whether or not they own a car.
- 7.4 The transport principles for the site reflect sustainable objectives which can be summarised under the following headings:
- „ To promote walking and cycling to and from the site by all staff members;
 - „ To promote the use of non-car modes of travel by all staff members;
 - „ To enable informed decisions about how to travel and the impacts on health, the local environment etc.; and
 - „ Establish long-term sustainable and active travel patterns associated with the site.
- 7.5 The objectives accord with the aims of National and Local Government.

Travel Plan Co-ordinator

- 7.6 A Travel Plan Co-ordinator (TPC) will be appointed prior to occupation of the site. This will allow the TPC to gather and prepare necessary information for staff, and to ensure that measures can be implemented from the first occupation of the site.

Measures

- 7.7 Specific physical and management measures will be implemented to promote the opportunity to use sustainable modes of travel.
- 7.8 The following measures are proposed in order to promote walking and cycling:
- „ provide information about walking and cycling routes;
 - „ raise awareness of the health benefits of walking and cycling;
 - „ provide employees with changing facilities, showers and lockers where they can store clothes;
 - „ encourage participation in 'Walk to Work Week' and/or other relevant events;
 - „ install high quality, covered and secure cycle parking within the site;
 - „ inform employees about cycle skills and maintenance training courses;
 - „ encourage participation in national cycle events such as 'Bike Week';
- 7.9 The following measures are proposed in order to promote public Transport:

- „ provide information about routes, timings and operators of local public transport services connecting the site to the surrounding areas for staff;
- „ the locations of local bus stops and the nearby rail station will be advised to staff;
- „ National Rail and TfL journey planner websites, smartphone applications (“apps”) and enquiry telephone numbers will be supplied for staff.

7.10 Lift-sharing is an effective method of reducing peak-hour traffic congestion and car parking stress. The following measures are proposed in order to promote travel by lift-sharing:

- „ provide information about the London-wide lift-sharing initiative <https://london.liftshare.com>; and
- „ set out the benefits to staff of commuting by lift-sharing for those trips that are most suitably made by private car.

Noticeboard and Travel Information Pack

7.11 Noticeboards will be provided on-site for the benefit of staff being aware of the transport options available to them for travel to and from the site. A Travel Information Pack will be produced and supplied to the staff team in place when the site first opens.

Potential Mini-Bus Service

7.12 There is potential to provide a shuttle mini-bus service to serve the development, providing connections to both Ebbsfleet International and Northfleet railway stations. It would be intended that the service would operate between the hours of 07:00-10:00 and 16:00-18:00 hours approximately every 30 minutes. The occupancy of the service will be monitored through the FTP. Dependent on the demand the frequency of the service will be altered. (KCC pre-app comment 9).

Monitoring

7.13 The monitoring programme will begin with the initial travel survey undertaken within six months of the site opening. This survey will collect data that illustrates:

- „ employees' commuting travel in terms of the main transport mode used regularly as well occasionally when the regular main mode is not available;
- „ use of and demand for on-site cycle parking;
- „ awareness of and active involvement in car sharing; and
- „ comments received from employees relating to the operation and implications of the Travel Plan.

7.14 Travel surveys will be repeated on the first, third and fifth anniversaries of the initial travel survey.

8.0 Summary and Conclusion

- 8.1 This Transport Assessment has been prepared on behalf of Jackson Lifts Group to accompany a planning application for a proposed commercial development at Unit K6 Lower Road, Northfleet.
- 8.2 Jackson Lifts Group is currently located within an existing industrial estate (Ropery Business Park, Charlton), with the use class B2/B8 warehouse. The existing warehouse employs 80 office-based staff with 35 car parking spaces. The proposals seek planning permission to relocate the existing warehouse and office space to Unit K6 Lower Road, Northfleet.
- 8.3 The proposals seek planning permission to relocate the existing warehouse and office business to the existing Unit K6 Lower Road, Northfleet. The proposals seek to retain the existing warehouse on the ground floor to be used by Jackson Lift Group, with an office extension above resulting in two additional storeys. The proposals also include a multi-storey car park containing 64 car parking spaces on the area of hardstanding to the rear of the building, plus 2 car parking spaces at the front of the site. This will result in a total of 120 members of staff within an 1,858.50 sqm of office floor space and 1,063.58 sqm of storage floor space.

Revised application

- 8.4 A planning application for a site redevelopment was submitted in 2022 and this was refused, and a subsequent planning appeal was dismissed on the basis of lack of ecology details. A pre-application consultation for a revised submission identified that the 2022 Transport Assessment was out-of-date for a 2024 planning submission and it was requested that the document be updated. Discussions with KCC officers identified the following in particular:
- „ Update Parking Surveys – record ‘snapshots’ of parking demands on the local roads (0830-100, 1400 and 1800); and
 - „ Update traffic surveys on Galley Hill Road/Lower Road approaches to align with 2024 flows.
- 8.5 In summary, this Transport Assessment has identified the following:
- „ The proposals accord with national and local policies relevant to transport;
 - „ The site is accessible by public transport, walking and cycling. This offers future residents a genuine choice of travel modes;
 - „ Parking on the surrounding road network does not exceed the 85% threshold at which network are considered “stressed” with the updated parking survey data;
 - „ Safe and suitable access to the site can be achieved for all users;
 - „ An appropriate level of car parking is proposed reflecting the local and national aspirations to encourage more sustainable travel;
 - „ The Lower Road/Galley Hill Road/Stonebridge Road junction operates within theoretical capacity in the 2027 with and without development scenarios. The local network traffic flows have been reviewed and the 2024 flows in and out of Lower Road are in the same order as 2022;
 - „ An outline Travel Plan sets out the objections, measures and monitoring to enable staff to make informed choices about their travel to and from the site;
 - „ Appropriate provision is made for cycle parking having regard to the relevant guidance;
 - „ The proposals include appropriate provision for servicing activity; and

- ” The proposals would result in an increase in traffic generation on the surrounding road network in the weekday peak hours and over a typical weekday. As such, the development proposals will have a marginal change in the operation of the local highway network.

Conclusion

- 8.6 In view of the above, the proposed development is considered to be acceptable in transport terms and meets with local and national policy criteria. The assessment work undertaken has shown that there would not be any demonstratable harm arising from the proposed scheme and it will not cause any severe impacts. Therefore, there are no traffic and transport related reasons why the development should not be granted planning consent.

Appendix A

KCC Pre-Application Response



Motion Consultants Ltd.

84 North Street
Guildford
GU1 4AU

Highways and Transportation

Ashford Highway Depot
4 Javelin Way
Ashford
TN24 8AD

Tel: 03000 418181

Date: 28 January 2022

Our Ref:

Application - PAP/2021/143

Location - Unit K9 Lower Road, Northfleet

Proposal - Seek to retain existing warehouse with office extension resulting in two additional storeys . Floor space of 2291 sqm

Dear Phil

Unit K6, Lower Road, Northfleet – Highways Pre-Application Advice – 27/01/2022

I refer to your request for highways pre-application advice dated 17th November 2021 and I apologise for the delay in getting back to you.

I have now had the opportunity to consider the information you have provided in the Technical Note dated 15th November 2021 together with relevant drawings but before I can give you a full response on the likely highway impact of the proposal there are some additional details that I need to understand (numbering refers to your Technical Note):

1. (1.3) Is the existing warehouse to remain the same floor area? Is the multi-storey car park replacing the existing car park outside the building? Have the number of existing staff in the ancillary office space of Unit K9 been discounted for the purposes of your analysis.
2. (2.3) Cycling opportunities should be covered.
3. (3.7) Is there any evidence for this? Could a survey amongst existing employees be taken to establish how they currently travel and how they would travel to Northfleet? It is usually accepted that within Greater London accessibility to public transport is much better. However, Northfleet is an area of Kent where sustainable transport availability is considered high e.g. Fastrack.
4. (3.8) The 2011 Census data is now 11 years old and therefore not an entirely reliable source of data. A survey of existing employees as suggested above would help to justify the figures given. However, a 74% modal split would appear reasonable for this location.
5. (3.9) What is the relevance of the existing parking ratio of 1.5 which is in a different location?
6. (3.10) There are major concerns regarding the proposal to access the car park via a pair of lifts. Full details of its method of operation is required together with details of what happens if there is a breakdown – particularly long-term. It is noted that in Table 5.1 estimating trip generation that 71 vehicles are expected in the AM peak hour and 77 in

the PM peak hour. These flows may also come in waves and queues may result waiting for the lift to arrive. How will this be managed? There is concern that if the delays caused by the lift could result in staff preferring to park on-street rather than being delayed going in or out. Also I would like to see examples of similar facilities elsewhere already in operation with details of speed of operation, number of breakdowns, etc.

7. (3.12) Cycle parking provided should be weatherproof and secure. Are facilities such as changing and showers proposed to support this?
8. (4.0) The parking survey is only a "snapshot" of the parking availability on a single day and therefore may vary considerably from day to day. General observations around industrial developments in Gravesham have tended to indicate very haphazard parking, including on footways. A single articulated HGV or trailer can easily take 3 or 4 car parking spaces. It is generally accepted that businesses provide sufficient parking to avoid any need for on-street parking although the latter is acceptable for visitor parking. The level of availability of nearby on-street parking spaces should therefore not be considered, although encouraging the use of sustainable travel should i.e. via a Travel Plan.
9. (4.22) The provision of a mini-bus to transport staff to local transport hubs is welcomed. More details should be provided as to its operation e.g. frequency, times, routes etc. Alternatively complimentary public transport tickets for the Fastrack / local bus service (as per individual choice) could be provided to staff.
10. (5.5) The proposed Office use is likely to generate considerably greater traffic numbers than the other existing storage / warehousing / manufacturing uses. I therefore have concerns that the road junction between Lower Road and Stonebridge Road may become more congested as a result of this proposal. Initially a survey should be undertaken at that junction to assess its capacity, paying particular attention to queue lengths both turning right into Lower Road in the AM peak and turning out of Lower Road into Stonebridge Road in the PM peak. Also cyclist / pedestrian movements should be considered and improved if necessary.
11. (Appendix A) Fully dimensioned plans of the car park are required including car parking spaces and aisle widths. Generally parking spaces should be a minimum of 5.0m x 2.5m but extended to 2.7m wide when adjacent to a wall. Aisle width should be a minimum of 6.0m.

Once I have further details I should be able to give you my further views on this proposal and what needs to be provided in any Transport Assessment supporting a planning application.

Informative: It is important to note that planning permission does not convey any approval to carry out works on or affecting the public highway.

Any changes to or affecting the public highway in Kent require the formal agreement of the Highway Authority, Kent County Council (KCC), and it should not be assumed that this will be a given because planning permission has been granted. For this reason, anyone considering works which may affect the public highway, including any highway-owned street furniture, is advised to engage with KCC Highways and Transportation at an early stage in the design process.

Across the county there are pieces of land next to private homes and gardens that do not look like roads or pavements but are actually part of the public highway. Some of this highway land

is owned by Kent County Council whilst some is owned by third party owners. Irrespective of the ownership, this land may have highway rights over the topsoil.

Works on private land may also affect the public highway. These include works to cellars, to retaining walls which support the highway or land above the highway, and to balconies, signs or other structures which project over the highway. Such works also require the approval of the Highway Authority.

Kent County Council has now introduced a formal technical approval process for new or altered highway assets, with the aim of improving future maintainability. This process applies to all development works affecting the public highway other than applications for vehicle crossings, which are covered by a separate approval process.

Should the development be approved by the Planning Authority, it is the responsibility of the applicant to ensure, before the development is commenced, that all necessary highway approvals and consents have been obtained and that the limits of the highway boundary have been clearly established, since failure to do so may result in enforcement action being taken by the Highway Authority. The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under the relevant legislation and common law. It is therefore important for the applicant to contact KCC Highways and Transportation to progress this aspect of the works prior to commencement on site.

Guidance for applicants, including information about how to clarify the highway boundary and links to application forms for vehicular crossings and other highway matters, may be found on Kent County Council's website:

<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>. Alternatively, KCC Highways and Transportation may be contacted by telephone: 03000 418181

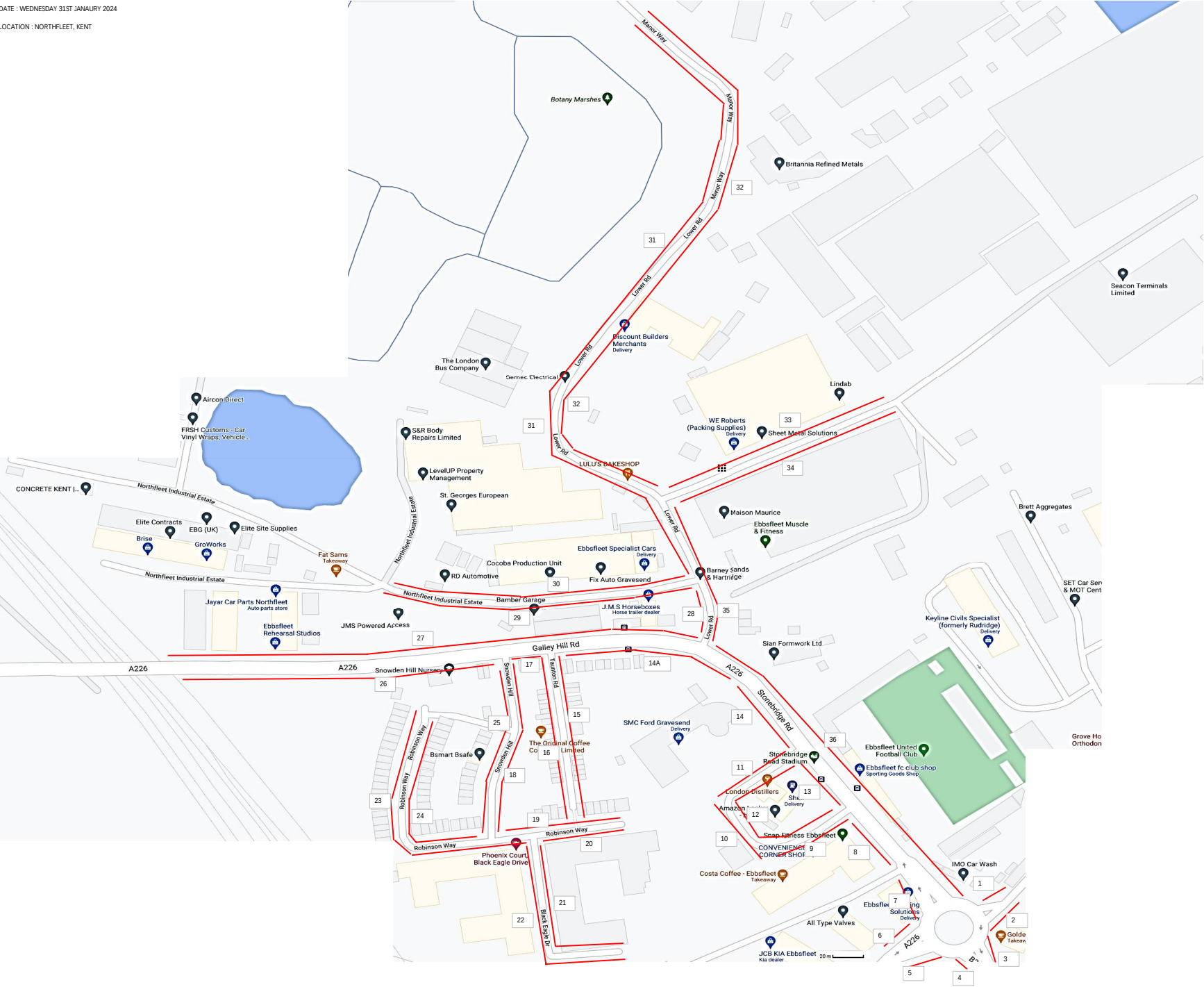
Yours Faithfully

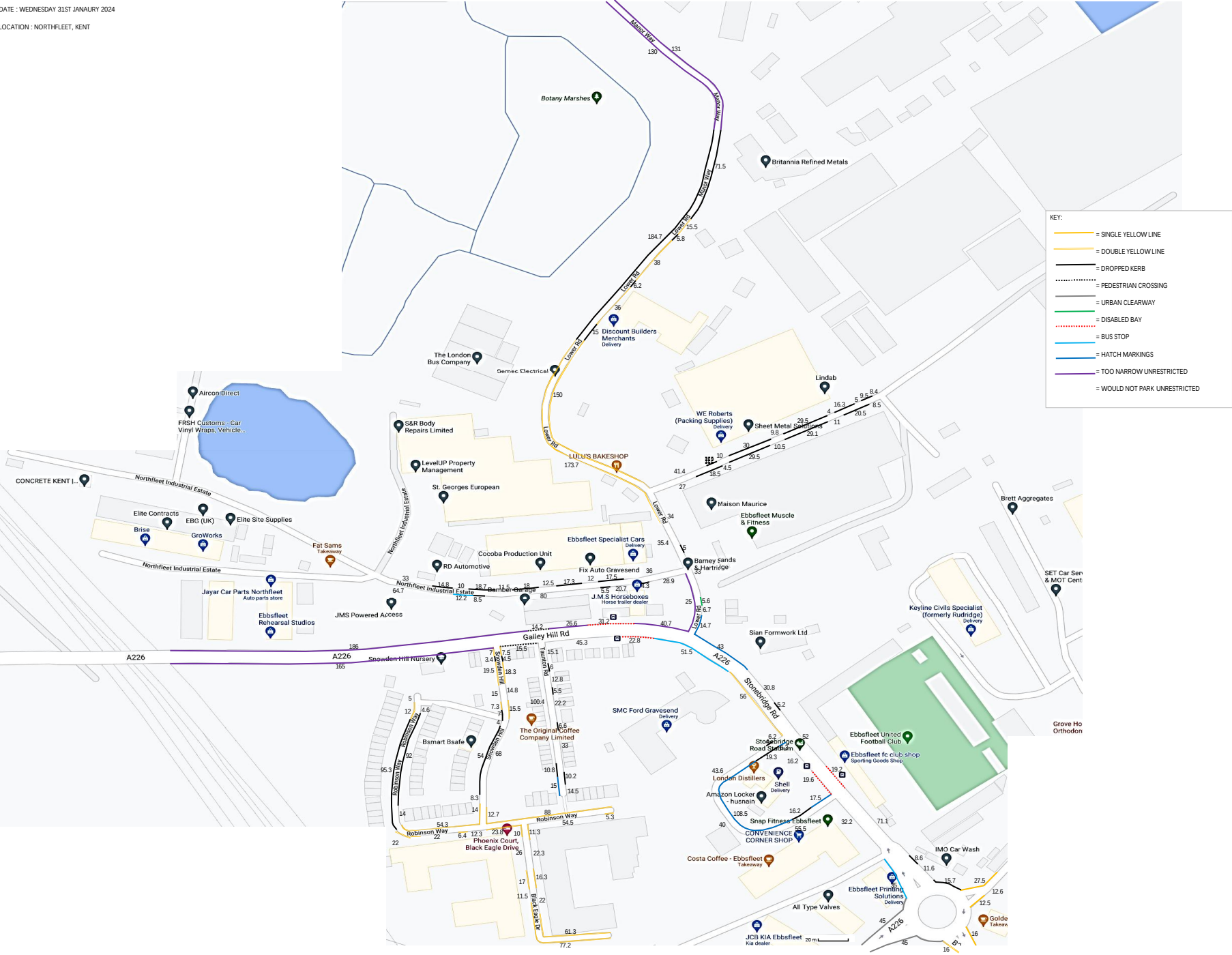
David Barton
Senior Development Planner
KCC Highways

*This is a statutory technical response on behalf of KCC as Highway Authority. If you wish to make representations in relation to highways matters associated with the planning application under consideration, please make these directly to the Planning Authority.

