

Nutfield Green Park SCC Highways Response Note

226799/N08
April 2024

Executive Summary

1. This note relates to Planning Application Ref 2023/1281 for a residential led mixed use development submitted by Nutfield Park Developments Ltd on the 20th of October 2023.
2. On the 14th of February 2024, Surrey County Council (SCC) issued a consultation response which recommended refusal on highway grounds. The reasons for SCC recommending refusal are provided below:
 - *“The site is located in an unsustainable location, without access to regular public transport services or local amenities, with limited active travel opportunities, and where the only realistic means of transport would be the private car. This is contrary to the aims of National Planning Policy Framework (NPPF, 2023), and the Surrey Local Transport Plan 4 (LTP4, 2022); and*
 - *The proposals would result in an unacceptable impact to highway capacity, in particular at key junctions along the A25 corridor, leading to severe cumulative impacts on the contrary to the aims of the NPPF, LTP4 and the Tandridge Local Plan (2014).”*
3. This note seeks to address all of the issues raised by SCC. In summary, the note demonstrates that the site is accessible to active travel routes in the area and existing bus and rail services. This is using generally accepted criteria on distances to bus stops and bus frequencies as well as examples of the approach taken by SCC when assessing other similar sites in the area.
4. However, in response to SCC’s comments, the applicant wishes to go further and provide additional sustainability measures, to enhance locational sustainability. Of particular note is the introduction of a dedicated electric bus to provide enhanced links to local destinations for all site users and including residents of the Later Living Village and Care Home.
5. A summary of transport infrastructure available to future site users, once enhanced sustainable transport proposals are introduced, is provided in **Table 1** below.

Table 1: Summary of Sustainable Transport Infrastructure – Existing & Enhanced

Mode	Summary
Walking	Footways connect the site to Redhill along the A25. A segregated pedestrian route is also available along Mid Street, connecting to South Nutfield and the station (a circa 1.5km walk).
	On-site pedestrian and cycle routes connecting site users onto the A25, and Church Hill and Chilmead Lane as well as to on-site facilities.
	Proposed puffin crossing across the A25, better connecting the site to Mid Street and the Memorial Hall westbound bus stop.
	Potential signalisation of the crossing of the A25 just to the west of the A25/Church Hill junction, if considered necessary by SCC.
	An unsignalised crossing, and new footway is proposed to better connect the proposed development to the Nutfield Cemetery westbound bus stop, if considered necessary by SCC.
	A Copenhagen style crossing is proposed across the proposed site access, allowing use by both pedestrians and cyclists alike.
Cycling	It is a 4-minute cycle to Nutfield Station with 10 cycle parking spaces available at the station.
	The Applicant will fund enhancements to the NCNR21 cycle route which connects the site to Redhill town centre and station – an 11-minute (3km) ride. This route avoids the A25.
	An alternative route using existing quiet streets to connect the site to Redhill with a total journey time of approximately 13-minutes (4.2km). This route avoids the A25.
	Provision of a shared pool of electric bikes for residents, in order to incentivise cycling, as well as making it more accessible.
Bus	The furthest point of any development is 560m from a bus stop, with the majority of all development uses within 400m of a bus stop, including routing around units.

	All bus stops are within 400m of site access points serving all areas of the development.
	Existing services in proximity to the site equates to an average service frequency of every 22-minutes, with a maximum gap between services of 30-minutes in the peak periods. With the inclusion of the electric bus service, this becomes an average frequency of 9-minutes per service, and a maximum gap of 15-minutes between services.
	An electric bus service is proposed, which would feature two electric buses providing four journeys per hour to Redhill and 4 journeys from Redhill during peak periods. During off-peak hours, the service would also serve the later living and care home facilities, providing access to key destination such as Redhill, Oxted, and South Nutfield.
	Improved connectivity to the Memorial Hall westbound bus stop.
Rail	Journeys are regularly available at Redhill station on GWR, Southern and Thameslink services, to key destinations including London Victoria, Reading, Gatwick Airport, and Clapham Junction.
	Redhill Station features step-free access to all platforms, accommodating those from with accessibility needed, notably important for later-living and care home residents. There are 190 cycle parking spaces.
	Access to railway stations, notably Redhill Station, is made easier through the upgraded cycling provision (avoiding the A25) and the enhanced bus services.

6. Turning to Highway capacity, the analysis presented in this note has focussed on the three junctions identified for further consideration by SCC. It demonstrates that, using the generally accepted assessment scenario (the impact of development onto existing flows plus permitted development flows), all junctions work acceptably and the impact of the development on queueing is small. None of these impacts are considered severe and are within increases accepted for developments elsewhere by SCC. Further analysis, including TEMPRO growth, has also been undertaken. It is not for this development to mitigate any unacceptable impacts generated by as yet unspecified developments. However, even using this criteria, the operation of the junctions is considered acceptable.
7. In summary, this note has addressed in detail the concerns raised by SCC. It has demonstrated that the extensive enhancements proposed to sustainable transport serving the site, along with the inherent accessible features of the site, make the development highly accessible by sustainable

modes. Furthermore, there are no unacceptable highway capacity or safety impacts. The proposals therefore comply with NPPF and LTP4 Guidance.

Introduction

8. Vectos (Part of SLR) has been instructed by Nutfield Park Developments Ltd to provide transport and highways advice in relation to the promotion of land at Nutfield Green Park.
9. The proposals seek to develop the land for a residential-led development comprising a quantum of 166 residential units, 41 units for later living and a 70-bed care home. In addition, community uses are being proposed under use classes E(e)/ F2.
10. On the 14th of February 2024, Surrey County Council (SCC) issued a consultation response to the submitted application, found at **Appendix A**. It recommended refusal on the grounds set out in the Executive Summary.
11. In relation to sustainability, SCC's reasons for taking an unfavourable stance can be broken down as follows:
 - Limited facilities to encourage walking trips in the local area;
 - Poor footways along the A25;
 - Poor cycling infrastructure along the A25;
 - Insufficient improvements to NCNR21;
 - Distance to bus stops;
 - Infrequent bus services;
 - Distance to rail services; and
 - Poor routing to rail services.
12. This note responds to SCC's recommended reasons for refusal. Since receiving the note Vectos/SLR and the applicant have sought to positively address the issues raised by SCC and this note proposes a number of measures which are considered to overcome the concerns.
13. The rest of the note will follow this structure:
 - **Section 2:** Location Sustainability – Existing & Proposed;
 - **Section 3:** Comparison between the Site and similar local applications;
 - **Section 4:** Junction Modelling; and
 - **Section 5:** Summary and Conclusion.

Site Location and Sustainability

Policy Context

14. This section details the existing sustainable transport serving the proposed development, establishing that the current transport infrastructure is, in fact, sufficient to provide a meaningful choice of travel modes for residents and visitors to the site.
15. The relevant national, regional, and local planning policies, relating to highways and the promotion of sustainable transport modes, have been summarised below.

National Planning Policy Framework (NPPF) (2023)

16. Paragraph 109 of the NPPF outlines the importance of sustainable transport at larger developments, as quoted below:

“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.”
17. Furthermore, Paragraph 115 relates to the condition to which a development will be refused on highway grounds, set out below:

“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.”

Surrey County Council – Local Transport Plan 4 (2022)

18. Moreover, Surrey County Council have produced their fourth Local Transport Plan (LTP4), adopted in July 2022. This document serves the commitment to net zero emissions by 2050, through nine ‘Policy Areas’. Two of the key Policy Areas directly relate to transport improvements that can be enhanced through considerate development proposals, set out below:

19. Active Travel / Personal Mobility:

“Delivery of facilities which make active travel (on foot, by bicycle, scooting etc.) more convenient, pleasant, and safe will mean more active journeys, bringing many transport, health and environmental benefits. Such facilities include an integrated and high-quality network of cycle routes and footpaths across the county, segregated from general traffic wherever possible. Elsewhere roads can be made more people-friendly through better design, giving more space to active modes, and lowering speed limits where appropriate. Secure

cycle parking, bike hire and promotion of electric and cargo bikes will also help to increase uptake.”

20. Public/Shared Transport:

“For many longer journeys, travel by bus or rail is the most attractive option. Working with operators, opportunities exist to improve end-to-end journeys by public transport, including environments at stations and access to them. The network of bus services will be reviewed to identify ways to improve the coverage of the network, service frequencies, reliability, fares and customer experience. Where demand is lower, shared transport and demand responsive transport will play an important role, as will park and ride and car clubs. Making it easy to plan, book and pay for journeys is an important aspect. The development of high-quality ‘Mobility as a Service (MaaS)’ technology (such as a travel app for smartphones), which simplifies this process, will be critical to making this happen.”

Draft Tandridge Draft Local Plan 2033

21. The Draft Tandridge Local Plan ‘Our Local Plan: 2033’, despite being deemed unsound, likely includes the general vision and approach for Tandridge over the next decade. Chapter 31 relates to ‘Sustainable Transport and Travel’, with key points quoted below:

22. Cycling and Walking:

“The Council will support development that includes integrated comprehensive cycle and walking routes. Development proposals shall demonstrate how safe and accessible pedestrian access and cycle routes will be delivered and how they will connect to the wider travel network. Opportunities should be proactively taken to connect with and enhance Public Rights of Way whenever possible, encouraging journeys on foot and active travel.”

23. Public Transport:

“The Council, in liaison with Surrey County Council, will seek enhancements to the local bus network in order to meet the additional demands created by new development as it comes forward. These enhancements should include the delivery of bus priority measures, the provision of a new service or the alteration/expansion of an existing service, contributions towards bus-related infrastructure and operational subsidy for the service in the first 10 years of occupation of the development.”

24. Highways:

“Developments that would generate significant traffic movements must be well-related to the primary and secondary road network and this should have adequate capacity to accommodate the development. New accesses and intensified use of existing accesses onto the primary or secondary road network will not be permitted if a clear risk of road traffic accidents or significant traffic delays would be likely to result.”

25. The development proposals included within this document have been designed and curated in reference to the aforementioned policies.

Existing Sustainable Transport

Bus

26. The SCC Consultation response stated the following:

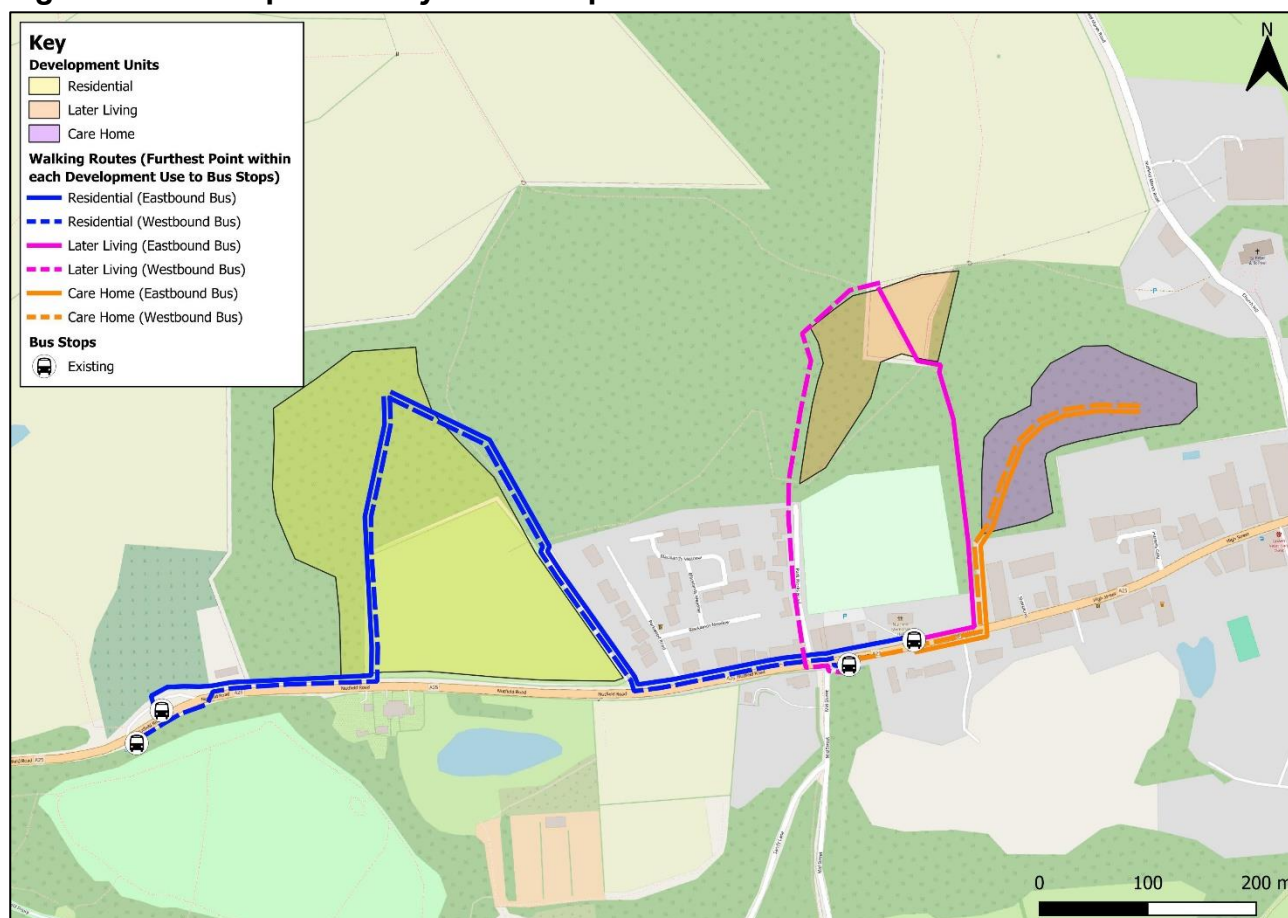
“A large proportion of the proposed development is not within 400 metres of bus stops, which is not acceptable in the context of SCC standards and represents a failure to facilitate access to high quality public transport and a failure to maximise the catchment area of bus service, contrary to the NPPF 2023 paragraph 116. The relatively infrequent and limited number of services combines with the distance to bus stops to mean that residents will not be able to rely on public transport for regular journeys.”

27. This comment raises concerns in regard to proximity and frequency. These two issues are considered below.

Distance to Bus Stops

28. The ‘SCC standards’ regarding 400m proximity to bus stops are, in fact, guidance rather than standards. The Healthy Street for Surrey webpage. Point 12.4, in the ‘requirements and guidance’ section, states that *“homes should be within 400m walk of a bus stop or transport hub... there is flexibility in this standard”*. As will be demonstrated later in this note, when considering examples of allocated and approved sites, SCC themselves have applied this guidance flexibly. Hence, it is considered that this guidance should be applied flexibly when seeking to make the best use of the land, and maximising public interest, namely delivery new housing to the area.
29. It was stated in the SCC Consultation Response that the Transport Assessment (TA) recognised that *“a large portion of the proposed development is not within 400 metres of bus stops”*. This is not accurate as to what was stated in the TA, which is as follows *“the majority of the site’s proposed areas of development are within 400m, or a 5-minute walk, of the existing bus stops”*.
30. This matter has been considered further in relation to available walking routes and bus stops. In particular, the cemetery bus stops to the west of the application site have been considered. The furthest distance between each area of development and the bus stops, is illustrated in **Figure 1**.

Figure 1: Bus Stop Proximity to Development Uses – Furthest Point



31. The relevant distances are summarised in **Table 2**.

Table 2: Summary of Bus Stop Proximity – Furthest Point

Use Class	To Nutfield Memorial Bus Stops		To Nutfield Cemetery Bus Stops	
	Eastbound	Westbound	Eastbound	Westbound
Residential	630m	550m	475m	500m
Later Living	350m	440m	N/A	
Care Home	330m	460m	N/A	

32. The later living and care home have not been considered for the Nutfield Cemetery bus stops, as site users are unlikely to walk to this stop when the Nutfield Memorial bus stops are immediately outside the easternmost site pedestrian accesses.

33. **Figure 1** shows that all the proposed development areas are within 500m i.e. a 6-minute walk of the nearest eastbound and westbound bus stop. Furthermore, the majority of the development is within 400m of the nearest bus stop, as outlined below, and shown in **Figure 2** and **Figure 3**:

- Residential: 63% within 400m of eastbound bus stop; 52% within 400m of westbound bus stop;

- Later Living: 94% within 400m of eastbound bus stop; 75% within 400m of westbound bus stop; and
- Care Home: 100% within 400m of eastbound bus stop; 54% within 400m of westbound bus stop.

Figure 2: Development Uses within 400m of the Nearest Eastbound Bus Stop

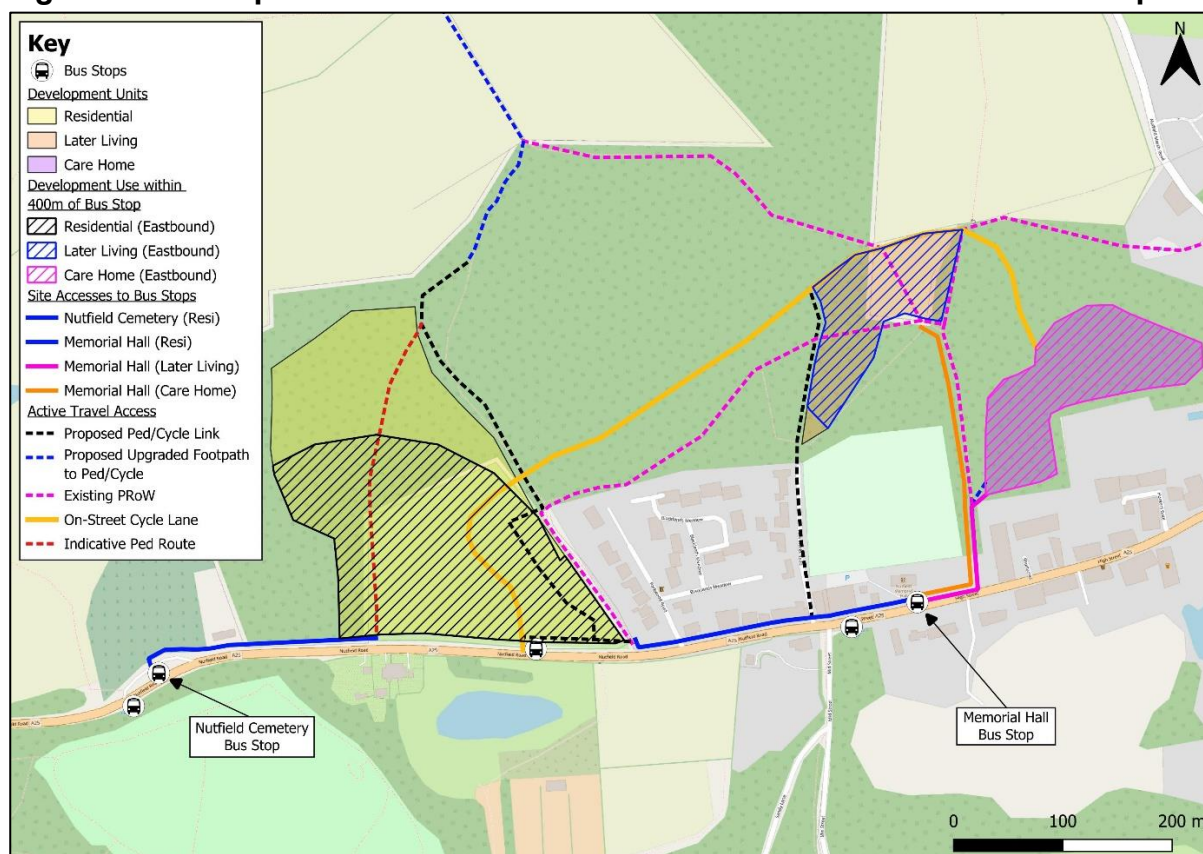
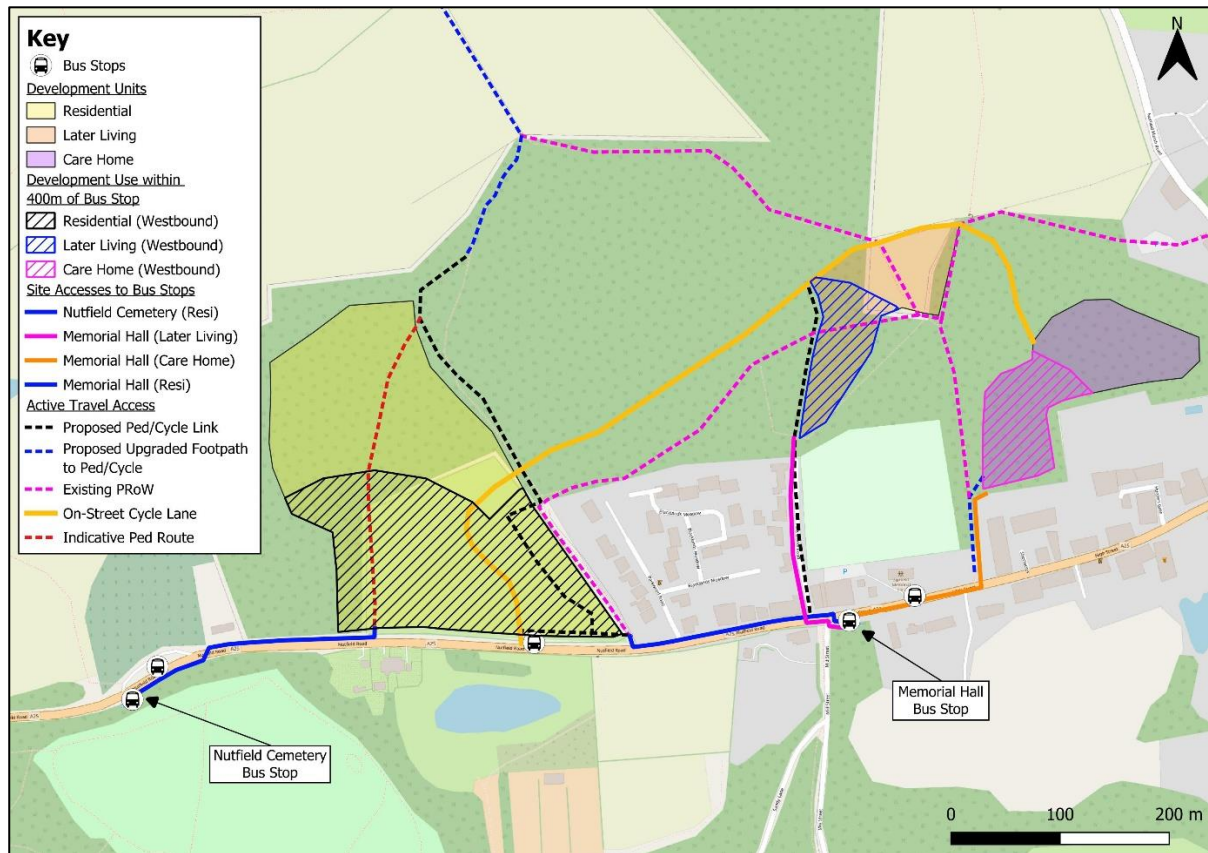


Figure 3: Development Uses within 400m of the Nearest Westbound Bus Stop



34. This provides a robust approach to measuring bus stop proximity i.e. by considering the furthest point from within the development to the stop.
35. This should be compared with the approach taken by SCC at the 'Land at Former Godstone Quarry' development, which went to committee on the 29th of February, and received a resolution to grant subject to S106 and conditions. In this case the distance between the site access and the relevant bus stop has been considered – not the distance to the furthest point in the development. The Godstone Quarry assessment stated that the nearest bus stops to the site are “280m and 360m to the east of the proposed residential site access”, later stating that “no improvements to these stops are therefore proposed as part of the development proposal”. Furthermore, the planning committee decision document, which approves the development, states the following:

“As the crow flies and with all distances taken from the position where the proposed residential access would meet the A25... the nearest bus stops are 300 and 330 metres from the site.”
36. If the same approach was taken for the Nutfield application site, **Figure 4** and **Table 3** show the outcome.

Figure 4: Bus Stop Proximity to Development Uses – Site Accesses

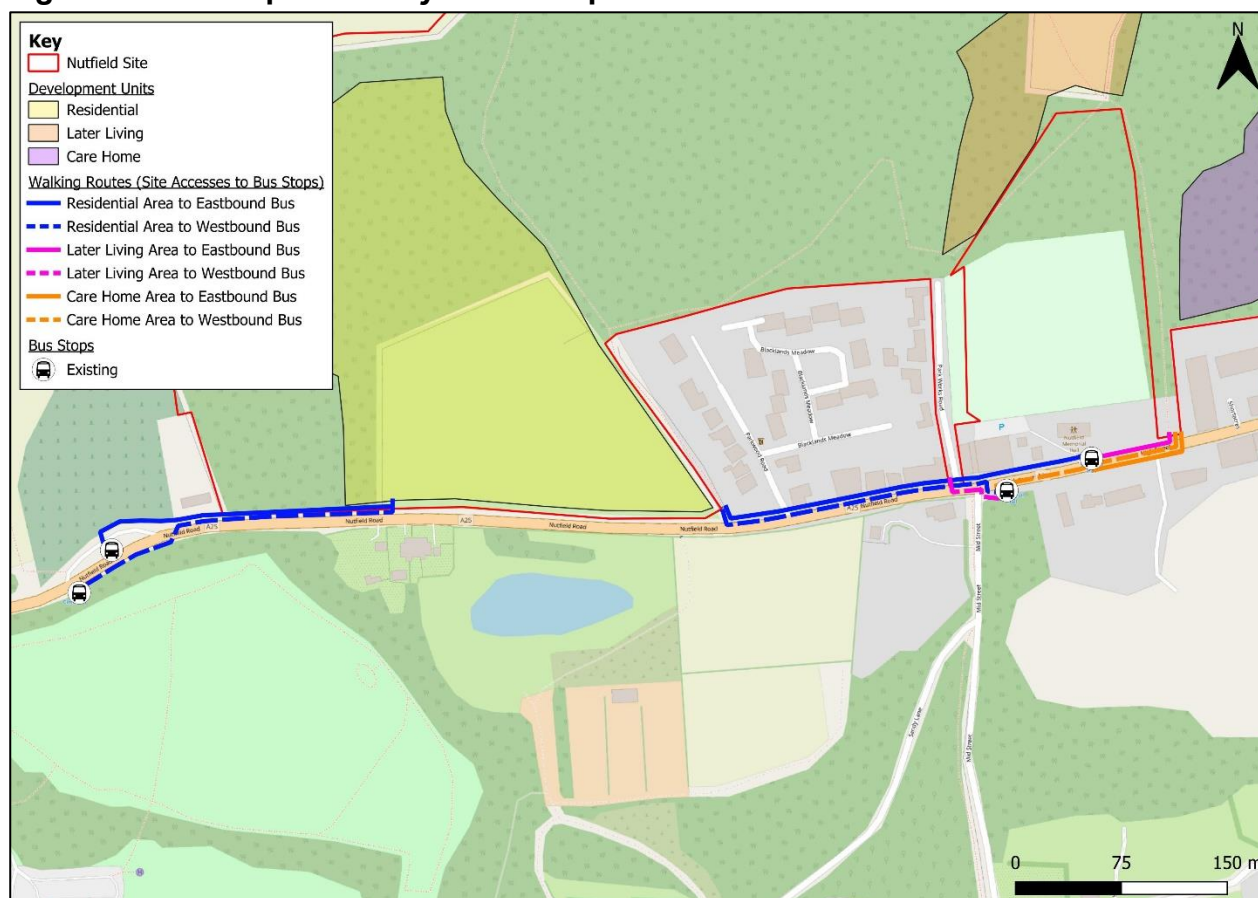


Table 3: Summary of Bus Stop Proximity – Accesses

Use Class	To Nutfield Memorial Bus Stops		To Nutfield Cemetery Bus Stops	
	East	West	East	West
Residential	300m	230m	220m	250m
Later Living	30m	55m	N/A	
Care Home	30m	160m	N/A	

37. **Table 3** demonstrates that the site accesses, for each development use, are comfortably within 400m of the nearest eastbound and westbound bus stops and are closer than the distances assessed for the Godstone Quarry site.
38. In summary, using the methodology applied by SCC at the Godstone Quarry site, all site access points are within 300m of a bus stop. Even if the distance is measured to development plots within the site, the maximum distance to a stop is 500m with the majority of the site being within 400m. Hence the proposed development complies with the flexible guidance and practice adopted by SCC.

Frequency of Bus Services

39. Regarding bus service frequency, the existing services accessible from the local bus stops are outlined in **Table 4** below, for the periods from 06:00-09:00 and 16:00-19:00, the likely travel times for commuters.

Table 4: Bus Service Frequency in Peak Periods

Operator	Service	To Redhill					From Redhill					
		06:00-07:00	07:00-08:00		08:00-09:00		16:00-17:00		17:00-18:00		18:00-19:00	
Metrobus	400	-	07:02	07:59	-	-	16:51	-	-	-	18:02	-
	410	06:38	07:27	07:53	08:18	08:46	16:20	16:50	17:20	17:50	18:20	18:50
Cruisers	315	-	07:57	-	-	-	-	-	17:15	-	-	-
TOTAL		1	5		2		3		3		3	

40. **Table 3** demonstrates that in the AM commuting period between 06:30 and 09:00 there are 8 bus services with a frequency of better than one bus every 30 minutes. The periods between services are: 24-min, 25-min, 26-min, 4-min, 2-min, 19-min, and 28-min.
41. In the PM commuting period between 16:00 and 19:00 there are 9 services with a minimum frequency of one bus every 30 minutes. The periods between services are: 30-min, 1-min, 24-min, 5-min, 30-min, 12-min, 18-min, and 30-min.
42. A 30 minute or better frequency is not considered to be a “*relatively infrequent and limited number of services*” as suggested by SCC. Such a frequency is reasonable for a site of this nature and, as will be demonstrated later in this note, similar to or better than frequencies at other allocated/approved sites.

Rail

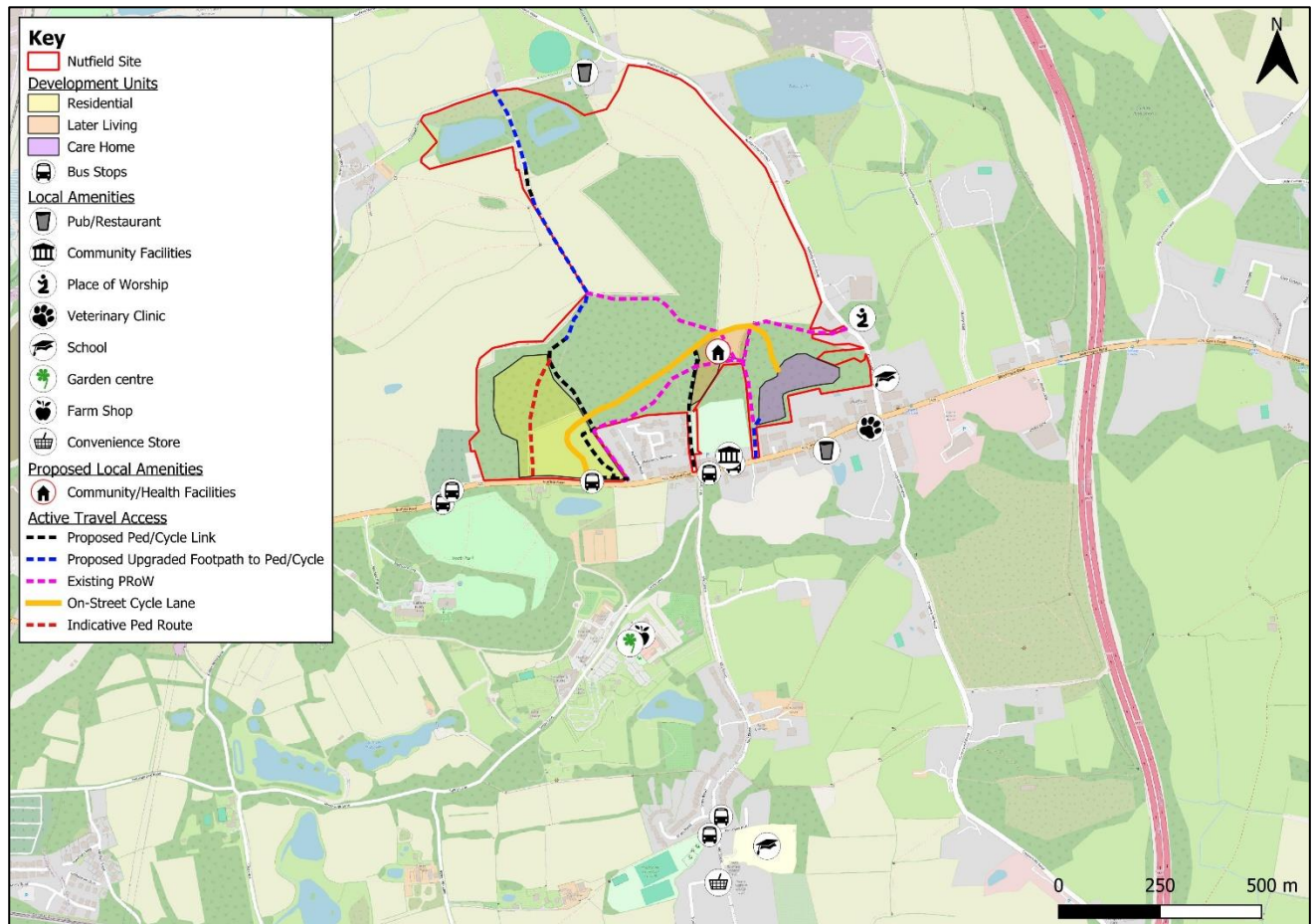
43. The proposed development is located within reasonable proximity of two railway stations. Nearest to the site is Nutfield Station, which is approximately 1.7km south of the site, via Mid Street and Station Approach. This station is served by Southern railway, providing services between Tonbridge and Redhill. Redhill Station is located 3km west of the site and is served by Southern, Great Western Railway, and Thameslink. This enables access to key destinations such as Gatwick Airport, Reigate, London Bridge, London King’s Cross, Reading and London Victoria.
44. The SCC Consultation Response raised concerns regarding the distance to nearby railway stations, in addition to concerns that any active travel trips “*from the proposed development could represent a material risk to road safety.*”
45. The journey between the site and Nutfield Station features a raised, segregated footway from the northern extent of Mid Street, travelling approximately 500m, before proceeding circa 900m along footways. Furthermore, the development proposals include the introduction of a puffin crossing across the A25, enabling safer routing for pedestrians from the site to Mid Street. This was initially proposed as a toucan crossing, however due to the footway widths, the inability for cyclists to cycle along the footway, and the reality that the crossing would only be allowing cyclists to turn onto Mid Street, which they will likely do without the use of a crossing, means that a puffin crossing is advised.

46. Regarding cyclists, the most direct route involves departing the site via Park Works Road, which will form a pedestrian/cyclist access directly onto the A25, with cyclists either travelling over the staggered junction onto Mid Street, or potentially dismounting at this point and using the proposed puffin crossing. Subsequently, they can travel 4-minutes southbound to Nutfield Station. Future residential occupants can also use the main site access and the ped/cycle route east of the mains site access. This is seen as a realistic journey, with zero cyclist collisions present along Mid Street within the most recent 5-year period. There are 10 cycle parking spaces present at the station. Use of e-bikes will assist with the gradient between the site and the station (see later in this note).
47. In relation to access to Redhill Station there are a number of options as follows.
 - As noted above there are frequent bus services between the site and Redhill Station with a journey time of circa 6 minutes;
 - Confident cyclists can use the A25
 - There are alternative, quieter, cycle routes between the site and Redhill, with a journey time of circa 10 minutes. The applicant is proposing to improve these routes as set out in the “New Proposed sustainable Transport” section of this note.
48. In summary, and compared with other sites in the area, the application site is considered to have good proximity to rail stations and acceptable links to those stations using walking, cycling or bus.

Amenities

49. SCC also raised concern regarding ‘*limited facilities to encourage walking trips in the local area.*’
50. It is worth noting on this point that there is no specific requirement in policy that there are a range of facilities within walking distance of a site. The test in NPPF (para 109) refer to “*offering a genuine choice of transport modes*”.
51. Notwithstanding this, **Figure 5** illustrates local amenities in the area, including proposed amenities within the development proposal.

Figure 5: Local Amenities Plan



52. It should be noted that the existing footpaths running through the site to the northern boundary, are proposed to be upgraded to bridleways, thus making the 'Inn on the Pond' pub easier to access by walking and cycling. Furthermore, a pedestrian access on the eastern boundary will make St Peter and St Paul Church easier to access for future site users.
53. The proposed development features a number of amenities in proximity to the site, including leisure facilities such as pubs, a village hall, a garden centre, and a farm shop, in addition to key amenities including a nursery, a place of worship, and a veterinary clinic.
54. Regarding grocery shopping, site users will be able to utilise home delivery services from supermarkets such as Sainsbury's in Redhill if necessary. Alternatively, Holborn's convenience store is located 1.1km (15-minute walk) south of the Park Works Road ped/cycle access. The Manual for Streets (2007) states that *"walking offers the greatest potential to replace short car trips, particularly those under 2km"*.
55. Finally, as described below (extracted from the "Benefits Summary") flexible use space will be provided on site for the benefit of residents of the site and the existing local community:

"The proposals include up to 1,500 sqm of flexible use floorspace, proposed as health care and/or community floorspace. The health care provision would include space for consulting rooms to aid

accessibly to screening, health checks and diagnostics. This has been supported by Prostate Cancer UK and Professor Langley of Urology and Surrey & Sussex Cancer NHS Alliance.”

56. Moreover, future site users wishing to access a larger variety of amenities can travel into Redhill via the existing Sustrans route ‘NCNR21’, or the bus (either the existing services or the proposed services expanded on in the following section).

Summary

57. The SCC response to the application concluded that the site was in an unsustainable location where the only realistic mode of transport would be the private car. The above analysis demonstrates that this is not the case and, based on the existing infrastructure and services, the site is sustainable and provides residents and visitors with a genuine choice of travel modes.
58. Notwithstanding this, the Applicant is keen to provide additional sustainable transport infrastructure, in order to provide future site users and existing Nutfield residents, with enhanced access to facilities. These enhanced measures are covered in the next section of this note.

Proposed Sustainable Transport

59. The SCC Highways Consultation Response stated the following:

“It is recognised that the Applicant has proposed a number of improvements aimed at increasing the use of sustainable modes of travel however these measures are not considered sufficient to provide a meaningful choice of travel modes or any material shift in the modes of travel used by residents.”

60. The previous section provided detail on the locational sustainability of the existing site. This section details the proposed sustainable transport improvements offered by the Applicant, both in the original submission, and further enhancements to accessibility and sustainability included within this document. The aim is to address SCC’s concerns, and to ensure that the proposed development aligns with Paragraph 114 of the NPPF, namely Point A:

“appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location.”

61. Firstly, the improvements proposed within the original submission will be summarised, followed by the further enhancements to accommodate SCC concerns.

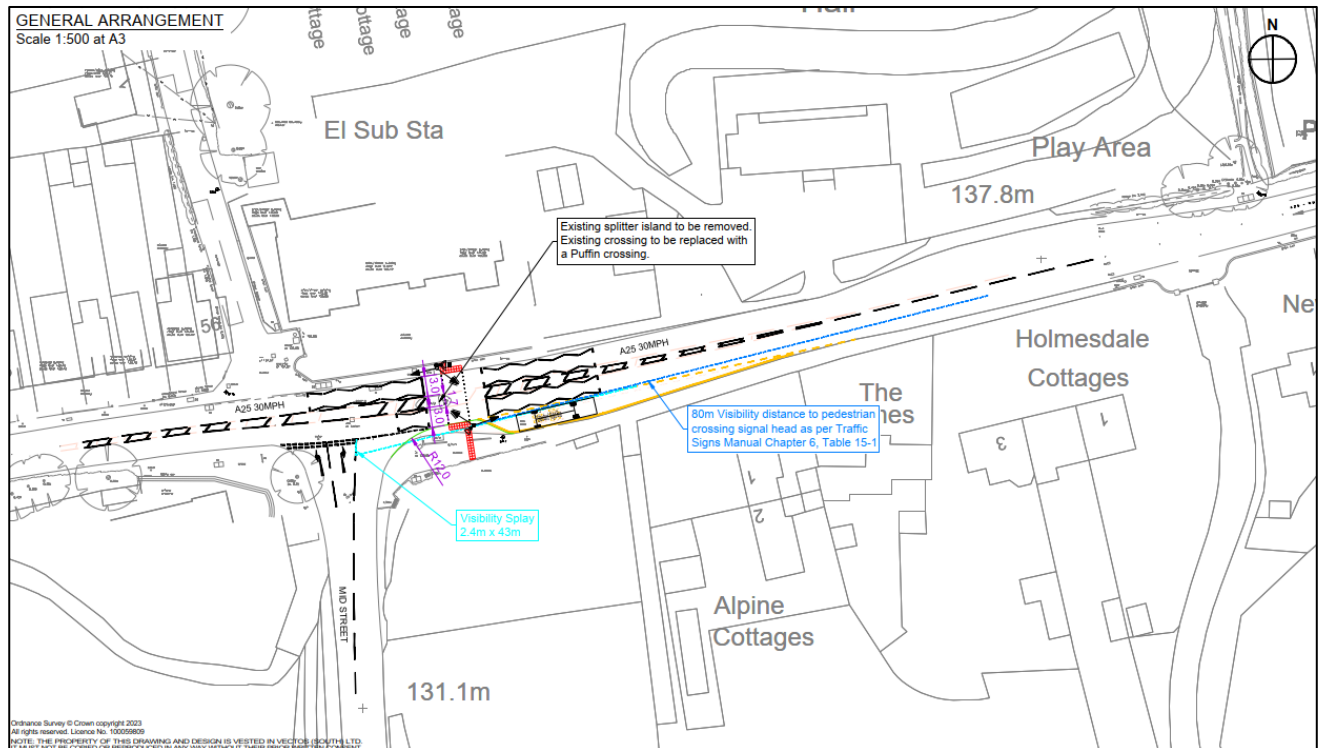
Original Submission

Bus

62. To improve pedestrian access to the Memorial Hall westbound bus stop, on the southern side of the A25, a signalised pedestrian crossing is proposed over the A25. This has been agreed in principle with SCC. The crossing would comprise a 3.2m wide crossing point with localised lane narrowing

and shortening of the southern bus stop layby. This is illustrated in **Figure 6** and provided at **Appendix B**.

Figure 6: Proposed Pedestrian Crossing over A25

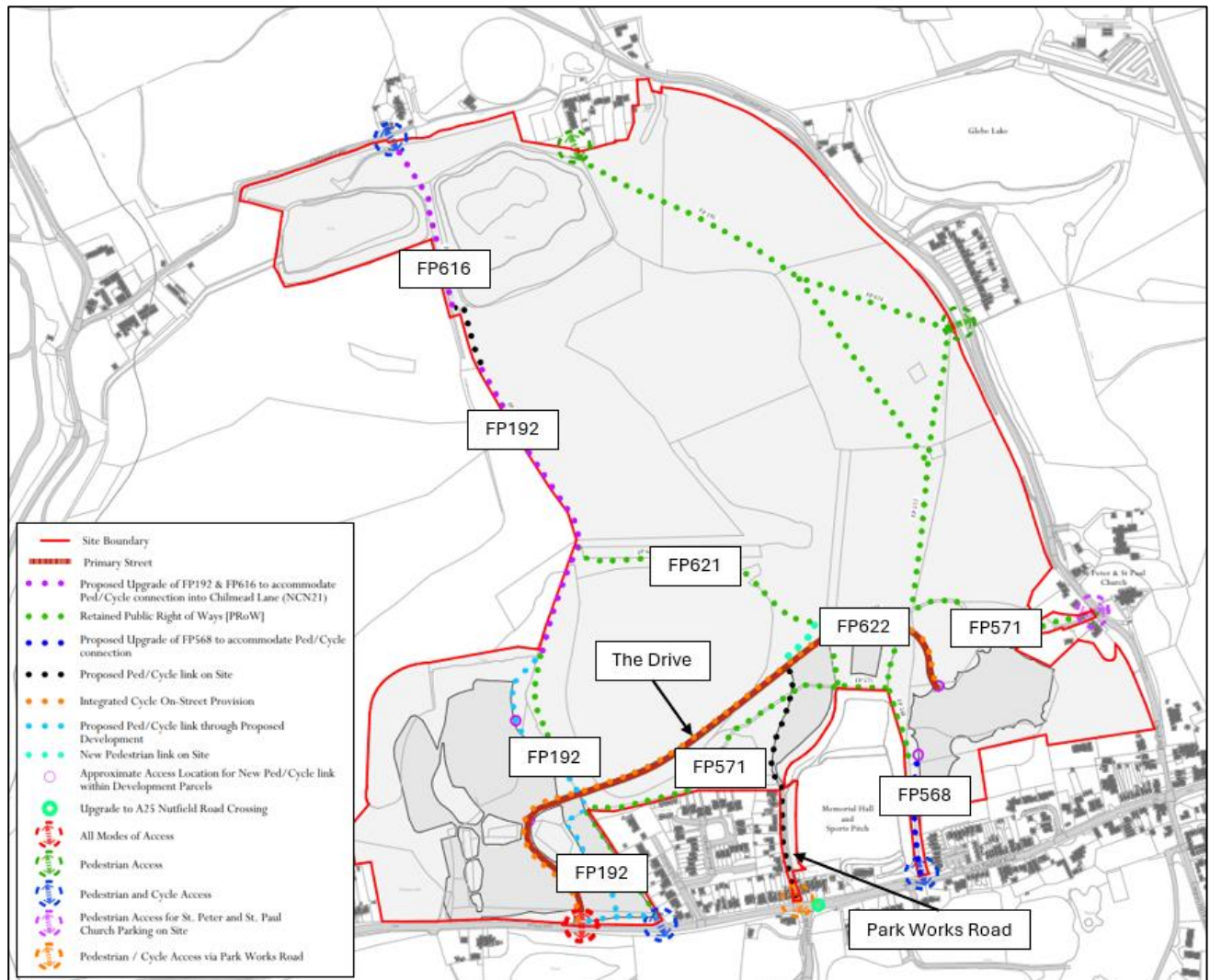


63. This crossing would also facilitate movements between the existing and new communities to the north of the A25 and facilities to the south in South Nutfield, and in particular, the primary school and Nutfield railway station. Moreover, when this signalised crossing is called by a pedestrian, this better allows vehicles on Mid Street to enter onto the A25 travelling westbound towards Redhill. As such, the proposed crossing has benefits to sustainable transport opportunities, and highway network efficiency.

Walking/Cycling

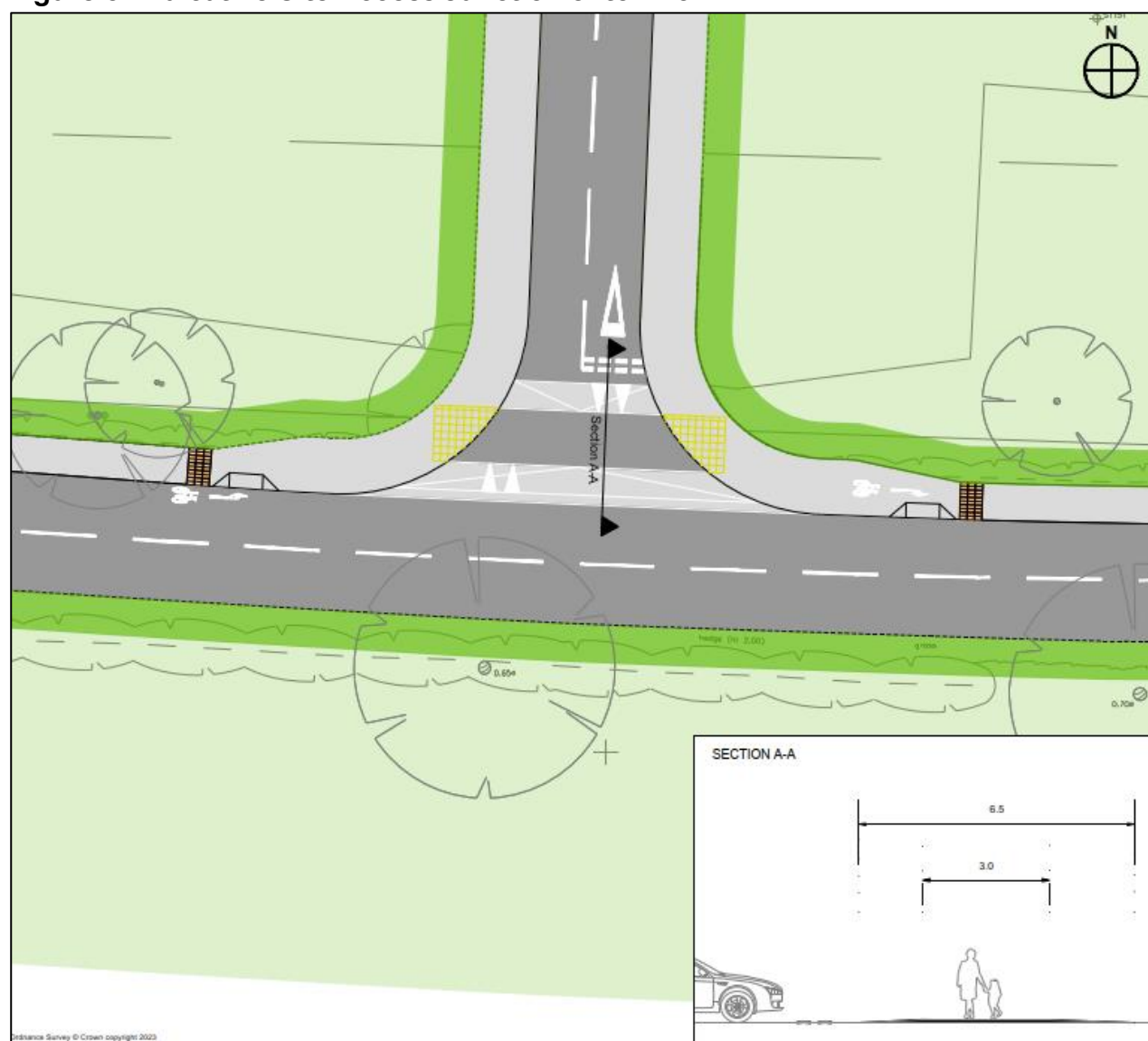
64. FP192 & FP616 are both proposed to be upgraded to accommodate pedestrian/cycle connections onto Chilmead Lane, which forms part of the NCNR21. This route would run along the eastern side of the residential land use, then travelling northbound along the site's western boundary. This route is shown in **Figure 7** and provided at **Appendix B**.

Figure 7: Key Pedestrian/Cycle Connections



65. **Figure 7** also illustrates additional ped/cycle connections within the site, connecting to the A25, Chilmead Lane, and Church Hill. This includes a mix of pedestrian only, and pedestrian/cycle routes.
66. The proposed development will make use of Park Works Road for pedestrian and cycle access only, as agreed with SCC. This will provide a direct connection to bus stops along the A25 to the south. Park Works Road is an existing lightly trafficked road that is within the ownership of the applicant (and historically provided vehicular access to the site). It is proposed that some improvements to this road through surface treatment and markings will be made to manage pedestrian, cyclist, and the few existing vehicular movements.
67. Moreover, the later living and care home parcels will be accessed by pedestrians and cyclists directly off the Drive at-grade, in addition to two connections onto the A25, via the upgrade of FP568 and the aforementioned Park Works Road upgrade.
68. Finally, the single vehicular access to the site, from the A25, is proposed to comprise a 3.0m shared footway/cycleway along the site frontage, with a raised 'Copenhagen' style crossing for pedestrians and cyclists. This is illustrated in **Figure 8** below.

Figure 8: Indicative Site Access Junction onto A25



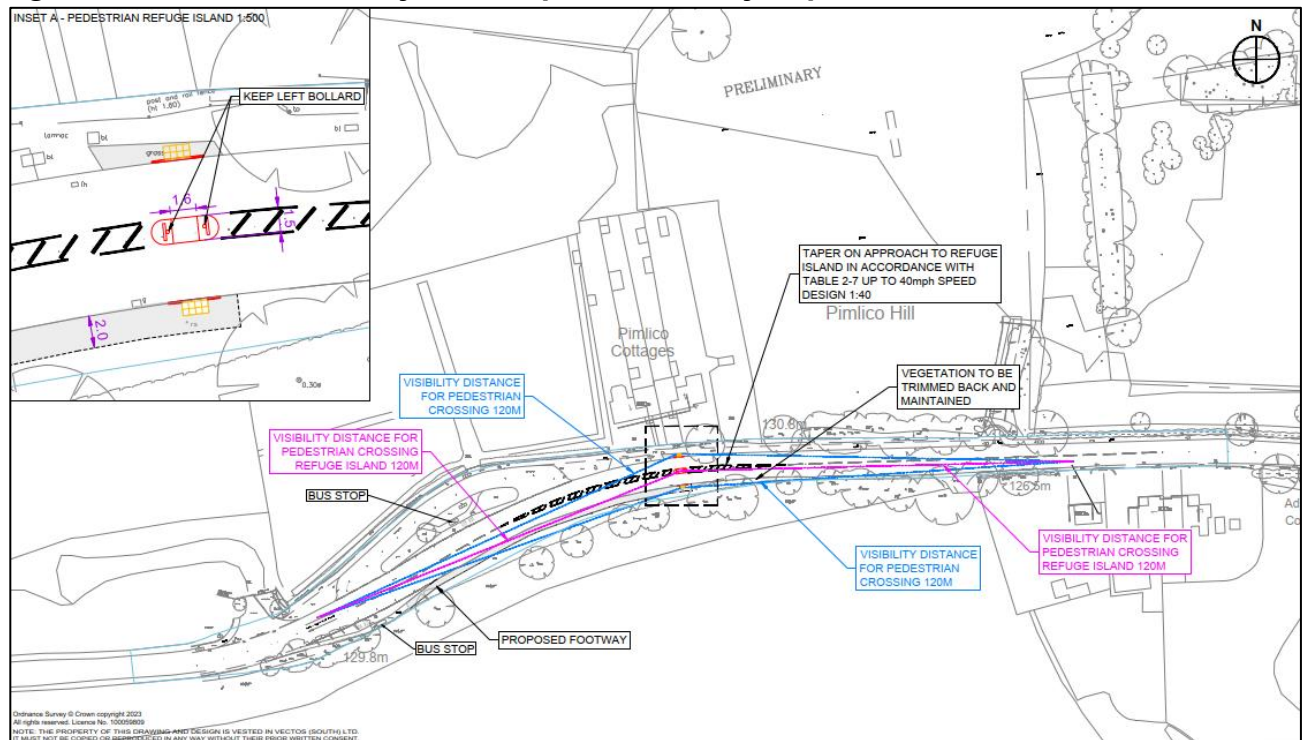
69. This ensures the best possible conditions for pedestrian and cyclist safety when travelling across the site access, in addition to making the active travel infrastructure appropriate for those from all walks of life. A Stage 1 Road Safety Audit was undertaken on the proposed access junction and proposed pedestrian crossing over the A25 on 5th September 2023, with no significant safety concerns raised. Further consideration can be addressed at detailed design stage.
70. This sub-section has summarised the proposed sustainable transport enhancements, covered within the original submission. The following sub-section details the new proposed sustainable transport improvements which seek to respond to the concerns raised by SCC.

New Proposed Sustainable Transport

Bus

71. As detailed in the previous section, the proximity and frequency of bus services is deemed to be appropriate and sufficient to support the proposed development. Notwithstanding this, the Applicant is keen to offer further improvements for future site users. This includes minimising journey time from the development uses to the nearest bus stops, via enhanced ped/cycle routes.
72. In the analysis of bus stop distances earlier in this note, reference is made to the westbound Nutfield Cemetery bus stop which will be the closest for some residential areas. It is proposed to improve access to this stop by providing an uncontrolled crossing and new section of footway as shown in **Figure 9**, and provided at **Appendix B**.

Figure 9: Nutfield Cemetery Bus Stop Accessibility Improvements



73. As illustrated in **Figure 9**, the improvements seek to introduce an unsignalised crossing, featuring a 1.6m by 1.5m refuge island waiting point, compliant with the minimum width requirements set out in 'Inclusive Mobility' (December 2021). Importantly, this design ensures that vehicles travelling along the A25 will have sufficient visibility of the refuge island, thus knowing to slow down due to the possibility of pedestrians crossing. The proposals also provide an approximately 2m wide footway, connecting from the bus stop to the proposed crossing, which would be approximately 100m in length.
74. The above is an indicative design, and the Applicant seeks support from SCC regarding the implementation of this proposed crossing.

Electric Bus

75. A major improvement that the Applicant is willing to commit to is the introduction of electric minibuses for both future site users, and, potentially, the local community. It is important to emphasise that these additional buses are not to address an existing shortcoming (the earlier section of this note has demonstrated that the bus services are sufficient) but rather to provide an additional and enhanced service for residents.
76. Two 13-seater, electric, minibuses will operate at a frequency of two services into Redhill, and two services back to the site, per hour, per bus, in the AM and PM peak hours and shoulder peak hours. Hence, there will be four services per hour in both directions during the AM and PM peak periods. Outside of these peak periods, the electric minibus route can be varied to assist residents of the later living and care home units, providing access to Redhill, Oxted, and South Nutfield. The proposed electric minibus frequency, combined with the existing public bus services is summarised in **Table 5**.

Table 5: Proposed Electric Minibus Frequency

Status	Operator	Service	Average Frequency (per hour)			
			To Redhill (06:00-09:00)	From Redhill (16:00-19:00)	To Redhill (During the Day)	From Redhill (During the Day)
Existing	Metrobus	400	1	1	1	1
		410	2	2	2	2
	Cruisers	315	>1	>1	0	0
Proposed	Electric Minibus		4	4	4	4
TOTAL			7	7	7	7

77. The combination of existing bus services and the proposed electric minibus means that future site users will have access to a bus service into Redhill (in the AM) and back to the site (in the PM) at an average frequency of every 9-minutes. Moreover, this reduces the maximum gap between services to 15-minutes. This is a significant improvement on the existing average frequency of a service every 22-minutes, and the maximum gap of 30-minutes, which is already considered sufficient. As a result of this improvement, the locational accessibility of the Nutfield application site is greatly enhanced.
78. Outside of the peak periods there is flexibility on how the bus service would be used. It could be used to enhance services between the site and Redhill or serve other locations. The service can also be made available to serve the later living units and Care Home to facilitate trips to certain destinations, day outings etc. Finally, the option of making the service open to the local community will also be investigated.
79. A benefit of this service is that it can penetrate the site, thus getting closer to residential properties and the later living area, which has the potential to make bus services easier to use for older and less mobile members of the community.
80. The principle of provision of an electric bus service is similar to that consented at the St Pierre's Estate, Lingfield, which is referred to later in this note.

81. The estimated cost of running two electric minibuses is £120k per year. The commitment is to operate the two buses for a period of 10 years from the first occupation, to be secured through the S106 agreement.

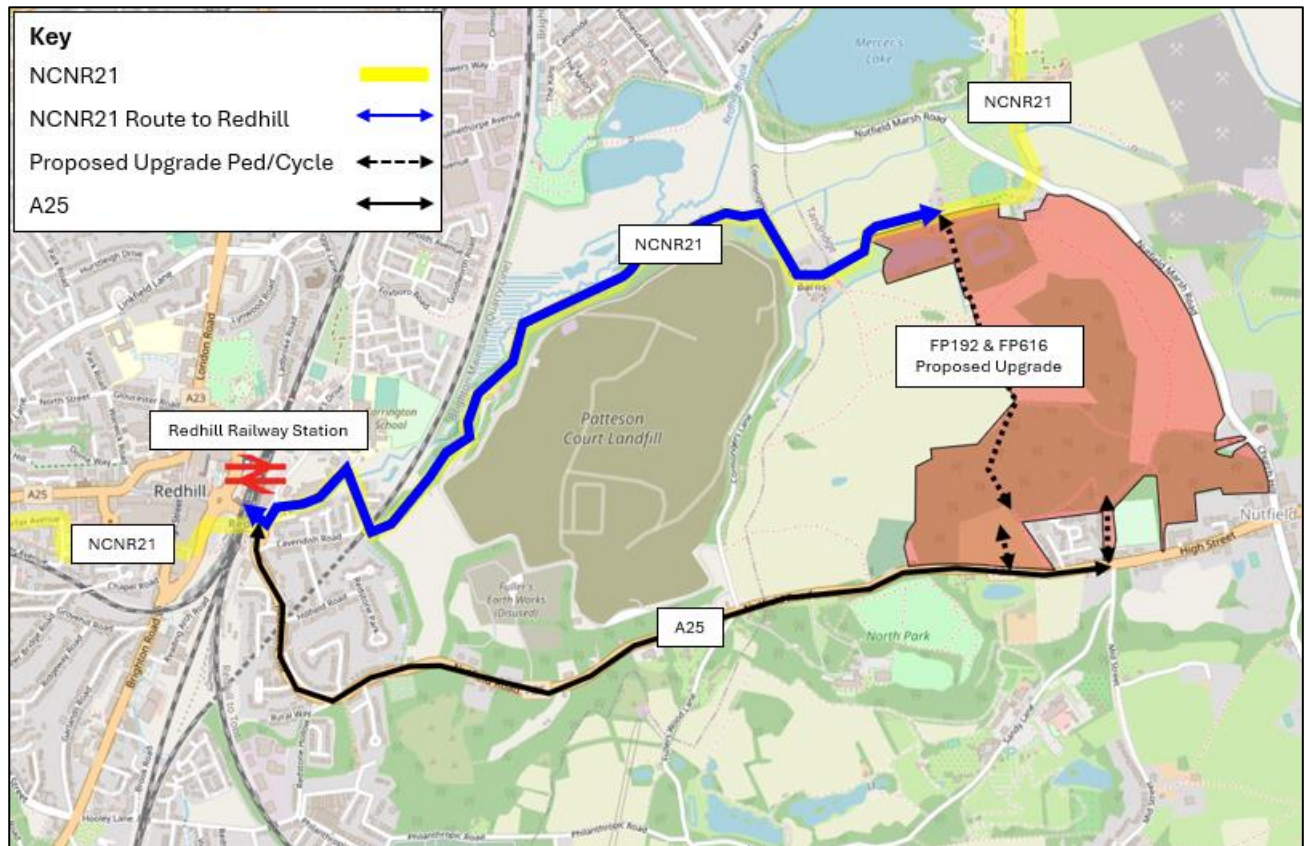
Cycling

82. Whilst a cycle route into Redhill is available along the A25 (2.8km/8-minute cycle), which will likely be used by confident cyclists, the Applicant is keen to provide an alternative route along less trafficked/non-trafficked roads. Two alternative cycle routes will be detailed within this section.

NCNR21

83. NCNR21 runs directly along the site's northern boundary, via Chilmead Lane, ultimately connecting into Redhill. As such, the Applicant is very keen to upgrade the route to make it usable, as it is currently prone to flooding. Upgrading of the route is supported by SCC and the Surrey Wildlife Trust.
84. Enhancements to this route can connect future site users to Redhill Station and the town centre, from the north of the site, a distance of circa 3km, equating to an approximately 11-minute ride. Based on National Travel Survey Statistics, the average cycling trip lengths in 2018 and 2019 was 3.3 miles, just over 5km. Moreover, greater distances are regularly undertaken and the DfT's 'Cycle Infrastructure Design' (October 2008) states that "for commuter journeys, a trip distance of over five miles (8.0km) is not uncommon".
85. Future site users can subsequently park their bicycle in one of 190 cycle parking spaces present at Redhill Station.
86. NCNR21 will be accessible from the site via internal PRow. FP192 & FP616 and both proposed to be upgraded to accommodate pedestrian/cycle connections onto Chilmead Lane, which forms part of the NCNR21. The NCNR21, and its connection to the Site are illustrated in **Figure 10** below.