Appendix B

Existing On-Street Parking Surveys





LOCATION : NORTHFLEET, KENT

					WEDNESDAY 8TH SEPTEMBER 2021											
					08:30			10:00			14:00			18:00		
ROAD NAME	ZONE	RESTRICTION	METRES	5 METRES = 1 SPACE	PARKED	OBSERVED SPACES	%RESTRICTION STRESS	PARKED	OBSERVED SPACES	%RESTRICTION STRESS	PARKED	OBSERVED SPACES	%RESTRICTION STRESS	PARKED	OBSERVED SPACES	%RESTRICTION STRESS
GROVE RD	1	SINGLE YELLOW LINE	27.5													
	2	UNRESTRICTED	12.6	2	2	0	100.00%	2	0	100.00%	2	0	100.00%	2	0	100.00%
STONEBRIDGE RD	3	SINGLE YELLOW LINE	16													
	4	DOUBLE YELLOW LINE	16													
THAMES WAY	5	URBAN CLEARWAY	45													
	6	URBAN CLEARWAY	45													
STONEBRIDGE RD	7	HATCH MARKINGS	35													
	8	UNRESTRICTED	32.2	6	5	0	100.00%	5	0	100.00%	5	0	100.00%	5	0	100.00%
EAGLE WAY	9	UNRESTRICTED	55.5	11	9	1	90.00%	9	1	90.00%	8	2	80.00%	10	0	100.00%
	10	UNRESTRICTED	40	8	7	0	100.00%	7	0	100.00%	7	0	100.00%	6	1	85.71%
	11	UNRESTRICTED	49.8	9	8	1	88.89%	6	3	66.67%	6	3	66.67%	6	3	66.67%
		DROPPED KERB	4													
	12	TOO NARROW UNRESTRICTED	131.3													
		DROPPED KERB	35.5													
STONEBRIDGE RD	13	BUS STOP - NOT IN USE	19.6					3			3			1		
		UNRESTRICTED	16.2	3	0	3	0.00%	2	1	66.67%	2	1	66.67%	1	2	33.33%
	14	DOUBLE YELLOW LINE	56													
	14A	UNRESTRICTED	45.3	9	4	4	50.00%	5	3	62.50%	4	4	50.00%	8	0	100.00%
		WHITE LINE / HATCHINGS	51.5													
	BUS STOP	22.8														
TAUNTON RD	15	UNRESTRICTED	97.6	17	7	9	43.75%	6	10	37.50%	8	8	50.00%	11	4	73.33%
		DROPPED KERB	28.3		1			1			1			1		
	16	TOO NARROW UNRESTRICTED	15		1			1			1			1		
		DROPPED KERB	10.8													
	UNRESTRICTED	100.4	20	5	8	38.46%	4	9	30.77%	4	9	30.77%	7	6	53.85%	
GALLEY HILL RD	17	PEDESTRIAN CROSSING	15.5													
SNOWDEN HILL	18	DOUBLE YELLOW LINE	54													
		DROPPED KERB	4.5													
		UNRESTRICTED	82.8	15	10	3	76.92%	13	0	100.00%	12	1	92.31%	13	0	100.00%
ROBINSON WAY	19	DOUBLE YELLOW LINE	88													
	20	DOUBLE YELLOW LINE	5.3													
		UNRESTRICTED	54.5	10	7	2	77.78%	8	1	88.89%	8	1	88.89%	10	0	100.00%
BLACK EAGLE DR	21	DOUBLE YELLOW LINE	88.9											2		
		UNRESTRICTED	44.3	8	7	0	100.00%	7	0	100.00%	7	0	100.00%	7	0	100.00%
	22	DOUBLE YELLOW LINE	104.2		2			2			1			2		
		UNRESTRICTED	37.5	7	6	0	100.00%	6	0	100.00%	5	1	83.33%	6	0	100.00%
ROBINSON WAY	23	DOUBLE YELLOW LINE	64.2		1			1			1			2		
		UNRESTRICTED	39.3	7	5	2	71.43%	5	1	83.33%	5	1	83.33%	6	1	85.71%
		DROPPED KERB	95.3		1			2			2			2		
	24	UNRESTRICTED	18.6	2	2	0	100.00%	2	0	100.00%	2	0	100.00%	2	0	100.00%
		DROPPED KERB	92											2		
		DOUBLE YELLOW LINE	54.3		1											
SNOWDEN HILL	25	DOUBLE YELLOW LINE	47.8													
		UNRESTRICTED	27.3	4	3	1	75.00%	4	0	100.00%	4	0	100.00%	4	0	100.00%
		DROPPED KERB	64.4		1											
GALLEY HILL RD - CLOSED WEST OF SNOWDEN HILL	26	WOULD NOT PARK UNRESTRICTED	165		3			2			4			4		
	27	WOULD NOT PARK UNRESTRICTED	253.3													
		PEDESTRIAN CROSSING	14.2													
			BUS STOP - NOT IN USE	31.2												
LOWER RD	28	WOULD NOT PARK UNRESTRICTED	25													
INDUSTRIAL ESTATE	29	UNRESTRICTED	194.3	37	35	0	100.00%	35	0	100.00%	34	1	97.14%	16	19	45.71%
		DROPPED KERB	18.3		1			2			2					
		HATCH MARKINGS	12.2		1			1			1					
	30	UNRESTRICTED	115	21	21	0	100.00%	21	0	100.00%	21	0	100.00%	11	10	52.38%
		DROPPED KERB	86.3		4			6			6			2		
LOWER RD	31	UNRESTRICTED	35.4	7	7	0	100.00%	7	0	100.00%	7	0	100.00%	6	1	85.71%
		DOUBLE YELLOW LINE	173.7		2			2			2			2		
		HGV PARKING AREA - 10 HGV BAYS	184.7	10	0	10	0.00%	0	10	0.00%	6	4	60.00%	4	6	40.00%
		WOULD NOT PARK UNRESTRICTED	130													
	32	WOULD NOT PARK UNRESTRICTED	131													
		DROPPED KERB	98.5													
		DOUBLE YELLOW LINE	239.5													
	33	UNRESTRICTED	78.6	13	9	2	81.82%	9	2	81.82%	11	0	100.00%	5	6	45.45%
		DROPPED KERB	93.5													
		UNRESTRICTED	61.5	10	7	3	70.00%	8	2	80.00%	8	2	80.00%	0	10	0.00%
	DROPPED KERB	97.6														
LOWER RD	35	UNRESTRICTED	73.7	13	13	0	100.00%	13	0	100.00%	13	0	100.00%	10	3	76.92%
		DROPPED KERB	5													
		DISABLED BAY	5.6	1	1	0	100.00%	1	0	100.00%	1	0	100.00%	1	0	0.00%
		TOO NARROW UNRESTRICTED	14.7													
STONEBRIDGE RD	36	TOO NARROW UNRESTRICTED	43													
		UNRESTRICTED	165.5	32	25	2	92.59%	25	2	92.59%	25	2	92.59%	12	18	40.00%
		DROPPED KERB	29.5													
		BUS STOP - NOT IN USE	19.2		3			3			2			0		

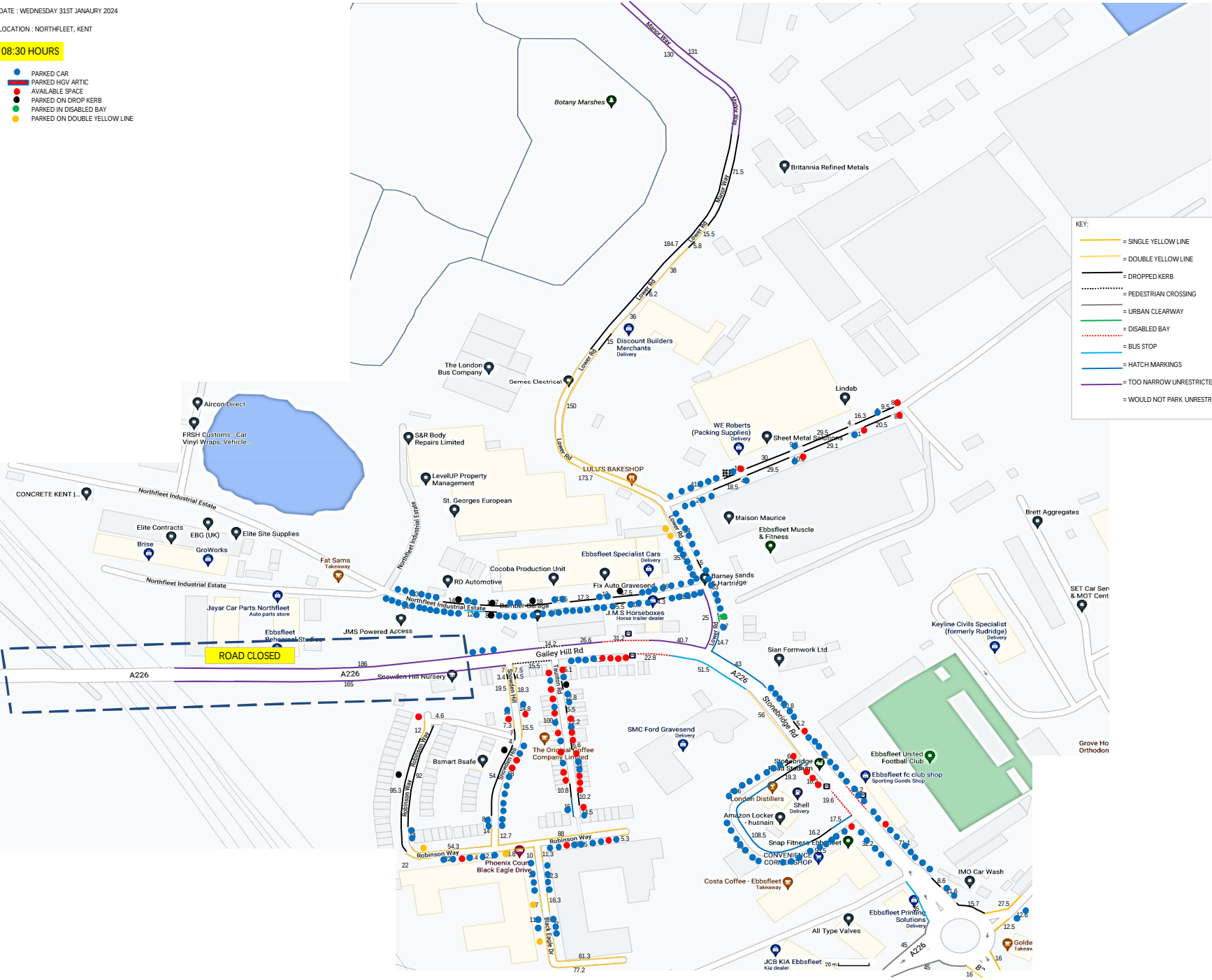
K&M TRAFFIC SURVEYS

DATE : WEDNESDAY 31ST JANUARY 2024

LOCATION : NORTHFLEET, KENT

08:30 HOURS

- PARKED CAR
- PARKED HGV ARTIC
- AVAILABLE SPACE
- PARKED ON DROP KERB
- PARKED IN DISABLED BAY
- PARKED ON DOUBLE YELLOW LINE



- KEY:
- = SINGLE YELLOW LINE
 - = DOUBLE YELLOW LINE
 - = DROPPED KERB
 - = PEDESTRIAN CROSSING
 - = URBAN CLEARWAY
 - = DISABLED BAY
 - = BUS STOP
 - = HATCH MARKINGS
 - = TOO NARROW UNRESTRICTED
 - = WOULD NOT PARK UNRESTRICTED

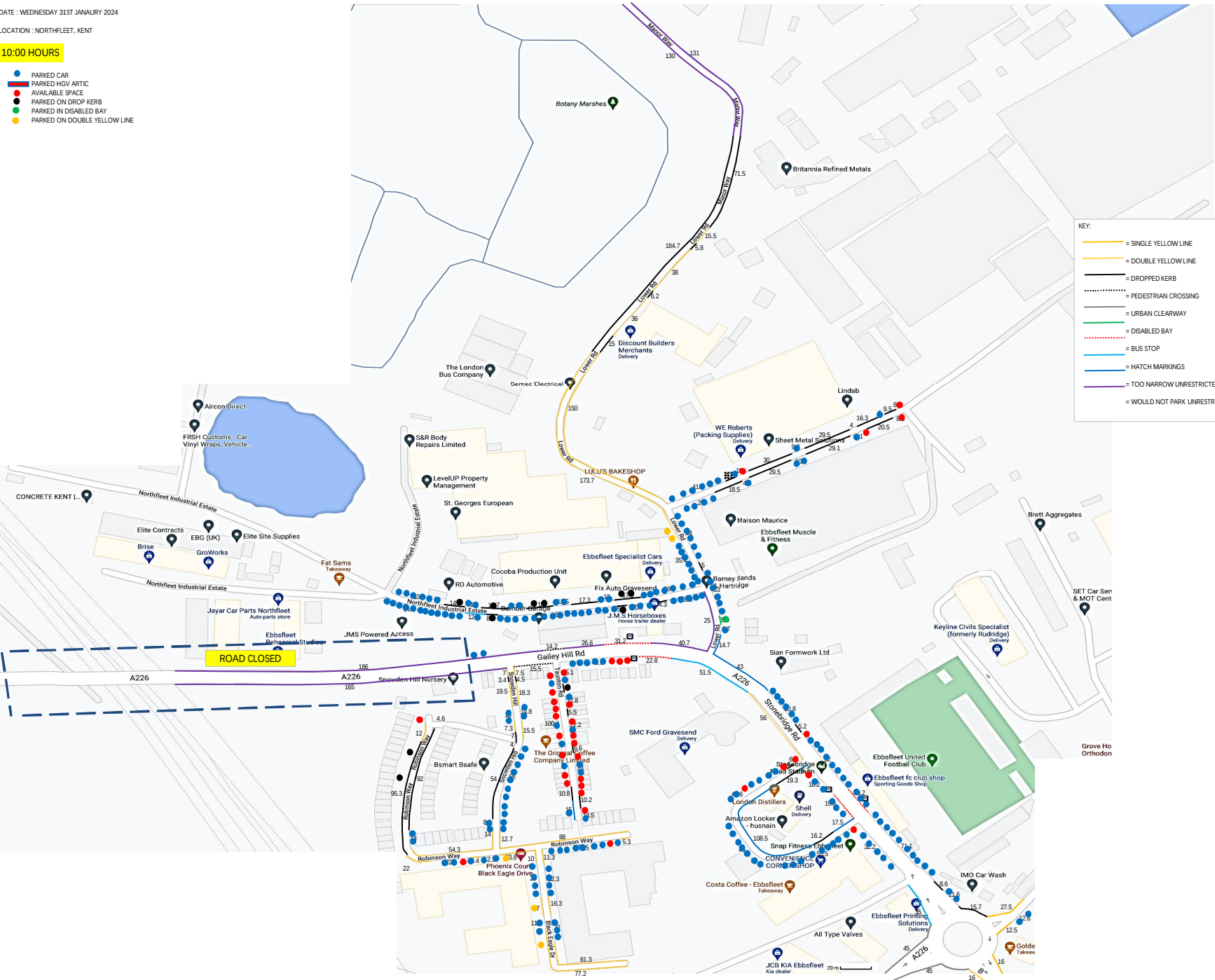
K&M TRAFFIC SURVEYS

DATE : WEDNESDAY 31ST JANUARY 2024

LOCATION : NORTHFLEET, KENT

10:00 HOURS

- PARKED CAR
- PARKED HGV ARTIC
- AVAILABLE SPACE
- PARKED ON DROP KERB
- PARKED IN DISABLED BAY
- PARKED ON DOUBLE YELLOW LINE



KEY:

- = SINGLE YELLOW LINE
- = DOUBLE YELLOW LINE
- = DROPPED KERB
- = PEDESTRIAN CROSSING
- = URBAN CLEARWAY
- = DISABLED BAY
- = BUS STOP
- = HATCH MARKINGS
- = TOO NARROW UNRESTRICTED
- = WOULD NOT PARK UNRESTRICTED

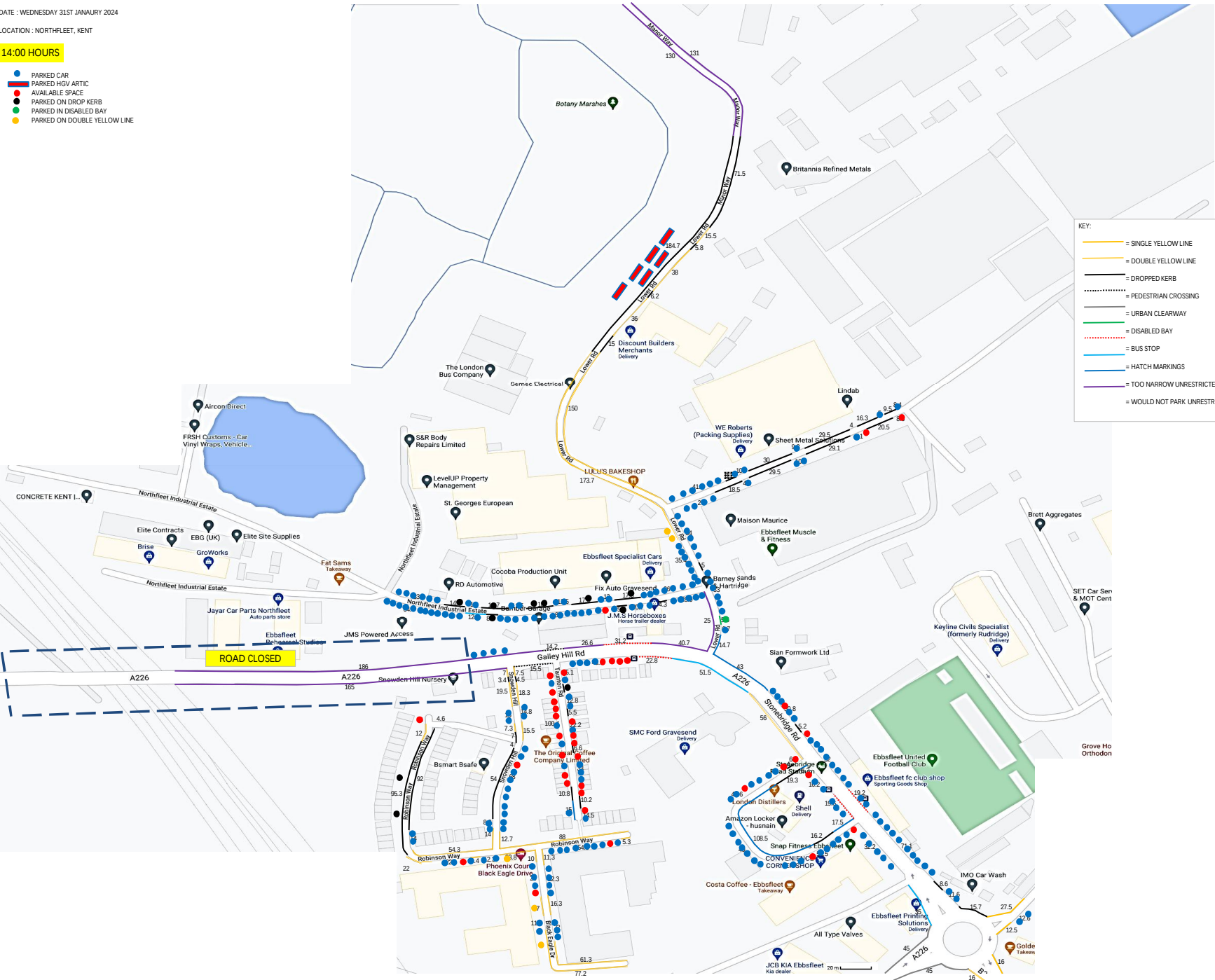
K&M TRAFFIC SURVEYS

DATE : WEDNESDAY 31ST JANUARY 2024

LOCATION : NORTHFLEET, KENT

14:00 HOURS

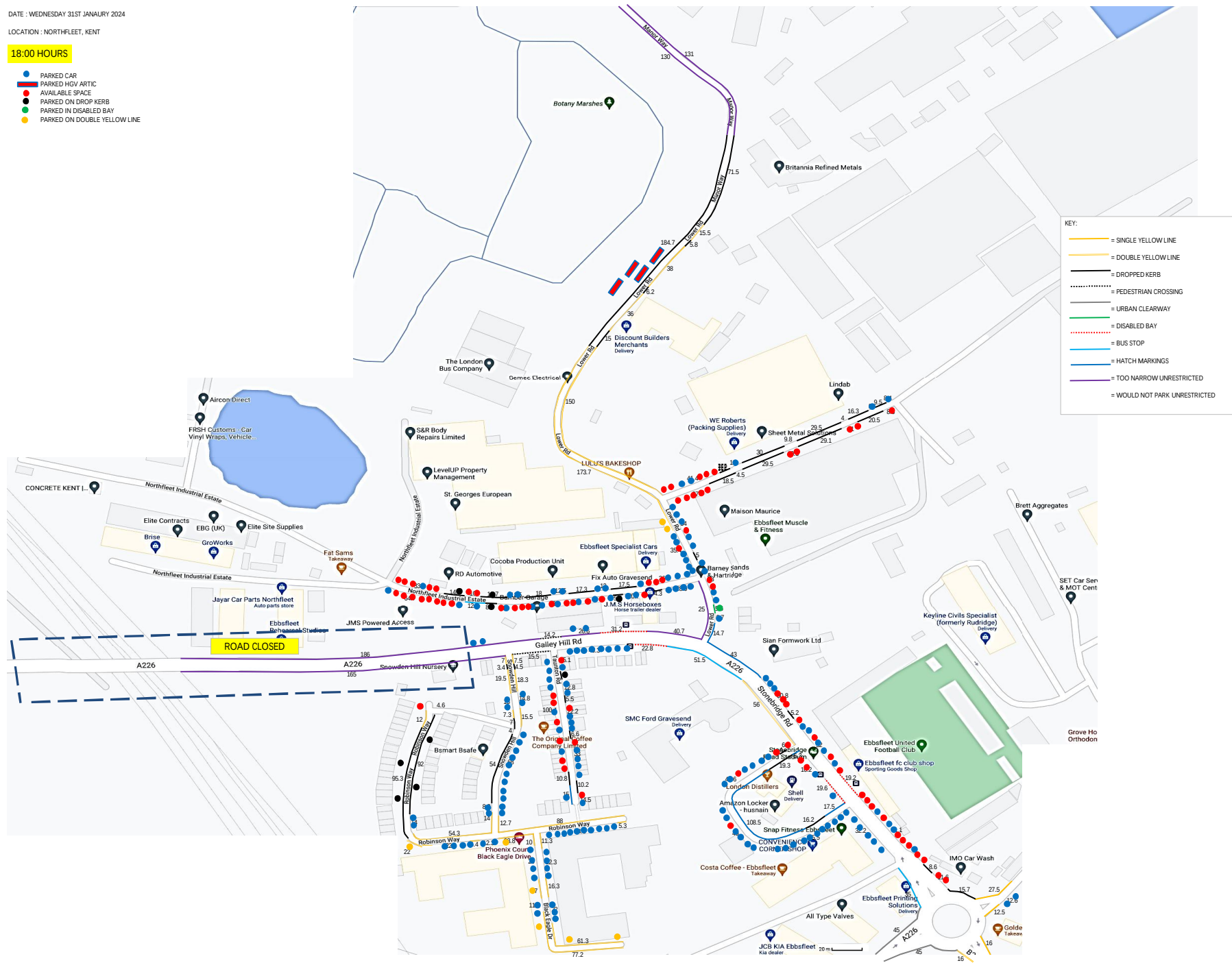
- PARKED CAR
- PARKED HGV/ARTIC
- AVAILABLE SPACE
- PARKED ON DROP KERB
- PARKED IN DISABLED BAY
- PARKED ON DOUBLE YELLOW LINE



- KEY:
- SINGLE YELLOW LINE
 - DOUBLE YELLOW LINE
 - DROPPED KERB
 - PEDESTRIAN CROSSING
 - URBAN CLEARWAY
 - DISABLED BAY
 - BUS STOP
 - HATCH MARKINGS
 - TOO NARROW UNRESTRICTED
 - WOULD NOT PARK UNRESTRICTED

18:00 HOURS

-  PARKED CAR
-  PARKED HGV ARTIC
-  AVAILABLE SPACE
-  PARKED ON DROP KERB
-  PARKED IN DISABLED BAY
-  PARKED ON DOUBLE YELLOW LINE



Appendix C

Crashmap Reports



crashmap.co.uk

Validated Data

Crash Date: Wednesday, October 14, 2020 **Time of Crash:** 2:05:00 PM **Crash Reference:** 2020461001779

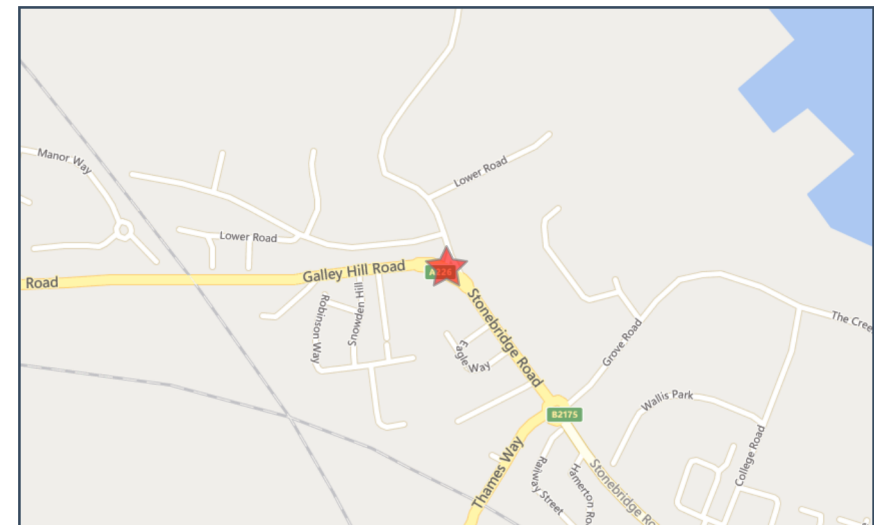
Highest Injury Severity: Slight
Highway Authority: Kent exc Medway Towns
Local Authority: Gravesham Borough
Weather Description: Raining without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: Not at or within 20 metres of junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: One way street
Junction Control: Not Applicable

Road Number: U0

Number of Casualties: 2

Number of Vehicles: 2

OS Grid Reference: 561318 174919



For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	3	Male	21 - 25	Vehicle is in the act of turning left	Nearside	Unknown	None	None
2	Car (excluding private hire)	11	Male	26 - 35	Vehicle proceeding normally along the carriageway, on a right hand bend	Offside	Unknown	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Validated Data

Crash Date: Monday, March 15, 2021 **Time of Crash:** 11:00:00 PM **Crash Reference:** 2021461031281

Highest Injury Severity: Slight
Highway Authority: Kent exc Medway Towns
Local Authority: Gravesham
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Darkness: street lights present and lit
Carriageway Hazards: None
Junction Detail: Not at or within 20 metres of junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Dual carriageway
Junction Control: Not Applicable

Road Number: A226

Number of Casualties: 1

Number of Vehicles: 1

OS Grid Reference: 561350 174888

Map temporarily unavailable.

Once map functionality is restored CrashMap will automatically email an updated report to you.

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	8	Male	26 - 35	Vehicle proceeding normally along the carriageway, on a right hand bend	Front	Other	Bollard/Refuge	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



crashmap.co.uk

Provisional Data does not include vehicle and casualty records

Crash Date: Tuesday, March 30, 2021

Time of Crash: 7:40:00 AM

Crash Reference: 2021461034527

Highest Injury Severity: Slight

Road Number: A226

Number of Casualties: 1

Highway Authority:

Number of Vehicles: 2

Local Authority:

OS Grid Reference: 561324 174907

Weather Description: Fine without high winds

Road Surface Description: Dry

Speed Limit: 30

Light Conditions: Daylight: regardless of presence of streetlights

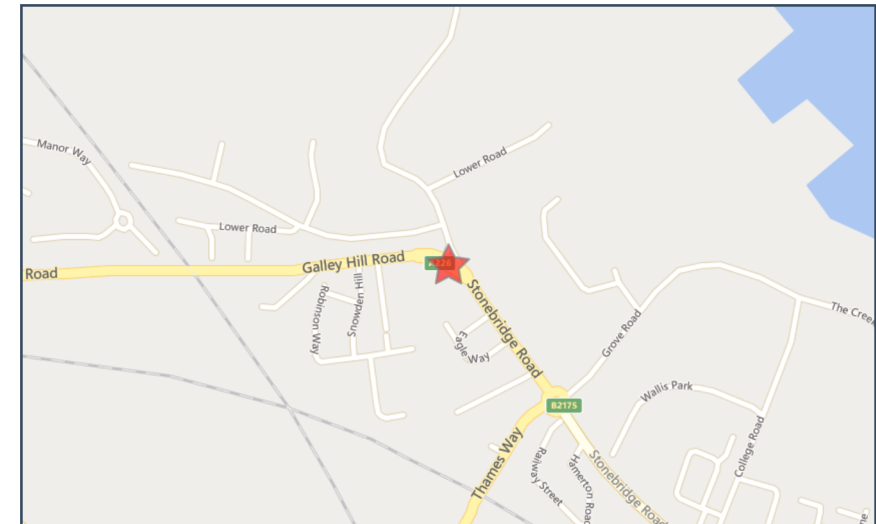
Carriageway Hazards: None

Junction Detail: Other junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Dual carriageway

Junction Control: Auto traffic signal



For more information about the data please visit: www.crashmap.co.uk/home/Faq

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crashmap.co.uk

Provisional Data does not include vehicle and casualty records

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Validated Data

Crash Date: Saturday, July 31, 2021 **Time of Crash:** 4:15:00 PM **Crash Reference:** 2021461073608

Highest Injury Severity: Slight
Highway Authority: Kent exc Medway Towns
Local Authority: Gravesham
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: T or staggered junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Dual carriageway
Junction Control: Give way or uncontrolled

Number of Casualties: 1
Number of Vehicles: 2
OS Grid Reference: 561347 174901

Map temporarily unavailable.

Once map functionality is restored CrashMap will automatically email an updated report to you.

For more information about the data please visit: www.crashmap.co.uk/home/Faq
To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	12	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Commuting to/from work	Parked vehicle	None
2	Car (excluding private hire)	2	Male	46 - 55	Vehicle is parked in the carriageway	Offside	Unknown	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Validated Data

Crash Date: Sunday, November 07, 2021 **Time of Crash:** 12:20:00 PM **Crash Reference:** 2021461110887

Highest Injury Severity: Slight
Highway Authority: Kent exc Medway Towns
Local Authority: Gravesham
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: Other junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Dual carriageway
Junction Control: Give way or uncontrolled

Road Number: A226

Number of Casualties: 1

Number of Vehicles: 1

OS Grid Reference: 561334 174917

Map temporarily unavailable.

Once map functionality is restored CrashMap will automatically email an updated report to you.

For more information about the data please visit: www.crashmap.co.uk/home/Faq

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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Male	21 - 25	Vehicle proceeding normally along the carriageway, on a right hand bend	Front	Other	None	None

Casualties

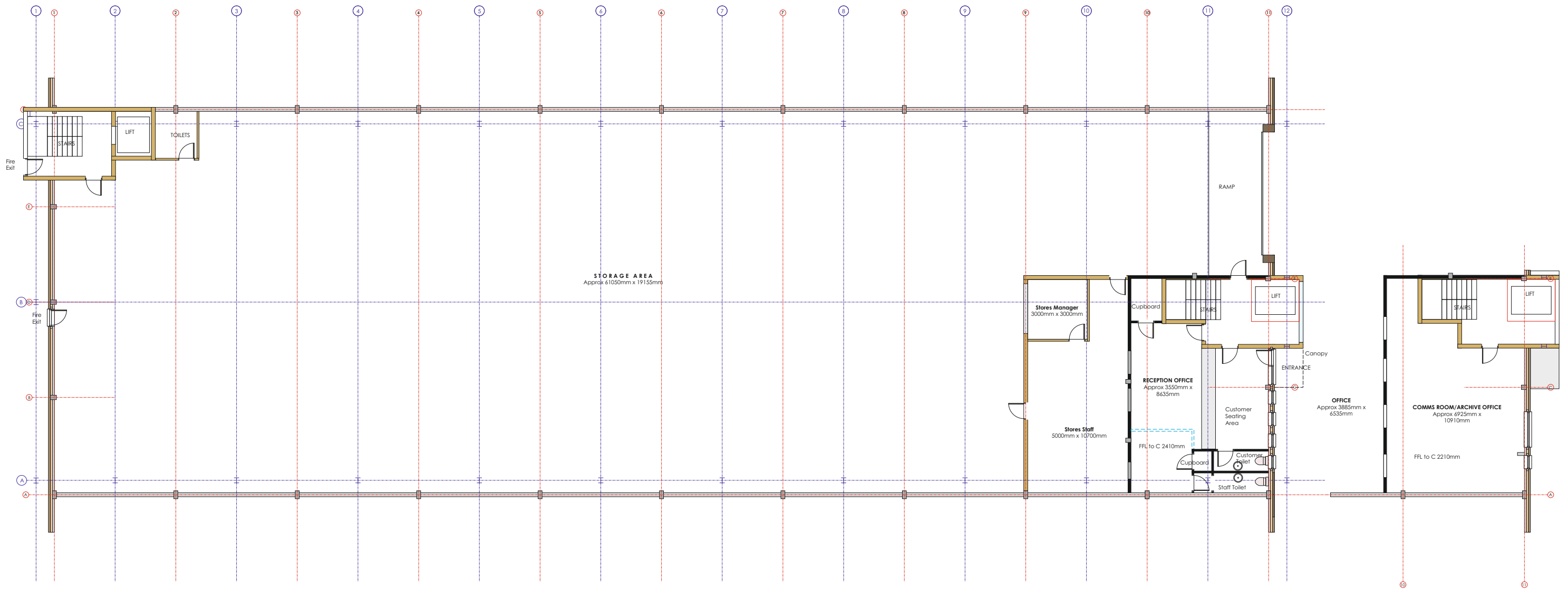
Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	21 - 25	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services

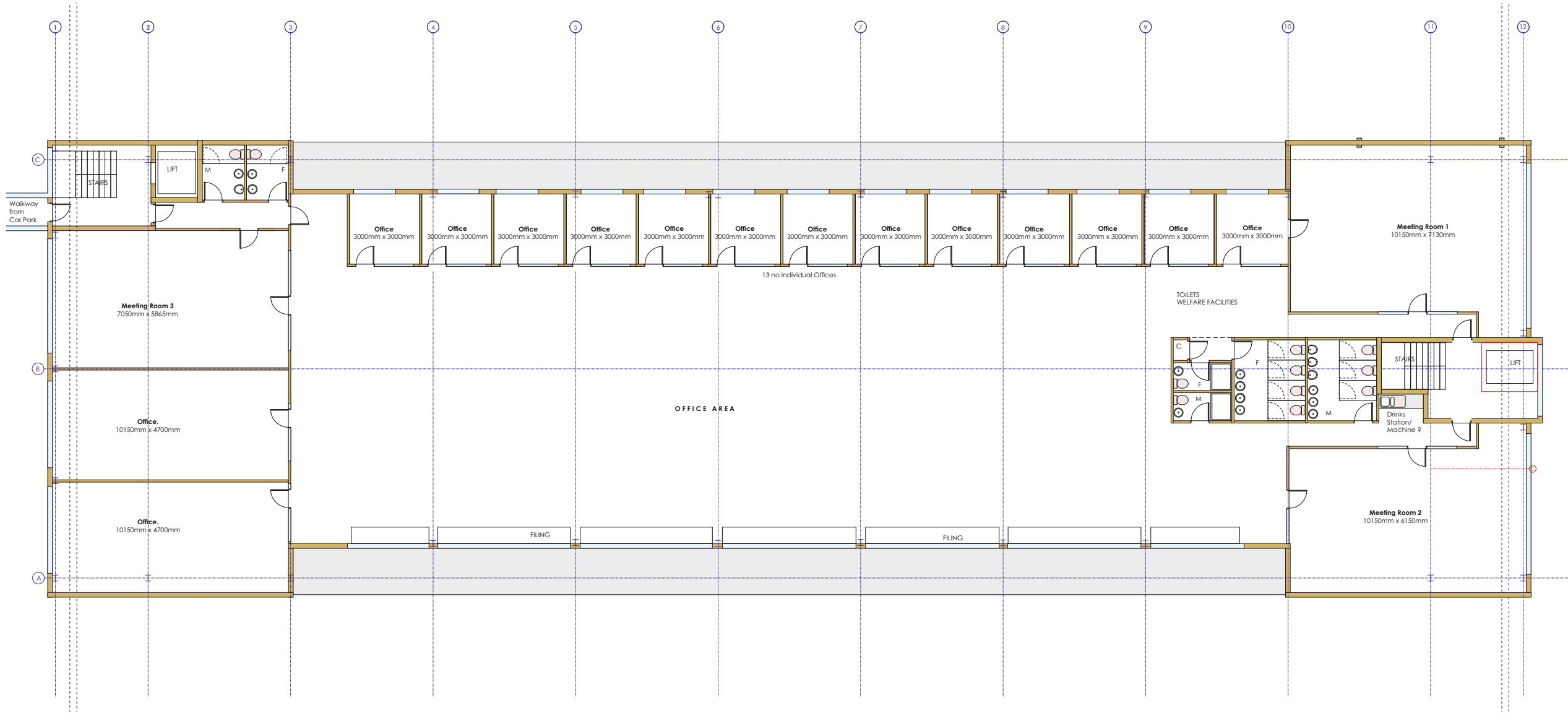
Appendix D

Architects Site Layout Plan



Proposed Ground Floor Plan-1:100

Proposed First/Mezz Floor Plan-1:100



Proposed First Floor Plan-1:100



Units 3/19, Roper Business Park
Anchor and Hope Lane, Charlton
London SE7 7RX
Telephone 020 8293 4176
Facsimile 020 8305 0274
E Mail: info@jacksonlifts.com
Website: www.jacksonlifts.com



E. Application layout
D. Minor changes
C. Offices handed
B. Client changes
A. Revised to suit initial comments

RFW
RFW
RFW
RFW
RFW

SCALE	1:100	REVISION	RFW
DATE	March 2022		

Proposed First Floor Plan

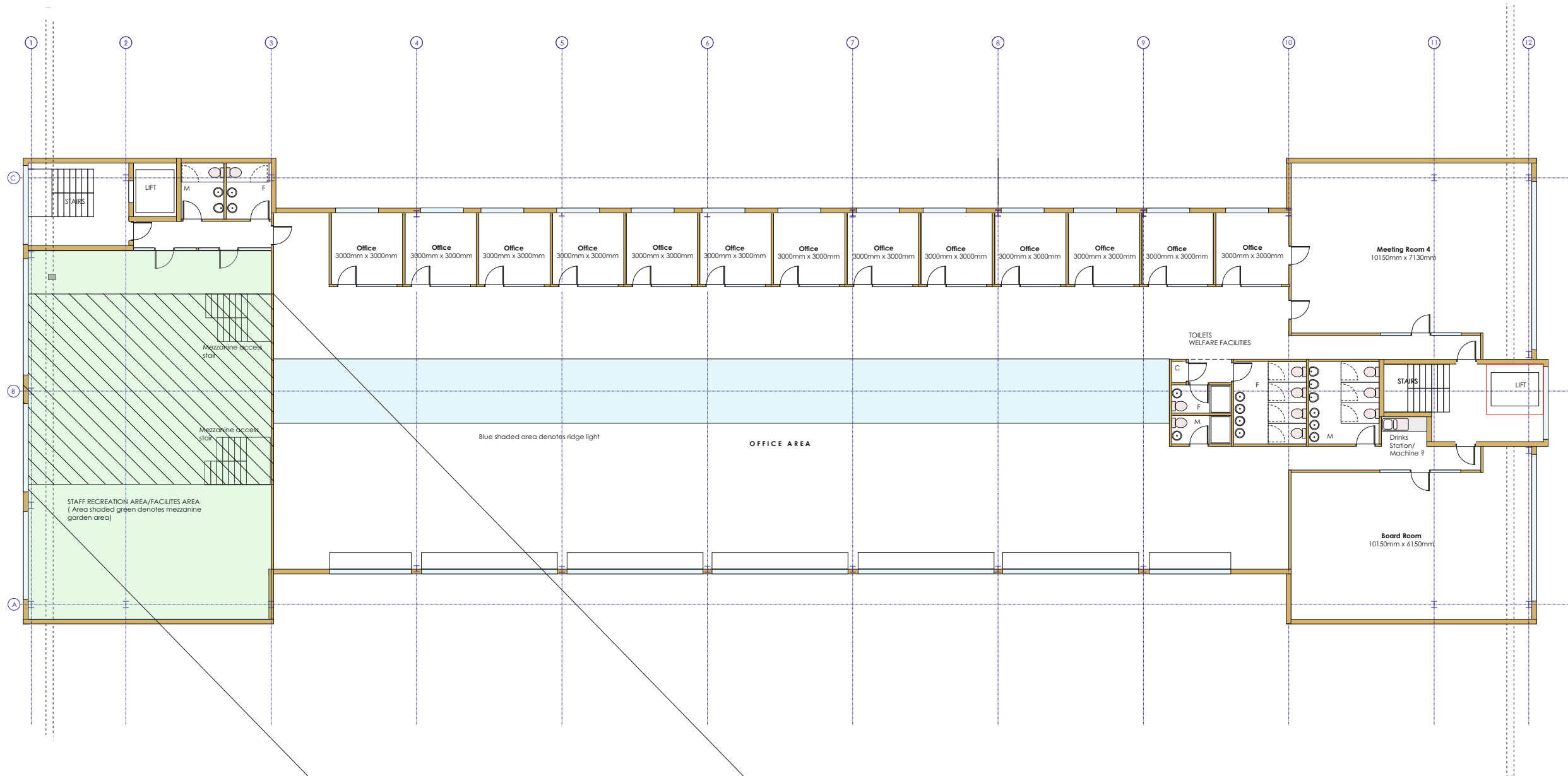
PROJECT
Proposed New Warehouse and Offices
Unit K6 Lower Road
Northfleet Kent DA11 9BL
for: Jackson Family Holdings limited

WARD + ASSOCIATES
THE HOO WROTHAM ROAD
MEOPHAM GRAVESEND KENT DA13 0HP

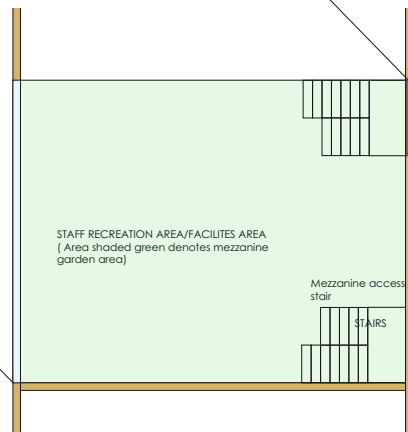
T: 01474 814196 M: 07771 843940
E: admin@wardassociates.co.uk W: www.wardassociates.co.uk
Skype User Name: rogerwardassociates