Figure 10: NCNR21 Route



87. Since the original submission, further detailed consideration has gone into the upgrading of NCNR 21 and the footpaths. A report from Land & Water 'Sustrans 21; Nutfield Link Restoration Appraisal' details the required restoration to NCNR21 and the upgrading of FP192 & FP616. This can be found at **Appendix C** for reference.
88. Regarding FP192 & FP616, the current walking surfaces are unsuitable for use by cyclists. The proposed improvements are as follows:
 - 2m wide track comprising a basal geotextile separator with 150mm of type 1 limestone base (or recycled equivalent) topped with 60mm of 8mm to dust limestone pathway gravel (a porous product);
 - Low level, solar powered bollards with downlighting are proposed to be in use during twilight and dark hours. The bollards would be equipped with approximately 1.2m high PIR which turns on the two units on either side for 30 seconds only, to allow the passage of a human on foot or bicycle, without unnecessary illumination on the ground/wildlife, to ensure no negative impacts on sensitive ecology and habitats; and
 - In between these existing footpaths, a short section of pedestrian/cycle route will be constructed (approx. 50m), to connect the paths.
89. The details of the above can be confirmed at a detailed design stage and secured by condition.

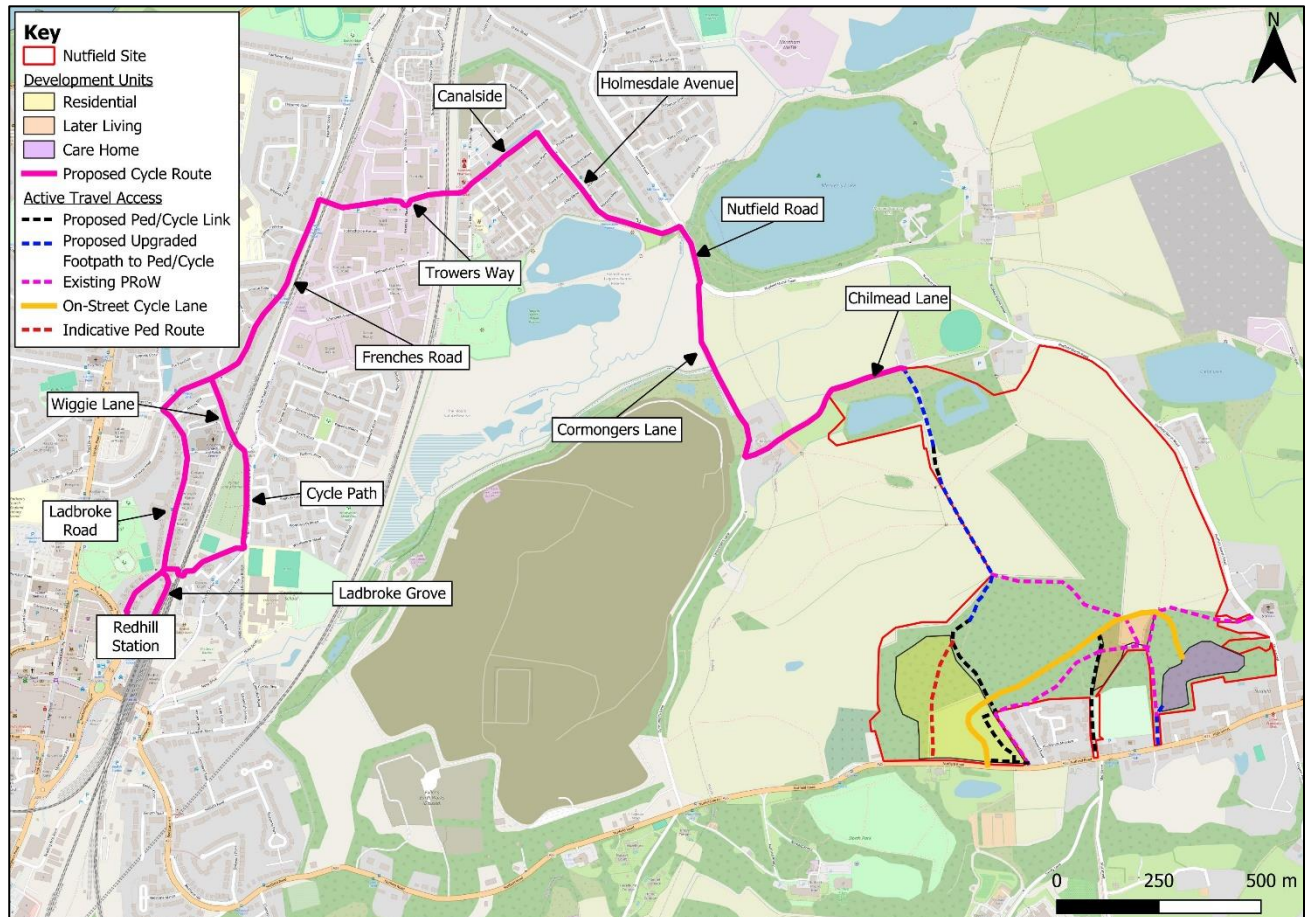
90. Turning to NCNR21, detailed analysis has been conducted into the feasibility, deliverability, and cost implications of the restoration of the route. The following enhancements are considered desirable along the route:
- Improved signage;
 - Cutting back of vegetation;
 - MOT type 1 stone pothole repairs and topping of 8mm to dust limestone pathway gravel;
 - Removal of surface debris;
 - Cosmetic improvements to entry gates;
 - Recutting of ditches to drain surface waters;
 - Treat and paint steel bearers and renew handrails and surface boarding at bridges crossing Redhill Brook;
 - Redhill Brook dredged to prevent pathway flooding above the blockages and decelerate the decay of steel bearers at bridges; and
 - Unblocking of culvert under NCNR21.
91. New engineering, significant infrastructure works, changes to alignment, or new structures are not vital to the restoration of NCNR21, which largely represents the backlogged maintenance of an existing landscape feature. However, the ultimate objective is the delivery of a fully functional link between Nutfield and Redhill, which would be achievable through these restoration methods. The cost of this restoration, in addition to a 5-year maintenance plan, is estimated at £1,278,573. These works can be secured and paid for via an S106 obligation from the Applicant and delivered as a pre-occupation condition.
92. Discussions with James Emmett at SCC are underway, seeking to further understand what can be provided to make the route suitable for all people with varying levels of mobility, all year round. We have been informed that SCC have no formal plan regarding improvements to this route.
93. It is important to note that the restoration works of the NCNR21 not only enhances the locational sustainability of the Site, but also the wider area of Nutfield. Existing Nutfield residents will benefit from these enhancements as much as the future site users at the proposed development.

Alternative Cycle Route

94. Notwithstanding the proposed enhancements of NCNR21, an additional route from the site via Chilmead Lane/Frenches Road to Redhill has also been investigated. The journey is approximately 4.2km long, from the north of the residential units to Redhill Station, anticipated to take approximately 13-minutes to cycle. This is well within maximum cycle distance guidance.

95. Furthermore, the route from Redhill Station to Chilmead Lane features a level increase of only 16m, an average gradient of 0.5%, which is considered insignificant. This is especially the case when considered in conjunction with electric bikes. **Figure 11** illustrates the alternative cycle route.

Figure 11: Potential Cycle Route – Site to Redhill



96. The directions of this alternative cycle route, from entry onto Chilmead Lane, until Redhill Station, are summarised below:
- Chilmead Lane forms a better-quality portion of the NCNR21, which site users would travel westbound along for approximately 450m;
 - Subsequently, cyclists would travel approximately 450m (1-min cycle) along Cormongers Lane, which features a 30mph speed limit, followed by approximately 150m along Nutfield Road, which features 'slow' signage on the road on approach to a mini roundabout. During a site visit in March 2024, Cormongers Lane and Nutfield Road were seen to be quiet and lightly trafficked;
 - Following this, cyclists would take the first exit onto Holmesdale Avenue, which is a residential estate with a 20mph speed limit. Following 450m along Holmesdale Avenue, there is 600m along Canalside and Trowers Way, which includes approximately 150m of shared footway/cycleway;

- Trowers Way connects to Frenches Road, which features frequent traffic calming measures, due to the proximity to Reigate Valley College. Approximately 550m along Frenches Road leads to Wiggie Lane, a quiet residential road connecting to a segregated cycle path running adjacent to St Annes Drive. This cycle path is approximately 450m in length, including a bridge over the railway line; and
- This connects to Ladbroke Grove, a small residential cul de sac, featuring a pedestrian/cycle access at its southern extent, connecting directly to the Redhill Station car park. Alternatively, cyclists could continue along Frenches Road for another 150m, before travelling 550m along Ladbroke Road into the station car park. Both roads are residential, and thus overlooked and well-lit.

97. The benefits of this alternative route have been summarised below:

- Routes along lightly trafficked/non-trafficked roads;
- Within 5km of Redhill Station, and Redhill town centre;
- Majority of the route is flat, made even easier by proposed electric bike provision (further detail in next section); and

Electric Bikes

98. It is considered that cycling could become even more desirable for future site users, through the provision of electric bikes.
99. The proposed electric bike provision would consist of a pool of shared e-bikes for those occupying units within the residential land use. This would be managed by the On-Site Management Team, likely coordinating the use of the bikes via a mobile phone application. This scheme would be subject to condition/S106 Obligation, with further details provided during the Reserved Matters stage.
100. The provision of electric bike hire is considered to provide the potential for a significant modal shift for residents, as supported by the SCC LTP4 *“Secure cycle parking, bike hire and promotion of electric and cargo bikes will also help to increase uptake.”*
101. It is believed that this scheme would be popular amongst occupiers, due to the proximity of Redhill, and the cost savings as a result of fewer private vehicle trips, without the outlay of a bicycle. Uptake would be monitored through the Travel Plan, with electric bicycles purchased relevant to demand.
102. In summary, the applicant is prepared to undertake a significant investment in cycle infrastructure that will provide two alternative routes between the site and Redhill, with a journey distance of less than 5km and being reasonably flat.
103. In addition an e-bike pool will be provided with sufficient bikes to address the demand.
104. These measures are considered to considerably improve the opportunities for residents and members of the existing community to use cycling as a mode of transport.

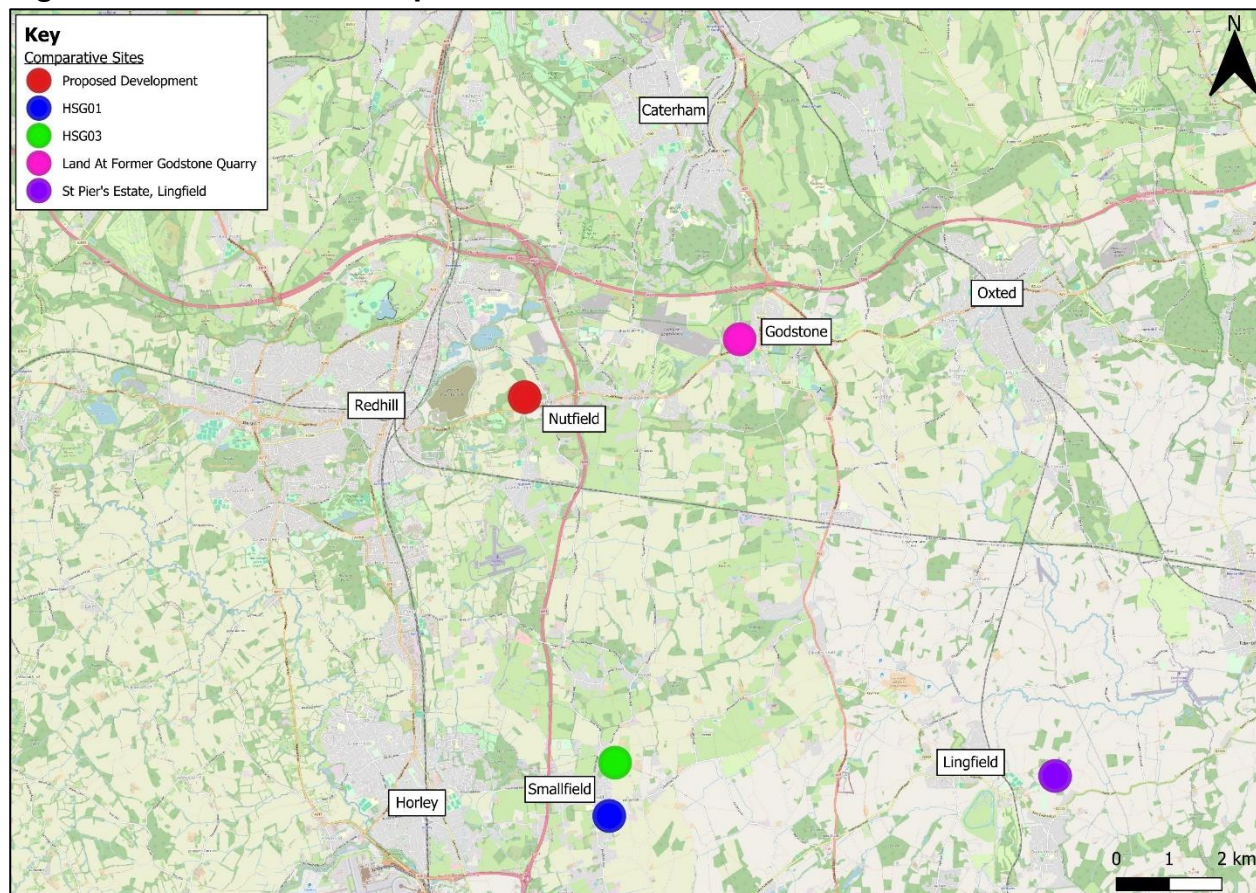
Summary

105. The development proposes a wealth of enhancements in regard to sustainable transport and these are summarised in the table in the Exec Summary. It is considered that these enhancements along with the inherent accessible features of the site, make the development highly accessible by sustainable modes.

Comparative Sites

106. This note has demonstrated that the application is already in a sustainable location from a transport perspective, and this will be further enhanced by the range of measures proposed by the applicant.
107. To judge the relative accessibility of the site it is considered helpful to compare the application site with similar sites that have been granted approval by Tandridge District or were allocated within the Draft Tandridge Local Plan 'Our Local Plan: 2033'. Despite the draft plan being deemed unsound, issues were not raised by the Inspector regarding all allocated sites. This assessment just focuses on transport related accessibility criteria.
108. There are four sites which it is considered have similarities to the application site and are therefore suitable for comparison:
- 'The Land at Former Godstone Quarry' – APPROVED;
 - 'St Pier's Estate, Lingfield' – APPROVED;
 - Draft Allocation HSG01 – Land at Plough Road and Redehall Road, Smallfield; and
 - Draft Allocation HSG03 – Land North of Plough Road, Smallfield.
109. The location of these sites is illustrated in **Figure 12** below.

Figure 12: Location of Comparative Sites



110. The following paragraphs give a more detailed analysis of the comparative sites.

Land at the Former Godstone Quarry

111. The 'Land at Former Godstone Quarry' development was considered at Planning Committee on 29th February and secured a resolution to grant subject to S106 and conditions. This site is located to the west of Godstone featuring 140 residential units and a new doctor's surgery. **Figure 13** illustrates the location of the development.

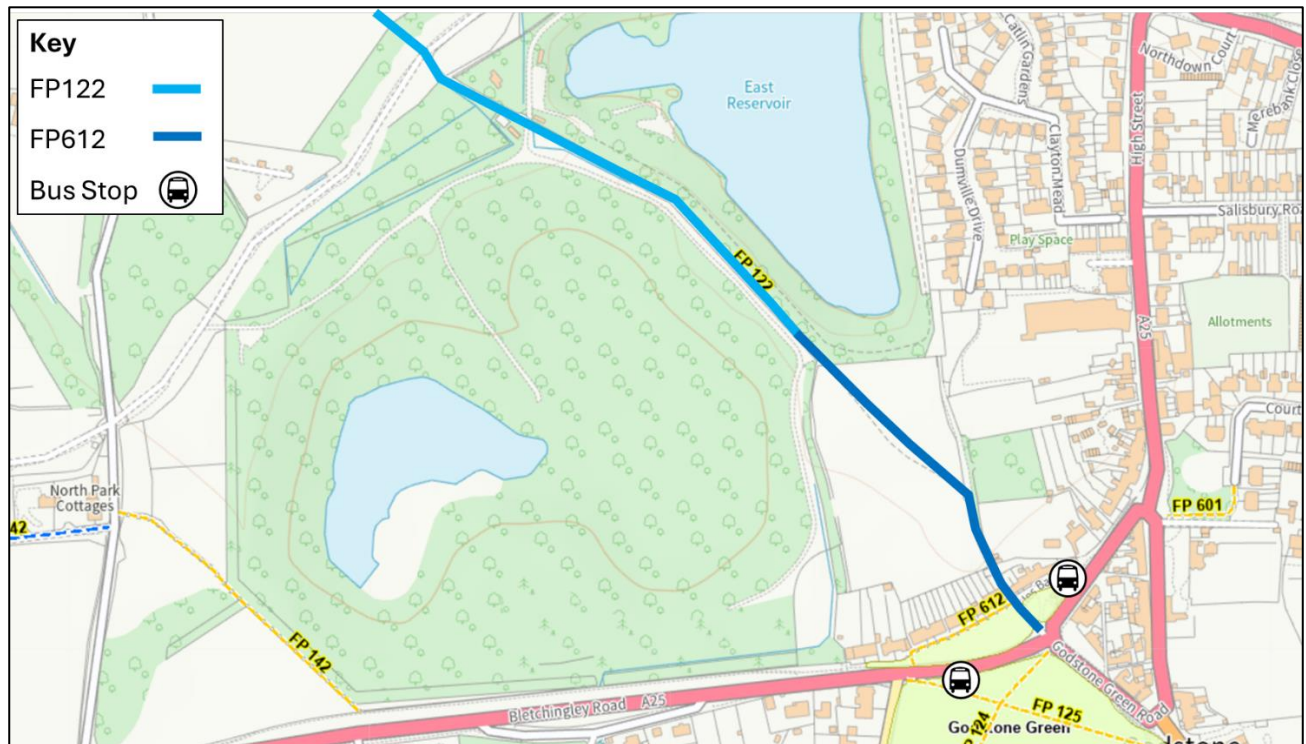
Figure 13: Land at Former Godstone Quarry Site Location Plan



112. Regarding public transport, proximity to bus stops and frequency of services has been considered.
113. As noted earlier, the methodology adopted and reported in the committee report was to measure the distance from the bus stops to the site entrance. The committee report states:

“As the crow flies and with all distances taken from the position where the proposed residential access would meet the A25... the nearest bus stops are 300 and 330 metres from the site.”
114. If this criteria were used, the equivalent distances for the Nutfield site are 300m and 230m. Using the more robust approach of considering the distance from bus stops to the furthest residential plots, the furthest part of the Former Godstone Quarry development (to the north) is approximately 550m from the nearest bus stop if using FP122 as shown below. This footpath is to be upgraded using a S106 contribution.
115. The FP122 and FP612 are shown in **Figure 14** below.

Figure 14: FP122 – Former Godstone Quarry Development Nearby Bus Stop Route



116. The comparable distances for the Nutfield application site, to the nearest bus stops, are 500m/475m. Therefore, whether, the distance is measured to the site access or to the furthest residential plot, the Nutfield application site performs better than Godstone Quarry in relation to public buses (i.e. ignoring the proposed electric bus provision).
117. Turning to bus frequency, the nearest bus stop (Godstone Green) is served by the 400, 409, 410 and 612 services. The 612 is a school-only service, whilst the 409 service connects Redhill and Oxted, with a service every half an hour. The 400 and 409 bus services have a frequency of approximately one service every hour. Regarding the largest gap between services to and from the nearest station (Caterham), in the AM this is 25 minutes (between 07:38-08:03) and 30 minutes in the PM (between 16:45-17:15). This is a very similar level of service available to future site users at the Nutfield application site (if the proposed electric bus service is ignored).
118. Regarding proximity to railway stations, the southern site access is approximately 4.6km south of Caterham railway station, approximately an hour walk, and a 21-minute cycle. Furthermore, this route involves travelling across the Godstone Interchange, and walking/cycling along the A22, which is a dual carriageway. Site users can also travel to Godstone Station, 4.6km south of the site (1 hour walk/16-minute cycle), however this also involves using the A22, and Godstone is a more poorly connected station than Caterham.
119. These distances and the quality of routes to the stations are considerably worse than from the Nutfield application site to Nutfield Station (1.7km) and Redhill station (3km)

St Pier's Estate, Lingfield

120. The 'St Pier's Estate' development received a resolution to grant permission on the 14th of February 2024, subject to S106 and conditions. This site is located to the east of Lingfield, and the proposals include a residential care community including 152 units of accommodation for older people who live independently, community facilities, and a refurbishment of the Young Epilepsy education centre. **Figure 15** illustrates the location of the development.

Figure 15: St Pier's Estate Site Location Plan



121. Regarding public transport, the proximity to nearby bus stops is approximately 450m, when measured from the site access. When bus stop proximity is measured from the furthest part of the residential aspect of the development (to the west) it is approximately 700m from the nearest bus stop (St Pier's Lane). This bus stop is served by the 231, 233, 236, 281, 315, 609, and 646 services. The first two services only run to Stations Road, when travelling northbound, which falls approximately 450m short of the station, whilst the 609 and 646 are school service only. The other services run to the station. Other key destinations include Crawley, Oxted, and Tunbridge Wells, which are accessible from the eastbound bus stop. Furthermore, in the 3-hour AM period (06:00-09:00), there are only 3 services westbound, to the nearest station (Lingfield). In the 3-hour PM period (16:00-19:00), there are only two services travelling eastbound. Hence, it can be concluded

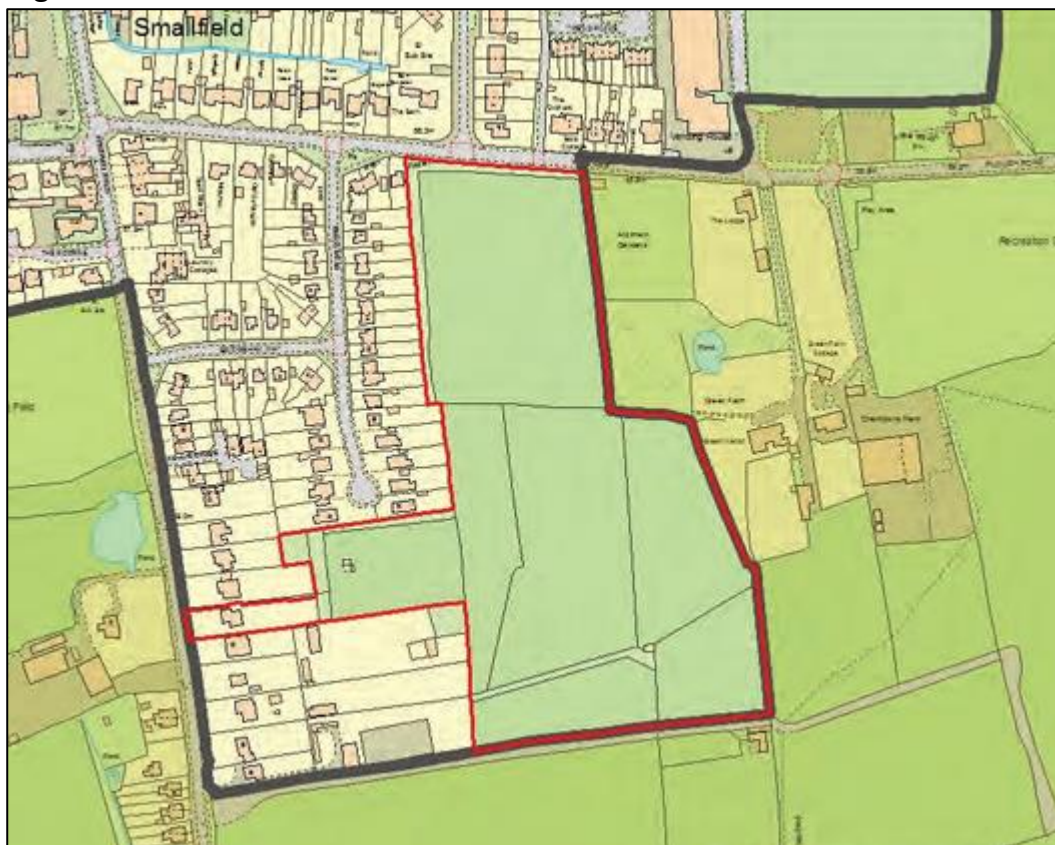
that the proximity of the bus stops, and frequency of services are not as good as those at the Nutfield application site.

122. The site's Travel Plan states that an electric minibus will be available on site, allowing residents to book transport to various destinations. The minibus service comprises an 8-seater electric vehicle, free of charge, with the anticipated destinations being the village centre, the railway station, nearby towns, and local leisure destinations such as Hever Castle. This can be seen to be similar (although not as comprehensive) as the electric bus provision planned for the Nutfield application site.
123. Regarding proximity to railway stations, the southern site access is approximately 1.8km southeast of Lingfield railway station, equal to a 22-minute walk, and a 5-minute cycle along the B2028. An additional, shorter route is available via PROW 381; however this is unsurfaced. Lingfield Station is served by Southern and Thameslink, whilst Redhill Station features Southern and Thameslink services in addition to Great Western Railway, accessing key destinations such as Reading and Gatwick Airport. As such, rail services are slightly better than for the Nutfield application site.

HSG01 – Land at Plough Road and Redehall Road, Smallfield

124. This site is located to the southeast of Smallfield and estimated to support 160 residential units. **Figure 16** illustrates the location of HSG01.

Figure 16: HSG01 Site Location Plan



125. In regard to bus stop proximity, the relevant bus stops are on Redehall Road since the stops on Plough Road are served by only the 315 which is an infrequent service. The furthest part of the site is circa 460m from the Redehall stops.
126. On bus frequency, the Woodside Cottages bus stops, on Redehall Road, are served by the 324, 422/424, and 624 bus services, with the 324 and 624 buses being school service only. The 422 service runs northbound along Redehall Road, whilst the 424 service runs southbound. These services offer no services in the AM peak (08:00-09:00) and two in the PM peak (17:00-18:00), averaging approximately 1 service every 70 minutes through the middle of the day. The largest gap in services in the AM is 26 minutes (07:15-07:41), with no services after 07:56, whilst the largest gap in the PM is 76 minutes (16:24-17:40).
127. Hence the Nutfield application site is similar in relation to the distance to public bus services but better in terms of frequency.
128. Regarding proximity to railway stations, the likely western site access is approximately 4.4km east of Horley railway station, which is a longer distance than to Nutfield and Redhill stations from the Nutfield application site.

HSG03 – Land North of Plough Road, Smallfield

129. This housing allocation is also within Smallfield, therefore much of the previous section will not be repeated but is still relevant to the sustainable transport available in proximity to the allocation.
130. This site is located to the northeast of Smallfield and estimated to support 120 residential units. **Figure 17** illustrates the location of HSG03.

Figure 17: HSG03 Site Location Plan



131. The furthest part of the site is approximately 590m north of the nearest bus stop, however, this is served by the 315 services, which is very infrequent. In order to reach a bus stop with more frequent services than the nearest stop, future site users would have to travel approximately 1.1km (14-minute walk) to access the Burstow Primary School bus stop, served by the 315, 324, 422/424, and 624 services. These are the same services as HSG01; however they are slightly less frequent, with the 315 not travelling northbound at this stop, and services present slightly outside of the peak periods. The largest gap in services in the AM is 41 minutes (07:16-07:57), also with no services after 07:57, whilst the largest gap in the PM is 76 minutes (16:23-17:39).
132. Hence the Nutfield application site performs better than this site in terms of both proximity to and frequency of public bus services.
133. In regard to rail travel, the likely site access to the south onto Plough Road, is approximately 4.5km east of Horley Station, and hence further than the distance between the Nutfield application site and either Nutfield or Redhill stations.

Summary

134. This section has demonstrated comparable sites that have been found to be acceptable in terms of locational sustainability. As has been demonstrated in this note, with the enhanced transportation package now proposed for the Nutfield application site, this will be equal to or better than these comparable sites. The Nutfield application site should therefore be supported in a consistent manner.

Highway Capacity Issues

Junction Modelling

135. The SCC Consultation Response raised an issue with the choice of modelling scenarios, claiming that it was inaccurate to separate committed developments and TEMPRO growth factors, and that a scenario should be run including both additional traffic generators, as is “*industry standard practice.*”
136. The modelling within the Transport Assessment featured the committed development and future (with growth) base scenarios separately, as committed developments are known quantities that can be used to more accurately assess the mitigation required once the proposed development is added. Where TEMPRO is added, it is based on the inclusion of growth where there are no planning permissions and no Transport Assessments of the schemes responsible for the growth, in addition to no knowledge of potential mitigation. As such, it should be for those future developments to mitigate their impacts if necessary, and not the responsibility of developers currently seeking approval. Therefore, the Nutfield application site should not have to mitigate for future unknown and unapproved developments. However, a scenario assessing the future base, plus committed and proposed development flows, has been run. This has been done to assist SCC, but we do not consider it should be used to assess necessary mitigation.
137. SCC also raised issues with the future year of 2029, with SCC claiming that this is likely earlier than the development would be fully occupied. A future year scenario of five years from the date of submission is industry standard practice, and as such is not proposed to change.
138. Subsequently, SCC have highlighted three junctions that they consider feature RFC scores over capacity. These junctions are listed below:
 - Stations Roundabout;
 - A25 / Mid Street / Park Works Road; and
 - Church Hill / A25 / Cooper’s Hill Road.
139. It is important to note at the outset that exceeding an RFC of 0.85 should not be considered as the analysis “failing” and mitigation being required. An RFC of 0.85 is the design capacity for a junction i.e. one would normally aim for 15% contingency in designing a new junction. This is not the same as assessing when a junction is operating unsatisfactorily. The appropriate test for an existing junction is whether the development has a severe impact as referenced in paragraph 115 of the NPPF.
140. As reported in the submitted Transport Assessment, Stations Roundabout reached a peak RFC, on a single arm, of 0.85, which is design capacity. As such, it is not considered that the Stations Roundabout is in need of mitigation.
141. The A25 / Mid Street / Park Works Road and the Church Hill / A25 / Cooper’s Hill Road junctions, as reported in the TA, also feature peak RFC under the theoretical capacity (1.00), and therefore they are similarly not operating “over” capacity as they are existing junctions, and the development does not cause a severe impact on the highway network.

142. Regarding queuing at junctions, the comparable site 'Land at Former Godstone Quarry' development stated in the TA, "with an increase of *2.7 vehicles in the 2025 morning peak hour and 4.4 vehicles in the 2033 morning peak hour... these modest increases are well below the severe impact level*". This would suggest that 4.4 vehicles (i.e. 5 vehicles) is considered to be a modest level of queueing by SCC, given the development has been granted approval.
143. The largest increase in queues on any arm at any junction in the TA assessment of the Nutfield application site was 2.3 vehicles, on the A25 / Mid Street junction. Therefore, using the same SCC criteria, a consistent approach should be taken in regard to the Nutfield application site proposals, in that all these queueing increases should be considered modest and well below the severe impact level on the road network, in accordance with paragraph 115 of the NPPF.
144. Despite the above, these junctions have been remodelled, as requested by SCC. The remodelled scenarios are as follows:
 - 2024 Base + Committed Development;
 - 2024 Base + Committed Development + Proposed Development;
 - 2029 Future Base (inc background growth) + Committed Development; and
 - 2029 Future Base (inc background growth) + Committed Development + Proposed Development.
145. Each of these scenarios have been modelled in the AM peak (08:00-09:00), PM peak (17:00-18:00), and from 16:00-17:00, as requested by SCC.
146. The junction modelling is based on 1500sqm of community use class E(e)/ F2 included in the application. Additionally, potential design enhancements have been proposed at the aforementioned junctions, as outlined in the following section.