2521.WD.04E

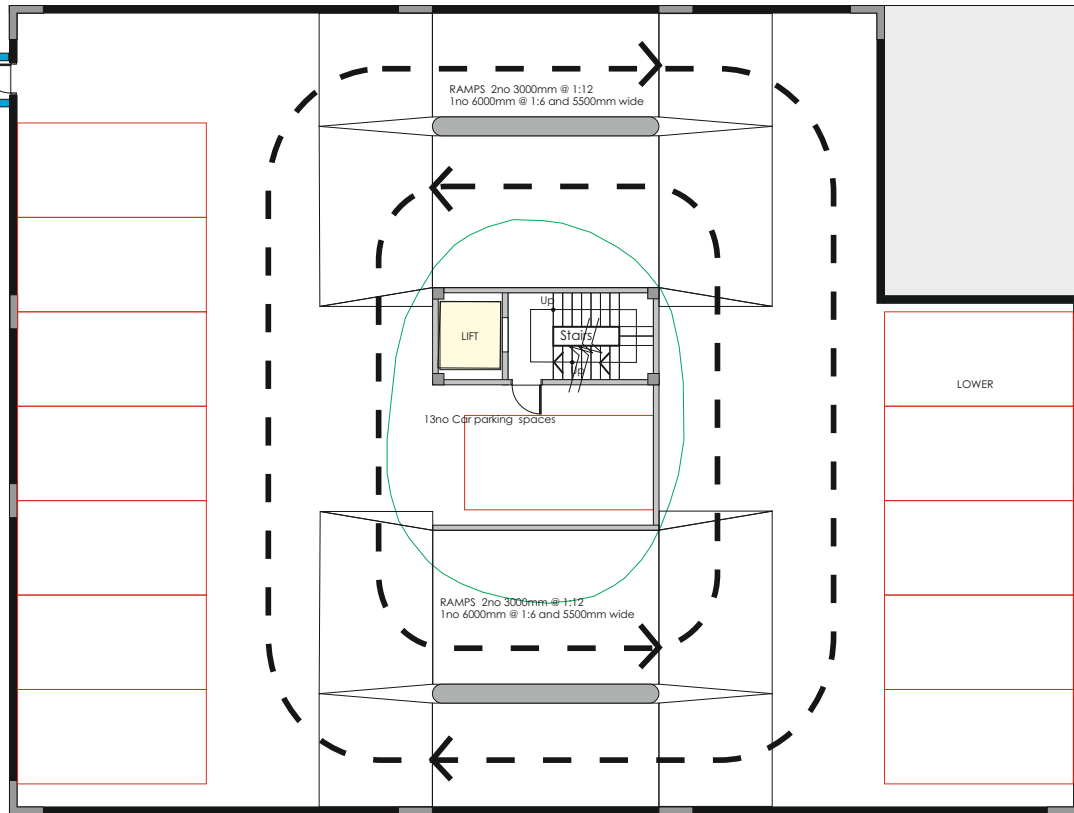




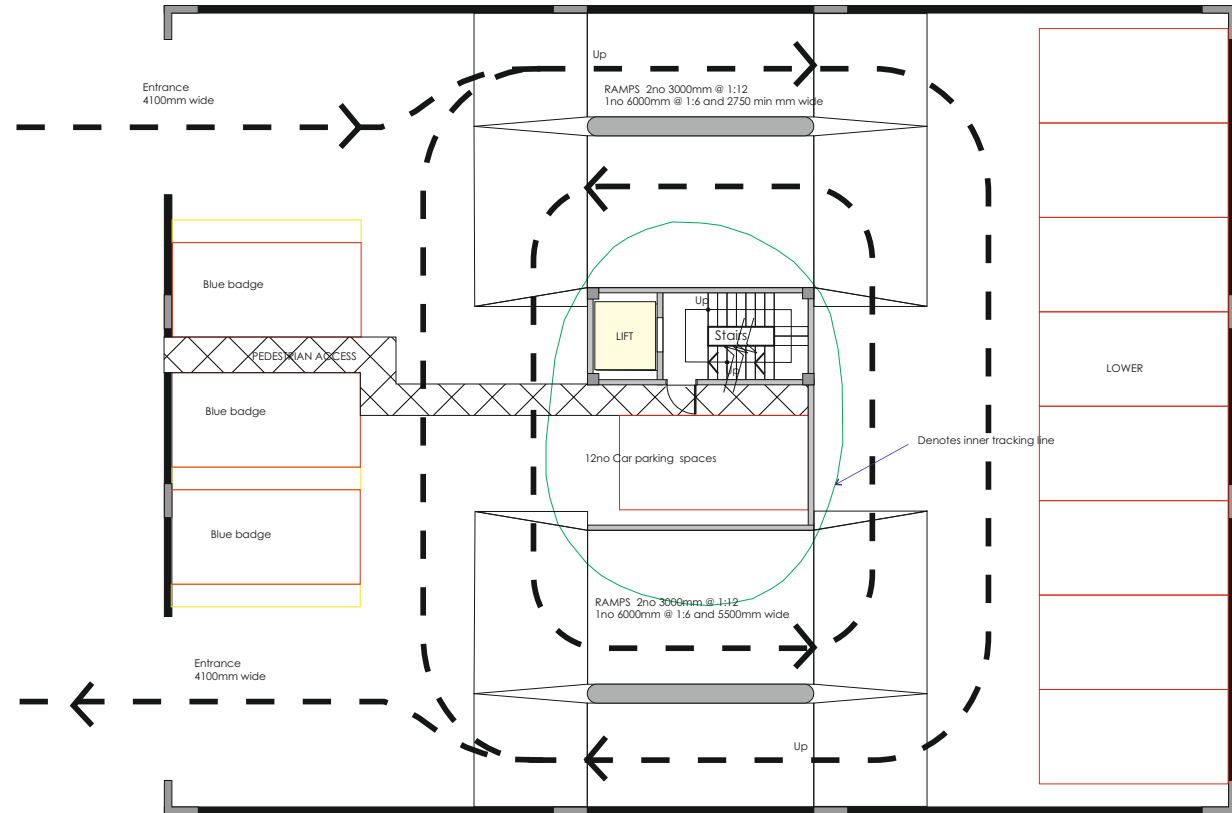
Proposed Second Floor Plan-1:100



Proposed Second Floor Garden Mezzanine Plan-1:100

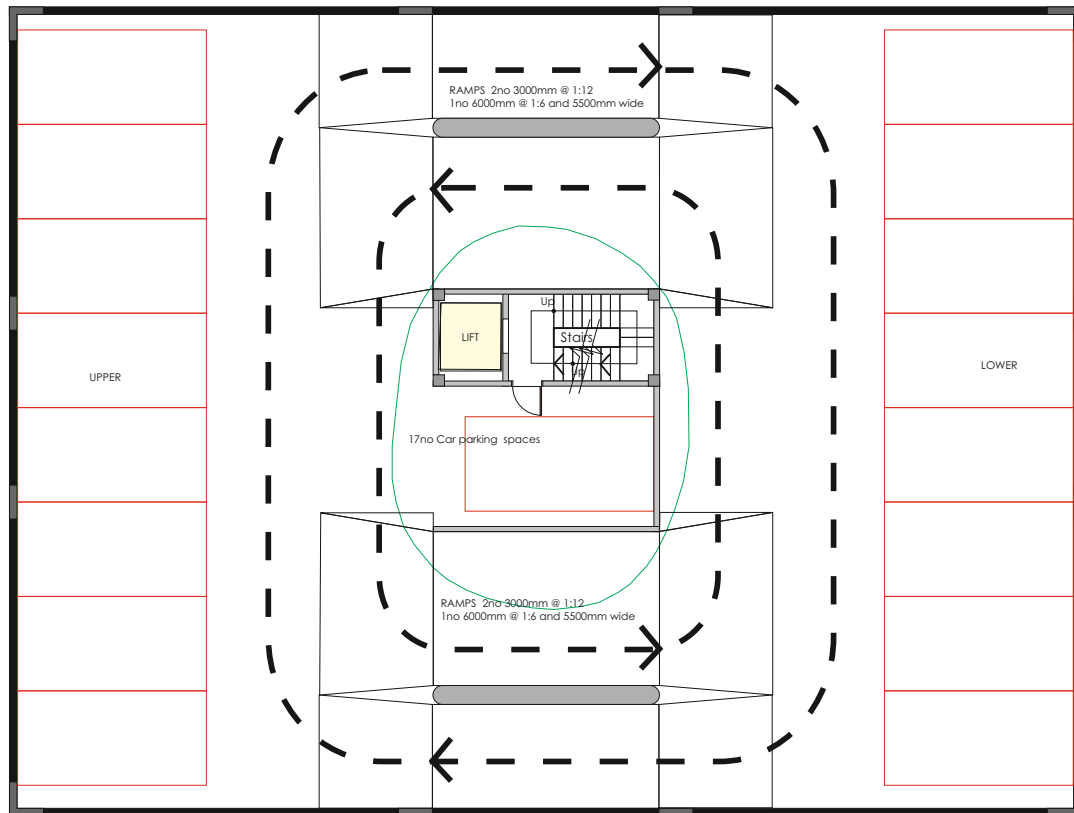


Second Floor Plans - 1:100 Multi-Story Car Park Similar

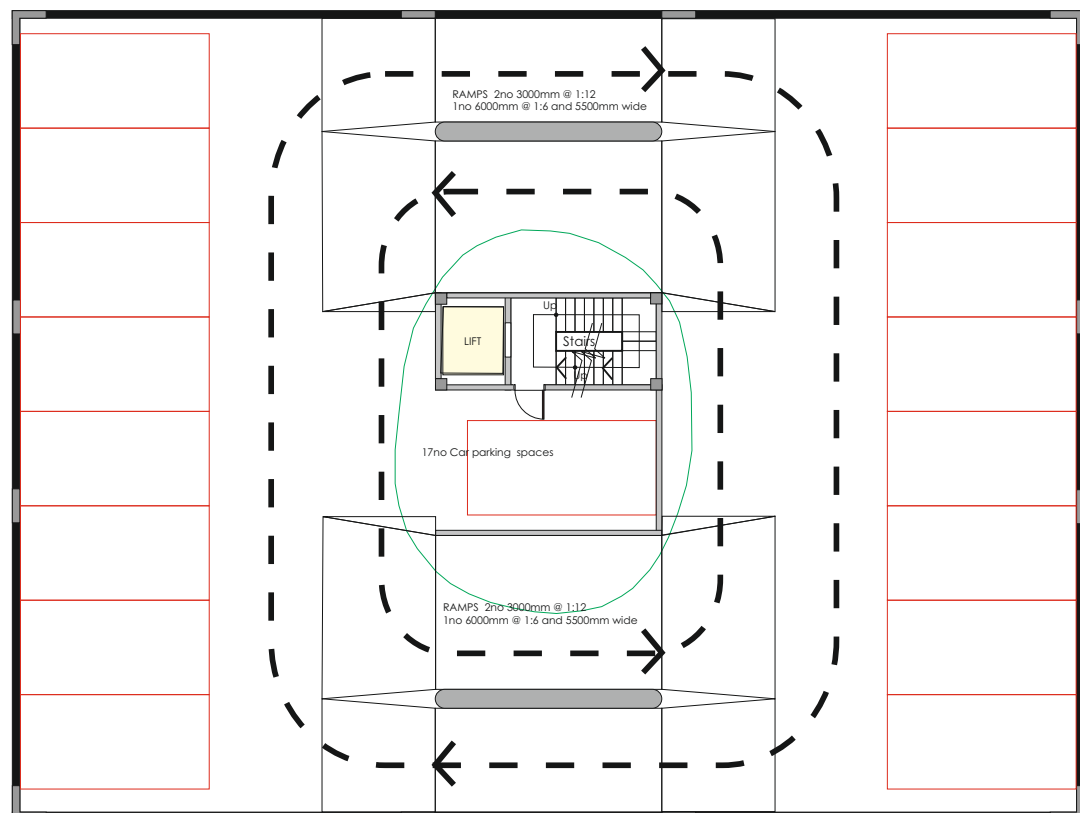


Ground Floor Plan - 1:100 Multi-Story Car Park

TOTAL 59no SPACES
plus 2no spaces at
the front 61no site
total of which 3no
are blue badge



Basement Floor Plan - 1:100 Multi-Story Car Park



First Floor Plan - 1:100 Multi-Story Car Park

E. Layout altered 61 spaces
D. Layout altered 64 spaces
C. Ramped access layout with bridge to main building
B. Ramped access layout altered
A. Ramped access layout

REVISIONS
SCALE 1:100
DATE April 2022
DRAWN RFW

PROJECT
Multi Storey Car Park - Ramped Split Level Floor Plans
Total four floors and 64 No spaces

PROPOSED NEW WAREHOUSE AND OFFICES
Unit K6 Lower Road
Northfleet Kent DA11 9BL
for: Jackson Family Holdings Limited

WARD + ASSOCIATES

THE HOO WROTHAM ROAD
MEOPHAM GRAVESEND KENT DA13 0HP

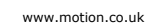
T: 01474 814196 M: 07771 843940
E: admin@wardassociates.co.uk W: www.wardassociates.co.uk
Skype: User Name: rogerwardassociates

2521.WD.09E

0 0.5m 1m 2m 3m 4m 5m
1:50 SCALE BAR

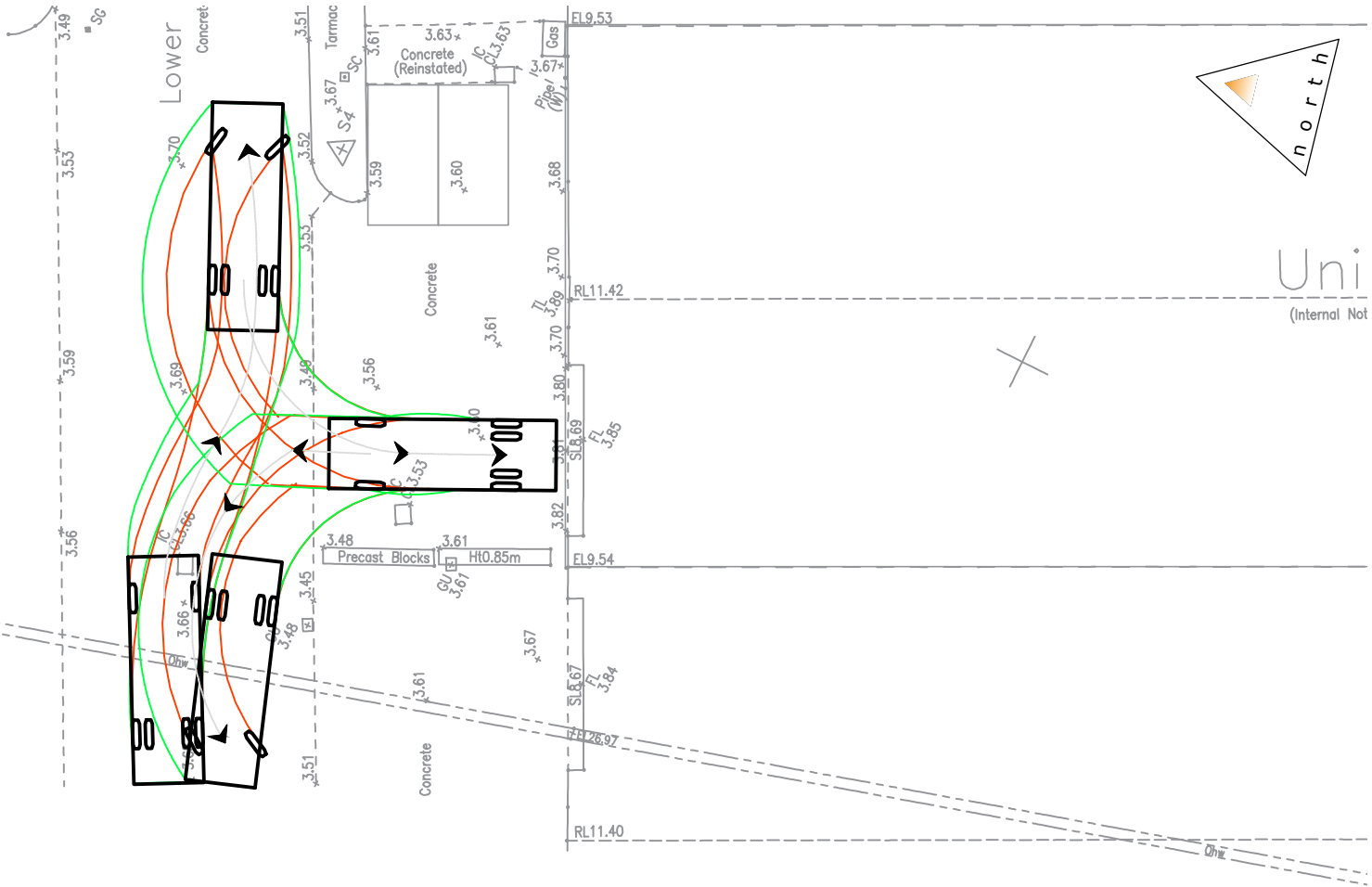
Appendix E

Swept Path Analysis – Large Car



Appendix F

Swept Path Analysis – Servicing Vehicles



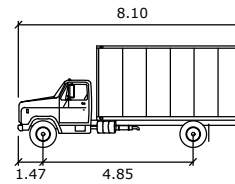
84 North Street
Guildford
Surrey
GU1 4AU

Golden Cross House
8 Duncannon Street
London
WC2N 4JF

T: 01483 531 300

T: 020 8065 5208

www.motion.co.uk



RIGID VAN 17T

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.8

Project:
Unit K6 Lower Road, Northfleet

Title:
Swept Path Analysis
8.1m Rigid

Scale: 1:250 (@ A4)

Drawing: Revision:

2107024-TK05

-

Appendix G

TRICS Output – Warehousing (Commercial)

Motion High Street Guildford

Licence No: 734001

Calculation Reference: AUDIT-734001-220426-0448

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	SY SOUTH YORKSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 6560 to 80100 (units: sqm)
 Range Selected by User: 3824 to 80100 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 22/11/21

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

Selected survey days:

Monday	1 days
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	1
Free Standing (PPS6 Out of Town)	1

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

Selected Location Sub Categories:

Industrial Zone	2
Out of Town	1

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

Motion High Street Guildford

Licence No: 734001

Secondary Filtering selection:

Use Class:

n/a	1 days
B8	2 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	2 days

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

Car ownership within 5 miles:

1.1 to 1.5	3 days
------------	--------

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

Travel Plan:

No	3 days
----	--------

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

PTAL Rating:

No PTAL Present	3 days
-----------------	--------

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

Motion High Street Guildford

Licence No: 734001

LIST OF SITES relevant to selection parameters

1	DV-02-F-03 CHILLPARK BRAKE NEAR EXETER CLYST HONITON Free Standing (PPS6 Out of Town) Out of Town Total Gross floor area: 49081 sqm Survey date: MONDAY 22/11/21	LIDL DISTRIBUTION CENTRE	DEVON	Survey Type: MANUAL
2	EX-02-F-01 BRUNEL WAY COLCHESTER SEVERALLS INDUSTRIAL PK Edge of Town Industrial Zone Total Gross floor area: 6560 sqm Survey date: FRIDAY 18/05/18	SPORTS SUPPLEMENTS	ESSEX	Survey Type: MANUAL
3	SY-02-F-01 MIDDLE BANK DONCASTER Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 80100 sqm Survey date: TUESDAY 21/09/21	TESCO DISTRIBUTION CENTRE	SOUTH YORKSHIRE	Survey Type: MANUAL

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

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.18

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	64591	0.142	2	64591	0.039	2	64591	0.181
06:00 - 07:00	2	64591	0.053	2	64591	0.098	2	64591	0.151
07:00 - 08:00	3	45247	0.062	3	45247	0.035	3	45247	0.097
08:00 - 09:00	3	45247	0.102	3	45247	0.043	3	45247	0.145
09:00 - 10:00	3	45247	0.091	3	45247	0.067	3	45247	0.158
10:00 - 11:00	3	45247	0.083	3	45247	0.074	3	45247	0.157
11:00 - 12:00	3	45247	0.079	3	45247	0.070	3	45247	0.149
12:00 - 13:00	3	45247	0.089	3	45247	0.112	3	45247	0.201
13:00 - 14:00	3	45247	0.086	3	45247	0.085	3	45247	0.171
14:00 - 15:00	3	45247	0.070	3	45247	0.141	3	45247	0.211
15:00 - 16:00	3	45247	0.061	3	45247	0.069	3	45247	0.130
16:00 - 17:00	3	45247	0.046	3	45247	0.051	3	45247	0.097
17:00 - 18:00	3	45247	0.057	3	45247	0.067	3	45247	0.124
18:00 - 19:00	3	45247	0.032	3	45247	0.076	3	45247	0.108
19:00 - 20:00	2	64591	0.032	2	64591	0.038	2	64591	0.070
20:00 - 21:00	2	64591	0.036	2	64591	0.039	2	64591	0.075
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.121			1.104			2.225

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

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

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Parameter summary

Trip rate parameter range selected:	6560 - 80100 (units: sqm)
Survey date range:	01/01/14 - 22/11/21
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	64591	0.015	2	64591	0.008	2	64591	0.023
06:00 - 07:00	2	64591	0.021	2	64591	0.013	2	64591	0.034
07:00 - 08:00	3	45247	0.031	3	45247	0.026	3	45247	0.057
08:00 - 09:00	3	45247	0.034	3	45247	0.026	3	45247	0.060
09:00 - 10:00	3	45247	0.043	3	45247	0.032	3	45247	0.075
10:00 - 11:00	3	45247	0.044	3	45247	0.043	3	45247	0.087
11:00 - 12:00	3	45247	0.034	3	45247	0.027	3	45247	0.061
12:00 - 13:00	3	45247	0.032	3	45247	0.039	3	45247	0.071
13:00 - 14:00	3	45247	0.020	3	45247	0.033	3	45247	0.053
14:00 - 15:00	3	45247	0.028	3	45247	0.032	3	45247	0.060
15:00 - 16:00	3	45247	0.029	3	45247	0.026	3	45247	0.055
16:00 - 17:00	3	45247	0.019	3	45247	0.017	3	45247	0.036
17:00 - 18:00	3	45247	0.032	3	45247	0.024	3	45247	0.056
18:00 - 19:00	3	45247	0.015	3	45247	0.029	3	45247	0.044
19:00 - 20:00	2	64591	0.013	2	64591	0.022	2	64591	0.035
20:00 - 21:00	2	64591	0.015	2	64591	0.019	2	64591	0.034
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.425			0.416			0.841

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

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

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

MULTI-MODAL LGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	64591	0.002	2	64591	0.000	2	64591	0.002
06:00 - 07:00	2	64591	0.002	2	64591	0.001	2	64591	0.003
07:00 - 08:00	3	45247	0.002	3	45247	0.000	3	45247	0.002
08:00 - 09:00	3	45247	0.015	3	45247	0.006	3	45247	0.021
09:00 - 10:00	3	45247	0.012	3	45247	0.006	3	45247	0.018
10:00 - 11:00	3	45247	0.007	3	45247	0.004	3	45247	0.011
11:00 - 12:00	3	45247	0.008	3	45247	0.007	3	45247	0.015
12:00 - 13:00	3	45247	0.007	3	45247	0.008	3	45247	0.015
13:00 - 14:00	3	45247	0.005	3	45247	0.006	3	45247	0.011
14:00 - 15:00	3	45247	0.007	3	45247	0.005	3	45247	0.012
15:00 - 16:00	3	45247	0.004	3	45247	0.008	3	45247	0.012
16:00 - 17:00	3	45247	0.003	3	45247	0.004	3	45247	0.007
17:00 - 18:00	3	45247	0.000	3	45247	0.003	3	45247	0.003
18:00 - 19:00	3	45247	0.001	3	45247	0.008	3	45247	0.009
19:00 - 20:00	2	64591	0.000	2	64591	0.002	2	64591	0.002
20:00 - 21:00	2	64591	0.001	2	64591	0.000	2	64591	0.001
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.076			0.068			0.144