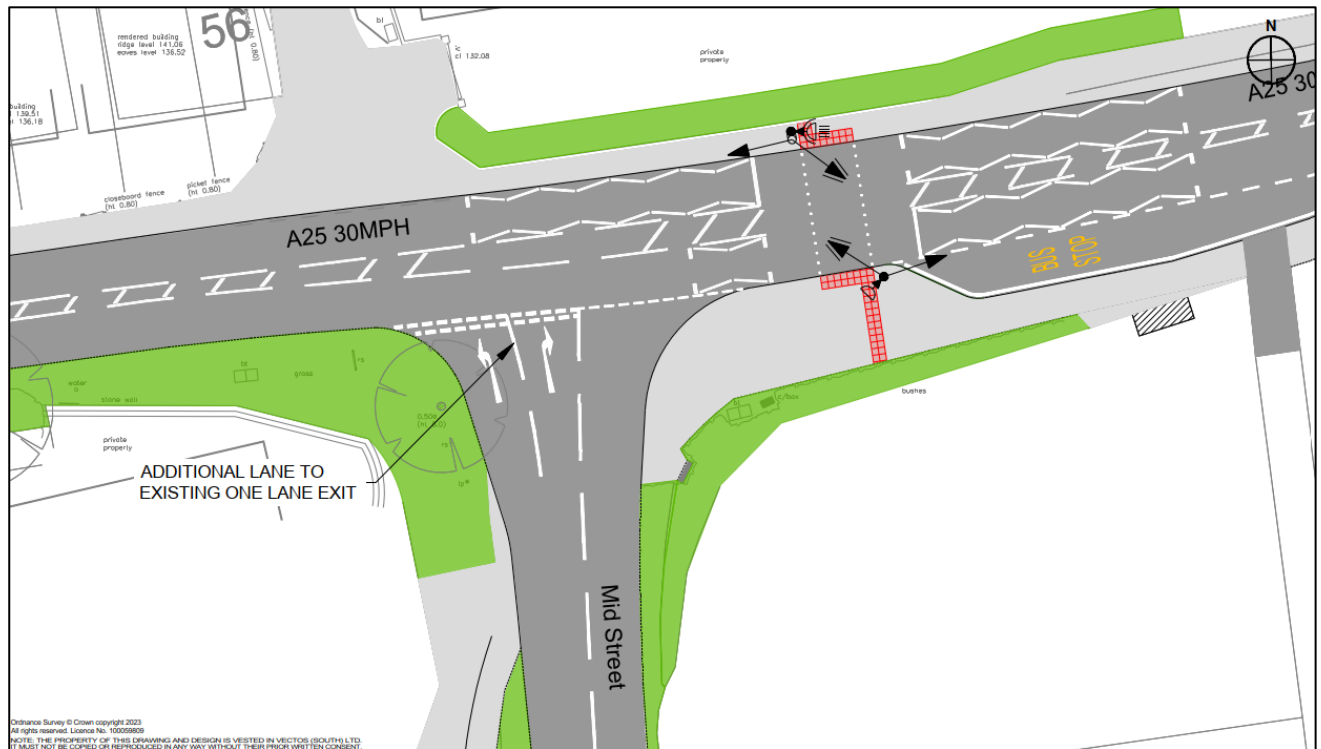
Highways Design

147. Notwithstanding that we consider than no junction mitigation is required, based on the revised analysis submitted below, we have investigated if there are any highway improvements that might improve the existing situation.
148. No junction improvements have been investigated at the Stations Roundabout due to the junction operating within design capacity. Any improvements would be to the detriment of pedestrians and involve amendments to an already recently developed junction. Therefore, it is recommended that no changes are made to this junction.

A25 / Mid Street / Park Works Road

149. **Figure 18** illustrates the potential improvements that could be made to this junction. This can also be found at **Appendix D**.

Figure 18: A25 / Mid Street / Park Works Road Junction Potential Improvements

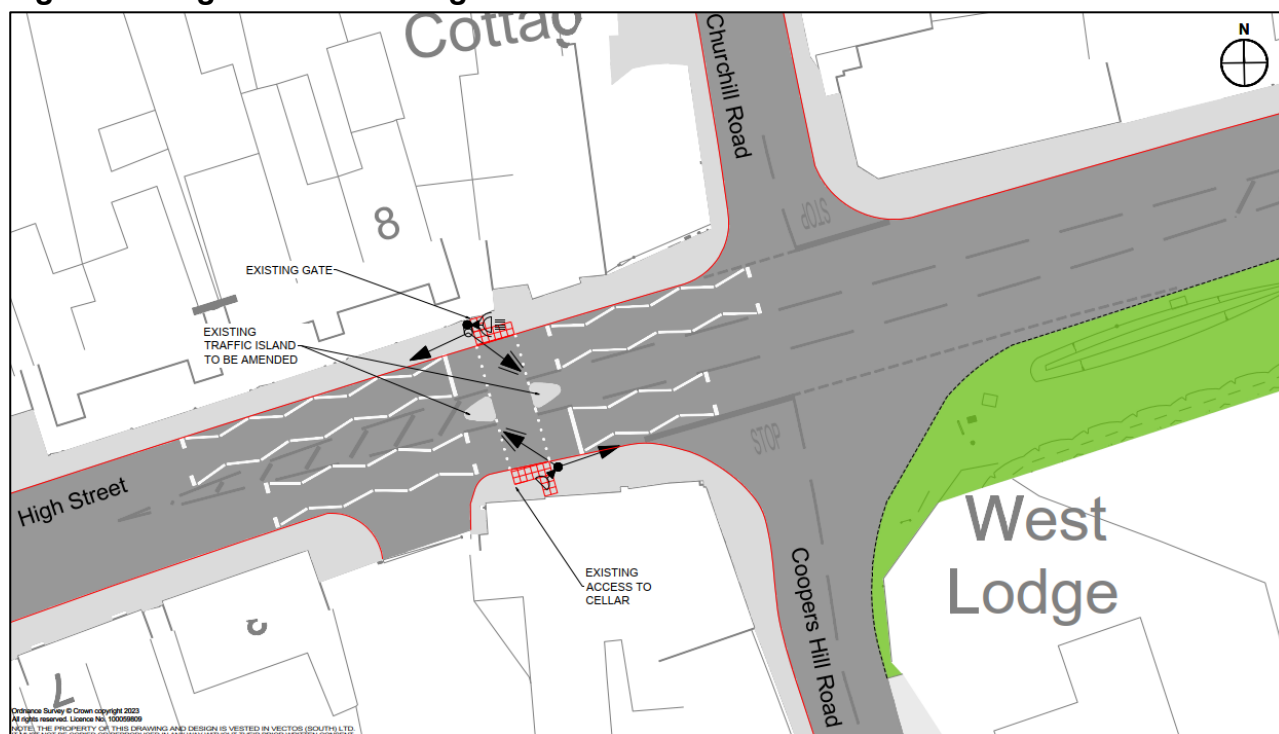


150. Observations show that currently 2 cars can approach the stop line but as there is no formal marking, sometimes people do not observe this convention. Hence, this potential improvement would formalise left and right lanes from Mid Street onto the A25, potentially reducing the chance of queues forming. This is achieved by changes to lane markings within the existing carriageway width. This is likely to improve the efficiency of the junction as it would, for example, encourage those turning right to keep right, thus allowing someone turning left to reach the stop line.

Church Hill / A25 / Cooper's Hill Road

151. Analysis was undertaken to determine potential benefits of signalising this junction. However, modelling results found that this reduced overall capacity at the junction, and as such signalisation across the entire junction is not recommended. Alternatively, the potential signalisation of the existing crossing on the A25 in the vicinity of the junction has been investigated to improve pedestrian safety. The scheme will also result in vehicles having a greater opportunity to exit Church Hill once the crossing is called, and the A25 traffic from the west is halted. This is shown in **Figure 19**, and can also be found at **Appendix D**.

Figure 19: Signalised Crossing across A25



Modelling Results

152. The modelling results for all junctions are provided in **Appendix E**. They are summarised below.

Stations Roundabout

153. Modelling results for the Stations Roundabout are presented in **Table 6** below.

Table 6: Stations Roundabout Modelling Results – Hour

Movement	AM (08:00-09:00)			PM (17:00-18:00)			PM (16:00-17:00)		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
Scenario 1 - 2024 Base + Committed Dev									
Princess Way	1.8	6.86	0.65	3.9	12.93	0.80	2.7	9.20	0.74
A23	2.4	10.92	0.71	0.9	6.03	0.46	0.8	5.65	0.43
Marketfield Way	1.0	5.55	0.51	1.5	6.15	0.60	1.2	5.29	0.55
Stations Road	0.1	18.00	0.09	0.1	17.07	0.05	0.0	13.83	0.02
Quadrant Access	0.1	7.71	0.12	0.2	7.63	0.15	0.1	6.95	0.10

Scenario 2 - 2024 Base + Committed Dev + Proposed Dev									
Princess Way	2.00	7.37	0.67	4.60	14.80	0.83	3.20	10.48	0.77
A23	2.10	9.90	0.68	1.00	6.44	0.50	0.90	6.14	0.48
Marketfield Way	1.00	5.36	0.50	1.60	6.53	0.62	1.30	5.64	0.57
Stations Road	0.10	16.63	0.08	0.10	18.66	0.05	0.00	15.17	0.03
Quadrant Access	0.10	8.00	0.12	0.20	7.91	0.16	0.10	7.22	0.11
Scenario 3 – 2029 Future Base + Committed Dev									
Princess Way	2.00	7.32	0.67	4.70	15.36	0.83	3.10	10.24	0.76
A23	2.70	12.15	0.73	0.90	6.36	0.48	0.80	5.91	0.45
Marketfield Way	1.10	5.82	0.53	1.60	6.58	0.62	1.30	5.56	0.56
Stations Road	0.10	19.39	0.10	0.10	18.67	0.05	0.00	14.72	0.03
Quadrant Access	0.10	7.99	0.12	0.20	7.98	0.16	0.10	7.19	0.11
Scenario 4 - 2029 Future Base + Committed Dev + Proposed Dev									
Princess Way	2.30	7.94	0.70	5.70	18.02	0.86	3.70	11.86	0.79
A23	2.30	10.90	0.70	1.10	6.82	0.52	1.00	6.46	0.50
Marketfield Way	1.10	5.61	0.52	1.80	7.01	0.64	1.40	5.95	0.59
Stations Road	0.10	17.84	0.09	0.10	20.58	0.06	0.00	16.25	0.03
Quadrant Access	0.10	8.31	0.13	0.20	8.28	0.17	0.10	7.48	0.11

154. Under the Core Test (Scenario 2) all RFCs are below 0.85. It is only the addition of unspecified growth in Scenario 4 that shows a peak RFC of 0.86, on the Princess Way arm and a peak queuing increase of only 1.0 vehicle. This is deemed an insignificant impact.
155. Notwithstanding the above, we have conducted further modelling analysis using a 'direct' traffic profile type. The 'direct' modelling results for the Stations Roundabout are presented in **Table 7** below.

Table 7: Stations Roundabout Modelling Results – Direct

Movement	AM (08:00-09:00)			PM (17:00-18:00)			PM (16:00-17:00)		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
Scenario 1 - 2024 Base + Committed Dev									
Princess Way	1.6	6.18	0.62	3.0	9.77	0.76	3.4	10.95	0.78
A23	1.9	8.02	0.66	0.7	5.09	0.43	0.6	4.77	0.37
Marketfield Way	0.9	5.11	0.47	1.2	5.32	0.54	1.0	4.96	0.51
Stations Road	0.1	18.64	0.11	0.1	14.50	0.10	0.0	12.93	0.03
Quadrant Access	0.2	7.90	0.17	0.2	8.19	0.15	0.1	6.93	0.10
Scenario 2 - 2024 Base + Committed Dev + Proposed Dev									
Princess Way	1.7	6.53	0.64	3.4	10.79	0.78	4.0	12.51	0.81
A23	1.4	6.71	0.58	0.8	5.33	0.46	0.7	5.04	0.41
Marketfield Way	0.9	5.08	0.48	1.3	5.57	0.56	1.1	5.23	0.53
Stations Road	0.1	14.88	0.10	0.1	15.54	0.11	0.0	13.88	0.03
Quadrant Access	0.2	8.15	0.17	0.2	8.40	0.15	0.1	7.14	0.10
Scenario 3 – 2029 Future Base + Committed Dev									
Princess Way	1.7	6.52	0.64	3.4	10.83	0.79	4.0	12.40	0.81
A23	2.0	8.56	0.68	0.8	5.33	0.45	0.6	4.95	0.39
Marketfield Way	0.9	5.25	0.49	1.3	5.60	0.57	1.1	5.19	0.53
Stations Road	0.1	19.54	0.12	0.1	15.47	0.11	0.0	13.68	0.03
Quadrant Access	0.2	8.09	0.17	0.2	8.49	0.15	0.1	7.13	0.10
Scenario 4 - 2029 Future Base + Committed Dev + Proposed Dev									
Princess Way	1.9	6.96	0.66	4.0	12.06	0.81	4.8	14.41	0.84
A23	1.5	7.12	0.60	0.9	5.66	0.48	0.7	5.22	0.42
Marketfield Way	1.0	5.24	0.50	1.4	5.87	0.58	1.2	5.48	0.55
Stations Road	0.1	15.88	0.11	0.1	16.65	0.12	0.0	14.74	0.03
Quadrant Access	0.2	8.34	0.18	0.2	8.74	0.16	0.1	7.34	0.11

The modelling of Stations Roundabout, with a 'direct' approach, demonstrates that every arm, in all scenarios, is under the design capacity threshold of 0.85, with a peak queuing increase of only 0.8 vehicles when the development flows are added in the future year scenario.

A25 / Mid Street / Park Works Road

156. The modelling results for the Mid Street junction are presented in **Table 8** below. The way that the junction has been modelled has been updated to reflect more accurate measurements for existing geometries. The junction arms are summarised below for reference:

- **A:** High Street (E);
- **B:** Mid Street;
- **C:** High Street (W); and
- **D:** Park Works Road.

Table 8: A25 / Mid Street / Park Works Road Modelling Results

Movement	AM (08:00-09:00)			PM (17:00-18:00)			PM (16:00-17:00)		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
Scenario 1 - 2024 Base + Committed Dev									
B-C D	0.40	14.90	0.30	0.50	22.85	0.36	0.70	22.07	0.40
B-A	1.50	32.56	0.60	3.70	55.50	0.81	3.40	49.69	0.79
AB-C D	0.00	4.13	0.01	0.00	4.90	0.01	0.00	4.80	0.01
D-ABC	0.00	8.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00
CD-AB	0.60	7.07	0.26	1.00	5.78	0.35	0.60	5.05	0.23
Scenario 2 - 2024 Base + Committed Dev + Proposed Dev									
B-C D	0.60	16.45	0.39	1.00	37.99	0.51	1.20	36.98	0.55
B-A	1.60	37.13	0.63	4.80	73.72	0.86	4.70	68.99	0.85
AB-C D	0.00	4.00	0.01	0.00	4.81	0.01	0.00	4.68	0.01
D-ABC	0.00	8.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00
CD-AB	0.90	7.78	0.36	1.20	6.02	0.39	0.70	5.17	0.26
Scenario 3 – 2029 Future Base + Committed Dev									
B-C D	0.50	16.52	0.33	0.90	35.75	0.48	0.90	31.47	0.50
B-A	1.70	37.26	0.64	4.80	70.84	0.86	4.40	62.48	0.84
AB-C D	0.00	4.09	0.01	0.00	4.87	0.01	0.00	4.77	0.01
D-ABC	0.00	8.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00
CD-AB	0.70	7.18	0.27	1.10	5.88	0.37	0.60	5.08	0.24
Scenario 4 - 2029 Future Base + Committed Dev + Proposed Dev									
B-C D	0.90	23.61	0.48	3.20	123.98	0.86	2.90	90.69	0.81
B-A	2.40	53.87	0.73	6.70	98.01	0.92	6.40	91.71	0.91
AB-C D	0.00	4.01	0.02	0.00	4.78	0.01	0.00	4.66	0.01
D-ABC	0.00	8.46	0.02	0.00	0.00	0.00	0.00	0.00	0.00
CD-AB	1.10	8.46	0.39	1.30	6.16	0.41	0.80	5.21	0.27

157. The results of Scenario 2 (2024 Base + Committed Dev + Proposed Dev) show a peak RFC of 0.86, significantly under the theoretical capacity of 1.00, with a peak queue of 4.8 i.e. less than 5 vehicles (the acceptance criteria used at Godstone Quarry). The peak queue increase is only 1.3 vehicles. Hence the impacts are minimal, and no mitigation is required.
158. In Scenario 4, the highest RFC is 0.92, (whereas in the submitted TA it was 0.96 and 0.95 from Mid Street onto the A25) and remain under the threshold of 1.00. Furthermore, the largest increase in queuing is only 2.0 vehicles, in the future scenario, which is insignificant and considerably less than the increase in queue accepted at Godstone Quarry.
159. If the potential improvements for this junction set out in **Figure 12** were deemed to be suitable then, in reality, this could improve the efficiency of the junction further (although this is not reflected in the analysis). In addition to this, the proposed crossing on the A25, to the east of Mid Street, will also allow vehicles exiting Mid Street greater opportunity to enter onto the A25 without a risk of conflict.

Church Hill / A25 / Cooper's Hill Road

160. The modelling results for the Church Hill / A25 / Cooper's Hill Road are presented in **Table 9**.

Table 9: Church Hill / A25 / Cooper's Hill Road Modelling Results

Movement	AM (08:00-09:00)			PM (17:00-18:00)			PM (16:00-17:00)		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
Scenario 1 - 2024 Base + Committed Dev									
Cooper's Hill Road	3.3	82.99	0.80	0.9	29.71	0.49	0.9	26.82	0.49
High Street (E)	0.4	9.46	0.29	0.2	10.50	0.19	0.2	9.28	0.14
Church Hill	1.2	28.49	0.56	4.1	73.92	0.84	1.3	29.05	0.57
High Street (W)	0.0	10.12	0.05	0.1	7.88	0.10	0.1	7.50	0.05
Scenario 2 - 2024 Base + Committed Dev + Proposed Dev									
Cooper's Hill Road	4.3	104.80	0.86	1.1	33.41	0.54	1.2	30.80	0.55
High Street (E)	0.4	9.62	0.30	0.2	10.78	0.19	0.2	9.58	0.14
Church Hill	1.4	31.58	0.59	5.3	94.36	0.88	1.5	34.04	0.61
High Street (W)	0.1	10.50	0.07	0.1	8.10	0.12	0.1	7.80	0.08
Scenario 3 – 2029 Future Base + Committed Dev									
Cooper's Hill Road	5.0	121.63	0.89	1.2	35.00	0.55	1.1	30.45	0.54
High Street (E)	0.5	9.63	0.30	0.2	10.80	0.20	0.2	9.50	0.14
Church Hill	1.4	32.85	0.60	6.0	104.14	0.90	1.5	33.55	0.61

High Street (W)	0.1	10.42	0.05	0.1	8.00	0.10	0.1	7.60	0.05
Scenario 4 - 2029 Future Base + Committed Dev + Proposed Dev									
Cooper's Hill Road	6.9	154.27	0.95	1.4	40.52	0.60	1.4	35.83	0.60
High Street (E)	0.5	9.78	0.31	0.3	11.08	0.20	0.2	9.80	0.15
Church Hill	1.6	36.08	0.62	8.1	135.43	0.96	1.8	39.40	0.65
High Street (W)	0.1	10.79	0.07	0.1	8.21	0.12	0.1	7.91	0.08

161. Considering Scenario 2, the peak RFC is 0.88, well-below the theoretical capacity, with a peak queue increase of only 1.2 vehicles compared with the base scenario. This is not a material, let alone a severe impact, and hence no mitigation is necessary.
162. Under Scenario 6, the peak RFC at this junction is 0.96 on Church Hill. This remains below the theoretical capacity of 1.00. Furthermore, the queue increase is only 2.1 vehicles once the development is added. This is considered insignificant and considerably less than the increase in queue accepted at Godstone Quarry.
163. It should also be noted that if the signalisation of the pedestrian crossing to the west of the junction is agreed by SCC, this would assist in vehicles existing Church Hill and thus reduce queueing.
164. In summary, the Core analysis, which should determine the need for mitigation, demonstrates that there is a minimal impact of the development with a maximum RFC of 0.88 and queue increase of 1.2 vehicles on one arm. Even if other undefined growth is added the junction still operates under theoretical capacity with a modest increase in queueing. Furthermore, if the pedestrian crossing to the west is signalised, this will further reduce queueing.

Summary

165. Based on the modelling reported above and focusing on the Scenario 2 and Scenario 2 vs Scenario 1 results it is not considered that any mitigation is required. This is based on the "severe impact" test within NPPF and SCC's own assessment of queue lengths when assessing the Former Godstone Quarry planning application.
166. Notwithstanding this, we have suggested potential enhancements at the A25 / Mid Street / Park Works Road and Church Hill / A25 / Cooper's Hill Road junctions which are considered to have positive impacts. We would wish to discuss these further with SCC to determine whether such measures are necessary.

Summary and Conclusion

167. This Technical Note has sought to comprehensively respond to the SCC response on the application.
168. A summary of the proposals and impacts are presented in the Executive Summary and are not repeated here.

169. In relation to policy it is considered that the proposals comply with NPPF policies. In relation to sustainable transport the proposals comply with Paragraphs 109, 114 and 115 that are set out below.
170. Paragraph 114:
- 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; 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.”*
171. Paragraph 109 of the NPPF highlights the importance of local context, when considering planning applications:
- “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.”*
172. Finally, Para 115 of the NPPF (2023), provided below, establishes that a development should only be refused if there is an unacceptable impact on highway safety or a severe impact in highway capacity:
- “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.”*
173. It has been demonstrated within this note that neither of those thresholds are exceeded by this development.
174. To conclude, this Technical Note has demonstrated that all junctions are below the theoretical capacity threshold for existing junctions, and as such no issues of highway capacity and safety should be raised by SCC. Regarding the Nutfield Application Site’s locational sustainability, it has been shown to be well-situated in regard to walking and cycling, in addition to proximity to frequent bus services and a railway station with multiple operators. Moreover, it is still capable of significant enhancement, secured by s106 agreement, including an electric bus service, and upgrades to the NCNR21. Crucially, the proposals are equal to or better than comparable approved / allocated

schemes, therefore consistency in assessment means that SCC should support the Nutfield proposals in accordance with NPPF, SCC, and TDC policy.

Appendix A

APPLICATION NUMBER	2023/1281
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DEVELOPMENT AFFECTING ROADS
TOWN AND COUNTRY PLANNING GENERAL DEVELOPMENT ORDER 1992

Location: Nutfield Green Park, The Former Laporte Works, Nutfield Road, Nutfield, Surrey

Development: Outline planning permission for the development of the site for new homes (Use Class C3) and Integrated Retirement Community (Use Classes C2, E(e), F2), creation of new access, landscaping and associated works to facilitate the development, in phases which are severable (Outline with all matters reserved, except for Access). (Additional Information Received 05.02.2024 Re: Highways and Ecology Issues)

Contact Officer	James Lehane	Re-consultation Date	6 February 2024	Response Date	13 February 2024
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The proposed development has been considered by THE COUNTY HIGHWAY AUTHORITY (CHA) who has assessed the application on safety, capacity and policy grounds and recommends the proposal be refused on the grounds that:

1. The site is located in an unsustainable location, without access to regular public transport services or local amenities, with limited active travel opportunities, and where the only realistic means of transport would be the private car. This is contrary to the aims of the National Planning Policy Framework (NPPF, 2023), and the Surrey Local Transport Plan 4 (LTP4, 2022).
2. The proposals would result in an unacceptable impact to highway capacity, in particular at key junctions along the A25 corridor, leading to severe cumulative impacts on the contrary to the aims of the NPPF, LTP4 and the Tandridge Local Plan (2014).

Reasons

Sustainability

The Transport Assessment (TA) provided in support of the application includes a number of measures aimed at providing suitable sustainable transport connectivity however the proposed measures are not sufficient to provide a meaningful alternative to reliance on private motor vehicles.

The key sustainability concerns raised by the CHA our consultation response to application TA/2021/1040 and then repeated in the Pre-Application advice provided to the applicant concerning this application remain applicable.

There are limited facilities to encourage walking trips in the local area and the nearest concentration of facilities (in Redhill) is far beyond a realistic walking distance for regular journeys.

Furthermore, the footways along the A25 in this area are narrow and unlit with fast moving traffic and a high volume of large vehicles. As such, walking trips would be unattractive, especially for vulnerable road users, and any walking trips which did result from the proposed development could represent a material risk to road safety due to the risk of conflict between pedestrians and vehicles, contrary to the NPPF 2023 paragraphs 115 and 116.

The proposed pedestrian crossing on the A25 would represent a benefit in terms of pedestrian connectivity, however this is not sufficient to address the wider concerns raised above.

The propensity for residents to travel by cycle is very low, beyond cycling within the development. It is recognised that the distance to facilities in Redhill is short enough to encourage trips to be made by cycling, however the A25 corridor lacks in safe cycle infrastructure and has a very steep gradient towards Redhill. It is noted that the Applicant has indicated a willingness to contribute towards improvements to public rights of way routes in order to provide a non-motorised cycle route into Redhill, however this would remain an unlit route and would therefore not be practical or attractive for significant parts of the year. There does not appear to be any feasibility for providing suitable cycle infrastructure for this proposed development which would comply with LTN1/20 requirements and, due to the lack of safe facilities, any cycling trips which did result from the proposed development could represent a material risk to road safety due to the risk of conflict between cycles and vehicles, contrary to the NPPF 2023 paragraph 116.

As recognised in the TA (and demonstrated in Figure 2.4), a large portion of the proposed development is not within 400 metres of bus stops, which is not acceptable in the context of SCC standards and represents a failure to facilitate access to high quality public transport and a failure to maximise the catchment area of bus service, contrary to the NPPF 2023 paragraph 116. The relatively infrequent and the limited number of services combines with the distance to bus stops to mean that residents will not be able to rely on public transport for regular journeys.

The distance to rail services and the lack of sustainable transport infrastructure along the A25 in this location and along Mid Street mean that even onward journeys made by rail would be highly likely to begin with a journey made by private motor vehicle. At Nutfield Rail Station, there is very little parking provision and the additional pressure resultant from the proposed development could result in inappropriate and unsafe parking along the public highway, in particular along The Copse and South Station Approach. In addition, due to the lack of safe walking or cycling facilities between the site and Nutfield Rail Station, and active travel trips which did result from the proposed development could represent a material risk to road safety due to the risk of conflict between vulnerable road users and vehicles, contrary to the NPPF 2023 paragraphs 115 and 116.

Highways capacity impacts

The TA provides assessments of the impact that the proposed development could have on the operation of the public highway, presented in five assessment scenarios. Scenarios 4 and 5 are the most relevant scenarios for assessing the impacts of the proposals because they include observed existing traffic flows, with Committed Development and background growth applied to present a robust forecast of a “future year” scenario, whereas scenarios 2 and 3 do not apply any growth factors and therefore only consider 2022 traffic flows and one committed development.

The TA argues that growth factors (derived from the Department for Transport's (DfT) National Trip End Model datasets) should not be applied to assessments for the future year scenarios, despite this approach to capacity assessments being common practice across the industry. The Applicant argues that a future year assessment including background growth is not necessary, on the basis that it is unknown what infrastructure improvements might accompany future development and also on the basis of historic traffic data.

The argument that any future development will fully mitigate its impacts to the extent that no additional trips will be added onto the network is not realistic. It is correct that it is unknown what

future infrastructure may be delivered, however the robust assumption and industry standard practice is to therefore not assume that any material mitigation has been delivered, which would be a realistic scenario if the majority of that growth came from small scale developments.

The historic data presented in Figure 6.1 is for the years of 2008 to 2018 and the supporting evidence has not been provided to back up this data. Given that the DfT approved growth forecasts would disagree with this hypothesis, the assumption argued for in the TA is not considered to be robust. Furthermore, it is noted that 2029 has been used as the future year, which is only 5 years from the current date at time of writing these comments and is likely sooner than the site is likely to be fully occupied if granted planning consent. As, such, the growth factors that are applied to the future year assessment likely include lower vehicle movement numbers than reasonably be expected to be present in reality once the proposed site was fully occupied.

The modelling results presented in the TA demonstrate that the development would result in potentially severe impacts at a number of junctions along the A25 corridor, including the following:

- At the stations roundabout, where Table 6.2 shows that the Ratio of Flow to Capacity (RFC) is expected to be at 0.81 in the PM peak period in the future year scenario and that this would be increased to 0.85 with the addition of traffic associated with the proposed development. Given that an RFC of 0.85 is considered to represent a junction operating at 'design capacity', it is clear that the proposed development would worsen the capacity at this already busy junction.

Given the location of this junction within the urban area, any additional queueing can have a material impact on the performance of other junctions within the area as well as the associated air quality and noise implications.

- Table 6.3 demonstrates that the RFC on the Mid Street arm of the A25 junction with Mid Street and Park Works Road is expected to be at 0.9 in the PM period of the future year scenario and that this is increased to 0.96 with the development traffic, which is well above the design capacity.
- Table 6.4 demonstrates that the RFC on the Church Hill arm of the A25 junction with Church Hill and Coopers Hill Road is expected to be at 0.9 in the PM period of the future year scenario and that this is increased to 0.94 with the development traffic, which is also well above the design capacity.

The above figures should be considered in the context of a few factors which would suggest that the actual residual capacity at the above junctions is likely to be worse than is forecast in the TA. This includes the fact that a later future year would be more realistic and that, as explained under 'Sustainable Transport' above, any onward trips made by rail would likely begin with a motor vehicle trip and these would be additional to the TRICS forecasted "vehicle movements" applied to forecast the likely trip generation of the development. In addition, the PM peak hour modelled is 17:00 to 18:00, however it is noted from the traffic count data provided that there were significantly more trips on the network at 16:00 than at 18:00. If the assessments had considered the 16:00 to 17:00 time period as the PM peak hour, the above summarised modelling outputs may therefore show even less residual capacity on the network.

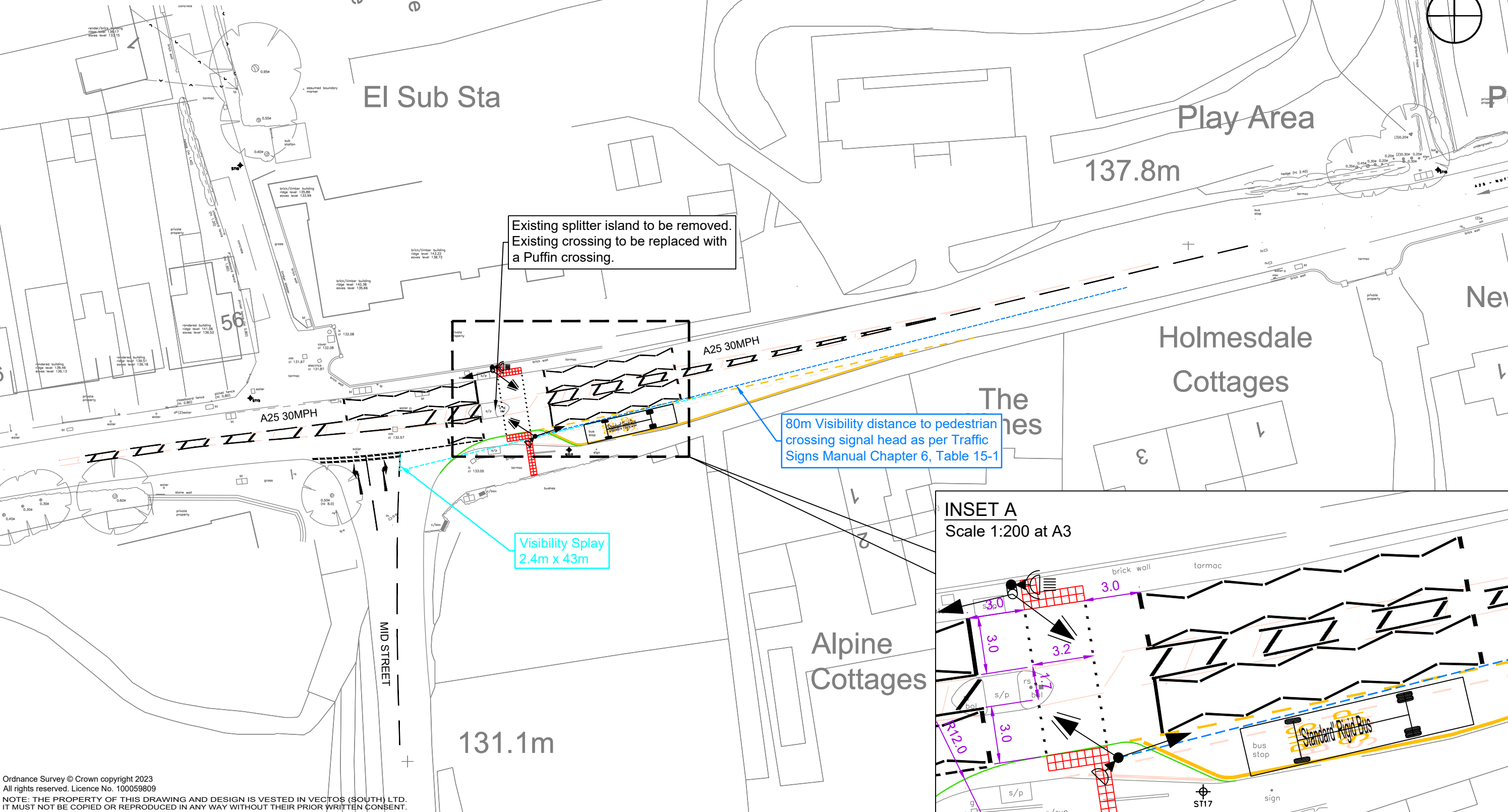
Despite the above, the Applicant has concluded that "no mitigation is required" at all of the above listed junctions.

It is recognised that the Applicant has proposed a number of improvements aimed at increasing the use of sustainable modes of travel however these measures are not considered sufficient to provide a meaningful choice of travel modes or any material shift in the modes of travel used by residents for the reasons explained above under 'Sustainable Transport'. As such, it is the view of the CHA that these proposals would result in severe residual cumulative impacts on the public highway, with reference to the NPPF 2023 paragraph 115.

Appendix B

GENERAL ARRANGEMENT

Scale 1:500 at A3



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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Updated Access	MZ	TF	08.03.2024

Notes:

- This is not a construction drawing and is intended for illustrative purposes only.
- White lining is indicative only.

Key:

- Existing road markings to be removed
- Proposed white - yellow road markings
- Amended kerb
- Controlled tactile paving
- Proposed signal equipments

INFORMATION ONLY

Nutfield Green Park

Proposed Signalised Crossing on
High Street A25

DRAWN:
NS

CHECKED:
RB

DATE:
01.09.2023

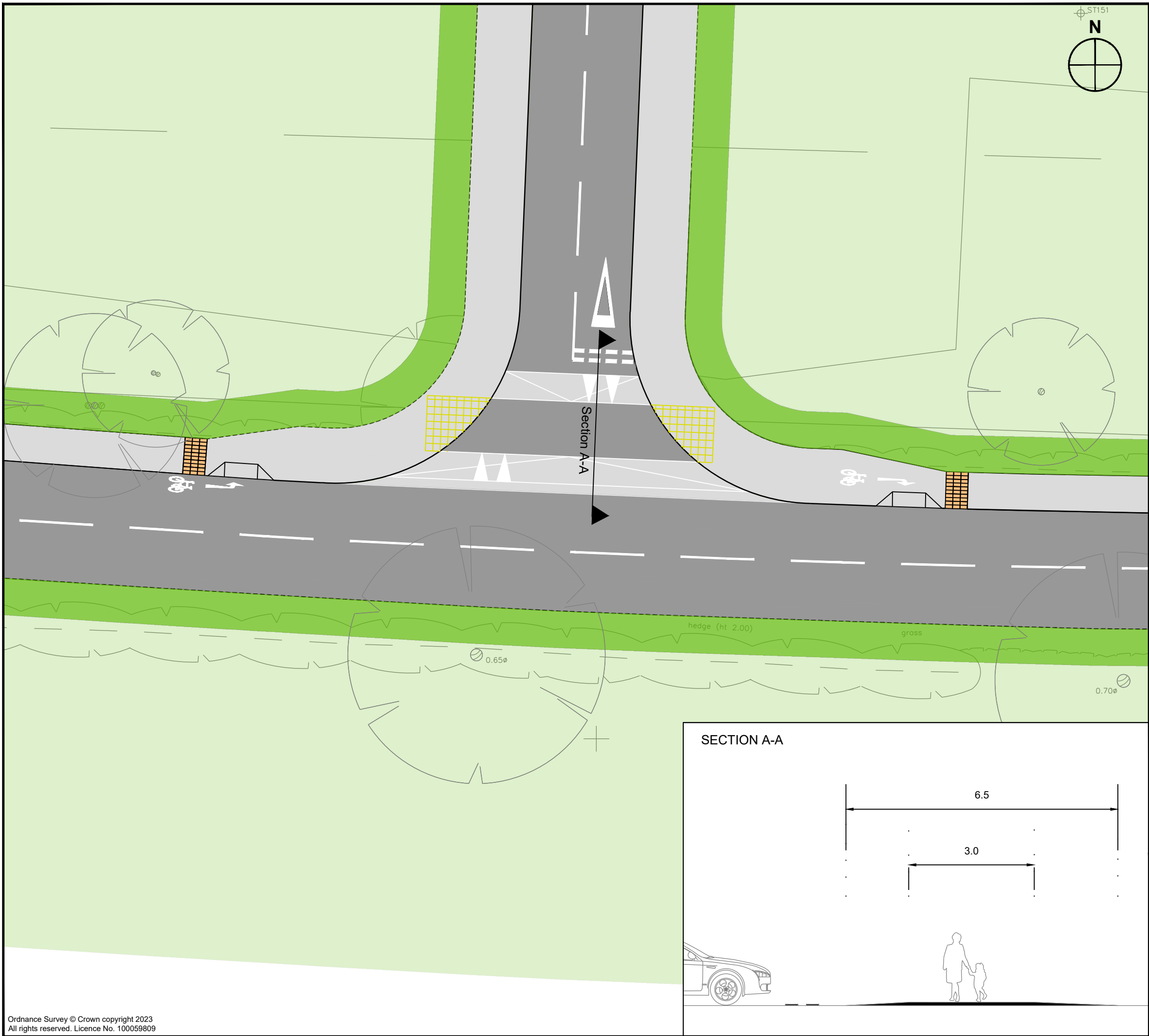
SCALES:
As shown at A3

Nutfield Park Developments Ltd



DRAWING NUMBER:
226799/PD06

REVISION:
A



Notes:
 1. This is not a construction drawing and is intended for illustrative purposes only
 2. White lining is indicative only.

REV.	DETAILS	DRAWN	CHECKED	DATE

STATUS:
INFORMATION ONLY

CLIENT:
Nutfield Park Developments Ltd

PROJECT:
Nutfield Green Park

DRAWING TITLE:
Illustrated Proposed Site Access

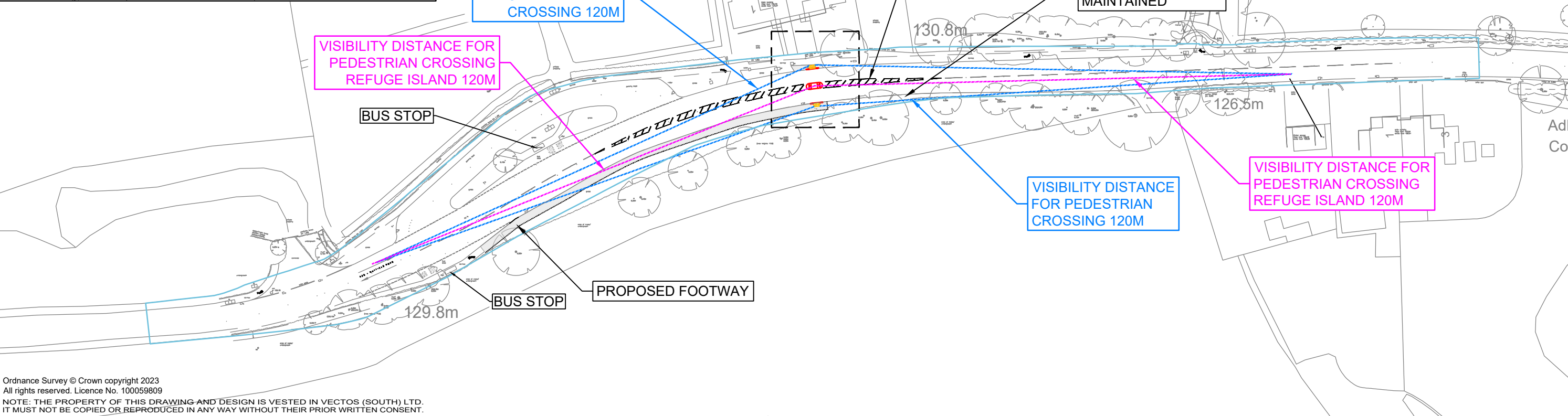
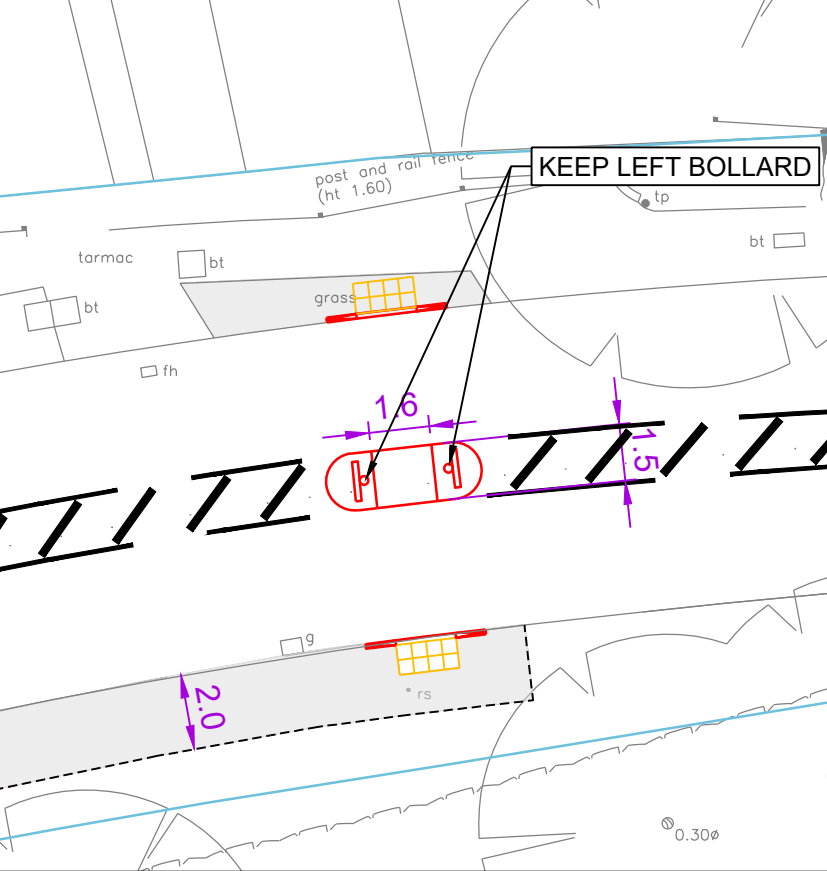
SCALES:
1:200 at A3

DRAWN: MZ CHECKED: TF DATE: 13.02.2024



DRAWING NUMBER: **226799/PD07** REVISION: .

INSET A - PEDESTRIAN REFUGE ISLAND 1:500



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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Highway boundary updated	MZ	TF	04.04.2024

- Notes:
- This is not a construction drawing and is intended for illustrative purposes only.
 - White lining is indicative only.
- Key:
- Proposed kerb
 - Proposed edging
 - Highway boundary
 - Proposed footway
 - Uncontrolled tactile paving

Nutfield Green Park

Proposed Uncontrolled Crossing on Nutfield Road

DRAWN: MZ

CHECKED: TF

DATE: 13.03.2024

SCALES: 1:1000 at A3

Nutfield Park Developments Ltd



DRAWING NUMBER: 226799/PD13

REVISION: A

INFORMATION ONLY

Appendix C

Nutfield Green Park

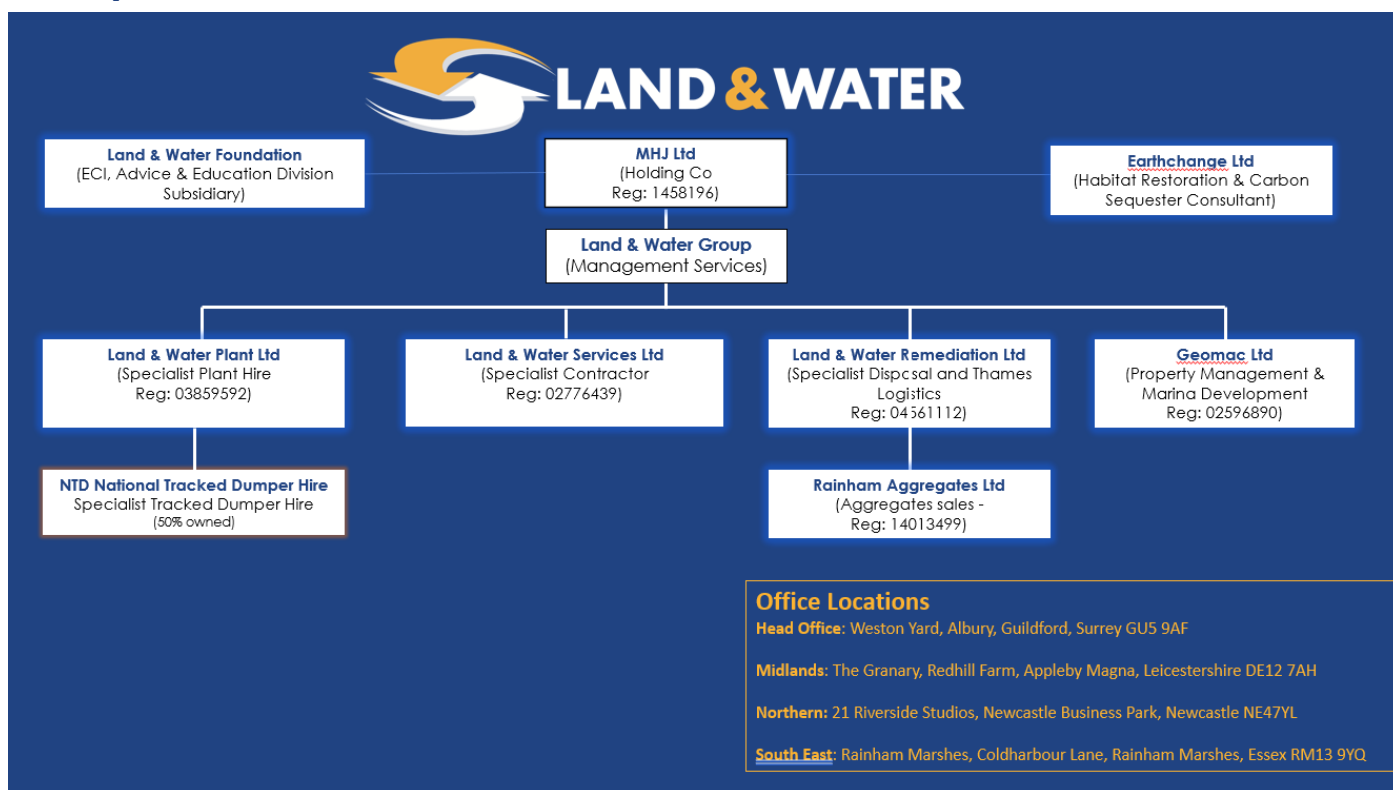
THE SPECIALISTS - WHERE LAND AND WATER MEET

**SUSTRANS 21;
NUTFIELD LINK
RESTORATION
APPRAISAL**



LAND & WATER SERVICES – WHY USE US

Group structure



INTRODUCTION

The Land & Water Group is made up of individual yet complimentary companies. From Contract Services to plant hire, waste remediation and soft engineering material supplies we provide innovative solutions to improve the environments in which we work; "Helping Nature to Help Herself".

Land & Water Services Ltd is an award-winning inland waterway and coastal civil and environmental engineering company and an SME. Throughout our 35-year history, our name has become synonymous with finding creative and effective solutions to complex challenges in the specialist environment where land and water meet. Often working in sensitive habitats, our work is completed with sympathy for the local surroundings, people, and the environment. Our specialism is working in areas of difficult access and ecologically sensitive areas requiring long reach, amphibious, low ground pressure and floating equipment to help manage risk profiles that others may reject.

ACCREDITATIONS



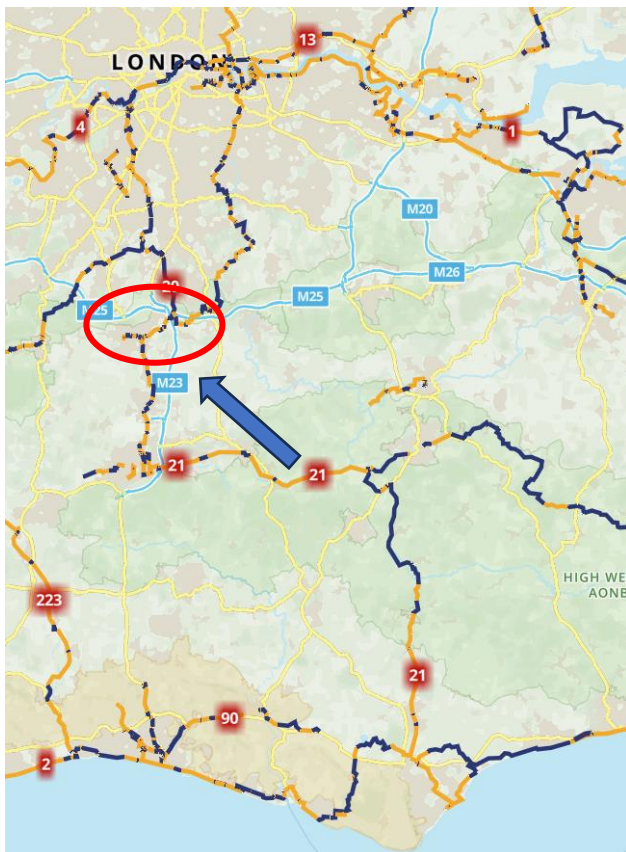


PROJECT BRIEF

Nutfield Park Developments Ltd is considering a wider strategy for the connectivity of its site on the northern edge of the village settlement of Nutfield, these plans will contribute to improving the sustainability of the sites' location and make a positive contribution to connectivity for the residents of Nutfield with the nearby town of Redhill. Currently, the only tangible option for residents to access Redhill on foot or bicycle from Nutfield is along the pavement of the busy A25. The A25 carries traffic into and out of the settlement of Redhill and its traffic is augmented by the frequent passage of HGV's which service the Biffa landfill site at Cormongers Lane (which is between Nutfield and Redhill). There is no designated cycle link between Nutfield and Redhill and the highway pedestrian path is inconsistent and requires the user to cross the trunk road to maintain a route to and from the town.

Nutfield Green Park (NGP) is located on the former Fullers Earthworks site (quarry and industrial site) to the immediate north of the village settlement and can offer a number of points of connectivity to the village centre and A25 to the south and the Sustrans 21 route to the immediate north of the site. The land in question is in single ownership, and subject to a planning application for a small area to be developed (approx.12 % being 7ha of the 58.9ha site) and the balance of the site is to be enhanced with nature conservation and public access in mind.

Figure 1; Sustrans 21 National Cycleway



Sustrans 21 is part of the designated national cycleway network and connects Central London to Eastbourne on the south coast, passing through Redhill and along the northern boundary of Nutfield Green Park. Locally the route provides direct connectivity to Redhill with bridges over the London/Brighton mainline railway to Redhill Station and Redhill town centre.

The section of Sustrans 21 between The Inn on the Pond Public House at Nutfield Marsh and the railway bridge at Cavendish Rd, Redhill is approximately 2507 lin m in length.

Generally, the eastern section from the public house to Cormongers Lane is on a tarmac road (Chilmead Lane) which services a small number of dwellings and has very low traffic demands. This section is 755 lin m in length and requires little maintenance or upgrade.



The western section of Sustrans 21 from Cormongers Lane to Cavendish Rd rail bridge is 1752 lin m in length and largely runs between the northern boundary of Biffa landfill at Cormongers Lane and the southern boundary of The Moors Nature Reserve and SSSI which is managed by Surrey Wildlife Trust (SWT).

The western section of the Sustrans route is in significant state of disrepair and requires sympathetic renovation to restore its suitability as part of the national cycleway network with careful consideration for the adjacent SSSI.

Figure2; Sustrans 21 Local Route Plan – Nutfield Marsh to Redhill Section



Land and Water Services Ltd (LAWS) have been asked to consider the feasibility, deliverability and cost implications of the restoration of the transport route and how to build nature into the easement as a regenerative contribution to the concept.

The brief extends to the costs and feasibility of improving some of the existing network of statutory and permissive only footpaths within Nutfield Green Park to a similar standard to that of the restored Sustrans 21 such that the residents of NGP and the residents of the wider Nutfield Settlement can travel through NGP and access the Sustrans from a number of separate access



points along the NGP site boundary. Complimenting the sustainability of the location and assisting in a strategy of non-car transport to and from Redhill in a safe environment.

Figure 4; Cycle and Pedestrian Route Masterplan



Blue; Sustrans 21

Yellow; Internal Connecting Cycleway/ Footpaths (NGP)

Red; NGP Site Boundary

General Situation

LAWS undertook site walkovers and detailed assessments on 04.03.23 (in heavy rainfall) and 19.3.24 (dry conditions). The assessment of the route was after the wettest February on record.

In general, the easement of the cycleway is fully intact, however it is suffering from substantive lack of maintenance to the track surface, to the linear vegetation, to the bridges, signage and furniture. Notably the drainage infrastructure within the easement and the track is impacted by localised flooding from a lack of drainage maintenance from third parties alongside the route (most notably at The Moors SSSI).

With little or no impact, the route could be fully restored to a 2m wide, fine graded, stone surface suitable for cycles, push chairs, pedestrians, wheel chairs and power-assisted single person vehicles (scooters etc) without any changes to engineering, without the need to fell trees or move any significant infrastructure.

The ultimate objective being the restoration of easement and the delivery of a fully functional trail to link Nutfield to Redhill. Akin to the Camel Trail in Cornwall or similar (see image below)



Figure 5 Example access trail; Bodmin to Padstow – The Camel Trail



Recommended Works;

Eastern section (Public House to Cormongers Lane)



CH0- CH178. From the Public House Car Park to Chilmead Lane there is a 178lin m section of track which requires some surface vegetation cutting back, the potholes require filling with MOT type 1 stone and a top dressing of 8mm to dust limestone pathway gravel should be added. Signage at the pub car park and the cricket ground cottages should be improved.



CH178-755. From the Cricket Pitch to Cormongers Lane the surface is metalled and suitably wide for a cycleway, no further enhancements are proposed.



CH755-780. The exit from Chimead Lane and crossing at Cormongers Lane requires improved signage for road users and trail users. There is existing signage but it is insufficient/obscured by vegetation which requires cutting back to improve sight lines.



CH 780-850. From the Cormongers Lane crossing there is a 74m section of path which requires scraping clean, MOT type 1 stone pothole repairs and a 60mm topping of 8mm to dust limestone pathway gravel. The vegetation requires cutting back.



Western Section (Cormongers Lane to Cavendish RD Rail Bridge)



CH850-900. The Sustrans runs along the Cormongers Lane carriageway for approx. 45m and will require the removal of surface debris topping with 60mm of 8mm-dust pathway gravel and the vegetation cutting back. Improved signage and cosmetic improvements to the entrance "style" are recommended.



CH900-CH1100. The path requires some Type 1 stone dressing after the debris is removed and a topping of 8mm to dust pathway gravel, a local ditch needs to be re-cut to drain ponded surface waters to the Redhill Brook (to the north).(*see arrow)



CH1100-CH1105. The bridge crossing the Redhill Brook appears structurally sound (bearers appear in good condition). Recommend to treat and paint the steel bearers and renew handrails and surface boarding – replace with hardwood equivalent



CH1105 – CH1545 There is good evidence of a stoned surface beneath the surface debris, scrape off the debris, address potholes as required, address local drainage to the adjacent Redhill Brook and top dress with 8mm to dust limestone pathway gravel and remove woody debris/dredge the Redhill Brook to prevent water spilling back onto the pathway.



Woody debris to be removed and the Redhill Brook dredged to prevent the pathway flooding above the blockages (4no blockages observed) (*arrow denotes back-flooding)



CH1545-CH1565 The bridge at CH1545 is unsafe and requires a new hardwood surface deck and handrails, the steel beam bearers appear in condition but require surface treatment and painting.

HOWEVER; The bridge beams are partially submerged due to the Redhill Brook water levels being raised/backed up by choked vegetation downstream on "The Moors". The backing up of river water will accelerate decay of the steel bridge structure. It is recommended that the brook is dredged immediately downstream of the bridge to relieve water levels.



High water levels under the bridge cause the water to back up and flood the Redhill Brook above the bridge & onto the adjacent Sustrans and farmland.



Meadow flooding on The Moors as a result of waster spilling from the choked Redhill Brook.



CH1565-CH1645 localised flooding of the Sustrans downstream of the bridge is caused by waters backing up from the choked Redhill Brook alongside, dredging and debris clearance from the Redhill Brook is recommended to relive the flood risk.

Then remove surface silt and debris, pothole repair with MOT Type 1 and surface dress with 8mm to dust limestone pathway gravel.



CH1645-CH1953 localised surface flooding (can be addressed with Redhill Brook dredging and clearance), then remove surface debris and mud, place MOT Type 1 raise by 150mm, and top with 8mm to dust pathway gravel.





CH1953-2355 Generally the path is well defined and in good condition, general cut back of vegetation and side debris to 2m, pothole repairs with MOT Type 1, local drainage improvements and dress with 8mm to dust limestone pathway gravel.



CH2340-2355 A blocked culvert under the Sustrans is causing surface flooding and needs to be reinstated and the ditch to the north recut for 30m to relieve the flow (currently filled with leaves and debris)



CH2355-CH 2507 scrape back surface debris, MOT Type 1 pothole repairs and topping with 60mm of 8mm to dust limestone pathway gravel.



CH2507 Exit to Cavendish Rd Rail Bridge; Improve signage, demarcation. Remove weeds and debris and local patch repairs to the tarmac surface.

Works within Nutfield Green Park

All of the proposed new cycle path routes within Nutfield Green Park have been assessed, the five access points that will serve to link Sustrans 21 to Nutfield Village and the A25 total a length of 2696Lin m.

Figure 6 Shows the Network of New Access Routes Proposed Through Nutfield Green Park





All of the routes proposed align with existing public footpaths or existing permissive footpaths and can be installed without the need for land clearance and tree removal.

The current walking surfaces within NGP are not suitable for a national cycle-way standard path and will require a new formation/construction. The recommended construction detail would be a 2m wide track (minimum width) comprising a basal geotextile separator with 150mm of type 1 limestone base (or recycled equivalent) topped with 60mm of 8mm to dust limestone pathway gravel (a porous product).

Lighting Recommendation



To optimise the use of the new cycleway infrastructure we would recommend it is lit during the twilight and dark hours.

To minimise the impact of any access lighting we do not recommend the use of conventional streetlighting, but instead low level, solar powered bollards (1.2m high).

The bollards can be equipped with one direction only downward lighting and so can be positioned to illuminate the Sustrans/Cycleway surface but turned away from sensitive ecology and habitats. The bollards are equipped with a waist height PIR which turns on the two units on either side for 30 seconds only to allow the passage of a human on foot or pedal cycle, but above the levels of most ground/wildlife (preventing unnecessary illumination).

Bollard spacing should be at 20m centres.

Budgets

A detailed topographical survey and some ground investigation works will be required to finalise a fixed cost for the restoration of Sustrans 21 and the new network of link-cycleways within . However the table presented below is our best estimate of the likely costs for the works including a 5-year maintenance plan.



Sustrans 21 Restoration Master Budget					
1	Mobilise to site, Contractors plant , machinery and compound			sum	8,500.00
2	Establish Contractors Compound			sum	6,500.00
3	Contractors preliminaries and Security	7,000.50	per week	24 weeks	168,012.00
4	Permanent and Temporary Works design inc investigations			sum	15,000.00
5	Restoration works CH 0-178	119.60	per lin m	178 Lin m	21,288.03
6	Signage Improvements CH 0-755			sum	8,500.00
7	Cormongers Lane Crossing Improvements and Signage			sum	45,450.00
8	Restoration works CH780-1100 and drainage works	145.77		320 lin m	46,646.08
9	Bridge repairs CH 1100			sum	16,400.00
10	Restoration works CH1105 -1545 and drainge works	145.77		440 lin m	64,138.36
11	Bridge repairs CH 1545			sum	24,240.00
12	Redhill Brook Dredging and Clearance SWT land			sum	18,974.00
13	Restoration and drainage works CH 1565-1953	145.77		398 lin m	58,016.06
14	Restoration works CH 1953-2355	119.60		402 lin m	48,077.46
15	Drainage works and ditching CH 2340			sum	11,435.00
16	Restoration works CH 2340-2507	119.60		167 lin m	19,972.48
17	Street Works and signage ch 2507			sum	6,352.00
18	General vegetation trimming and cutting back			sum	16,845.00
19	Signage improvements			sum	18,500.00
20	Low level lighting option	465.00	ea	265 no	123,225.00
21	New cycleways NGP	195.45	per lin m	2681 Lin m	524,001.45
22	Demobilisation			sum	8,500.00
				Total	1,278,572.92

Further Recommendations

It will be necessary to open dialogue with Surrey Wildlife Trust regarding maintenance works to the Redhill Brook, we would recommend consideration being given to the installation of some further wetlands alongside the Sustrans on SWT's land which will provide additional flood storage capacity, provide further bio-diversity gains and improve the environment. The spoils from this activity could be incorporated into the cycleway improvements and provide further flood resilience to climate change. In this respect we have identified an ideal location for this improvement as highlighted below (flooded already by the poor drainage and choking of the Redhill Brook).



Figure 7. Potential Permanent Wetland (currently flood waters from the choked Redhill Brook)



Note;

The proposed restoration works to Sustrans 21 do not require any new engineering or significant infrastructure works, change to alignment or new structures, and largely represent the back-logged maintenance of an existing landscape feature, as such consideration should be given as to the need or otherwise for planning permission (save for the low-level lighting option).