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

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

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

MULTI-MODAL Servicing Vehicles

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	64591	0.017	2	64591	0.009	2	64591	0.026
06:00 - 07:00	2	64591	0.023	2	64591	0.014	2	64591	0.037
07:00 - 08:00	3	45247	0.032	3	45247	0.026	3	45247	0.058
08:00 - 09:00	3	45247	0.045	3	45247	0.029	3	45247	0.074
09:00 - 10:00	3	45247	0.048	3	45247	0.035	3	45247	0.083
10:00 - 11:00	3	45247	0.046	3	45247	0.046	3	45247	0.092
11:00 - 12:00	3	45247	0.035	3	45247	0.029	3	45247	0.064
12:00 - 13:00	3	45247	0.032	3	45247	0.043	3	45247	0.075
13:00 - 14:00	3	45247	0.023	3	45247	0.038	3	45247	0.061
14:00 - 15:00	3	45247	0.032	3	45247	0.035	3	45247	0.067
15:00 - 16:00	3	45247	0.031	3	45247	0.032	3	45247	0.063
16:00 - 17:00	3	45247	0.020	3	45247	0.018	3	45247	0.038
17:00 - 18:00	3	45247	0.032	3	45247	0.024	3	45247	0.056
18:00 - 19:00	3	45247	0.017	3	45247	0.034	3	45247	0.051
19:00 - 20:00	2	64591	0.013	2	64591	0.025	2	64591	0.038
20:00 - 21:00	2	64591	0.015	2	64591	0.019	2	64591	0.034
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.461			0.456			0.917

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

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

Appendix H

TRICS Output - Office

Calculation Reference: AUDIT-734001-220426-0430

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	SO SLOUGH	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 178 to 5050 (units: sqm)
 Range Selected by User: 178 to 70291 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 21/10/21

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

Selected survey days:

Monday	1 days
Thursday	2 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	3
---------------------	---

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

Selected Location Sub Categories:

Commercial Zone	1
Built-Up Zone	2

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

Motion High Street Guildford

Licence No: 734001

Secondary Filtering selection:

Use Class:

Not Known 3 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

15,001 to 20,000 1 days

25,001 to 50,000 2 days

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

Population within 5 miles:

25,001 to 50,000 1 days

100,001 to 125,000 1 days

125,001 to 250,000 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 1 days

1.6 to 2.0 1 days

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

Travel Plan:

Yes 1 days

No 2 days

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

PTAL Rating:

No PTAL Present 3 days

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

Motion High Street Guildford

Licence No: 734001

LIST OF SITES relevant to selection parameters

1	NF-02-A-02 NORTH QUAY GREAT YARMOUTH	FINANCIAL PLANNERS	NORFOLK
	Edge of Town Centre Commercial Zone		
	Total Gross floor area:	894 sqm	
	Survey date: MONDAY	11/09/17	Survey Type: MANUAL
2	NY-02-A-01 NORTH PARK ROAD HARROGATE	SOLICITORS	NORTH YORKSHIRE
	Edge of Town Centre Built-Up Zone		
	Total Gross floor area:	178 sqm	
	Survey date: THURSDAY	04/10/18	Survey Type: MANUAL
3	SO-02-A-02 BATH ROAD SLOUGH	COUNCIL OFFICES	SLOUGH
	Edge of Town Centre Built-Up Zone		
	Total Gross floor area:	5050 sqm	
	Survey date: THURSDAY	27/02/14	Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CB-02-A-02	Low Parking
DS-02-A-02	Low Parking
ES-02-A-12	Low Parking
ES-02-A-13	Low Parking
GM-02-A-09	Low Parking
HF-02-A-04	Low Parking
MS-02-A-02	Low Parking
NF-02-A-03	Low Parking
NY-02-A-02	Low Parking

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.35

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2972	0.976	2	2972	0.050	2	2972	1.026
08:00 - 09:00	3	2041	3.104	3	2041	0.408	3	2041	3.512
09:00 - 10:00	3	2041	3.904	3	2041	1.274	3	2041	5.178
10:00 - 11:00	3	2041	1.225	3	2041	0.947	3	2041	2.172
11:00 - 12:00	3	2041	0.817	3	2041	0.980	3	2041	1.797
12:00 - 13:00	3	2041	1.111	3	2041	1.503	3	2041	2.614
13:00 - 14:00	3	2041	1.519	3	2041	1.094	3	2041	2.613
14:00 - 15:00	3	2041	1.176	3	2041	0.980	3	2041	2.156
15:00 - 16:00	3	2041	0.866	3	2041	1.274	3	2041	2.140
16:00 - 17:00	3	2041	0.588	3	2041	2.565	3	2041	3.153
17:00 - 18:00	3	2041	0.490	3	2041	3.365	3	2041	3.855
18:00 - 19:00	2	2972	0.202	2	2972	1.110	2	2972	1.312
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			15.978			15.550			31.528

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

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

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Parameter summary

Trip rate parameter range selected:	178 - 5050 (units: sqm)
Survey date range:	01/01/14 - 21/10/21
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	9

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

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2972	0.017	2	2972	0.000	2	2972	0.017
08:00 - 09:00	3	2041	0.033	3	2041	0.033	3	2041	0.066
09:00 - 10:00	3	2041	0.000	3	2041	0.016	3	2041	0.016
10:00 - 11:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
11:00 - 12:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
12:00 - 13:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
13:00 - 14:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
14:00 - 15:00	3	2041	0.016	3	2041	0.016	3	2041	0.032
15:00 - 16:00	3	2041	0.016	3	2041	0.016	3	2041	0.032
16:00 - 17:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
17:00 - 18:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
18:00 - 19:00	2	2972	0.000	2	2972	0.000	2	2972	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.082			0.081			0.163

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

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Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.35

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2972	1.094	2	2972	0.050	2	2972	1.144
08:00 - 09:00	3	2041	4.280	3	2041	0.310	3	2041	4.590
09:00 - 10:00	3	2041	4.704	3	2041	1.454	3	2041	6.158
10:00 - 11:00	3	2041	1.650	3	2041	1.323	3	2041	2.973
11:00 - 12:00	3	2041	1.143	3	2041	1.323	3	2041	2.466
12:00 - 13:00	3	2041	1.976	3	2041	2.597	3	2041	4.573
13:00 - 14:00	3	2041	2.761	3	2041	1.944	3	2041	4.705
14:00 - 15:00	3	2041	1.617	3	2041	1.323	3	2041	2.940
15:00 - 16:00	3	2041	1.111	3	2041	1.470	3	2041	2.581
16:00 - 17:00	3	2041	0.621	3	2041	3.267	3	2041	3.888
17:00 - 18:00	3	2041	0.392	3	2041	4.672	3	2041	5.064
18:00 - 19:00	2	2972	0.185	2	2972	1.312	2	2972	1.497
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			21.534			21.045			42.579

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

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

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL LGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2972	0.000	2	2972	0.000	2	2972	0.000
08:00 - 09:00	3	2041	0.016	3	2041	0.000	3	2041	0.016
09:00 - 10:00	3	2041	0.065	3	2041	0.065	3	2041	0.130
10:00 - 11:00	3	2041	0.033	3	2041	0.082	3	2041	0.115
11:00 - 12:00	3	2041	0.082	3	2041	0.049	3	2041	0.131
12:00 - 13:00	3	2041	0.033	3	2041	0.033	3	2041	0.066
13:00 - 14:00	3	2041	0.000	3	2041	0.000	3	2041	0.000
14:00 - 15:00	3	2041	0.065	3	2041	0.065	3	2041	0.130
15:00 - 16:00	3	2041	0.065	3	2041	0.082	3	2041	0.147
16:00 - 17:00	3	2041	0.016	3	2041	0.000	3	2041	0.016
17:00 - 18:00	3	2041	0.016	3	2041	0.000	3	2041	0.016
18:00 - 19:00	2	2972	0.017	2	2972	0.017	2	2972	0.034
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.408			0.393			0.801

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

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

Appendix I

Census Data Distribution

WF01BEW - Location of usual residence and place of work (OA level)

ONS Crown Copyright Reserved [from Nomis on 12 April 2022]

population All usual residents ages 16 and over in employment the week before the census
units Persons
date 2011

		place of work	
currently residing in : 2011 census merged local authority district	E02005055 : Gravesham 001	% Trips	Distribution
Gravesham	1,147	50.3% East	
Medway	348	15.3% East	
Sevenoaks	76	3.3% East	
Maidstone	75	3.3% East	
Bexley	67	2.9% East	
Swale	55	2.4% East	
Tonbridge and Malling	53	2.3% East	
Bromley	29	1.3% East	
Greenwich	28	1.2% East	
Ashford	24	1.1% East	
Canterbury	18	0.8% East	
Crawley	14	0.6% East	
Croydon	14	0.6% East	
Lewisham	14	0.6% East	
Tunbridge Wells	14	0.6% East	86.7%
Dartford	269	11.8% West	
Thurrock	23	1.0% West	
Havering	11	0.5% West	13.3%
TOTAL	2,279	100%	

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geograph

Appendix J

2024 Traffic Data – A226/Lower Road

K&M TRAFFIC SURVEYS

DATE : WEDNESDAY 31st JANUARY 2024

LOCATION : A226 GALLEY HILLROAD / LOWER ROAD, NORTHFLEET

A226 GALLEY HILLROAD / LOWER ROAD / STONEBRIDGE ROAD SIGNAL JUNCTION

1							2							3							4							5							6						
A226 STONEBRIDGE ROAD SE STRAIGHT AHEAD TO A226 GALLEY HILL ROAD							A226 STONEBRIDGE ROAD SE RIGHT TURN TO LOWER RD NORTH							A226 GALLEY HILL ROAD WEST LEFT TURN TO LOWER RD NORTH							A226 GALLEY HILL ROAD WEST STRAIGHT AHEAD TO A226 STONEBRIDGE RD SE							LOWER ROAD NORTH LEFT TURN TO A226 STONEBRIDGE RD SE							LOWER ROAD NORTH RIGHT TURN TO A226 GALLEY HILL ROAD WEST						
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT					
0730-0745	11					11	40	9				49	0					0	21					21	14	11				25	0				0						
0745-0800	12					12	76	14		1		91	0					0	35					35	8	6				14	0				0						
0800-0815	9					9	50	10		1	1	62	0					0	30					30	26	14				40	0				0						
0815-0830	4					4	42	6				48	0					0	29					29	23	14		1		38	0				0						
0730-0930	36	0	0	0	0	36	208	39	0	2	1	250	0	0	0	0	0	0	115	0	0	0	0	115	71	45	0	1	0	117	0	0	0	0	0	0					

A226 STONEBRIDGE ROAD SE STRAIGHT AHEAD TO A226 GALLEY HILL ROAD							A226 STONEBRIDGE ROAD SE RIGHT TURN TO LOWER RD NORTH							A226 GALLEY HILL ROAD WEST LEFT TURN TO LOWER RD NORTH							A226 GALLEY HILL ROAD WEST STRAIGHT AHEAD TO A226 STONEBRIDGE RD SE							LOWER ROAD NORTH LEFT TURN TO A226 STONEBRIDGE RD SE							LOWER ROAD NORTH RIGHT TURN TO A226 GALLEY HILL ROAD WEST						
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT					
1615-1630	18					18	25	5		1		31	0					0	13					13	49	2		2		53	0				0						
1615-1630	19					19	29	2				31	0					0	14					14	60	3				63	0				0						
1645-1700	21					21	16	1				17	0					0	17					17	49	2			1	52	0				0						
1700-1715	28			1		29	21					21	0					0	13			1		14	83	6			3	92	0				0						
1600-1800	86	0	0	1	0	87	91	8	0	1	0	100	0	0	0	0	0	0	57	0	0	1	0	58	241	13	0	2	4	260	0	0	0	0	0	0					



ROAD CLOSED WEST OF SNOWDEN HILL JUNCTION

Appendix K

LINSIG Modelling Outputs

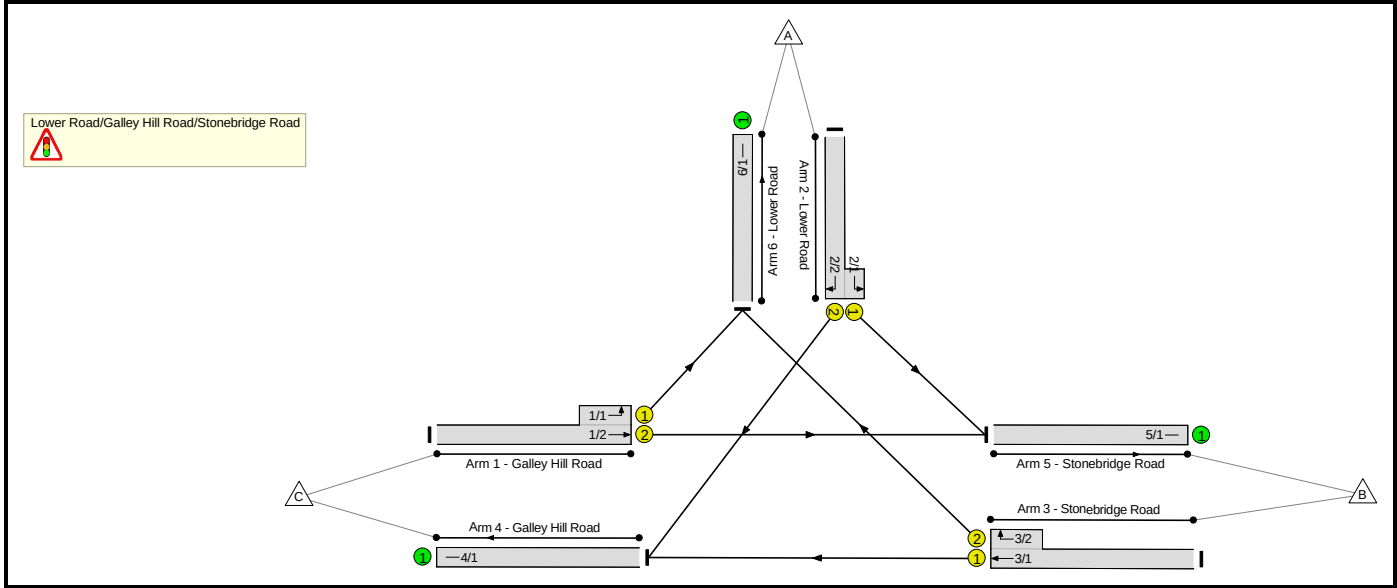
Full Input Data And Results

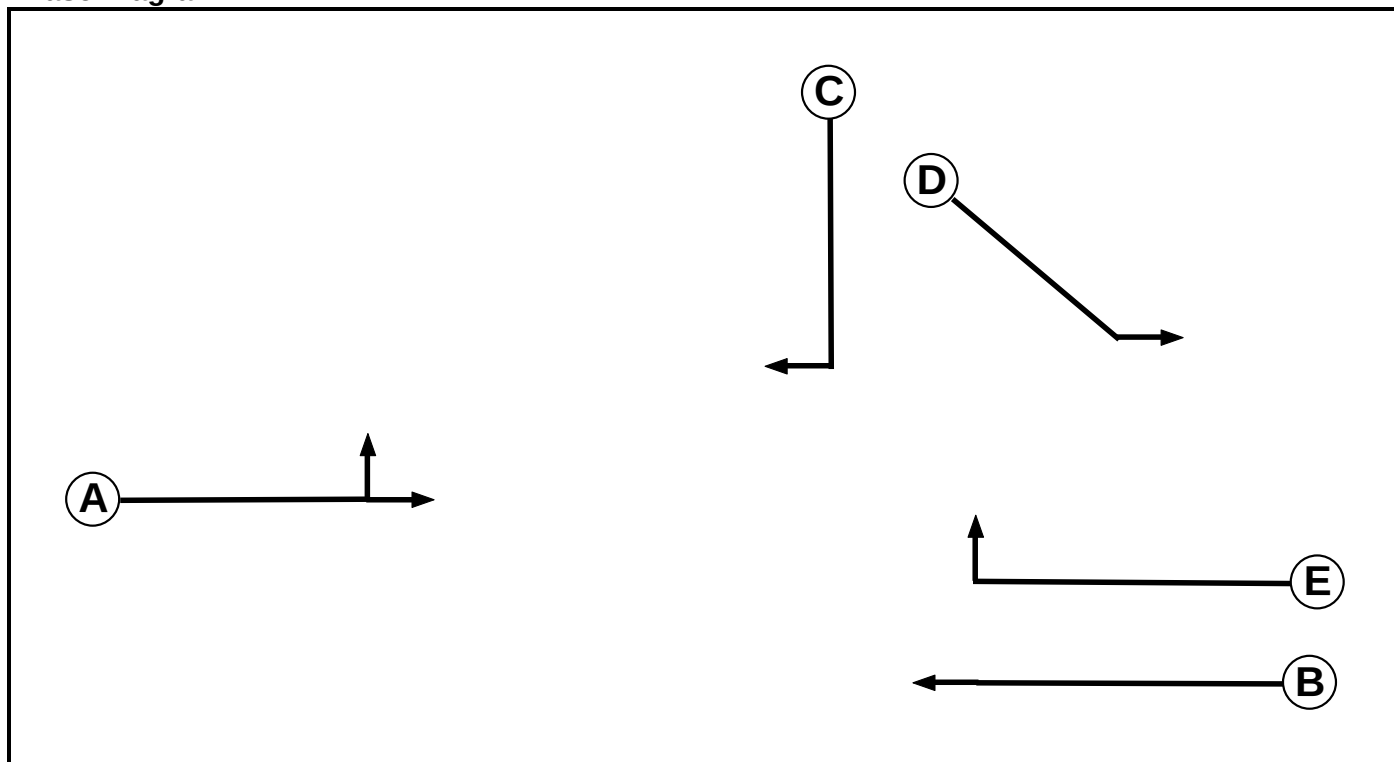
Full Input Data And Results

User and Project Details

Project:	Lower Road, Northfleet
Title:	Proposed Commercial Development
Location:	
Client:	Jackson Lift Group
Additional detail:	
File name:	M01-wanort-LinSig Model 22-06-06.lsg3x
Author:	JE
Company:	Motion
Address:	84 North Street, Guildford

Network Layout Diagram



Phase Diagram**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		4	4

Phase Intergreens Matrix

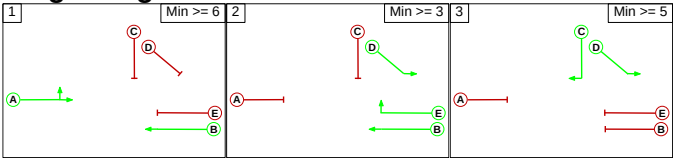
Phase Interference Matrix						
	Starting Phase					
Terminating Phase		A	B	C	D	E
	A		-	6	8	7
	B	-		6	-	-
	C	6	7		-	7
	D	6	-	-		-
	E	7	-	6	-	

Phases in Stage

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

Full Input Data And Results

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage			
		1	2	3
	From Stage 1		8	8
	From Stage 2	7		6
	From Stage 3	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Lower Road/Galley Hill Road/Stonebridge Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Lower Road/Galley Hill Road/Stonebridge Road												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Galley Hill Road)	U	A	2	3	4.0	Geom	-	4.36	0.00	Y	Arm 6 Left	12.00
1/2 (Galley Hill Road)	U	A	2	3	18.6	User	2024	-	-	-	-	-
2/1 (Lower Road)	U	D	2	3	2.3	Geom	-	5.00	0.00	Y	Arm 5 Left	20.00
2/2 (Lower Road)	U	C	2	3	174.0	Geom	-	5.00	0.00	Y	Arm 4 Right	12.00
3/1 (Stonebridge Road)	U	B	2	3	40.0	User	2043	-	-	-	-	-
3/2 (Stonebridge Road)	U	E	2	3	4.0	Geom	-	4.00	0.00	Y	Arm 6 Right	8.00
4/1 (Galley Hill Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Stonebridge Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Lower Road)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2022 Baseline AM'	07:30	08:30	01:00	
2: '2022 Baseline PM'	16:15	17:15	01:00	
3: '2027 Baseline AM'	07:30	08:30	01:00	F1*1.0407
4: '2027 Baseline PM'	16:15	17:15	01:00	F2*1.043
7: '2022 with Development AM'	07:30	08:30	01:00	F1+F5
8: '2022 with Development PM'	16:15	17:15	01:00	F2+F6
9: '2027 with Development AM'	07:30	08:30	01:00	F3+F5
10: '2027 with Development PM'	16:15	17:15	01:00	F4+F6

Scenario 1: '2022 Baseline AM' (FG1: '2022 Baseline AM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	89	25	114
	B	183	0	419	602
	C	57	433	0	490
	Tot.	240	522	444	1206

Traffic Lane Flows

Lane	Scenario 1: 2022 Baseline AM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	57
1/2 (with short)	490(In) 433(Out)
2/1 (short)	89
2/2 (with short)	114(In) 25(Out)
3/1 (with short)	602(In) 419(Out)
3/2 (short)	183
4/1	444
5/1	522
6/1	240

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	206	48	254
	B	72	0	424	496
	C	20	378	0	398
	Tot.	92	584	472	1148

Traffic Lane Flows

Lane	Scenario 2: 2022 Baseline PM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	20
1/2 (with short)	398(In) 378(Out)
2/1 (short)	206
2/2 (with short)	254(In) 48(Out)
3/1 (with short)	496(In) 424(Out)
3/2 (short)	72
4/1	472
5/1	584
6/1	92

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2027 Baseline AM' (FG3: '2027 Baseline AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	93	26	119
	B	190	0	436	626
	C	59	451	0	510
	Tot.	249	544	462	1255

Traffic Lane Flows

Lane	Scenario 3: 2027 Baseline AM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	59
1/2 (with short)	510(In) 451(Out)
2/1 (short)	93
2/2 (with short)	119(In) 26(Out)
3/1 (with short)	626(In) 436(Out)
3/2 (short)	190
4/1	462
5/1	544
6/1	249