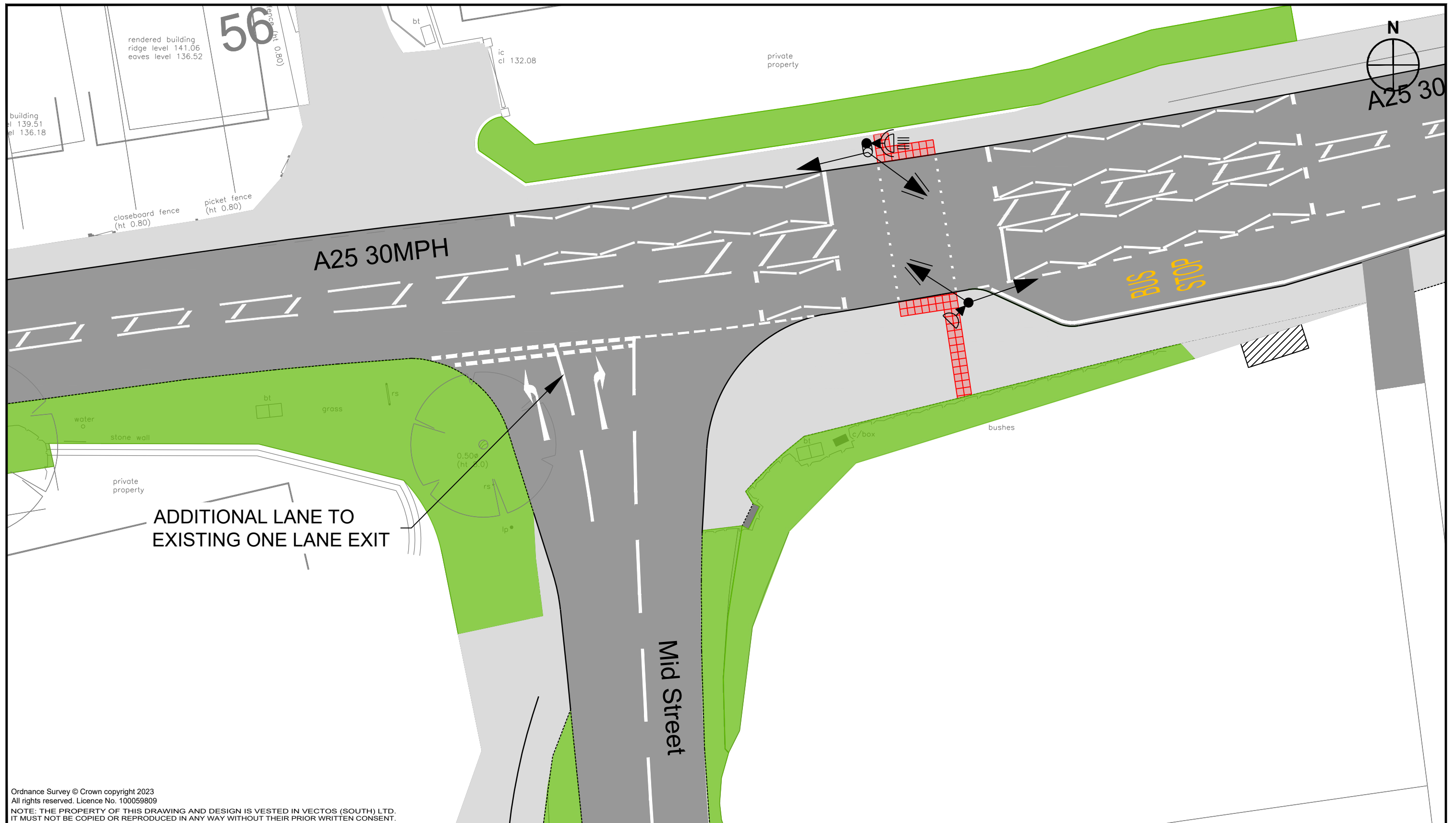
The new cycleways within NGP will require planning permission and consideration should be given to this forming part of the main planning application for the site.

Conclusion

By liaison with Sustrans and Surrey Wildlife Trust the restoration of the Sustrans 21 to link Nutfield Village and Nutfield Green Park directly to Redhill is feasible, deliverable and sustainable. The works can be delivered with the minimum of impact and will use the existing infrastructure.

The restored link and new network of feeder cycleways will provide a sustainable, safe, vibrant and healthy link between Nutfield and Redhill and break the need to travel between the two along the busy A25.

Appendix D



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REV.	DETAILS	DRAWN	CHECKED	DATE
1.				

Notes:

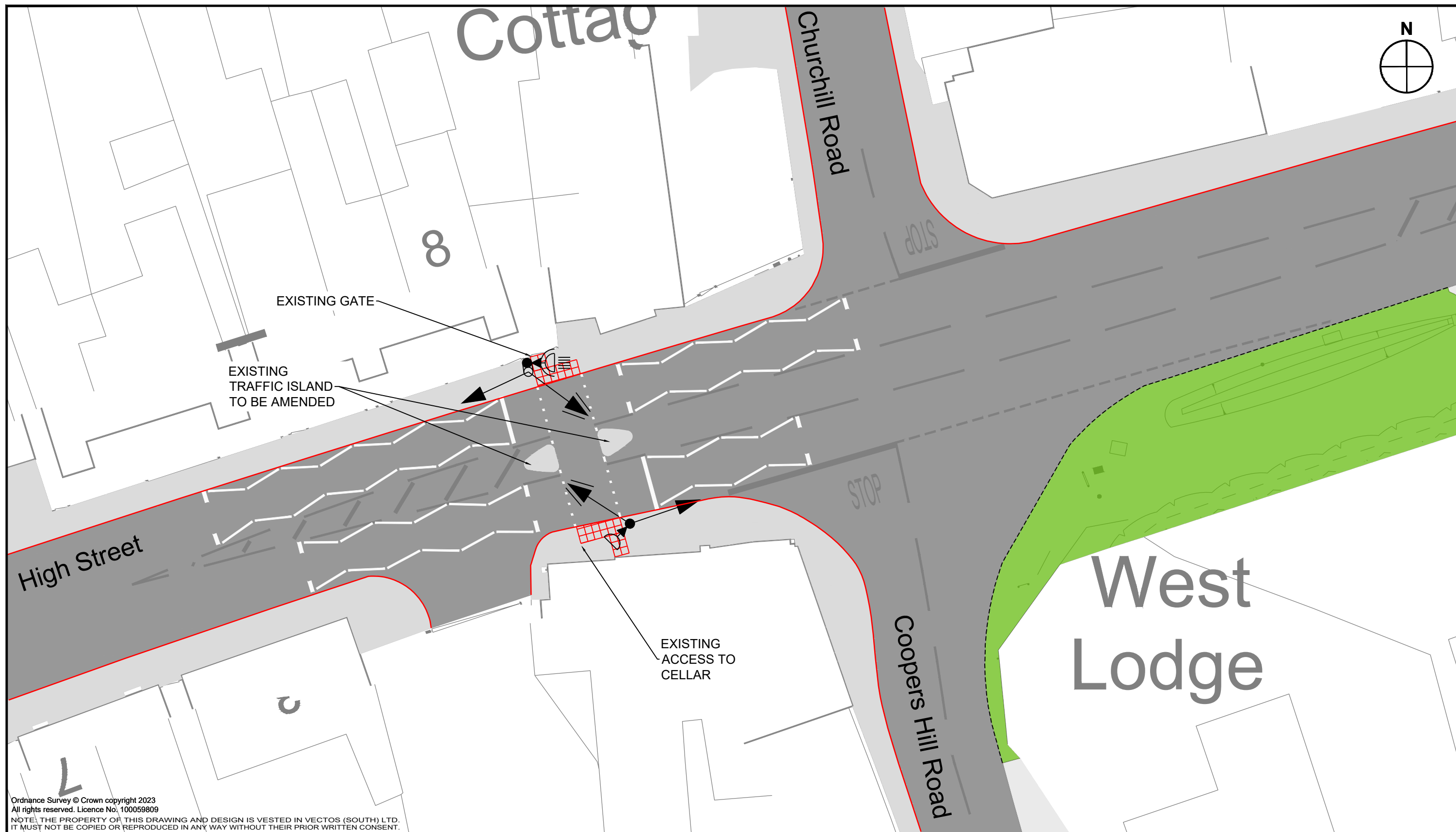
1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Key:

- Proposed road markings
- Controlled tactile paving
- Proposed carriageway
- Proposed footway
- Proposed verge
- Proposed signal equipments

INFORMATION ONLY

Nutfield Green Park				Nutfield Park Developments Ltd	
Proposed Improvements Mid Street					
DRAWN: MZ	CHECKED: TF	DATE: 08.03.2024	SCALES: 1:200 at A3	DRAWING NUMBER: 226799/PD11	REVISION: .



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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Updated drawing	MZ	TF	15.04.2024

INFORMATION ONLY

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Key:

- Proposed road markings
- Proposed traffic island
- Controlled tactile paving
- Proposed carriageway
- Proposed footway
- Proposed verge
- Proposed signal equipments

Nutfield Green Park		Nutfield Park Developments Ltd	
Proposed Controlled Crossing on High Street			
DRAWN: MZ	CHECKED: TF	DATE: 04.04.2024	SCALES: 1:200 at A3
DRAWING NUMBER: 226799/PD15		REVISION: A	

Appendix E

Junctions 9	
ARCADY 9 - Roundabout Module	
Version: 9.5.2.1013 © Copyright TRL Limited, 2019	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
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Filename: Stations Roundabout 240313 (HOUR).j9

Path: O:\London\Vectos\Projects\Projects\220000\226799 - Nutfield Green Park\MODELLING\Junctions\Stations Roundabout

Report generation date: 26/03/2024 17:07:50

-
- »Nutfield - 2024 Base + Com Devs, AM (08:00-09:00)
 - »Nutfield - 2024 Base + Com Devs, PM (17:00-18:00)
 - »Nutfield - 2024 Base + Com Devs, PM (16:00-17:00)
 - »Nutfield - 2024 Base + Com Dev + Dev, AM (08:00-09:00)
 - »Nutfield - 2024 Base + Com Dev + Dev, PM (17:00-18:00)
 - »Nutfield - 2024 Base + Com Dev + Dev, PM (16:00-17:00)
 - »Nutfield - 2029 Future Base + Com Dev, AM (08:00-09:00)
 - »Nutfield - 2029 Future Base + Com Dev, PM (17:00-18:00)
 - »Nutfield - 2029 Future Base + Com Dev, PM (16:00-17:00)
 - »Nutfield - 2029 Future Base + Com Dev + Dev, AM (08:00-09:00)
 - »Nutfield - 2029 Future Base + Com Dev + Dev, PM (17:00-18:00)
 - »Nutfield - 2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Summary of junction performance

	AM (08:00-09:00)					PM (17:00-18:00)					PM (16:00-17:00)				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	Nutfield - 2024 Base + Com Devs														
5 - Princess Way	D1	1.8	6.86	0.65	A	D2	3.9	12.93	0.80	B	D3	2.7	9.20	0.74	A
1 - A23		2.4	10.92	0.71	B		0.9	6.03	0.46	A		0.8	5.65	0.43	A
2 - Marketfield Way		1.0	5.55	0.51	A		1.5	6.15	0.60	A		1.2	5.29	0.55	A
3 - Station Road		0.1	18.00	0.09	C		0.1	17.07	0.05	C		0.0	13.83	0.02	B
4 - Quadrant Access		0.1	7.71	0.12	A		0.2	7.63	0.15	A		0.1	6.95	0.10	A
	Nutfield - 2024 Base + Com Dev + Dev														
5 - Princess Way	D4	2.0	7.37	0.67	A	D5	4.6	14.80	0.83	B	D6	3.2	10.48	0.77	B
1 - A23		2.1	9.90	0.68	A		1.0	6.44	0.50	A		0.9	6.14	0.48	A
2 - Marketfield Way		1.0	5.36	0.50	A		1.6	6.53	0.62	A		1.3	5.64	0.57	A
3 - Station Road		0.1	16.63	0.08	C		0.1	18.66	0.05	C		0.0	15.17	0.03	C
4 - Quadrant Access		0.1	8.00	0.12	A		0.2	7.91	0.16	A		0.1	7.22	0.11	A
	Nutfield - 2029 Future Base + Com Dev														
5 - Princess Way	D7	2.0	7.32	0.67	A	D8	4.7	15.36	0.83	C	D9	3.1	10.24	0.76	B
1 - A23		2.7	12.15	0.73	B		0.9	6.36	0.48	A		0.8	5.91	0.45	A
2 - Marketfield Way		1.1	5.82	0.53	A		1.6	6.58	0.62	A		1.3	5.56	0.56	A
3 - Station Road		0.1	19.39	0.10	C		0.1	18.67	0.05	C		0.0	14.72	0.03	B
4 - Quadrant Access		0.1	7.99	0.12	A		0.2	7.98	0.16	A		0.1	7.19	0.11	A
	Nutfield - 2029 Future Base + Com Dev + Dev														
5 - Princess Way	D10	2.3	7.94	0.70	A	D11	5.7	18.02	0.86	C	D12	3.7	11.86	0.79	B
1 - A23		2.3	10.90	0.70	B		1.1	6.82	0.52	A		1.0	6.46	0.50	A
2 - Marketfield Way		1.1	5.61	0.52	A		1.8	7.01	0.64	A		1.4	5.95	0.59	A
3 - Station Road		0.1	17.84	0.09	C		0.1	20.58	0.06	C		0.0	16.25	0.03	C
4 - Quadrant Access		0.1	8.31	0.13	A		0.2	8.28	0.17	A		0.1	7.48	0.11	A

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

File summary

File Description

Title	
Location	
Site number	
Date	07/08/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\ethan.terry
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 Base + Com Devs	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D2	2024 Base + Com Devs	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D3	2024 Base + Com Devs	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D4	2024 Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D5	2024 Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D6	2024 Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Nutfield	100.000

Nutfield - 2024 Base + Com Devs, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
5	Princess Way	
1	A23	
2	Marketfield Way	
3	Station Road	
4	Quadrant Access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
5 - Princess Way	5.79	7.82	2.6	19.9	42.0	61.5	
1 - A23	4.10	8.00	6.6	40.0	50.0	43.3	
2 - Marketfield Way	5.68	7.23	3.2	26.0	42.0	46.3	
3 - Station Road	2.22	4.56	4.3	7.0	42.0	49.9	
4 - Quadrant Access	3.92	7.33	14.1	6.9	42.0	38.3	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
5 - Princess Way	0.608	1719
1 - A23	0.586	1615
2 - Marketfield Way	0.647	1817
3 - Station Road	0.406	780
4 - Quadrant Access	0.572	1555

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 Base + Com Devs	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	887	100.000
1 - A23		✓	725	100.000
2 - Marketfield Way		✓	607	100.000
3 - Station Road		✓	18	100.000
4 - Quadrant Access		✓	56	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	80	290	506	2	9
	1 - A23	375	0	261	1	88
	2 - Marketfield Way	452	132	14	1	8
	3 - Station Road	6	11	1	0	0
	4 - Quadrant Access	19	10	27	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	15	4	3	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	6	9	0	0	12
	3 - Station Road	17	0	0	0	0
	4 - Quadrant Access	63	50	59	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.65	6.86	1.8	A
1 - A23	0.71	10.92	2.4	B
2 - Marketfield Way	0.51	5.55	1.0	A
3 - Station Road	0.09	18.00	0.1	C
4 - Quadrant Access	0.12	7.71	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	668	146	1548	0.431	665	0.8	4.062	A
1 - A23	546	479	1262	0.432	543	0.8	4.983	A
2 - Marketfield Way	457	416	1441	0.317	455	0.5	3.647	A
3 - Station Road	14	868	385	0.035	13	0.0	9.677	A
4 - Quadrant Access	42	803	672	0.063	42	0.1	5.707	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	797	175	1528	0.522	796	1.1	4.907	A
1 - A23	652	574	1205	0.541	650	1.2	6.464	A
2 - Marketfield Way	546	498	1388	0.393	545	0.6	4.264	A
3 - Station Road	16	1039	316	0.051	16	0.1	12.015	B
4 - Quadrant Access	50	961	612	0.082	50	0.1	6.412	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	977	214	1502	0.650	974	1.8	6.780	A
1 - A23	798	701	1129	0.707	794	2.3	10.600	B
2 - Marketfield Way	668	608	1318	0.507	667	1.0	5.513	A
3 - Station Road	20	1270	222	0.089	20	0.1	17.808	C
4 - Quadrant Access	62	1175	530	0.116	61	0.1	7.684	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	977	215	1501	0.651	977	1.8	6.858	A
1 - A23	798	703	1127	0.708	798	2.4	10.916	B
2 - Marketfield Way	668	611	1316	0.508	668	1.0	5.554	A
3 - Station Road	20	1275	220	0.090	20	0.1	18.001	C
4 - Quadrant Access	62	1179	528	0.117	62	0.1	7.714	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	797	176	1528	0.522	800	1.1	4.969	A
1 - A23	652	577	1204	0.542	656	1.2	6.637	A
2 - Marketfield Way	546	502	1386	0.394	547	0.7	4.302	A
3 - Station Road	16	1046	313	0.052	16	0.1	12.142	B
4 - Quadrant Access	50	967	609	0.083	51	0.1	6.442	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	668	147	1547	0.432	669	0.8	4.105	A
1 - A23	546	482	1260	0.433	548	0.8	5.062	A
2 - Marketfield Way	457	419	1438	0.318	458	0.5	3.672	A
3 - Station Road	14	874	383	0.035	14	0.0	9.748	A
4 - Quadrant Access	42	808	670	0.063	42	0.1	5.735	A

Nutfield - 2024 Base + Com Devs, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	9.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024 Base + Com Devs	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1016	100.000
1 - A23		✓	468	100.000
2 - Marketfield Way		✓	791	100.000
3 - Station Road		✓	10	100.000
4 - Quadrant Access		✓	76	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	109	399	487	2	19
	1 - A23	272	1	184	1	10
	2 - Marketfield Way	420	313	44	3	11
	3 - Station Road	6	2	2	0	0
	4 - Quadrant Access	25	18	32	0	1

Vehicle Mix

Heavy Vehicle Percentages

From	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
	5 - Princess Way	8	2	1	0	0
	1 - A23	4	0	2	0	0
	2 - Marketfield Way	6	1	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	32	39	53	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.80	12.93	3.9	B
1 - A23	0.46	6.03	0.9	A
2 - Marketfield Way	0.60	6.15	1.5	A
3 - Station Road	0.05	17.07	0.1	C
4 - Quadrant Access	0.15	7.63	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	765	310	1487	0.514	761	1.0	4.926	A
1 - A23	352	521	1257	0.280	351	0.4	3.965	A
2 - Marketfield Way	596	311	1551	0.384	593	0.6	3.748	A
3 - Station Road	8	899	400	0.019	7	0.0	9.168	A
4 - Quadrant Access	57	876	727	0.079	57	0.1	5.367	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	913	371	1448	0.631	911	1.7	6.663	A
1 - A23	421	624	1196	0.352	420	0.5	4.635	A
2 - Marketfield Way	711	372	1511	0.471	710	0.9	4.489	A
3 - Station Road	9	1077	325	0.028	9	0.0	11.386	B
4 - Quadrant Access	68	1049	655	0.104	68	0.1	6.134	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1119	453	1396	0.801	1110	3.8	12.246	B
1 - A23	515	761	1115	0.462	514	0.8	5.980	A
2 - Marketfield Way	871	455	1457	0.598	869	1.5	6.093	A
3 - Station Road	11	1317	224	0.049	11	0.1	16.918	C
4 - Quadrant Access	84	1283	557	0.150	83	0.2	7.599	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1119	455	1395	0.802	1118	3.9	12.929	B
1 - A23	515	766	1112	0.463	515	0.9	6.033	A
2 - Marketfield Way	871	457	1456	0.598	871	1.5	6.153	A
3 - Station Road	11	1321	222	0.050	11	0.1	17.067	C
4 - Quadrant Access	84	1287	555	0.151	84	0.2	7.632	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	913	373	1447	0.631	922	1.7	6.963	A
1 - A23	421	631	1192	0.353	422	0.5	4.684	A
2 - Marketfield Way	711	375	1509	0.471	713	0.9	4.535	A
3 - Station Road	9	1083	323	0.028	9	0.0	11.485	B
4 - Quadrant Access	68	1055	652	0.105	69	0.1	6.169	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	765	312	1486	0.515	768	1.1	5.031	A
1 - A23	352	526	1254	0.281	353	0.4	3.995	A
2 - Marketfield Way	596	313	1550	0.384	597	0.6	3.783	A
3 - Station Road	8	905	398	0.019	8	0.0	9.227	A
4 - Quadrant Access	57	882	725	0.079	57	0.1	5.392	A

Nutfield - 2024 Base + Com Devs, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024 Base + Com Devs	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	993	100.000
1 - A23		✓	440	100.000
2 - Marketfield Way		✓	741	100.000
3 - Station Road		✓	6	100.000
4 - Quadrant Access		✓	53	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	94	403	487	0	9
	1 - A23	257	0	175	0	8
	2 - Marketfield Way	490	209	29	2	11
	3 - Station Road	3	1	1	0	1
	4 - Quadrant Access	17	11	25	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	2	2	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	4	1	0	0	9
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	47	36	52	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.74	9.20	2.7	A
1 - A23	0.43	5.65	0.8	A
2 - Marketfield Way	0.55	5.29	1.2	A
3 - Station Road	0.02	13.83	0.0	B
4 - Quadrant Access	0.10	6.95	0.1	A

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	748	207	1545	0.484	744	0.9	4.470	A
1 - A23	331	483	1254	0.264	330	0.4	3.888	A
2 - Marketfield Way	558	276	1582	0.353	556	0.5	3.500	A
3 - Station Road	5	830	431	0.010	4	0.0	8.447	A
4 - Quadrant Access	40	813	730	0.055	40	0.1	5.216	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	893	248	1520	0.587	891	1.4	5.708	A
1 - A23	396	579	1199	0.330	395	0.5	4.476	A
2 - Marketfield Way	666	330	1546	0.431	665	0.8	4.084	A
3 - Station Road	5	994	362	0.015	5	0.0	10.105	B
4 - Quadrant Access	48	973	665	0.072	48	0.1	5.829	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1093	303	1484	0.737	1088	2.7	8.965	A
1 - A23	484	707	1124	0.431	483	0.7	5.612	A
2 - Marketfield Way	816	404	1498	0.545	814	1.2	5.255	A
3 - Station Road	7	1216	268	0.025	7	0.0	13.766	B
4 - Quadrant Access	58	1191	578	0.101	58	0.1	6.930	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1093	304	1484	0.737	1093	2.7	9.196	A
1 - A23	484	710	1122	0.432	484	0.8	5.646	A
2 - Marketfield Way	816	405	1497	0.545	816	1.2	5.285	A
3 - Station Road	7	1219	267	0.025	7	0.0	13.831	B
4 - Quadrant Access	58	1193	576	0.101	58	0.1	6.948	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	893	249	1519	0.588	898	1.4	5.843	A
1 - A23	396	583	1196	0.331	397	0.5	4.509	A
2 - Marketfield Way	666	332	1545	0.431	668	0.8	4.113	A
3 - Station Road	5	998	360	0.015	5	0.0	10.160	B
4 - Quadrant Access	48	977	663	0.072	48	0.1	5.847	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	748	208	1545	0.484	750	0.9	4.538	A
1 - A23	331	487	1252	0.265	332	0.4	3.914	A
2 - Marketfield Way	558	278	1581	0.353	559	0.5	3.527	A
3 - Station Road	5	835	429	0.011	5	0.0	8.490	A
4 - Quadrant Access	40	817	728	0.055	40	0.1	5.233	A

Nutfield - 2024 Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2024 Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	914	100.000
1 - A23		✓	689	100.000
2 - Marketfield Way		✓	619	100.000
3 - Station Road		✓	18	100.000
4 - Quadrant Access		✓	56	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	80	317	506	2	9
	1 - A23	405	0	277	1	6
	2 - Marketfield Way	452	144	14	1	8
	3 - Station Road	6	11	1	0	0
	4 - Quadrant Access	19	10	27	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	15	4	3	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	6	8	0	0	12
	3 - Station Road	17	0	0	0	0
	4 - Quadrant Access	63	49	59	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.67	7.37	2.0	A
1 - A23	0.68	9.90	2.1	A
2 - Marketfield Way	0.50	5.36	1.0	A
3 - Station Road	0.08	16.63	0.1	C
4 - Quadrant Access	0.12	8.00	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	688	155	1543	0.446	685	0.8	4.180	A
1 - A23	519	479	1256	0.413	516	0.7	4.847	A
2 - Marketfield Way	466	377	1466	0.318	464	0.5	3.586	A
3 - Station Road	14	838	397	0.034	13	0.0	9.390	A
4 - Quadrant Access	42	834	661	0.064	42	0.1	5.807	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	822	186	1522	0.540	820	1.2	5.117	A
1 - A23	619	573	1199	0.516	618	1.1	6.178	A
2 - Marketfield Way	556	451	1418	0.392	556	0.6	4.169	A
3 - Station Road	16	1003	329	0.049	16	0.1	11.498	B
4 - Quadrant Access	50	999	598	0.084	50	0.1	6.567	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1006	227	1494	0.673	1003	2.0	7.274	A
1 - A23	759	701	1123	0.676	755	2.0	9.676	A
2 - Marketfield Way	682	551	1354	0.503	680	1.0	5.327	A
3 - Station Road	20	1227	238	0.083	20	0.1	16.481	C
4 - Quadrant Access	62	1221	513	0.120	61	0.1	7.960	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1006	228	1494	0.674	1006	2.0	7.373	A
1 - A23	759	703	1122	0.676	758	2.1	9.904	A
2 - Marketfield Way	682	554	1353	0.504	682	1.0	5.363	A
3 - Station Road	20	1231	236	0.084	20	0.1	16.626	C
4 - Quadrant Access	62	1225	512	0.120	62	0.1	7.996	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	822	187	1522	0.540	825	1.2	5.193	A
1 - A23	619	577	1197	0.517	623	1.1	6.312	A
2 - Marketfield Way	556	455	1416	0.393	558	0.7	4.202	A
3 - Station Road	16	1009	327	0.050	16	0.1	11.600	B
4 - Quadrant Access	50	1005	596	0.084	51	0.1	6.600	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	688	156	1542	0.446	690	0.8	4.228	A
1 - A23	519	482	1254	0.414	520	0.7	4.918	A
2 - Marketfield Way	466	380	1464	0.318	467	0.5	3.613	A
3 - Station Road	14	843	394	0.034	14	0.0	9.457	A
4 - Quadrant Access	42	840	659	0.064	42	0.1	5.836	A

Nutfield - 2024 Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	10.08	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2024 Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1043	100.000
1 - A23		✓	508	100.000
2 - Marketfield Way		✓	808	100.000
3 - Station Road		✓	10	100.000
4 - Quadrant Access		✓	77	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	109	426	487	2	19
	1 - A23	296	1	199	1	11
	2 - Marketfield Way	420	330	44	3	11
	3 - Station Road	6	2	2	0	0
	4 - Quadrant Access	25	19	32	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	1	1	0	0
	1 - A23	3	0	2	0	0
	2 - Marketfield Way	6	1	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	32	37	53	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.83	14.80	4.6	B
1 - A23	0.50	6.44	1.0	A
2 - Marketfield Way	0.62	6.53	1.6	A
3 - Station Road	0.05	18.66	0.1	C
4 - Quadrant Access	0.16	7.91	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	785	323	1485	0.529	781	1.1	5.080	A
1 - A23	382	521	1264	0.302	381	0.4	4.067	A
2 - Marketfield Way	608	330	1541	0.395	606	0.6	3.837	A
3 - Station Road	8	931	388	0.019	7	0.0	9.458	A
4 - Quadrant Access	58	907	718	0.081	58	0.1	5.447	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	938	387	1445	0.649	935	1.8	7.022	A
1 - A23	457	624	1203	0.380	456	0.6	4.816	A
2 - Marketfield Way	726	395	1499	0.485	725	0.9	4.646	A
3 - Station Road	9	1115	310	0.029	9	0.0	11.937	B
4 - Quadrant Access	69	1086	643	0.108	69	0.1	6.268	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1148	473	1390	0.826	1138	4.4	13.769	B
1 - A23	559	760	1122	0.499	558	1.0	6.368	A
2 - Marketfield Way	890	482	1442	0.617	887	1.6	6.453	A
3 - Station Road	11	1363	206	0.053	11	0.1	18.452	C
4 - Quadrant Access	85	1328	542	0.156	85	0.2	7.867	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1148	475	1389	0.827	1148	4.6	14.802	B
1 - A23	559	766	1118	0.500	559	1.0	6.440	A
2 - Marketfield Way	890	484	1441	0.617	890	1.6	6.528	A
3 - Station Road	11	1367	204	0.054	11	0.1	18.655	C
4 - Quadrant Access	85	1332	540	0.157	85	0.2	7.907	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	938	389	1443	0.650	948	1.9	7.424	A
1 - A23	457	632	1198	0.381	458	0.6	4.877	A
2 - Marketfield Way	726	398	1497	0.485	729	1.0	4.702	A
3 - Station Road	9	1121	308	0.029	9	0.0	12.063	B
4 - Quadrant Access	69	1092	640	0.108	69	0.1	6.309	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	785	325	1484	0.529	788	1.1	5.197	A
1 - A23	382	526	1261	0.303	383	0.4	4.102	A
2 - Marketfield Way	608	332	1540	0.395	609	0.7	3.876	A
3 - Station Road	8	937	385	0.020	8	0.0	9.530	A
4 - Quadrant Access	58	913	716	0.081	58	0.1	5.476	A

Nutfield - 2024 Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2024 Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1024	100.000
1 - A23		✓	487	100.000
2 - Marketfield Way		✓	762	100.000
3 - Station Road		✓	6	100.000
4 - Quadrant Access		✓	54	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	94	434	487	0	9
	1 - A23	285	0	193	0	9
	2 - Marketfield Way	490	230	29	2	11
	3 - Station Road	3	1	1	0	1
	4 - Quadrant Access	17	12	25	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
	5 - Princess Way	8	2	2	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	4	1	0	0	9
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	47	33	52	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.77	10.48	3.2	B
1 - A23	0.48	6.14	0.9	A
2 - Marketfield Way	0.57	5.64	1.3	A
3 - Station Road	0.03	15.17	0.0	C
4 - Quadrant Access	0.11	7.22	0.1	A

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	771	223	1536	0.502	767	1.0	4.657	A
1 - A23	367	483	1255	0.292	365	0.4	4.039	A
2 - Marketfield Way	574	297	1569	0.366	571	0.6	3.603	A
3 - Station Road	5	867	415	0.011	4	0.0	8.766	A
4 - Quadrant Access	41	849	719	0.057	40	0.1	5.301	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	921	268	1508	0.610	918	1.5	6.081	A
1 - A23	438	579	1199	0.365	437	0.6	4.722	A
2 - Marketfield Way	685	356	1530	0.448	684	0.8	4.251	A
3 - Station Road	5	1039	343	0.016	5	0.0	10.664	B
4 - Quadrant Access	49	1017	651	0.075	48	0.1	5.970	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1127	327	1470	0.767	1121	3.1	10.124	B
1 - A23	536	706	1124	0.477	535	0.9	6.095	A
2 - Marketfield Way	839	436	1478	0.568	837	1.3	5.601	A
3 - Station Road	7	1270	245	0.027	7	0.0	15.079	C
4 - Quadrant Access	59	1244	559	0.106	59	0.1	7.195	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1127	328	1470	0.767	1127	3.2	10.481	B
1 - A23	536	710	1122	0.478	536	0.9	6.144	A
2 - Marketfield Way	839	437	1477	0.568	839	1.3	5.642	A
3 - Station Road	7	1274	244	0.027	7	0.0	15.170	C
4 - Quadrant Access	59	1247	558	0.107	59	0.1	7.217	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	921	269	1507	0.611	927	1.6	6.270	A
1 - A23	438	584	1196	0.366	439	0.6	4.767	A
2 - Marketfield Way	685	358	1529	0.448	687	0.8	4.286	A
3 - Station Road	5	1043	341	0.016	5	0.0	10.735	B
4 - Quadrant Access	49	1022	650	0.075	49	0.1	5.992	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	771	225	1535	0.502	773	1.0	4.739	A
1 - A23	367	487	1252	0.293	367	0.4	4.072	A
2 - Marketfield Way	574	300	1567	0.366	575	0.6	3.631	A
3 - Station Road	5	873	413	0.011	5	0.0	8.818	A
4 - Quadrant Access	41	855	717	0.057	41	0.1	5.323	A

Nutfield - 2029 Future Base + Com Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	8.53	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	913	100.000
1 - A23		✓	744	100.000
2 - Marketfield Way		✓	626	100.000
3 - Station Road		✓	18	100.000
4 - Quadrant Access		✓	58	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	82	299	521	2	9
	1 - A23	386	0	269	1	88
	2 - Marketfield Way	466	136	15	1	8
	3 - Station Road	6	11	1	0	0
	4 - Quadrant Access	20	10	28	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
	5 - Princess Way	15	4	3	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	6	9	0	0	12
	3 - Station Road	17	0	0	0	0
	4 - Quadrant Access	63	50	59	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.67	7.32	2.0	A
1 - A23	0.73	12.15	2.7	B
2 - Marketfield Way	0.53	5.82	1.1	A
3 - Station Road	0.10	19.39	0.1	C
4 - Quadrant Access	0.12	7.99	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	687	151	1545	0.445	684	0.8	4.167	A
1 - A23	560	493	1253	0.447	557	0.8	5.145	A
2 - Marketfield Way	471	425	1435	0.329	469	0.5	3.721	A
3 - Station Road	14	892	376	0.036	13	0.0	9.933	A
4 - Quadrant Access	44	826	663	0.066	43	0.1	5.808	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	821	180	1525	0.538	819	1.2	5.093	A
1 - A23	669	590	1195	0.560	667	1.3	6.796	A
2 - Marketfield Way	563	509	1381	0.407	562	0.7	4.391	A
3 - Station Road	16	1068	304	0.053	16	0.1	12.501	B
4 - Quadrant Access	52	990	600	0.087	52	0.1	6.564	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1005	221	1497	0.671	1002	2.0	7.218	A
1 - A23	819	722	1116	0.734	814	2.6	11.695	B
2 - Marketfield Way	689	622	1310	0.526	688	1.1	5.771	A
3 - Station Road	20	1305	208	0.095	20	0.1	19.137	C
4 - Quadrant Access	64	1209	516	0.124	64	0.1	7.948	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1005	221	1497	0.672	1005	2.0	7.318	A
1 - A23	819	724	1115	0.735	819	2.7	12.146	B
2 - Marketfield Way	689	625	1307	0.527	689	1.1	5.823	A
3 - Station Road	20	1310	205	0.096	20	0.1	19.393	C
4 - Quadrant Access	64	1214	515	0.124	64	0.1	7.986	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	821	181	1524	0.539	824	1.2	5.167	A
1 - A23	669	594	1193	0.561	674	1.3	7.016	A
2 - Marketfield Way	563	515	1378	0.408	564	0.7	4.434	A
3 - Station Road	16	1075	301	0.054	16	0.1	12.658	B
4 - Quadrant Access	52	997	598	0.087	52	0.1	6.603	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	687	152	1544	0.445	689	0.8	4.217	A
1 - A23	560	496	1251	0.448	562	0.8	5.238	A
2 - Marketfield Way	471	429	1432	0.329	472	0.5	3.754	A
3 - Station Road	14	898	373	0.036	14	0.0	10.017	B
4 - Quadrant Access	44	832	661	0.066	44	0.1	5.836	A

Nutfield - 2029 Future Base + Com Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	10.35	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1048	100.000
1 - A23		✓	483	100.000
2 - Marketfield Way		✓	817	100.000
3 - Station Road		✓	10	100.000
4 - Quadrant Access		✓	79	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	112	412	502	2	20
	1 - A23	281	1	190	1	10
	2 - Marketfield Way	434	323	46	3	11
	3 - Station Road	6	2	2	0	0
	4 - Quadrant Access	26	19	33	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	2	1	0	0
	1 - A23	4	0	2	0	0
	2 - Marketfield Way	6	1	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	32	39	53	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.83	15.36	4.7	C
1 - A23	0.48	6.36	0.9	A
2 - Marketfield Way	0.62	6.58	1.6	A
3 - Station Road	0.05	18.67	0.1	C
4 - Quadrant Access	0.16	7.98	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	789	320	1481	0.533	784	1.1	5.139	A
1 - A23	364	538	1247	0.292	362	0.4	4.058	A
2 - Marketfield Way	615	321	1545	0.398	612	0.7	3.850	A
3 - Station Road	8	929	388	0.019	7	0.0	9.461	A
4 - Quadrant Access	60	905	716	0.083	59	0.1	5.481	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	942	383	1441	0.654	939	1.8	7.140	A
1 - A23	434	644	1184	0.367	434	0.6	4.790	A
2 - Marketfield Way	734	384	1503	0.489	733	0.9	4.668	A
3 - Station Road	9	1112	310	0.029	9	0.0	11.943	B
4 - Quadrant Access	71	1083	641	0.111	71	0.1	6.314	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1154	469	1386	0.832	1143	4.5	14.209	B
1 - A23	532	784	1101	0.483	530	0.9	6.291	A
2 - Marketfield Way	900	469	1448	0.621	897	1.6	6.503	A
3 - Station Road	11	1359	206	0.054	11	0.1	18.465	C
4 - Quadrant Access	87	1324	540	0.161	87	0.2	7.938	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1154	470	1385	0.833	1153	4.7	15.356	C
1 - A23	532	790	1098	0.485	532	0.9	6.362	A
2 - Marketfield Way	900	471	1446	0.622	899	1.6	6.578	A
3 - Station Road	11	1364	204	0.054	11	0.1	18.672	C
4 - Quadrant Access	87	1329	538	0.162	87	0.2	7.982	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	942	385	1439	0.655	953	1.9	7.575	A
1 - A23	434	653	1179	0.368	436	0.6	4.851	A
2 - Marketfield Way	734	387	1501	0.489	737	1.0	4.725	A
3 - Station Road	9	1119	307	0.029	9	0.0	12.069	B
4 - Quadrant Access	71	1090	638	0.111	71	0.1	6.353	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	789	322	1479	0.533	792	1.2	5.264	A
1 - A23	364	543	1244	0.292	364	0.4	4.094	A
2 - Marketfield Way	615	323	1543	0.399	616	0.7	3.888	A
3 - Station Road	8	935	385	0.020	8	0.0	9.535	A
4 - Quadrant Access	60	911	713	0.083	60	0.1	5.509	A

Nutfield - 2029 Future Base + Com Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1024	100.000
1 - A23		✓	454	100.000
2 - Marketfield Way		✓	764	100.000
3 - Station Road		✓	6	100.000
4 - Quadrant Access		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	97	416	502	0	9
	1 - A23	265	0	181	0	8
	2 - Marketfield Way	505	216	30	2	11
	3 - Station Road	3	1	1	0	1
	4 - Quadrant Access	18	11	26	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	2	2	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	4	1	0	0	9
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	47	36	52	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.76	10.24	3.1	B
1 - A23	0.45	5.91	0.8	A
2 - Marketfield Way	0.56	5.56	1.3	A
3 - Station Road	0.03	14.72	0.0	B
4 - Quadrant Access	0.11	7.19	0.1	A

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	771	214	1541	0.500	767	1.0	4.627	A
1 - A23	342	498	1246	0.274	340	0.4	3.970	A
2 - Marketfield Way	575	284	1577	0.365	573	0.6	3.580	A
3 - Station Road	5	855	420	0.011	4	0.0	8.663	A
4 - Quadrant Access	41	838	719	0.058	41	0.1	5.309	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	921	256	1514	0.608	918	1.5	6.017	A
1 - A23	408	596	1188	0.344	408	0.5	4.609	A
2 - Marketfield Way	687	340	1540	0.446	686	0.8	4.212	A
3 - Station Road	5	1024	349	0.015	5	0.0	10.482	B
4 - Quadrant Access	49	1004	652	0.076	49	0.1	5.969	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1127	313	1478	0.763	1121	3.1	9.912	A
1 - A23	500	728	1111	0.450	499	0.8	5.867	A
2 - Marketfield Way	841	416	1490	0.565	839	1.3	5.517	A
3 - Station Road	7	1253	252	0.026	7	0.0	14.640	B
4 - Quadrant Access	61	1228	562	0.108	60	0.1	7.172	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1127	314	1478	0.763	1127	3.1	10.244	B
1 - A23	500	732	1109	0.451	500	0.8	5.909	A
2 - Marketfield Way	841	417	1489	0.565	841	1.3	5.556	A
3 - Station Road	7	1256	251	0.026	7	0.0	14.723	B
4 - Quadrant Access	61	1231	561	0.108	61	0.1	7.192	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	921	257	1514	0.608	927	1.6	6.196	A
1 - A23	408	602	1185	0.344	409	0.5	4.648	A
2 - Marketfield Way	687	342	1538	0.446	689	0.8	4.247	A
3 - Station Road	5	1029	347	0.016	5	0.0	10.546	B
4 - Quadrant Access	49	1008	651	0.076	50	0.1	5.993	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	771	215	1540	0.500	773	1.0	4.705	A
1 - A23	342	502	1243	0.275	342	0.4	3.999	A
2 - Marketfield Way	575	286	1575	0.365	576	0.6	3.605	A
3 - Station Road	5	861	418	0.011	5	0.0	8.711	A
4 - Quadrant Access	41	843	717	0.058	41	0.1	5.331	A

Nutfield - 2029 Future Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	8.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	940	100.000
1 - A23		✓	708	100.000
2 - Marketfield Way		✓	638	100.000
3 - Station Road		✓	19	100.000
4 - Quadrant Access		✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	82	326	521	2	9
	1 - A23	416	0	285	1	6
	2 - Marketfield Way	466	148	15	1	8
	3 - Station Road	6	12	1	0	0
	4 - Quadrant Access	20	11	28	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	15	4	3	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	6	8	0	0	12
	3 - Station Road	17	0	0	0	0
	4 - Quadrant Access	63	49	59	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.70	7.94	2.3	A
1 - A23	0.70	10.90	2.3	B
2 - Marketfield Way	0.52	5.61	1.1	A
3 - Station Road	0.09	17.84	0.1	C
4 - Quadrant Access	0.13	8.31	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	708	161	1539	0.460	704	0.8	4.296	A
1 - A23	533	493	1247	0.427	530	0.7	5.000	A
2 - Marketfield Way	480	386	1460	0.329	478	0.5	3.658	A
3 - Station Road	14	862	388	0.037	14	0.0	9.622	A
4 - Quadrant Access	44	859	652	0.068	44	0.1	5.915	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	845	193	1518	0.557	843	1.2	5.327	A
1 - A23	636	590	1189	0.535	635	1.1	6.478	A
2 - Marketfield Way	574	463	1411	0.406	573	0.7	4.290	A
3 - Station Road	17	1032	318	0.054	17	0.1	11.942	B
4 - Quadrant Access	53	1028	588	0.090	53	0.1	6.732	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1035	236	1488	0.695	1031	2.2	7.802	A
1 - A23	780	722	1111	0.702	775	2.3	10.585	B
2 - Marketfield Way	702	565	1346	0.522	701	1.1	5.571	A
3 - Station Road	21	1261	224	0.093	21	0.1	17.654	C
4 - Quadrant Access	65	1257	500	0.130	65	0.1	8.267	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1035	237	1488	0.696	1035	2.3	7.937	A
1 - A23	780	724	1109	0.703	779	2.3	10.902	B
2 - Marketfield Way	702	568	1344	0.523	702	1.1	5.614	A
3 - Station Road	21	1266	223	0.094	21	0.1	17.845	C
4 - Quadrant Access	65	1262	498	0.130	65	0.1	8.307	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	845	194	1517	0.557	849	1.3	5.422	A
1 - A23	636	594	1187	0.536	641	1.2	6.649	A
2 - Marketfield Way	574	467	1408	0.407	575	0.7	4.327	A
3 - Station Road	17	1039	316	0.054	17	0.1	12.068	B
4 - Quadrant Access	53	1035	585	0.091	53	0.1	6.771	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	708	162	1538	0.460	709	0.9	4.353	A
1 - A23	533	497	1245	0.428	535	0.8	5.080	A
2 - Marketfield Way	480	390	1458	0.329	481	0.5	3.689	A
3 - Station Road	14	868	386	0.037	14	0.0	9.699	A
4 - Quadrant Access	44	865	650	0.068	45	0.1	5.945	A

Nutfield - 2029 Future Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	11.68	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1075	100.000
1 - A23		✓	523	100.000
2 - Marketfield Way		✓	834	100.000
3 - Station Road		✓	10	100.000
4 - Quadrant Access		✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	112	439	502	2	20
	1 - A23	305	1	205	1	11
	2 - Marketfield Way	434	340	46	3	11
	3 - Station Road	6	2	2	0	0
	4 - Quadrant Access	26	20	33	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	1	1	0	0
	1 - A23	3	0	2	0	0
	2 - Marketfield Way	6	1	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	32	37	53	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.86	18.02	5.7	C
1 - A23	0.52	6.82	1.1	A
2 - Marketfield Way	0.64	7.01	1.8	A
3 - Station Road	0.06	20.58	0.1	C
4 - Quadrant Access	0.17	8.28	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	809	333	1479	0.547	805	1.2	5.305	A
1 - A23	394	537	1255	0.314	392	0.5	4.165	A
2 - Marketfield Way	628	339	1535	0.409	625	0.7	3.945	A
3 - Station Road	8	960	376	0.020	7	0.0	9.774	A
4 - Quadrant Access	60	935	707	0.085	60	0.1	5.564	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	966	399	1437	0.673	963	2.0	7.550	A
1 - A23	470	643	1191	0.395	469	0.6	4.982	A
2 - Marketfield Way	750	406	1491	0.503	748	1.0	4.838	A
3 - Station Road	9	1150	296	0.030	9	0.0	12.549	B
4 - Quadrant Access	72	1120	629	0.114	72	0.1	6.457	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1184	488	1380	0.858	1170	5.4	16.207	C
1 - A23	576	782	1108	0.520	574	1.1	6.717	A
2 - Marketfield Way	918	496	1433	0.641	915	1.7	6.911	A
3 - Station Road	11	1405	188	0.059	11	0.1	20.294	C
4 - Quadrant Access	88	1369	525	0.168	88	0.2	8.232	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1184	490	1379	0.858	1182	5.7	18.015	C
1 - A23	576	790	1104	0.522	576	1.1	6.816	A
2 - Marketfield Way	918	499	1432	0.641	918	1.8	7.010	A
3 - Station Road	11	1410	186	0.059	11	0.1	20.584	C
4 - Quadrant Access	88	1374	523	0.169	88	0.2	8.283	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	966	402	1435	0.673	981	2.1	8.155	A
1 - A23	470	654	1185	0.397	472	0.7	5.061	A
2 - Marketfield Way	750	410	1489	0.504	753	1.0	4.908	A
3 - Station Road	9	1157	292	0.031	9	0.0	12.712	B
4 - Quadrant Access	72	1127	626	0.115	72	0.1	6.503	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	809	336	1477	0.548	813	1.2	5.450	A
1 - A23	394	543	1251	0.315	395	0.5	4.205	A
2 - Marketfield Way	628	342	1533	0.410	629	0.7	3.989	A
3 - Station Road	8	967	373	0.020	8	0.0	9.856	A
4 - Quadrant Access	60	942	704	0.086	60	0.1	5.595	A

Nutfield - 2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	8.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
5 - Princess Way		✓	1055	100.000
1 - A23		✓	501	100.000
2 - Marketfield Way		✓	785	100.000
3 - Station Road		✓	6	100.000
4 - Quadrant Access		✓	56	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	97	447	502	0	9
	1 - A23	293	0	199	0	9
	2 - Marketfield Way	505	237	30	2	11
	3 - Station Road	3	1	1	0	1
	4 - Quadrant Access	18	12	26	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	2	2	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	4	1	0	0	9
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	47	33	52	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
5 - Princess Way	0.79	11.86	3.7	B
1 - A23	0.50	6.46	1.0	A
2 - Marketfield Way	0.59	5.95	1.4	A
3 - Station Road	0.03	16.25	0.0	C
4 - Quadrant Access	0.11	7.48	0.1	A

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	794	230	1532	0.519	790	1.1	4.828	A
1 - A23	377	498	1246	0.303	375	0.4	4.128	A
2 - Marketfield Way	591	306	1563	0.378	589	0.6	3.684	A
3 - Station Road	5	893	404	0.011	4	0.0	9.001	A
4 - Quadrant Access	42	875	709	0.060	42	0.1	5.399	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	948	276	1503	0.631	946	1.7	6.435	A
1 - A23	450	596	1188	0.379	450	0.6	4.870	A
2 - Marketfield Way	706	366	1524	0.463	705	0.9	4.391	A
3 - Station Road	5	1069	330	0.016	5	0.0	11.085	B
4 - Quadrant Access	50	1047	639	0.079	50	0.1	6.118	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1162	337	1464	0.793	1154	3.6	11.323	B
1 - A23	552	728	1112	0.496	550	1.0	6.394	A
2 - Marketfield Way	864	448	1470	0.588	862	1.4	5.901	A
3 - Station Road	7	1307	230	0.029	7	0.0	16.128	C
4 - Quadrant Access	62	1281	544	0.113	61	0.1	7.458	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	1162	338	1464	0.794	1161	3.7	11.861	B
1 - A23	552	732	1109	0.497	552	1.0	6.456	A
2 - Marketfield Way	864	449	1469	0.588	864	1.4	5.953	A
3 - Station Road	7	1311	228	0.029	7	0.0	16.249	C
4 - Quadrant Access	62	1285	543	0.114	62	0.1	7.484	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	948	277	1502	0.631	956	1.7	6.688	A
1 - A23	450	603	1185	0.380	452	0.6	4.923	A
2 - Marketfield Way	706	368	1522	0.464	708	0.9	4.435	A
3 - Station Road	5	1075	328	0.016	5	0.0	11.168	B
4 - Quadrant Access	50	1053	636	0.079	51	0.1	6.147	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	794	232	1531	0.519	797	1.1	4.922	A
1 - A23	377	502	1243	0.303	378	0.4	4.163	A
2 - Marketfield Way	591	308	1562	0.378	592	0.6	3.715	A
3 - Station Road	5	898	402	0.011	5	0.0	9.057	A
4 - Quadrant Access	42	880	706	0.060	42	0.1	5.423	A

Junctions 9	
ARCADY 9 - Roundabout Module	
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Filename: Stations Roundabout 240313 (DIRECT).j9

Path: O:\London\Vectos\Projects\Projects\220000\226799 - Nutfield Green Park\MODELLING\Junctions\Stations Roundabout

Report generation date: 13/03/2024 18:32:36

-
- »Nutfield - 2024 Base + Com Devs, AM (08:00-09:00)
 - »Nutfield - 2024 Base + Com Devs, PM (17:00-18:00)
 - »Nutfield - 2024 Base + Com Devs, PM (16:00-17:00)
 - »Nutfield - 2024 Base + Com Dev + Dev, AM (08:00-09:00)
 - »Nutfield - 2024 Base + Com Dev + Dev, PM (17:00-18:00)
 - »Nutfield - 2024 Base + Com Dev + Dev, PM (16:00-17:00)
 - »Nutfield - 2029 Future Base + Com Dev, AM (08:00-09:00)
 - »Nutfield - 2029 Future Base + Com Dev, PM (17:00-18:00)
 - »Nutfield - 2029 Future Base + Com Dev, PM (16:00-17:00)
 - »Nutfield - 2029 Future Base + Com Dev + Dev, AM (08:00-09:00)
 - »Nutfield - 2029 Future Base + Com Dev + Dev, PM (17:00-18:00)
 - »Nutfield - 2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Summary of junction performance

	AM (08:00-09:00)					PM (17:00-18:00)					PM (16:00-17:00)				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	Nutfield - 2024 Base + Com Devs														
5 - Princess Way	D1	1.6	6.18	0.62	A	D2	3.0	9.77	0.76	A	D3	3.4	10.95	0.78	B
1 - A23		1.9	8.02	0.66	A		0.7	5.09	0.43	A		0.6	4.77	0.37	A
2 - Marketfield Way		0.9	5.11	0.47	A		1.2	5.32	0.54	A		1.0	4.96	0.51	A
3 - Station Road		0.1	18.64	0.11	C		0.1	14.50	0.10	B		0.0	12.93	0.03	B
4 - Quadrant Access		0.2	7.90	0.17	A		0.2	8.19	0.15	A		0.1	6.93	0.10	A
	Nutfield - 2024 Base + Com Dev + Dev														
5 - Princess Way	D4	1.7	6.53	0.64	A	D5	3.4	10.79	0.78	B	D6	4.0	12.51	0.81	B
1 - A23		1.4	6.71	0.58	A		0.8	5.33	0.46	A		0.7	5.04	0.41	A
2 - Marketfield Way		0.9	5.08	0.48	A		1.3	5.57	0.56	A		1.1	5.23	0.53	A
3 - Station Road		0.1	14.88	0.10	B		0.1	15.54	0.11	C		0.0	13.88	0.03	B
4 - Quadrant Access		0.2	8.15	0.17	A		0.2	8.40	0.15	A		0.1	7.14	0.10	A
	Nutfield - 2029 Future Base + Com Dev														
5 - Princess Way	D7	1.7	6.52	0.64	A	D8	3.4	10.83	0.79	B	D9	4.0	12.40	0.81	B
1 - A23		2.0	8.56	0.68	A		0.8	5.33	0.45	A		0.6	4.95	0.39	A
2 - Marketfield Way		0.9	5.25	0.49	A		1.3	5.60	0.57	A		1.1	5.19	0.53	A
3 - Station Road		0.1	19.54	0.12	C		0.1	15.47	0.11	C		0.0	13.68	0.03	B
4 - Quadrant Access		0.2	8.09	0.17	A		0.2	8.49	0.15	A		0.1	7.13	0.10	A
	Nutfield - 2029 Future Base + Com Dev + Dev														
5 - Princess Way	D10	1.9	6.96	0.66	A	D11	4.0	12.06	0.81	B	D12	4.8	14.41	0.84	B
1 - A23		1.5	7.12	0.60	A		0.9	5.66	0.48	A		0.7	5.22	0.42	A
2 - Marketfield Way		1.0	5.24	0.50	A		1.4	5.87	0.58	A		1.2	5.48	0.55	A
3 - Station Road		0.1	15.88	0.11	C		0.1	16.65	0.12	C		0.0	14.74	0.03	B
4 - Quadrant Access		0.2	8.34	0.18	A		0.2	8.74	0.16	A		0.1	7.34	0.11	A

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

File summary

File Description

Title	
Location	
Site number	
Date	07/08/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\ethan.terry
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2024 Base + Com Devs	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓
D2	2024 Base + Com Devs	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓
D3	2024 Base + Com Devs	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓
D4	2024 Base + Com Dev + Dev	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓
D5	2024 Base + Com Dev + Dev	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓
D6	2024 Base + Com Dev + Dev	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓

Analysis Set Details

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

Nutfield - 2024 Base + Com Devs, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	6.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
5	Princess Way	
1	A23	
2	Marketfield Way	
3	Station Road	
4	Quadrant Access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
5 - Princess Way	5.79	7.82	2.6	19.9	42.0	61.5	
1 - A23	3.92	7.40	14.6	27.0	50.0	39.5	
2 - Marketfield Way	5.68	7.23	3.2	26.0	42.0	46.3	
3 - Station Road	2.22	4.56	4.3	7.0	42.0	49.9	
4 - Quadrant Access	3.92	7.33	14.1	6.9	42.0	38.3	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
5 - Princess Way	0.608	429.838
1 - A23	0.612	437.210
2 - Marketfield Way	0.647	454.319
3 - Station Road	0.406	195.087
4 - Quadrant Access	0.572	388.683

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2024 Base + Com Devs	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	18.00	59.00	136.00	0.00	6.00
	1 - A23	99.00	0.00	71.00	0.00	2.00
	2 - Marketfield Way	128.00	34.00	1.00	0.00	1.00
	3 - Station Road	4.00	3.00	0.00	0.00	0.00
	4 - Quadrant Access	10.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	21.00	66.00	112.00	0.00	2.00
	1 - A23	99.00	0.00	68.00	0.00	0.00
	2 - Marketfield Way	117.00	30.00	10.00	0.00	1.00
	3 - Station Road	0.00	4.00	0.00	0.00	0.00
	4 - Quadrant Access	2.00	1.00	8.00	0.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	21.00	79.00	131.00	0.00	1.00
	1 - A23	104.00	0.00	68.00	1.00	1.00
	2 - Marketfield Way	125.00	30.00	0.00	0.00	1.00
	3 - Station Road	0.00	1.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	6.00	0.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	19.00	87.00	127.00	2.00	0.00
	1 - A23	74.00	0.00	55.00	0.00	85.00
	2 - Marketfield Way	83.00	40.00	3.00	1.00	5.00
	3 - Station Road	2.00	3.00	1.00	0.00	0.00
	4 - Quadrant Access	4.00	1.00	6.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	17	3	1	0	0
	1 - A23	6	0	4	0	0
	2 - Marketfield Way	4	9	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	70	50	43	0	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	24	9	4	0	0
	1 - A23	5	0	7	0	0
	2 - Marketfield Way	8	10	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	50	0	88	0	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	3	4	0	0
	1 - A23	1	0	4	0	0
	2 - Marketfield Way	6	7	0	0	98
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	100	100	50	0	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	11	2	3	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	9	10	0	0	0
	3 - Station Road	50	0	0	0	0
	4 - Quadrant Access	25	0	50	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.62	6.18	1.6	A	221.75	886.98
1 - A23	0.66	8.02	1.9	A	181.74	726.97
2 - Marketfield Way	0.47	5.11	0.9	A	152.50	609.98
3 - Station Road	0.11	18.64	0.1	C	4.50	18.01
4 - Quadrant Access	0.17	7.90	0.2	A	14.01	56.04

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	219.00	219.00	50.66	382.76	0.572	217.68	257.38	0.0	1.3	5.409	A
1 - A23	172.00	172.00	166.97	314.46	0.547	170.81	101.37	0.0	1.2	6.215	A
2 - Marketfield Way	164.00	164.00	124.16	350.77	0.468	163.13	213.62	0.0	0.9	4.774	A
3 - Station Road	7.00	7.00	287.29	71.38	0.098	6.89	0.00	0.0	0.1	13.935	B
4 - Quadrant Access	23.00	23.00	285.24	137.89	0.167	22.80	8.94	0.0	0.2	7.807	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	201.00	201.00	53.02	363.68	0.553	201.07	239.16	1.3	1.2	5.537	A
1 - A23	167.00	167.00	153.08	315.14	0.530	167.05	101.01	1.2	1.1	6.079	A
2 - Marketfield Way	158.00	158.00	122.03	342.25	0.462	158.00	198.10	0.9	0.9	4.886	A
3 - Station Road	4.00	4.00	280.03	72.19	0.055	4.05	0.00	0.1	0.1	13.217	B
4 - Quadrant Access	11.00	11.00	281.04	125.05	0.088	11.14	3.04	0.2	0.1	7.904	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	232.00	232.00	39.12	385.52	0.602	231.76	252.96	1.2	1.5	5.843	A
1 - A23	174.00	174.00	158.94	326.46	0.533	174.00	111.95	1.1	1.1	5.902	A
2 - Marketfield Way	156.00	156.00	127.98	346.03	0.451	156.03	204.95	0.9	0.8	4.739	A
3 - Station Road	1.00	1.00	283.02	74.45	0.013	1.05	0.99	0.1	0.0	12.269	B
4 - Quadrant Access	11.00	11.00	281.07	127.91	0.086	11.01	3.00	0.1	0.1	7.700	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	235.00	235.00	53.88	380.44	0.618	234.90	182.16	1.5	1.6	6.177	A
1 - A23	214.00	214.00	157.96	324.75	0.659	213.24	130.82	1.1	1.9	8.018	A
2 - Marketfield Way	132.00	132.00	179.29	308.33	0.428	132.05	191.92	0.8	0.8	5.108	A
3 - Station Road	6.00	6.00	308.34	54.07	0.111	5.89	2.99	0.0	0.1	18.641	C
4 - Quadrant Access	11.00	11.00	225.02	182.90	0.060	11.03	89.22	0.1	0.1	5.236	A

Nutfield - 2024 Base + Com Devs, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2024 Base + Com Devs	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	22.00	108.00	133.00	1.00	8.00
	1 - A23	81.00	1.00	47.00	1.00	0.00
	2 - Marketfield Way	114.00	70.00	16.00	0.00	0.00
	3 - Station Road	0.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	7.00	6.00	6.00	0.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	30.00	115.00	106.00	0.00	3.00
	1 - A23	56.00	0.00	45.00	0.00	3.00
	2 - Marketfield Way	106.00	81.00	11.00	2.00	4.00
	3 - Station Road	0.00	2.00	0.00	0.00	0.00
	4 - Quadrant Access	4.00	5.00	8.00	0.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	25.00	92.00	125.00	0.00	4.00
	1 - A23	62.00	0.00	57.00	0.00	3.00
	2 - Marketfield Way	94.00	94.00	10.00	0.00	3.00
	3 - Station Road	6.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	6.00	5.00	7.00	0.00	1.01

Demand (Veh/TS)

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	31.00	85.00	123.00	1.00	4.00
	1 - A23	73.00	0.00	34.00	0.00	4.00
	2 - Marketfield Way	106.00	69.00	7.00	1.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	11.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	3	0	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	43	50	100	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	3	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	8	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	25	40	38	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	1	2	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	9	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	20	57	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	7	0	0	0	0
	2 - Marketfield Way	3	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	0	50	36	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.76	9.77	3.0	A	254.00	1015.99
1 - A23	0.43	5.09	0.7	A	116.75	467.01
2 - Marketfield Way	0.54	5.32	1.2	A	197.99	791.98
3 - Station Road	0.10	14.50	0.1	B	2.50	10.00
4 - Quadrant Access	0.15	8.19	0.2	A	18.99	75.95

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	272.00	272.00	99.36	358.30	0.759	268.99	222.57	0.0	3.0	9.774	A
1 - A23	130.00	130.00	185.02	305.44	0.426	129.27	183.33	0.0	0.7	5.087	A
2 - Marketfield Way	200.00	200.00	113.19	367.87	0.544	198.82	201.10	0.0	1.2	5.289	A
3 - Station Road	1.00	1.00	310.03	65.02	0.015	0.98	1.98	0.0	0.0	14.052	B
4 - Quadrant Access	19.00	19.00	303.10	128.50	0.148	18.83	7.91	0.0	0.2	8.194	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	254.00	254.00	106.96	351.62	0.722	254.33	196.23	3.0	2.7	9.293	A
1 - A23	104.00	104.00	158.37	330.99	0.314	104.27	202.92	0.7	0.5	3.974	A
2 - Marketfield Way	204.00	204.00	92.21	376.43	0.542	204.00	170.43	1.2	1.2	5.219	A
3 - Station Road	2.00	2.00	294.20	70.40	0.028	1.99	2.01	0.0	0.0	13.151	B
4 - Quadrant Access	17.00	17.00	286.16	160.31	0.106	17.03	10.02	0.2	0.1	6.284	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	246.00	246.00	117.93	345.78	0.711	246.15	192.95	2.7	2.5	9.056	A
1 - A23	122.00	122.00	172.87	322.93	0.378	121.86	191.21	0.5	0.6	4.473	A
2 - Marketfield Way	201.00	201.00	94.99	370.07	0.543	201.00	199.74	1.2	1.2	5.322	A
3 - Station Road	7.00	7.00	295.98	68.89	0.102	6.92	0.01	0.0	0.1	14.504	B
4 - Quadrant Access	19.01	19.01	291.90	144.95	0.131	18.98	10.99	0.1	0.1	7.142	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	244.00	244.00	89.22	364.83	0.669	244.46	217.97	2.5	2.1	7.510	A
1 - A23	111.00	111.00	177.26	309.47	0.359	111.04	156.42	0.6	0.6	4.536	A
2 - Marketfield Way	187.00	187.00	112.94	369.63	0.506	187.14	175.37	1.2	1.0	4.937	A
3 - Station Road	0.00	0.00	298.09	69.29	0.000	0.11	1.99	0.1	0.0	0.000	A
4 - Quadrant Access	21.00	21.00	286.20	176.37	0.119	20.99	12.01	0.1	0.1	5.795	A

Nutfield - 2024 Base + Com Devs, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2024 Base + Com Devs	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	17.00	74.00	111.00	0.00	2.00
	1 - A23	53.00	0.00	45.00	0.00	2.00
	2 - Marketfield Way	129.00	36.00	11.00	1.00	1.00
	3 - Station Road	0.00	1.00	1.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	3.00	0.00	0.00

Demand (Veh/TS)

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	26.00	92.00	116.00	0.00	2.00
	1 - A23	72.00	0.00	44.00	0.00	2.00
	2 - Marketfield Way	112.00	51.00	5.00	1.00	6.00
	3 - Station Road	2.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	20.00	118.00	123.00	0.00	3.00
	1 - A23	64.00	0.00	44.00	0.00	2.00
	2 - Marketfield Way	127.00	61.00	4.00	0.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	1.00
	4 - Quadrant Access	3.00	1.00	6.00	0.00	0.00

Demand (Veh/TS)

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	30.00	120.00	137.00	0.00	2.00
	1 - A23	68.00	0.00	41.00	0.00	2.00
	2 - Marketfield Way	121.00	62.00	9.00	0.00	0.00
	3 - Station Road	1.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	9.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	6	1	3	0	0
	1 - A23	8	0	11	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	38	50	67	0	0