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2027 Baseline PM' (FG4: '2027 Baseline PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	215	50	265
	B	75	0	442	517
	C	21	394	0	415
	Tot.	96	609	492	1197

Traffic Lane Flows

Lane	Scenario 4: 2027 Baseline PM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	21
1/2 (with short)	415(In) 394(Out)
2/1 (short)	215
2/2 (with short)	265(In) 50(Out)
3/1 (with short)	517(In) 442(Out)
3/2 (short)	75
4/1	492
5/1	609
6/1	96

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2022 with Development AM' (FG7: '2022 with Development AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	92	26	118
	B	234	0	419	653
	C	65	433	0	498
	Tot.	299	525	445	1269

Traffic Lane Flows

Lane	Scenario 5: 2022 with Development AM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	65
1/2 (with short)	498(In) 433(Out)
2/1 (short)	92
2/2 (with short)	118(In) 26(Out)
3/1 (with short)	653(In) 419(Out)
3/2 (short)	234
4/1	445
5/1	525
6/1	299

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2022 with Development PM' (FG8: '2022 with Development PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	261	57	318
	B	76	0	424	500
	C	21	378	0	399
	Tot.	97	639	481	1217

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2022 with Development PM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	21
1/2 (with short)	399(In) 378(Out)
2/1 (short)	261
2/2 (with short)	318(In) 57(Out)
3/1 (with short)	500(In) 424(Out)
3/2 (short)	76
4/1	481
5/1	639
6/1	97

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2027 with Development AM' (FG9: '2027 with Development AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	96	27	123
	B	241	0	436	677
	C	67	451	0	518
	Tot.	308	547	463	1318

Traffic Lane Flows

Lane	Scenario 7: 2027 with Development AM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	67
1/2 (with short)	518(In) 451(Out)
2/1 (short)	96
2/2 (with short)	123(In) 27(Out)
3/1 (with short)	677(In) 436(Out)
3/2 (short)	241
4/1	463
5/1	547
6/1	308

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2027 with Development PM' (FG10: '2027 with Development PM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	270	59	329
	B	79	0	442	521
	C	22	394	0	416
	Tot.	101	664	501	1266

Traffic Lane Flows

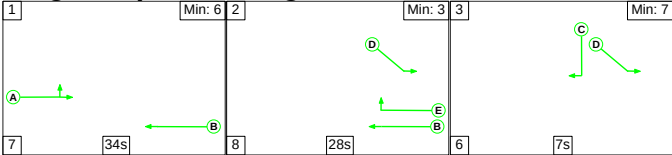
Lane	Scenario 8: 2027 with Development PM
Junction: Lower Road/Galley Hill Road/Stonebridge Road	
1/1 (short)	22
1/2 (with short)	416(In) 394(Out)
2/1 (short)	270
2/2 (with short)	329(In) 59(Out)
3/1 (with short)	521(In) 442(Out)
3/2 (short)	79
4/1	501
5/1	664
6/1	101

Lane Saturation Flows

Junction: Lower Road/Galley Hill Road/Stonebridge Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Galley Hill Road)	4.36	0.00	Y	Arm 6 Left	12.00	100.0 %	1823	1823
1/2 (Galley Hill Road Lane 2)	This lane uses a directly entered Saturation Flow						2024	2024
2/1 (Lower Road)	5.00	0.00	Y	Arm 5 Left	20.00	100.0 %	1967	1967
2/2 (Lower Road)	5.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1880	1880
3/1 (Stonebridge Road Lane 1)	This lane uses a directly entered Saturation Flow						2043	2043
3/2 (Stonebridge Road)	4.00	0.00	Y	Arm 6 Right	8.00	100.0 %	1697	1697
4/1 (Galley Hill Road Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stonebridge Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Lower Road Lane 1)	Infinite Saturation Flow						Inf	Inf

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

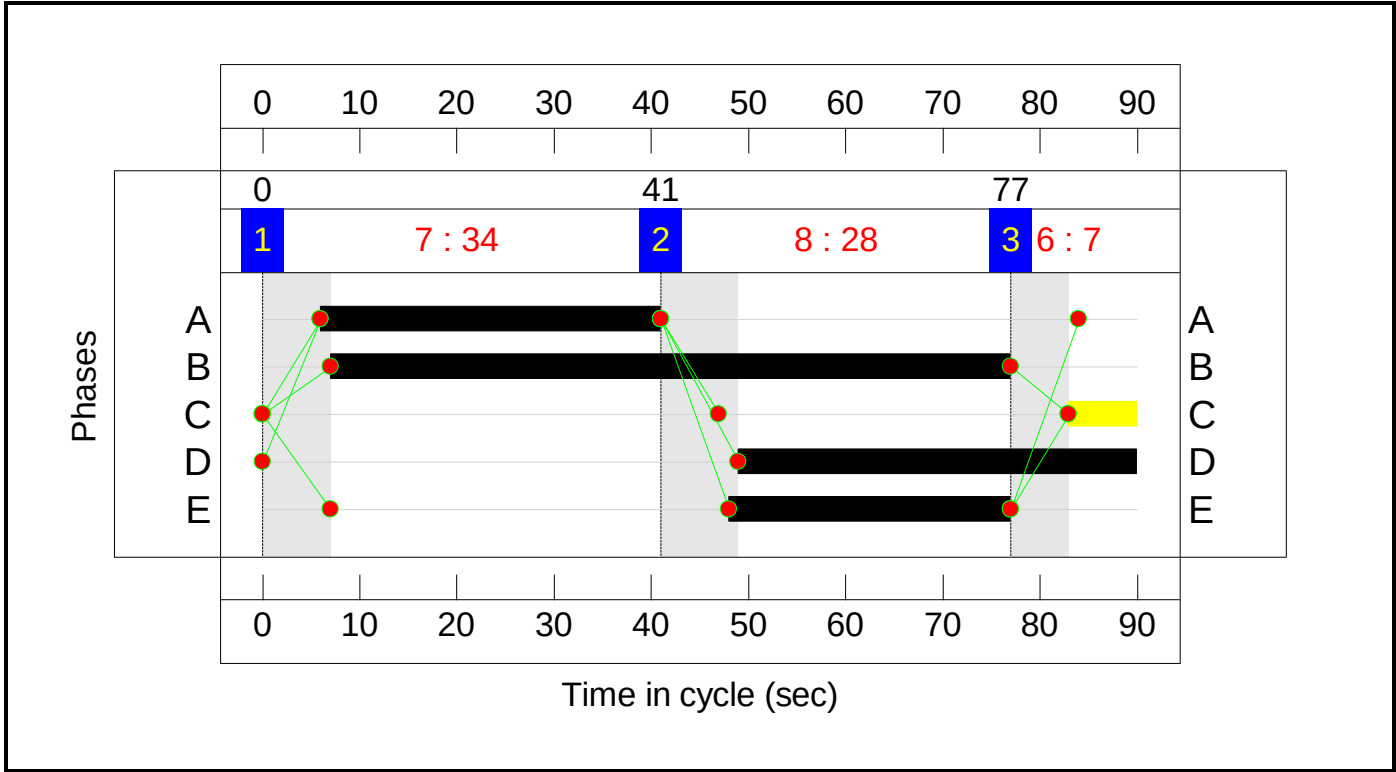
Stage Sequence Diagram



Stage Timings

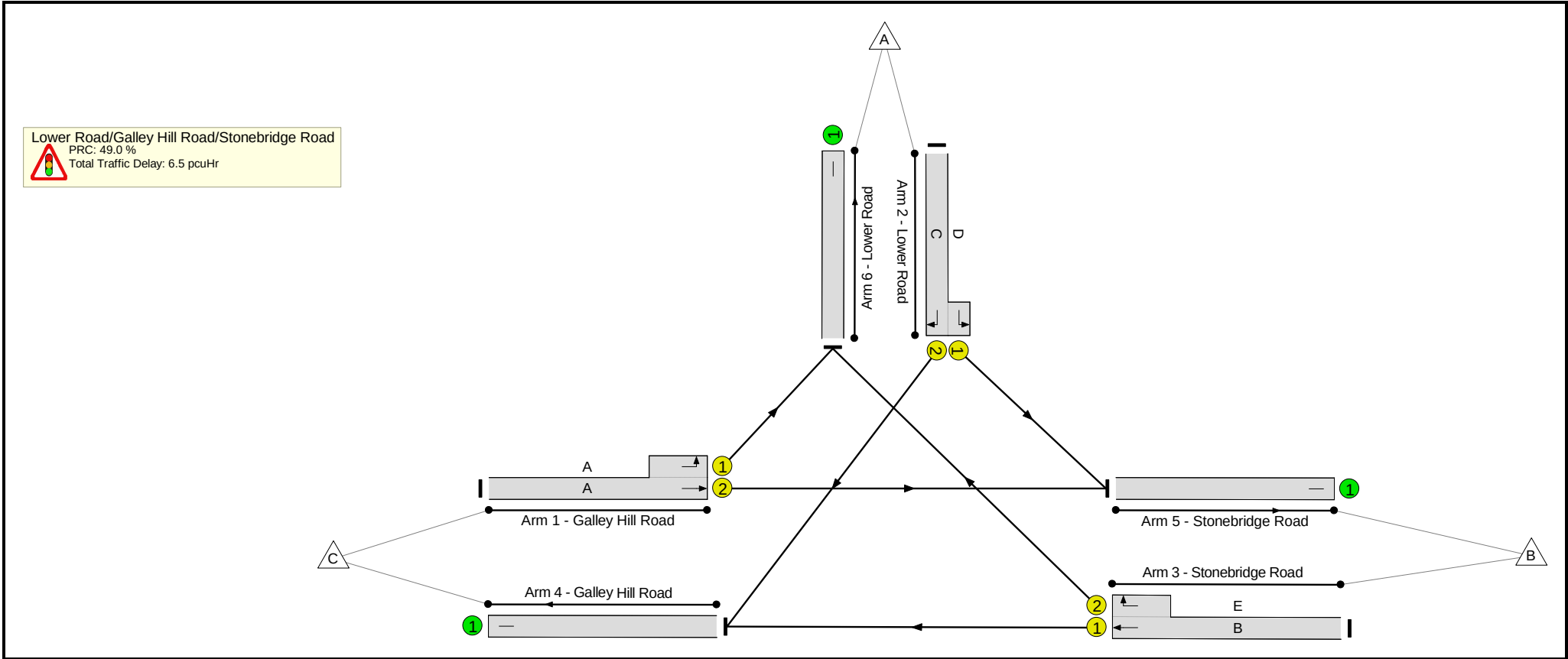
Stage	1	2	3
Duration	34	28	7
Change Point	0	41	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	60.4%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	60.4%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	35	-	490	2024:1823	729+96	59.4 : 59.4%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	7:41	-	114	1880:1967	111+394	22.6 : 22.6%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	70:29	-	602	2043:1697	694+303	60.4 : 60.4%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	444	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	522	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%

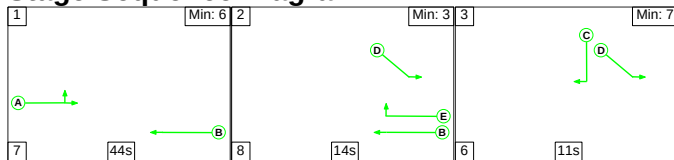
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Commercial Development	-	-	0	0	0	4.8	1.6	0.0	6.5	-	-	-	-
Lower Road/Galley Hill Road/Stonebridge Road	-	-	0	0	0	4.8	1.6	0.0	6.5	-	-	-	-
1/2+1/1	490	490	-	-	-	2.8	0.7	-	3.5	26.0	9.0	0.7	9.7
2/2+2/1	114	114	-	-	-	0.6	0.1	-	0.7	23.4	1.2	0.1	1.4
3/1+3/2	602	602	-	-	-	1.4	0.8	-	2.2	13.1	3.4	0.8	4.2
4/1	444	444	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	522	522	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 49.0 Total Delay for Signalled Lanes (pcuHr): 6.48 Cycle Time (s): 90 PRC Over All Lanes (%): 49.0 Total Delay Over All Lanes(pcuHr): 6.48													

Full Input Data And Results

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

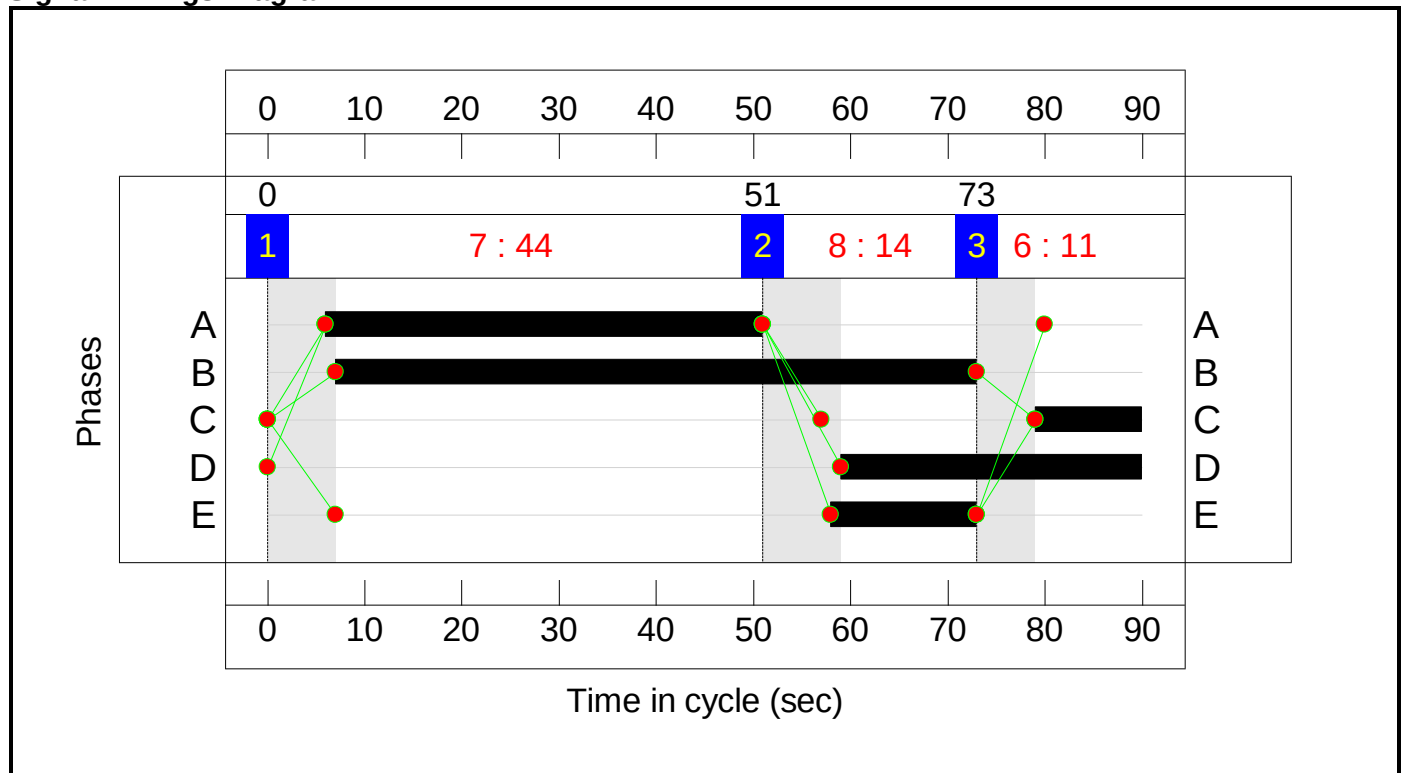
Stage Sequence Diagram



Stage Timings

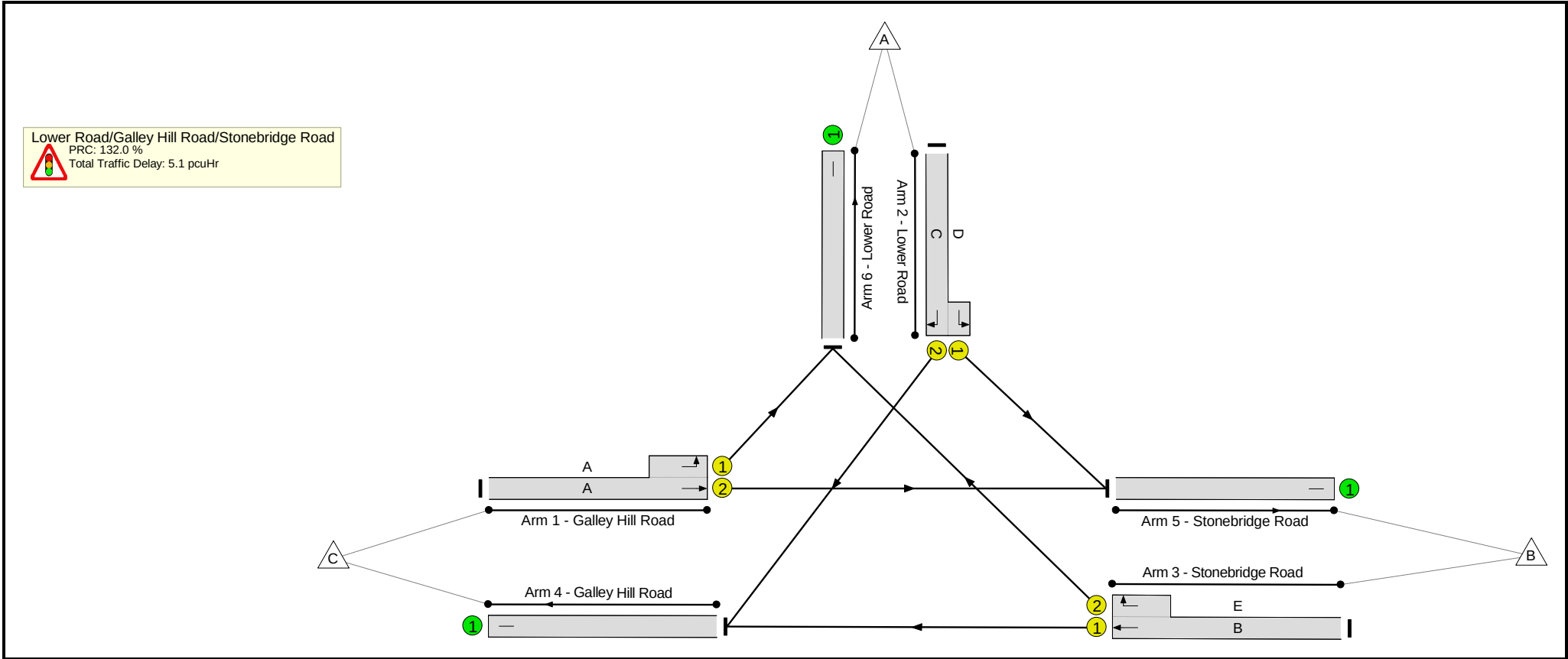
Stage	1	2	3
Duration	44	14	11
Change Point	0	51	73

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

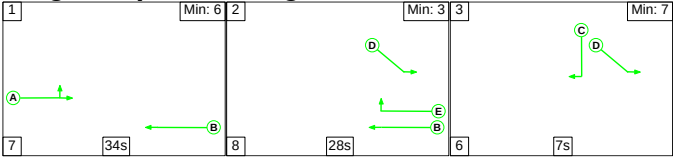
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	38.8%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	38.8%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	45	-	398	2024:1823	988+52	38.2 : 38.2%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	11:31	-	254	1880:1967	124+534	38.6 : 38.6%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	66:15	-	496	2043:1697	1093+186	38.8 : 38.8%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	472	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	92	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

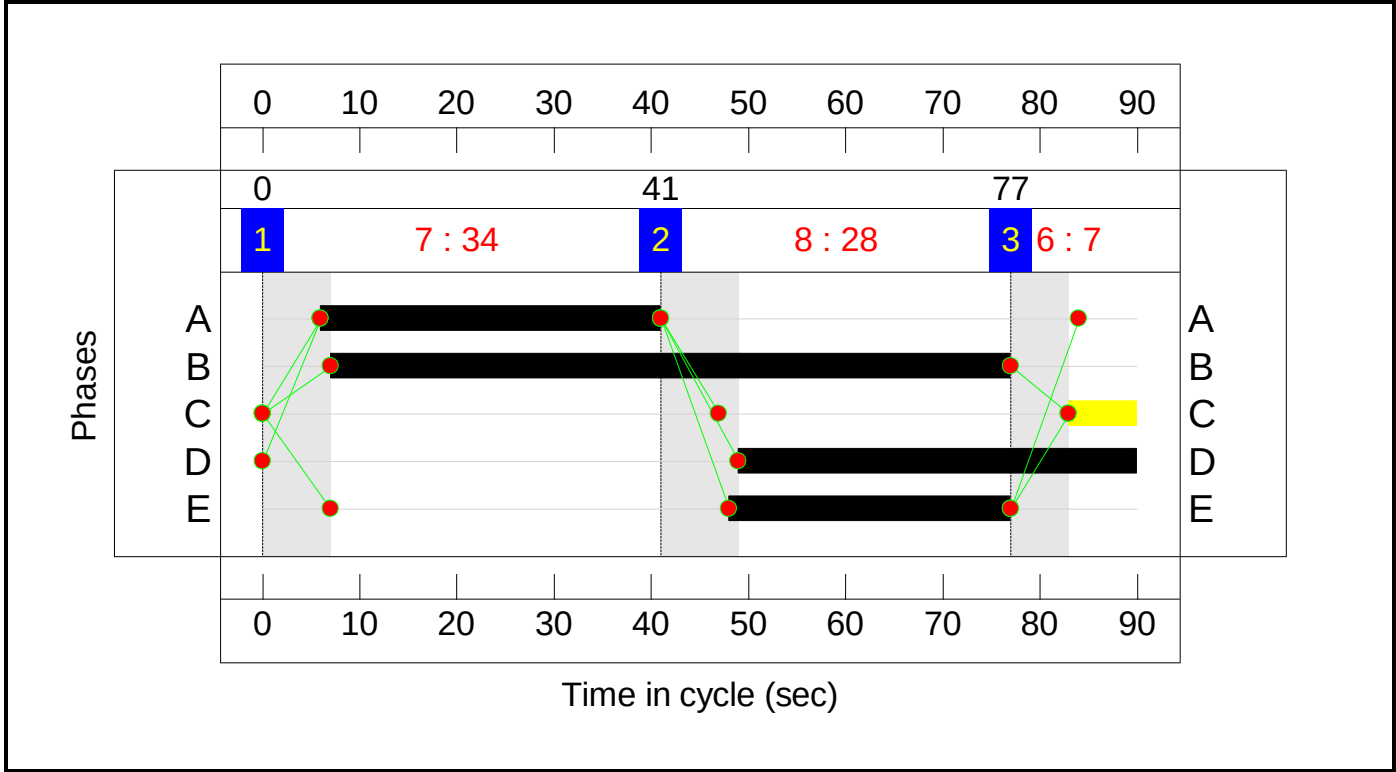
Stage Sequence Diagram



Stage Timings

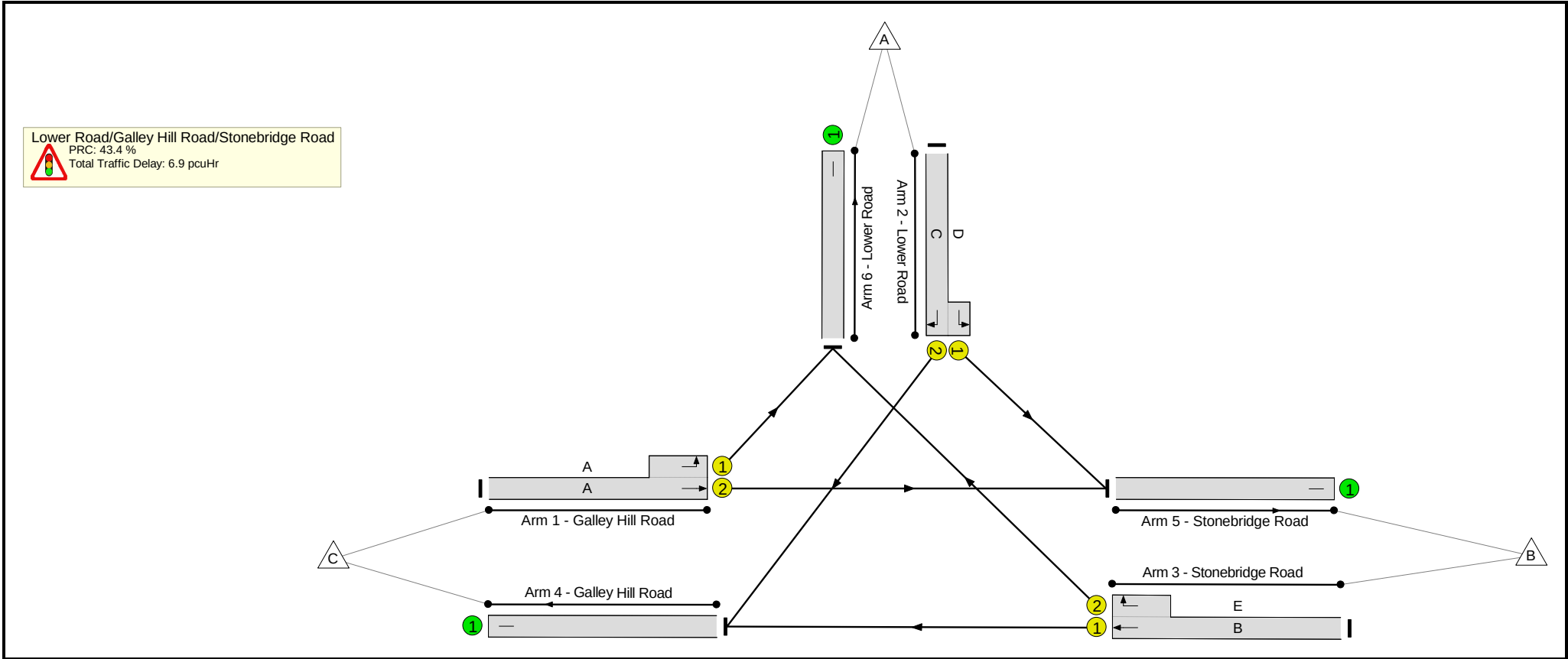
Stage	1	2	3
Duration	34	28	7
Change Point	0	41	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

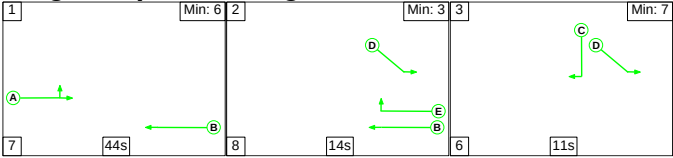
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	62.8%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	62.8%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	35	-	510	2024:1823	729+95	61.8 : 61.8%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	7:41	-	119	1880:1967	110+395	23.5 : 23.5%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	70:29	-	626	2043:1697	695+303	62.8 : 62.8%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	462	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

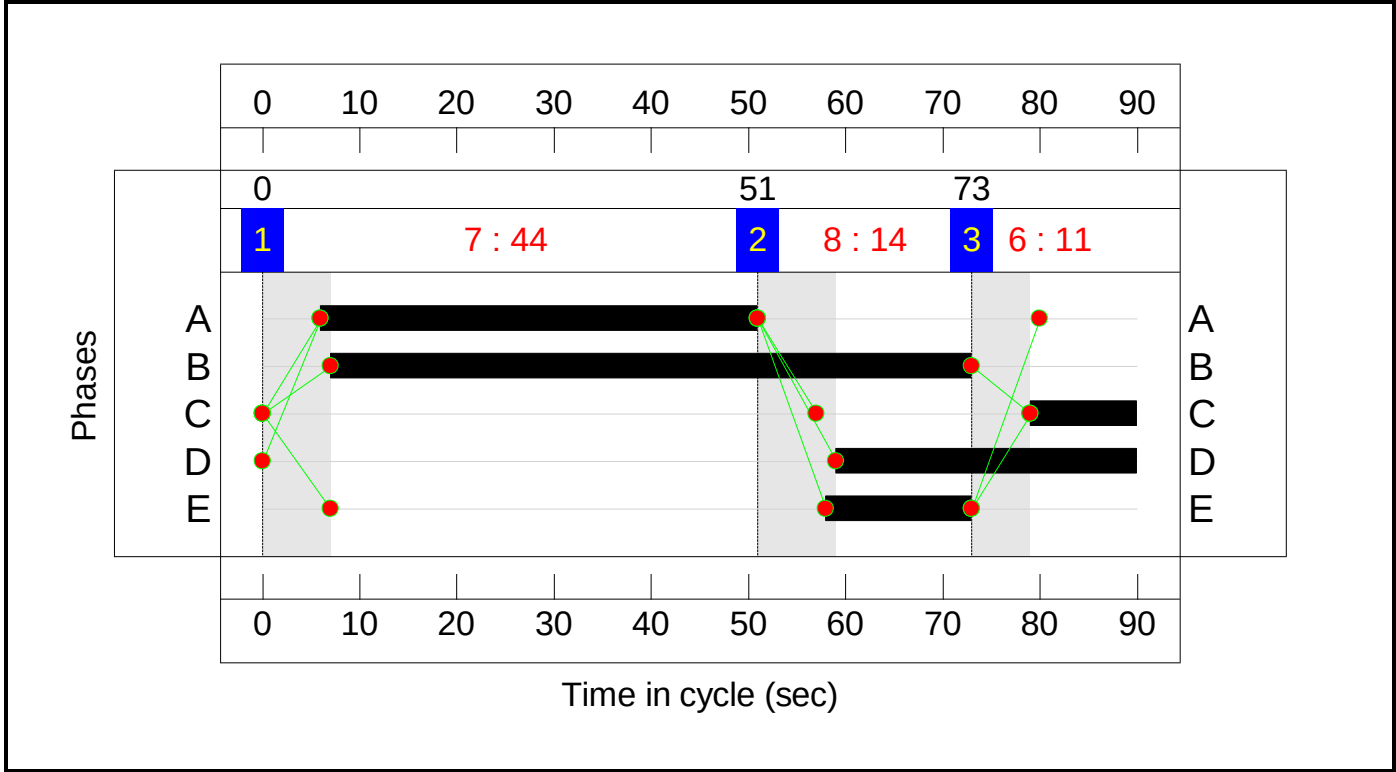
Stage Sequence Diagram



Stage Timings

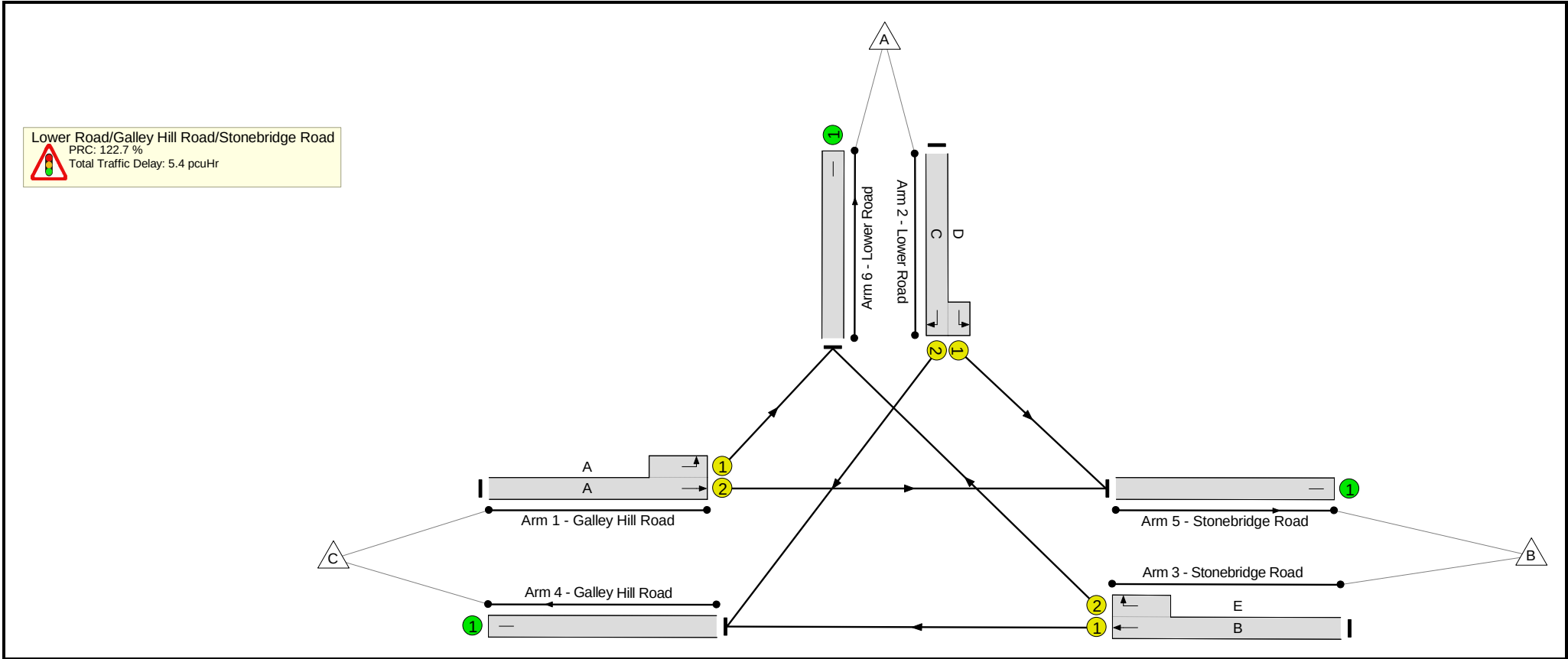
Stage	1	2	3
Duration	44	14	11
Change Point	0	51	73

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	40.4%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	40.4%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	45	-	415	2024:1823	988+53	39.9 : 39.9%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	11:31	-	265	1880:1967	124+535	40.2 : 40.2%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	66:15	-	517	2043:1697	1094+186	40.4 : 40.4%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	492	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	609	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	96	Inf	Inf	0.0%

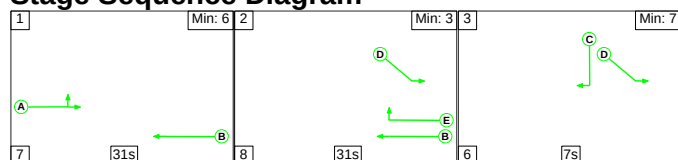
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 5: '2022 with Development AM' (FG7: '2022 with Development AM', Plan 1: 'Network Control Plan 1')

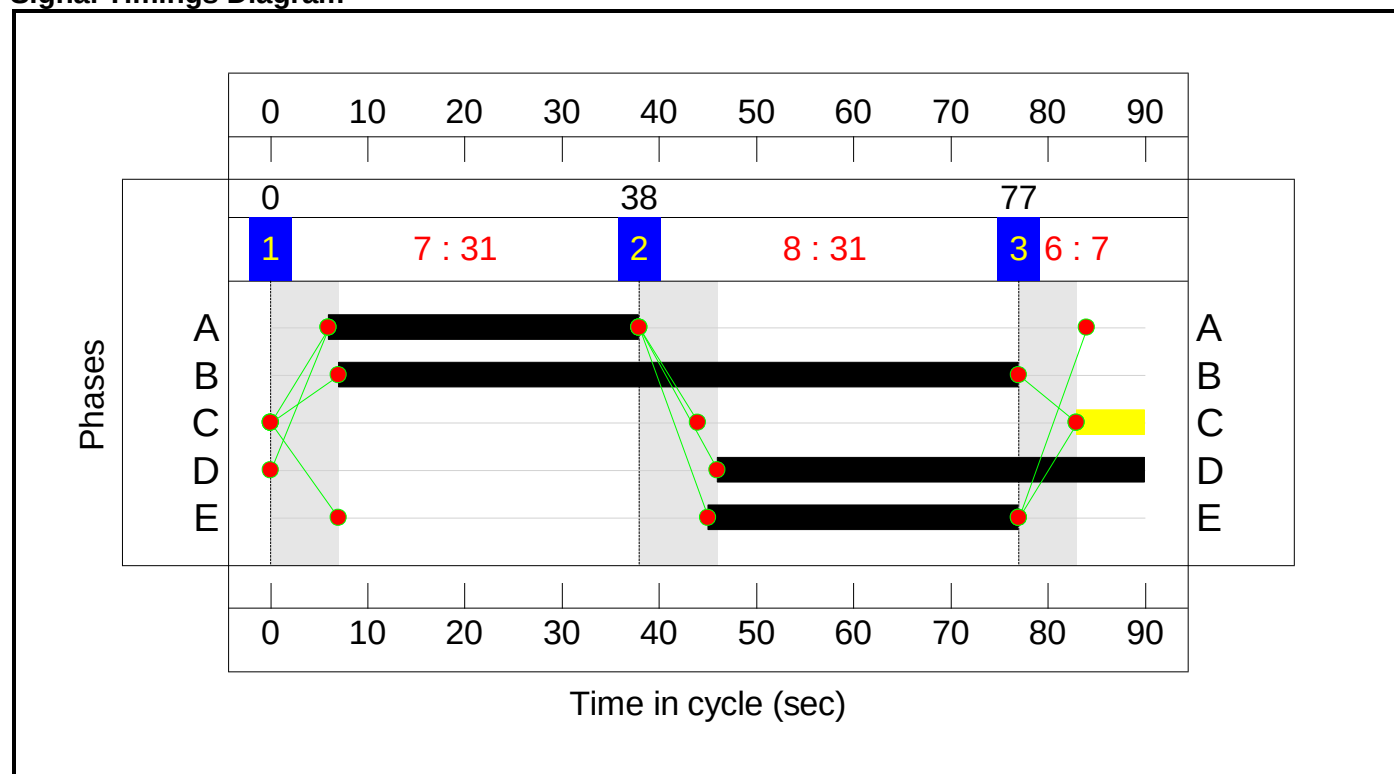
Stage Sequence Diagram



Stage Timings

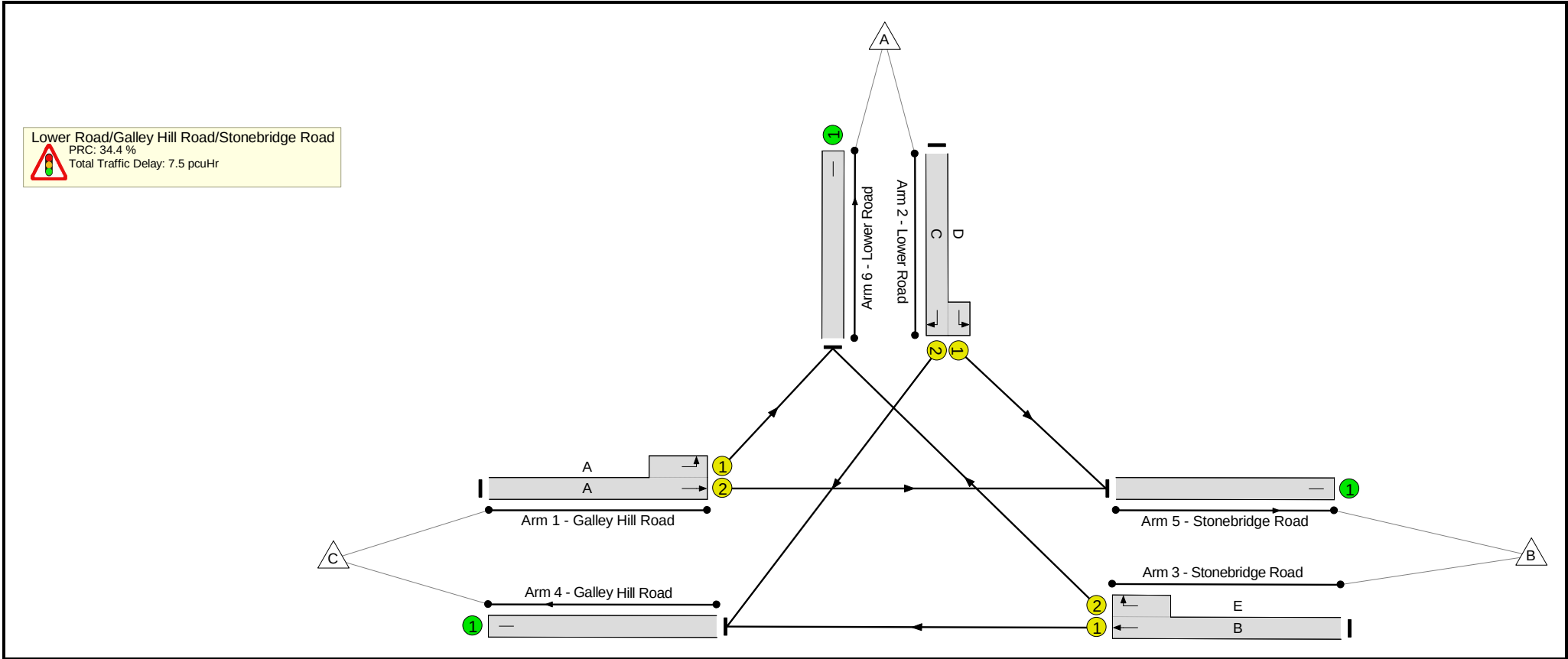
Stage	1	2	3
Duration	31	31	7
Change Point	0	38	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	66.9%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	66.9%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	32	-	498	2024:1823	661+99	65.5 : 65.5%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	7:44	-	118	1880:1967	111+392	23.5 : 23.5%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	70:32	-	653	2043:1697	626+350	66.9 : 66.9%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	445	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	525	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	299	Inf	Inf	0.0%

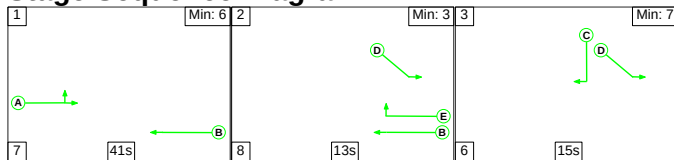
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 6: '2022 with Development PM' (FG8: '2022 with Development PM', Plan 1: 'Network Control Plan 1')

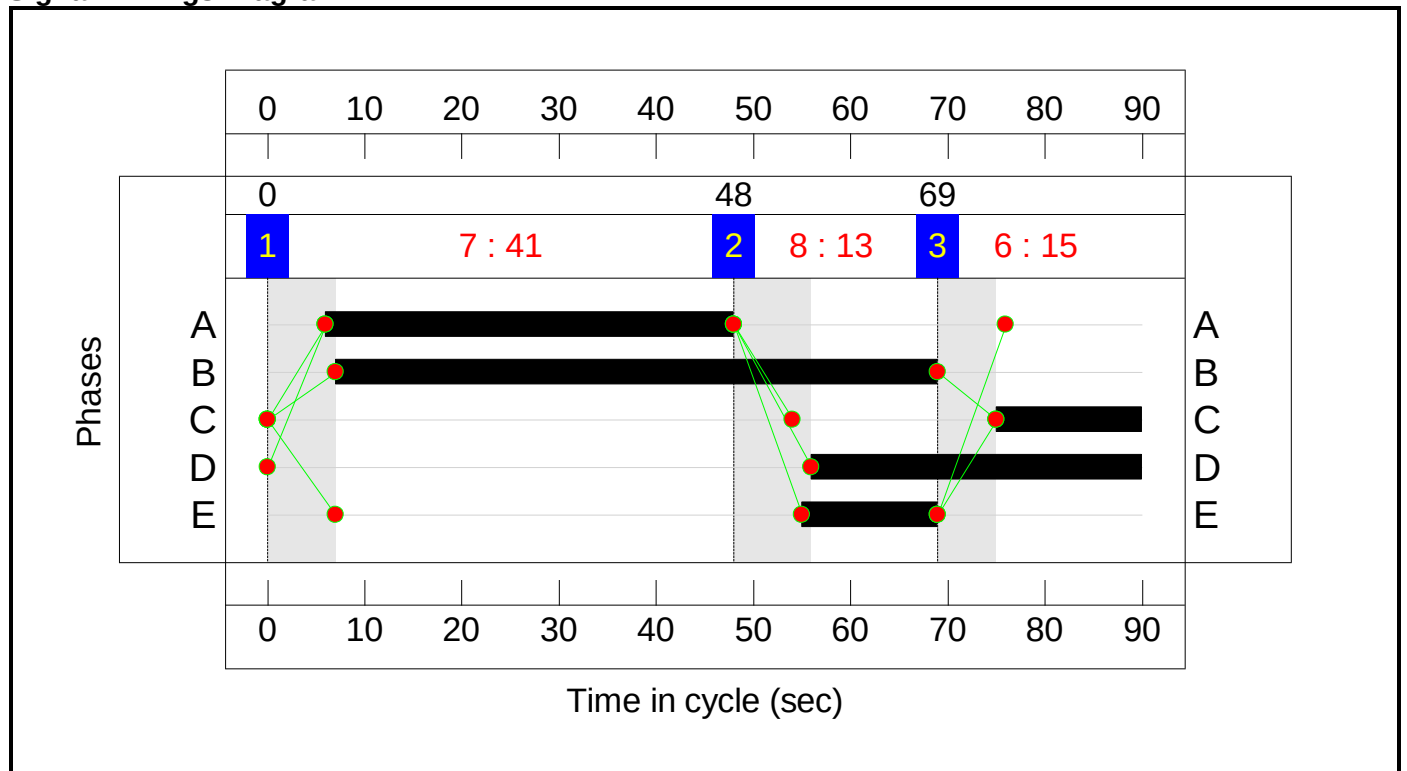
Stage Sequence Diagram



Stage Timings

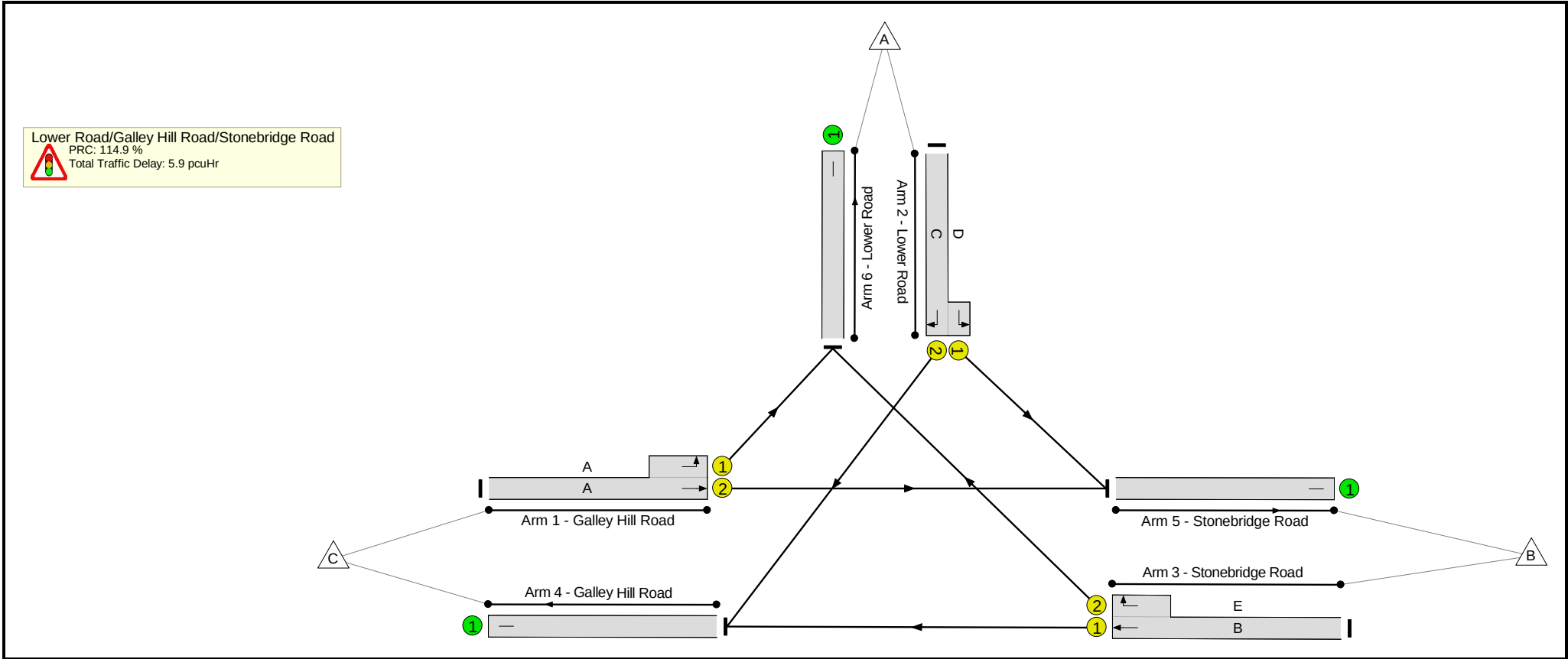
Stage	1	2	3
Duration	41	13	15
Change Point	0	48	69

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	41.9%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	41.9%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	42	-	399	2024:1823	923+51	41.0 : 41.0%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	15:34	-	318	1880:1967	136+623	41.9 : 41.9%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	62:14	-	500	2043:1697	1023+183	41.4 : 41.4%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	481	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	639	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	97	Inf	Inf	0.0%

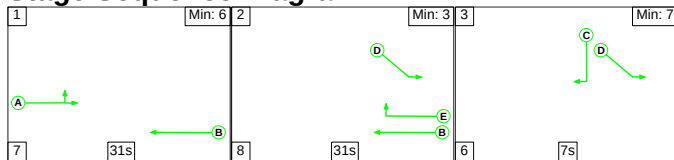
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 7: '2027 with Development AM' (FG9: '2027 with Development AM', Plan 1: 'Network Control Plan 1')

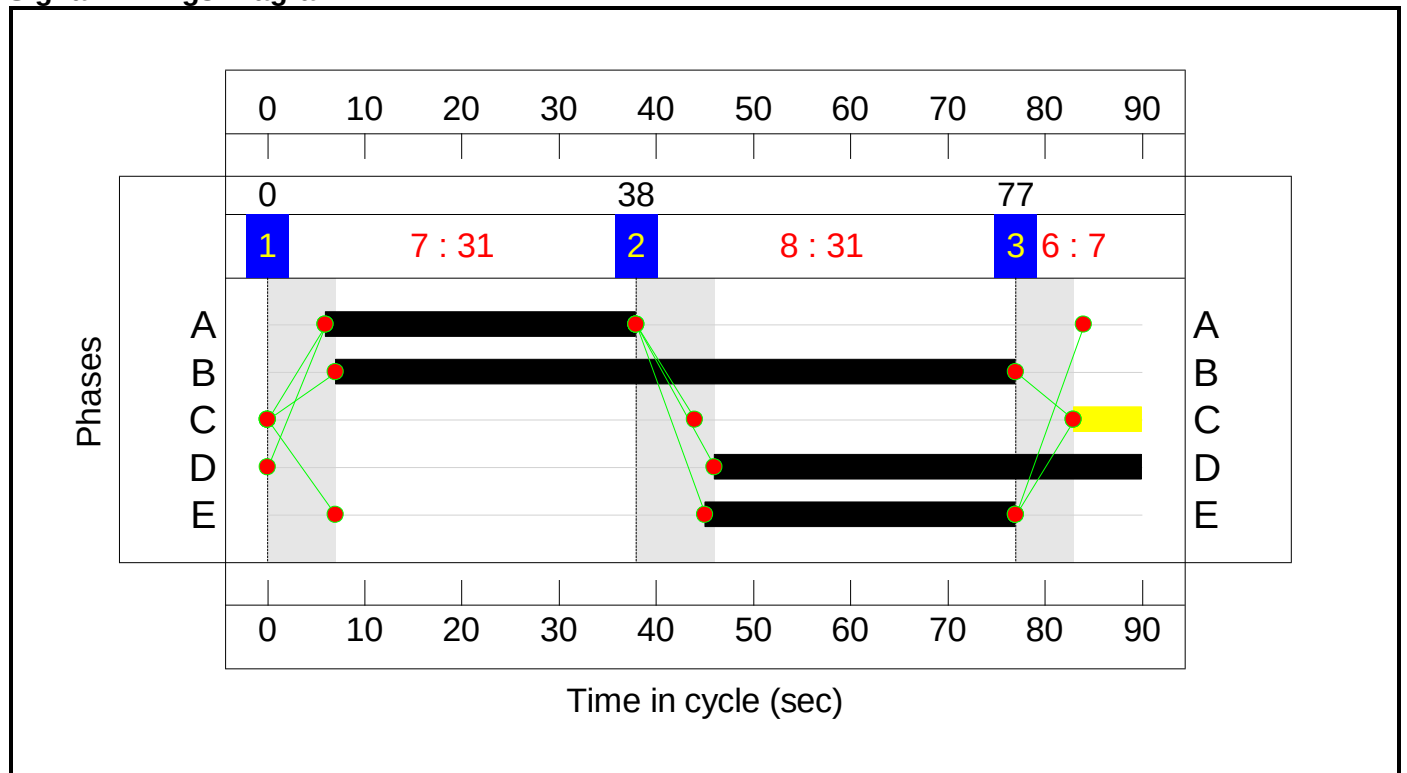
Stage Sequence Diagram



Stage Timings

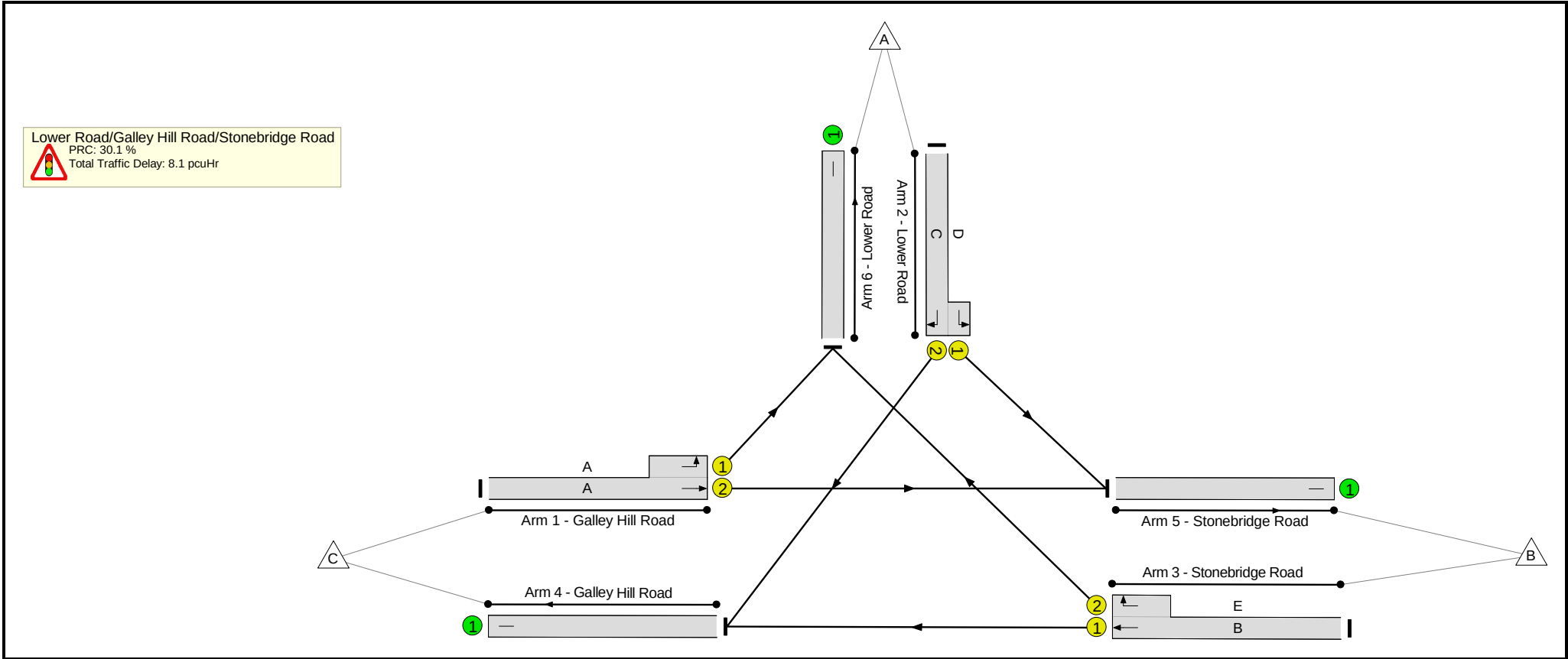
Stage	1	2	3
Duration	31	31	7
Change Point	0	38	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	69.2%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	69.2%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	32	-	518	2024:1823	662+98	68.1 : 68.1%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	7:44	-	123	1880:1967	111+393	24.4 : 24.4%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	70:32	-	677	2043:1697	630+348	69.2 : 69.2%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	463	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	547	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	308	Inf	Inf	0.0%

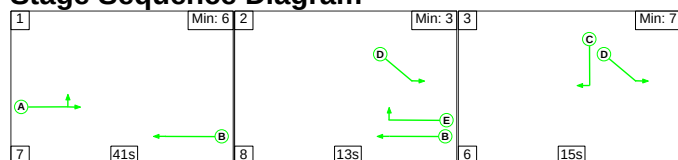
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 8: '2027 with Development PM' (FG10: '2027 with Development PM', Plan 1: 'Network Control Plan 1')

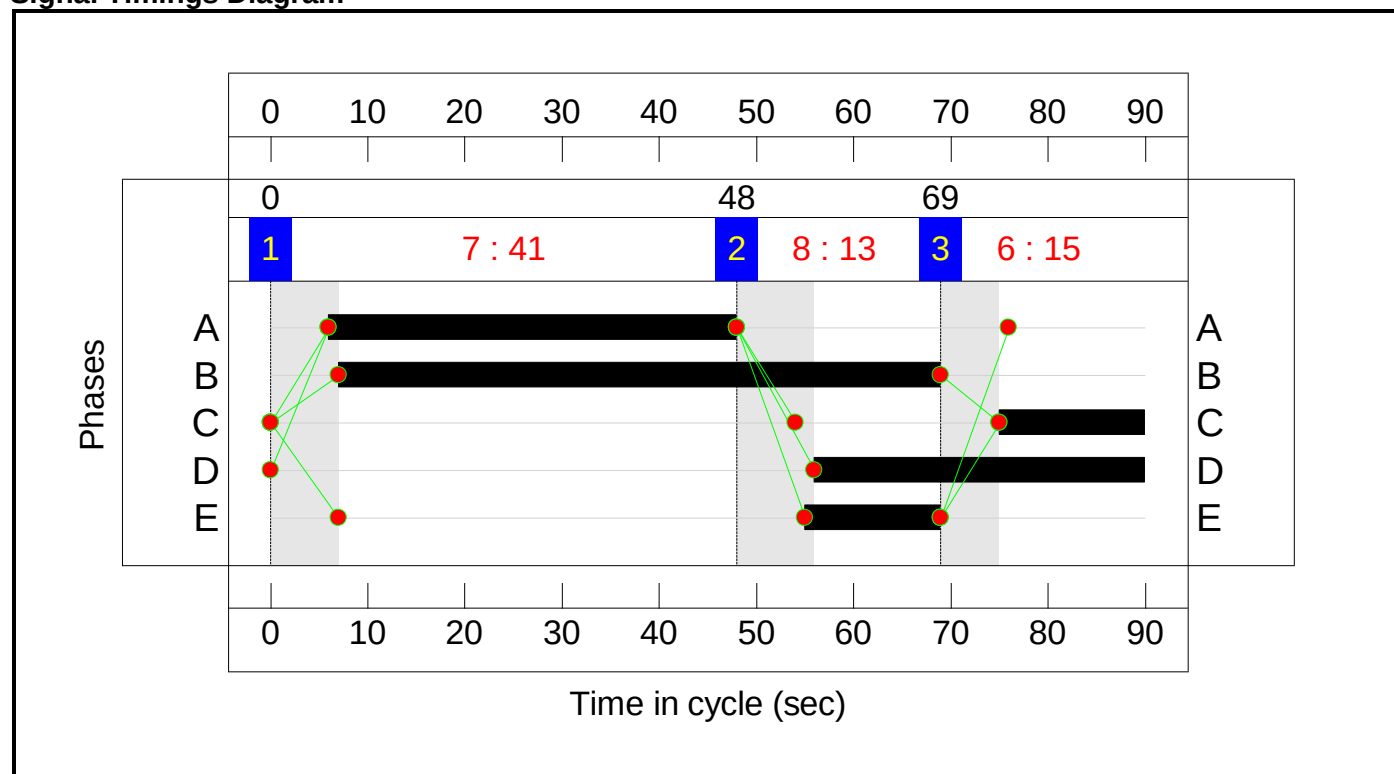
Stage Sequence Diagram



Stage Timings

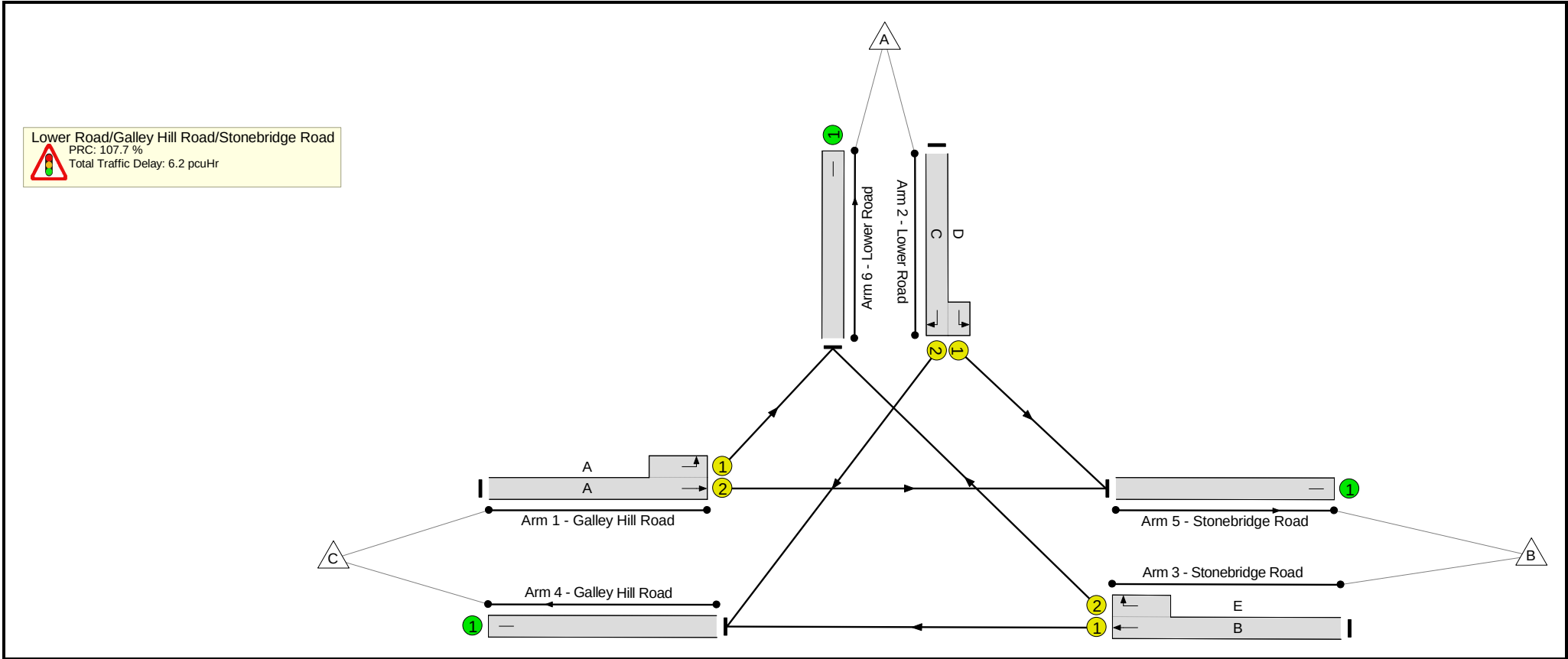
Stage	1	2	3
Duration	41	13	15
Change Point	0	48	69

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Commercial Development	-	-	N/A	-	-		-	-	-	-	-	-	43.3%
Lower Road/Galley Hill Road/Stonebridge Road	-	-	N/A	-	-		-	-	-	-	-	-	43.3%
1/2+1/1	Galley Hill Road Ahead Left	U	N/A	N/A	A		1	42	-	416	2024:1823	922+52	42.7 : 42.7%
2/2+2/1	Lower Road Right Left	U	N/A	N/A	C D		1	15:34	-	329	1880:1967	136+623	43.3 : 43.3%
3/1+3/2	Stonebridge Road Ahead Right	U	N/A	N/A	B E		1	62:14	-	521	2043:1697	1026+183	43.1 : 43.1%
4/1	Galley Hill Road	U	N/A	N/A	-		-	-	-	501	Inf	Inf	0.0%
5/1	Stonebridge Road	U	N/A	N/A	-		-	-	-	664	Inf	Inf	0.0%
6/1	Lower Road	U	N/A	N/A	-		-	-	-	101	Inf	Inf	0.0%

Full Input Data And Results

[illegible]