Heavy Vehicle Percentages

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	5	3	0	0
	1 - A23	3	0	5	0	0
	2 - Marketfield Way	3	0	0	0	17
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	33	33	43	0	0

Heavy Vehicle Percentages

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	1	2	0	0
	1 - A23	2	0	7	0	0
	2 - Marketfield Way	4	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	0	67	0	0

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	6	0	7	0	0
	2 - Marketfield Way	3	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	50	44	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.78	10.95	3.4	B	248.25	992.98
1 - A23	0.37	4.77	0.6	A	109.75	439.00
2 - Marketfield Way	0.51	4.96	1.0	A	185.25	741.01
3 - Station Road	0.03	12.93	0.0	B	1.50	6.00
4 - Quadrant Access	0.10	6.93	0.1	A	13.25	53.01

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	204.00	204.00	53.72	385.74	0.529	202.89	206.01	0.0	1.1	4.893	A
1 - A23	100.00	100.00	144.21	316.04	0.316	99.54	112.40	0.0	0.5	4.149	A
2 - Marketfield Way	178.00	178.00	73.64	389.22	0.457	177.16	170.11	0.0	0.8	4.229	A
3 - Station Road	2.00	2.00	249.81	88.81	0.023	1.98	1.00	0.0	0.0	10.362	B
4 - Quadrant Access	13.00	13.00	246.82	164.43	0.079	12.91	4.98	0.0	0.1	5.938	A

16:15 - 16:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	236.00	236.00	68.91	369.07	0.640	235.37	214.86	1.1	1.7	6.699	A
1 - A23	118.00	118.00	155.66	324.65	0.363	117.89	148.63	0.5	0.6	4.351	A
2 - Marketfield Way	175.00	175.00	101.79	376.34	0.465	174.98	171.75	0.8	0.9	4.469	A
3 - Station Road	2.00	2.00	275.77	79.49	0.025	2.00	1.00	0.0	0.0	11.613	B
4 - Quadrant Access	16.00	16.00	267.79	168.24	0.095	15.98	9.97	0.1	0.1	5.911	A

16:30 - 16:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	264.00	264.00	71.98	376.96	0.700	263.46	213.98	1.7	2.3	7.889	A
1 - A23	110.00	110.00	155.81	324.43	0.339	110.05	179.63	0.6	0.5	4.198	A
2 - Marketfield Way	196.00	196.00	89.06	385.29	0.509	195.84	176.80	0.9	1.0	4.746	A
3 - Station Road	1.00	1.00	284.89	76.30	0.013	1.01	0.00	0.0	0.0	11.955	B
4 - Quadrant Access	10.00	10.00	275.92	141.85	0.071	10.04	9.99	0.1	0.1	6.827	A

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	289.00	289.00	81.92	368.81	0.784	287.84	222.75	2.3	3.4	10.945	B
1 - A23	111.00	111.00	186.20	299.46	0.371	110.93	183.56	0.5	0.6	4.773	A
2 - Marketfield Way	192.00	192.00	101.76	373.31	0.514	191.97	195.37	1.0	1.1	4.963	A
3 - Station Road	1.00	1.00	293.74	70.61	0.014	1.00	0.00	0.0	0.0	12.929	B
4 - Quadrant Access	14.00	14.00	290.70	143.73	0.097	13.97	4.04	0.1	0.1	6.933	A

Nutfield - 2024 Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	6.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2024 Base + Com Dev + Dev	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	18.00	66.00	136.00	0.00	6.00
	1 - A23	106.00	0.00	75.00	0.00	2.00
	2 - Marketfield Way	128.00	37.00	1.00	0.00	1.00
	3 - Station Road	4.00	3.00	0.00	0.00	0.00
	4 - Quadrant Access	10.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	21.00	72.00	112.00	0.00	2.00
	1 - A23	106.00	0.00	72.00	0.00	0.00
	2 - Marketfield Way	117.00	33.00	10.00	0.00	1.00
	3 - Station Road	0.00	4.00	0.00	0.00	0.00
	4 - Quadrant Access	2.00	1.00	8.00	0.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	21.00	85.00	131.00	0.00	1.00
	1 - A23	111.00	0.00	72.00	1.00	1.00
	2 - Marketfield Way	125.00	33.00	0.00	0.00	1.00
	3 - Station Road	0.00	1.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	6.00	0.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	19.00	93.00	127.00	2.00	0.00
	1 - A23	81.00	0.00	59.00	0.00	3.00
	2 - Marketfield Way	83.00	43.00	3.00	1.00	5.00
	3 - Station Road	2.00	3.00	1.00	0.00	0.00
	4 - Quadrant Access	4.00	1.00	6.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	17	3	1	0	0
	1 - A23	6	0	4	0	0
	2 - Marketfield Way	4	8	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	70	49	43	0	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	24	8	4	0	0
	1 - A23	5	0	7	0	0
	2 - Marketfield Way	8	9	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	50	0	88	0	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	2	4	0	0
	1 - A23	1	0	4	0	0
	2 - Marketfield Way	6	6	0	0	98
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	100	97	50	0	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	11	2	3	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	9	10	0	0	0
	3 - Station Road	50	0	0	0	0
	4 - Quadrant Access	25	0	50	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.64	6.53	1.7	A	228.00	911.99
1 - A23	0.58	6.71	1.4	A	172.25	689.00
2 - Marketfield Way	0.48	5.08	0.9	A	155.49	621.98
3 - Station Road	0.10	14.88	0.1	B	4.50	18.01
4 - Quadrant Access	0.17	8.15	0.2	A	14.01	56.04

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	226.00	226.00	53.63	381.08	0.593	224.56	264.24	0.0	1.4	5.700	A
1 - A23	183.00	183.00	166.92	314.46	0.582	181.63	111.28	0.0	1.4	6.708	A
2 - Marketfield Way	167.00	167.00	131.04	346.78	0.482	166.08	217.51	0.0	0.9	4.956	A
3 - Station Road	7.00	7.00	297.12	67.25	0.104	6.89	0.00	0.0	0.1	14.883	B
4 - Quadrant Access	23.00	23.00	295.07	134.41	0.171	22.80	8.94	0.0	0.2	8.049	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	207.00	207.00	56.02	363.05	0.570	207.09	246.17	1.4	1.3	5.774	A
1 - A23	178.00	178.00	153.09	315.15	0.565	178.05	110.02	1.4	1.3	6.570	A
2 - Marketfield Way	161.00	161.00	129.03	338.36	0.476	161.00	202.12	0.9	0.9	5.076	A
3 - Station Road	4.00	4.00	290.03	68.00	0.059	4.05	0.00	0.1	0.1	14.086	B
4 - Quadrant Access	11.00	11.00	291.04	121.64	0.091	11.15	3.04	0.2	0.1	8.150	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	238.00	238.00	42.13	385.30	0.618	237.75	259.96	1.3	1.6	6.087	A
1 - A23	185.00	185.00	158.94	326.46	0.567	185.00	120.95	1.3	1.3	6.361	A
2 - Marketfield Way	159.00	159.00	134.98	342.39	0.464	159.04	208.95	0.9	0.9	4.909	A
3 - Station Road	1.00	1.00	293.03	70.40	0.014	1.05	0.99	0.1	0.0	12.987	B
4 - Quadrant Access	11.00	11.00	291.08	125.00	0.088	11.01	3.00	0.1	0.1	7.894	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	241.00	241.00	56.97	378.57	0.637	240.87	189.59	1.6	1.7	6.528	A
1 - A23	143.00	143.00	157.95	318.75	0.449	143.49	139.88	1.3	0.8	5.149	A
2 - Marketfield Way	135.00	135.00	105.31	352.07	0.383	135.22	196.13	0.9	0.6	4.156	A
3 - Station Road	6.00	6.00	237.55	78.54	0.076	5.93	2.99	0.0	0.1	12.384	B
4 - Quadrant Access	11.00	11.00	235.53	178.25	0.062	11.03	7.95	0.1	0.1	5.384	A

Nutfield - 2024 Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2024 Base + Com Dev + Dev	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	22.00	115.00	133.00	1.00	8.00
	1 - A23	87.00	1.00	51.00	1.00	0.00
	2 - Marketfield Way	114.00	74.00	16.00	0.00	0.00
	3 - Station Road	0.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	7.00	6.00	6.00	0.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	30.00	122.00	106.00	0.00	3.00
	1 - A23	62.00	0.00	49.00	0.00	3.00
	2 - Marketfield Way	106.00	85.00	11.00	2.00	4.00
	3 - Station Road	0.00	2.00	0.00	0.00	0.00
	4 - Quadrant Access	4.00	5.00	8.00	0.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	25.00	99.00	125.00	0.00	4.00
	1 - A23	68.00	0.00	61.00	0.00	3.00
	2 - Marketfield Way	94.00	98.00	10.00	0.00	3.00
	3 - Station Road	6.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	6.00	5.00	7.00	0.00	1.01

Demand (Veh/TS)

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	31.00	91.00	123.00	1.00	4.00
	1 - A23	79.00	0.00	38.00	0.00	4.00
	2 - Marketfield Way	106.00	73.00	7.00	1.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	11.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	3	0	0	0
	1 - A23	3	0	6	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	43	48	100	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	3	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	8	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	25	38	38	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	1	2	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	9	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	19	57	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	6	0	0	0	0
	2 - Marketfield Way	3	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	0	45	36	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.78	10.79	3.4	B	260.75	1042.99
1 - A23	0.46	5.33	0.8	A	126.75	507.01
2 - Marketfield Way	0.56	5.57	1.3	A	201.99	807.97
3 - Station Road	0.11	15.54	0.1	C	2.50	10.00
4 - Quadrant Access	0.15	8.40	0.2	A	18.99	75.95

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	279.00	279.00	103.31	355.89	0.784	275.57	228.45	0.0	3.4	10.790	B
1 - A23	140.00	140.00	184.81	307.36	0.455	139.17	194.07	0.0	0.8	5.326	A
2 - Marketfield Way	204.00	204.00	119.09	364.75	0.559	202.75	204.89	0.0	1.3	5.514	A
3 - Station Road	1.00	1.00	319.86	61.28	0.016	0.98	1.98	0.0	0.0	14.923	B
4 - Quadrant Access	19.00	19.00	312.94	125.77	0.151	18.82	7.90	0.0	0.2	8.402	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	261.00	261.00	110.96	349.49	0.747	261.37	202.25	3.4	3.1	10.272	B
1 - A23	114.00	114.00	158.42	330.94	0.344	114.30	213.92	0.8	0.5	4.159	A
2 - Marketfield Way	208.00	208.00	98.23	372.91	0.558	207.99	174.48	1.3	1.3	5.457	A
3 - Station Road	2.00	2.00	304.21	66.28	0.030	1.99	2.01	0.0	0.0	13.995	B
4 - Quadrant Access	17.00	17.00	296.17	156.72	0.108	17.04	10.03	0.2	0.1	6.445	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	253.00	253.00	121.93	343.47	0.737	253.17	198.94	3.1	2.9	10.001	B
1 - A23	132.00	132.00	172.86	322.89	0.409	131.84	202.24	0.5	0.7	4.706	A
2 - Marketfield Way	205.00	205.00	100.99	366.51	0.559	205.00	203.71	1.3	1.3	5.571	A
3 - Station Road	7.00	7.00	305.97	64.73	0.108	6.91	0.01	0.0	0.1	15.544	C
4 - Quadrant Access	19.01	19.01	301.89	141.24	0.135	18.98	10.99	0.1	0.2	7.359	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	250.00	250.00	93.23	362.59	0.689	250.60	223.98	2.9	2.3	8.083	A
1 - A23	121.00	121.00	177.33	311.46	0.389	121.05	166.51	0.7	0.6	4.729	A
2 - Marketfield Way	191.00	191.00	118.94	366.17	0.521	191.15	179.43	1.3	1.1	5.149	A
3 - Station Road	0.00	0.00	308.11	65.36	0.000	0.12	1.99	0.1	0.0	0.000	A
4 - Quadrant Access	21.00	21.00	296.22	172.56	0.121	20.99	12.01	0.2	0.1	5.938	A

Nutfield - 2024 Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	8.42	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2024 Base + Com Dev + Dev	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	17.00	81.00	111.00	0.00	2.00
	1 - A23	60.00	0.00	50.00	0.00	2.00
	2 - Marketfield Way	129.00	42.00	11.00	1.00	1.00
	3 - Station Road	0.00	1.00	1.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	3.00	0.00	0.00

Demand (Veh/TS)

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	26.00	100.00	116.00	0.00	2.00
	1 - A23	79.00	0.00	49.00	0.00	2.00
	2 - Marketfield Way	112.00	56.00	5.00	1.00	6.00
	3 - Station Road	2.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	20.00	126.00	123.00	0.00	3.00
	1 - A23	71.00	0.00	49.00	0.00	2.00
	2 - Marketfield Way	127.00	66.00	4.00	0.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	1.00
	4 - Quadrant Access	3.00	1.00	6.00	0.00	0.00

Demand (Veh/TS)

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	30.00	128.00	137.00	0.00	2.00
	1 - A23	75.00	0.00	46.00	0.00	2.00
	2 - Marketfield Way	121.00	67.00	9.00	0.00	0.00
	3 - Station Road	1.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	9.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	6	1	3	0	0
	1 - A23	7	0	10	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	38	44	67	0	0

Heavy Vehicle Percentages

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	5	3	0	0
	1 - A23	3	0	4	0	0
	2 - Marketfield Way	3	0	0	0	17
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	33	32	43	0	0

Heavy Vehicle Percentages

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	1	2	0	0
	1 - A23	1	0	6	0	0
	2 - Marketfield Way	4	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	0	67	0	0

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	5	0	7	0	0
	2 - Marketfield Way	3	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	44	44	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.81	12.51	4.0	B	255.99	1023.98
1 - A23	0.41	5.04	0.7	A	121.75	487.00
2 - Marketfield Way	0.53	5.23	1.1	A	190.50	762.01
3 - Station Road	0.03	13.88	0.0	B	1.50	6.00
4 - Quadrant Access	0.10	7.14	0.1	A	13.25	53.01

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	211.00	211.00	59.68	382.47	0.552	209.79	212.93	0.0	1.2	5.176	A
1 - A23	112.00	112.00	144.16	318.92	0.351	111.46	125.30	0.0	0.5	4.327	A
2 - Marketfield Way	184.00	184.00	80.59	385.35	0.477	183.10	175.03	0.0	0.9	4.431	A
3 - Station Road	2.00	2.00	262.69	83.59	0.024	1.98	1.00	0.0	0.0	11.025	B
4 - Quadrant Access	13.00	13.00	259.70	160.43	0.081	12.91	4.97	0.0	0.1	6.096	A

16:15 - 16:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	244.00	244.00	73.91	366.11	0.667	243.26	221.84	1.2	2.0	7.282	A
1 - A23	130.00	130.00	155.61	325.83	0.399	129.88	161.57	0.5	0.7	4.589	A
2 - Marketfield Way	180.00	180.00	108.77	372.06	0.484	179.98	176.71	0.9	0.9	4.685	A
3 - Station Road	2.00	2.00	287.75	74.54	0.027	2.00	1.00	0.0	0.0	12.406	B
4 - Quadrant Access	16.00	16.00	279.78	163.62	0.098	15.98	9.97	0.1	0.1	6.095	A

16:30 - 16:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	272.00	272.00	76.97	374.05	0.727	271.37	220.98	2.0	2.6	8.707	A
1 - A23	122.00	122.00	155.77	327.50	0.373	122.06	192.57	0.7	0.6	4.381	A
2 - Marketfield Way	201.00	201.00	96.06	381.47	0.527	200.83	181.77	0.9	1.1	4.976	A
3 - Station Road	1.00	1.00	296.89	71.65	0.014	1.01	0.01	0.0	0.0	12.744	B
4 - Quadrant Access	10.00	10.00	287.91	137.78	0.073	10.04	9.98	0.1	0.1	7.045	A

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	297.00	297.00	86.92	365.90	0.812	295.55	229.70	2.6	4.0	12.515	B
1 - A23	123.00	123.00	186.04	301.25	0.408	122.91	196.43	0.6	0.7	5.044	A
2 - Marketfield Way	197.00	197.00	108.72	369.14	0.534	196.97	200.23	1.1	1.1	5.225	A
3 - Station Road	1.00	1.00	305.69	65.83	0.015	1.00	0.00	0.0	0.0	13.882	B
4 - Quadrant Access	14.00	14.00	302.65	140.04	0.100	13.97	4.04	0.1	0.1	7.136	A

Nutfield - 2029 Future Base + Com Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	6.97	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	19.00	61.00	140.00	0.00	6.00
	1 - A23	102.00	0.00	73.00	0.00	2.00
	2 - Marketfield Way	132.00	35.00	1.00	0.00	1.00
	3 - Station Road	4.00	3.00	0.00	0.00	0.00
	4 - Quadrant Access	10.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	22.00	67.00	115.00	0.00	2.00
	1 - A23	102.00	0.00	70.00	0.00	0.00
	2 - Marketfield Way	120.00	30.00	10.00	0.00	1.00
	3 - Station Road	0.00	4.00	0.00	0.00	0.00
	4 - Quadrant Access	2.00	1.00	8.00	0.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	22.00	81.00	135.00	0.00	1.00
	1 - A23	107.00	0.00	70.00	1.00	1.00
	2 - Marketfield Way	129.00	30.00	0.00	0.00	1.00
	3 - Station Road	0.00	1.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	6.00	0.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	20.00	89.00	131.00	2.00	0.00
	1 - A23	76.00	0.00	57.00	0.00	85.00
	2 - Marketfield Way	85.00	41.00	3.00	1.00	5.00
	3 - Station Road	2.00	3.00	1.00	0.00	0.00
	4 - Quadrant Access	4.00	1.00	6.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	17	3	1	0	0
	1 - A23	6	0	4	0	0
	2 - Marketfield Way	4	9	0	0	12
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	70	50	43	0	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	24	9	4	0	0
	1 - A23	5	0	7	0	0
	2 - Marketfield Way	8	10	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	50	0	88	0	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	3	4	0	0
	1 - A23	1	0	4	0	0
	2 - Marketfield Way	6	7	0	0	98
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	100	100	50	0	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	11	2	3	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	9	10	0	0	0
	3 - Station Road	50	0	0	0	0
	4 - Quadrant Access	25	0	50	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.64	6.52	1.7	A	228.25	912.98
1 - A23	0.68	8.56	2.0	A	186.49	745.97
2 - Marketfield Way	0.49	5.25	0.9	A	156.25	624.98
3 - Station Road	0.12	19.54	0.1	C	4.50	18.01
4 - Quadrant Access	0.17	8.09	0.2	A	14.01	56.04

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	226.00	226.00	51.64	382.01	0.592	224.57	265.25	0.0	1.4	5.666	A
1 - A23	177.00	177.00	171.89	311.47	0.568	175.71	104.32	0.0	1.3	6.569	A
2 - Marketfield Way	169.00	169.00	128.08	347.91	0.486	168.07	219.52	0.0	0.9	4.978	A
3 - Station Road	7.00	7.00	296.15	67.49	0.104	6.89	0.00	0.0	0.1	14.826	B
4 - Quadrant Access	23.00	23.00	294.09	134.44	0.171	22.80	8.94	0.0	0.2	8.047	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	206.00	206.00	53.03	363.57	0.567	206.10	246.18	1.4	1.3	5.719	A
1 - A23	172.00	172.00	157.10	312.61	0.550	172.06	102.03	1.3	1.2	6.406	A
2 - Marketfield Way	161.00	161.00	126.03	339.61	0.474	161.02	203.13	0.9	0.9	5.042	A
3 - Station Road	4.00	4.00	287.05	69.08	0.058	4.05	0.00	0.1	0.1	13.851	B
4 - Quadrant Access	11.00	11.00	288.07	122.53	0.090	11.15	3.04	0.2	0.1	8.086	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	239.00	239.00	39.13	385.48	0.620	238.72	260.95	1.3	1.6	6.119	A
1 - A23	179.00	179.00	163.91	323.31	0.554	179.00	113.93	1.2	1.2	6.235	A
2 - Marketfield Way	160.00	160.00	131.98	343.59	0.466	160.03	210.93	0.9	0.9	4.905	A
3 - Station Road	1.00	1.00	291.02	71.05	0.014	1.05	0.99	0.1	0.0	12.864	B
4 - Quadrant Access	11.00	11.00	289.07	125.14	0.088	11.01	3.00	0.1	0.1	7.886	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	242.00	242.00	54.87	379.73	0.637	241.88	187.18	1.6	1.7	6.520	A
1 - A23	218.00	218.00	162.95	321.53	0.678	217.18	133.80	1.2	2.0	8.559	A
2 - Marketfield Way	135.00	135.00	182.23	306.43	0.441	135.06	197.89	0.9	0.8	5.254	A
3 - Station Road	6.00	6.00	314.30	51.83	0.116	5.89	2.99	0.0	0.1	19.544	C
4 - Quadrant Access	11.00	11.00	231.02	180.18	0.061	11.03	89.17	0.1	0.1	5.321	A

Nutfield - 2029 Future Base + Com Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	7.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	23.00	111.00	137.00	1.00	8.00
	1 - A23	84.00	1.00	49.00	1.00	0.00
	2 - Marketfield Way	118.00	72.00	17.00	0.00	0.00
	3 - Station Road	0.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	7.00	6.00	6.00	0.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	31.00	119.00	109.00	0.00	3.00
	1 - A23	58.00	0.00	47.00	0.00	3.00
	2 - Marketfield Way	109.00	83.00	11.00	2.00	4.00
	3 - Station Road	0.00	2.00	0.00	0.00	0.00
	4 - Quadrant Access	4.00	5.00	8.00	0.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	26.00	95.00	129.00	0.00	4.00
	1 - A23	64.00	0.00	59.00	0.00	3.00
	2 - Marketfield Way	97.00	97.00	10.00	0.00	3.00
	3 - Station Road	6.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	6.00	5.00	7.00	0.00	1.04

Demand (Veh/TS)

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	32.00	87.00	127.00	1.00	4.00
	1 - A23	75.00	0.00	35.00	0.00	4.00
	2 - Marketfield Way	109.00	71.00	7.00	1.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	11.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	3	0	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	43	50	100	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	3	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	8	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	25	40	38	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	1	2	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	9	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	20	57	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	7	0	0	0	0
	2 - Marketfield Way	3	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	0	50	36	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.79	10.83	3.4	B	261.75	1046.99
1 - A23	0.45	5.33	0.8	A	120.75	483.01
2 - Marketfield Way	0.57	5.60	1.3	A	203.74	814.97
3 - Station Road	0.11	15.47	0.1	C	2.50	10.00
4 - Quadrant Access	0.15	8.49	0.2	A	18.99	75.98

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	280.00	280.00	102.31	356.53	0.785	276.54	230.42	0.0	3.5	10.829	B
1 - A23	135.00	135.00	190.73	302.06	0.447	134.20	188.12	0.0	0.8	5.328	A
2 - Marketfield Way	207.00	207.00	117.10	365.31	0.567	205.71	207.84	0.0	1.3	5.595	A
3 - Station Road	1.00	1.00	320.82	60.48	0.017	0.98	1.98	0.0	0.0	15.123	C
4 - Quadrant Access	19.00	19.00	313.91	124.59	0.153	18.82	7.90	0.0	0.2	8.494	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	262.00	262.00	108.97	350.44	0.748	262.38	202.27	3.5	3.1	10.283	B
1 - A23	108.00	108.00	162.45	328.42	0.329	108.30	208.91	0.8	0.5	4.095	A
2 - Marketfield Way	209.00	209.00	95.23	374.41	0.558	209.01	175.51	1.3	1.3	5.442	A
3 - Station Road	2.00	2.00	302.24	66.97	0.030	1.99	2.01	0.0	0.0	13.845	B
4 - Quadrant Access	17.00	17.00	294.20	156.75	0.108	17.04	10.03	0.2	0.1	6.446	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	254.00	254.00	120.96	343.90	0.739	254.16	198.95	3.1	2.9	10.062	B
1 - A23	126.00	126.00	177.87	319.81	0.394	125.85	197.24	0.5	0.6	4.636	A
2 - Marketfield Way	207.00	207.00	98.02	368.11	0.562	207.00	205.70	1.3	1.3	5.585	A
3 - Station Road	7.00	7.00	305.01	65.02	0.108	6.91	0.01	0.0	0.1	15.465	C
4 - Quadrant Access	19.04	19.04	300.89	141.36	0.135	19.01	11.03	0.1	0.2	7.354	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	251.00	251.00	91.24	363.61	0.690	251.62	223.99	2.9	2.3	8.083	A
1 - A23	114.00	114.00	182.35	306.41	0.372	114.05	160.51	0.6	0.6	4.679	A
2 - Marketfield Way	192.00	192.00	115.95	367.55	0.522	192.17	180.45	1.3	1.1	5.138	A
3 - Station Road	0.00	0.00	306.13	65.88	0.000	0.12	1.99	0.1	0.0	0.000	A
4 - Quadrant Access	21.00	21.00	294.24	172.49	0.121	20.99	12.01	0.2	0.1	5.943	A

Nutfield - 2029 Future Base + Com Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	8.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	18.00	76.00	114.00	0.00	2.00
	1 - A23	55.00	0.00	47.00	0.00	2.00
	2 - Marketfield Way	133.00	38.00	11.00	1.00	1.00
	3 - Station Road	0.00	1.00	1.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	3.00	0.00	0.00

Demand (Veh/TS)

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	27.00	95.00	120.00	0.00	2.00
	1 - A23	74.00	0.00	46.00	0.00	2.00
	2 - Marketfield Way	116.00	52.00	5.00	1.00	6.00
	3 - Station Road	2.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	21.00	122.00	127.00	0.00	3.00
	1 - A23	66.00	0.00	46.00	0.00	2.00
	2 - Marketfield Way	131.00	63.00	4.00	0.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	1.00
	4 - Quadrant Access	3.00	1.00	6.00	0.00	0.00

Demand (Veh/TS)

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	31.00	124.00	141.00	0.00	2.00
	1 - A23	70.00	0.00	43.00	0.00	2.00
	2 - Marketfield Way	125.00	64.00	9.00	0.00	0.00
	3 - Station Road	1.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	9.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	6	1	3	0	0
	1 - A23	8	0	11	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	38	50	67	0	0

Heavy Vehicle Percentages

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	5	3	0	0
	1 - A23	3	0	5	0	0
	2 - Marketfield Way	3	0	0	0	17
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	33	33	43	0	0

Heavy Vehicle Percentages

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	1	2	0	0
	1 - A23	2	0	7	0	0
	2 - Marketfield Way	4	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	0	67	0	0

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	6	0	7	0	0
	2 - Marketfield Way	3	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	50	44	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.81	12.40	4.0	B	256.24	1024.98
1 - A23	0.39	4.95	0.6	A	113.75	455.00
2 - Marketfield Way	0.53	5.19	1.1	A	191.00	764.01
3 - Station Road	0.03	13.68	0.0	B	1.50	6.00
4 - Quadrant Access	0.10	7.13	0.1	A	13.25	53.01

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	210.00	210.00	55.70	384.53	0.546	208.81	212.94	0.0	1.2	5.090	A
1 - A23	104.00	104.00	148.16	313.71	0.332	103.51	116.36	0.0	0.5	4.272	A
2 - Marketfield Way	184.00	184.00	76.62	387.26	0.475	183.10	175.05	0.0	0.9	4.389	A
3 - Station Road	2.00	2.00	258.73	85.02	0.024	1.98	1.00	0.0	0.0	10.835	B
4 - Quadrant Access	13.00	13.00	255.73	160.79	0.081	12.91	4.97	0.0	0.1	6.084	A

16:15 - 16:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	244.00	244.00	69.91	368.48	0.662	243.27	221.85	1.2	1.9	7.147	A
1 - A23	122.00	122.00	160.60	321.59	0.379	121.88	152.59	0.5	0.6	4.505	A
2 - Marketfield Way	180.00	180.00	104.78	374.38	0.481	179.98	177.71	0.9	0.9	4.629	A
3 - Station Road	2.00	2.00	283.76	76.14	0.026	2.00	1.00	0.0	0.0	12.138	B
4 - Quadrant Access	16.00	16.00	275.78	164.81	0.097	15.98	9.97	0.1	0.1	6.047	A

16:30 - 16:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	273.00	273.00	73.97	375.75	0.726	272.34	220.97	1.9	2.6	8.642	A
1 - A23	114.00	114.00	160.75	321.38	0.355	114.05	185.55	0.6	0.6	4.341	A
2 - Marketfield Way	202.00	202.00	92.05	383.33	0.527	201.82	182.76	0.9	1.1	4.953	A
3 - Station Road	1.00	1.00	293.87	72.55	0.014	1.01	0.01	0.0	0.0	12.584	B
4 - Quadrant Access	10.00	10.00	284.89	138.56	0.072	10.04	9.98	0.1	0.1	7.002	A

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	298.00	298.00	83.92	367.58	0.811	296.56	229.71	2.6	4.0	12.404	B
1 - A23	115.00	115.00	191.03	296.58	0.388	114.93	189.45	0.6	0.6	4.952	A
2 - Marketfield Way	198.00	198.00	104.72	371.30	0.533	197.97	201.23	1.1	1.1	5.190	A
3 - Station Road	1.00	1.00	302.69	66.81	0.015	1.00	0.00	0.0	0.0	13.675	B
4 - Quadrant Access	14.00	14.00	299.65	140.16	0.100	13.97	4.04	0.1	0.1	7.129	A

Nutfield - 2029 Future Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	6.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	19.00	68.00	140.00	0.00	6.00
	1 - A23	109.00	0.00	77.00	0.00	2.00
	2 - Marketfield Way	132.00	38.00	1.00	0.00	1.00
	3 - Station Road	4.00	3.00	0.00	0.00	0.00
	4 - Quadrant Access	10.00	6.00	7.00	0.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	22.00	74.00	115.00	0.00	2.00
	1 - A23	109.00	0.00	74.00	0.00	0.00
	2 - Marketfield Way	120.00	33.00	10.00	0.00	1.00
	3 - Station Road	0.00	4.00	0.00	0.00	0.00
	4 - Quadrant Access	2.00	1.00	8.00	0.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	22.00	88.00	135.00	0.00	1.00
	1 - A23	114.00	0.00	74.00	1.00	1.00
	2 - Marketfield Way	129.00	33.00	0.00	0.00	1.00
	3 - Station Road	0.00	1.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	6.00	0.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	20.00	96.00	131.00	2.00	0.00
	1 - A23	83.00	0.00	61.00	0.00	3.00
	2 - Marketfield Way	85.00	44.00	3.00	1.00	5.00
	3 - Station Road	2.00	3.00	1.00	0.00	0.00
	4 - Quadrant Access	4.00	1.00	6.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	17	3	1	0	0
	1 - A23	6	0	4	0	0
	2 - Marketfield Way	4	8	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	70	49	43	0	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	24	8	4	0	0
	1 - A23	5	0	7	0	0
	2 - Marketfield Way	8	9	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	50	0	88	0	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	2	4	0	0
	1 - A23	1	0	4	0	0
	2 - Marketfield Way	6	6	0	0	98
	3 - Station Road	17	0	0	0	0
	4 - Quadrant Access	100	97	50	0	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	11	2	3	0	0
	1 - A23	4	0	7	0	0
	2 - Marketfield Way	9	10	0	0	0
	3 - Station Road	50	0	0	0	0
	4 - Quadrant Access	25	0	50	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.66	6.96	1.9	A	235.25	940.98
1 - A23	0.60	7.12	1.5	A	177.00	708.00
2 - Marketfield Way	0.50	5.24	1.0	A	159.25	636.98
3 - Station Road	0.11	15.88	0.1	C	4.50	18.01
4 - Quadrant Access	0.18	8.34	0.2	A	14.01	56.04

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	233.00	233.00	54.60	380.34	0.613	231.44	272.09	0.0	1.6	5.983	A
1 - A23	188.00	188.00	171.83	311.48	0.604	186.51	114.22	0.0	1.5	7.119	A
2 - Marketfield Way	172.00	172.00	134.95	344.16	0.500	171.01	223.39	0.0	1.0	5.170	A
3 - Station Road	7.00	7.00	305.96	63.42	0.110	6.88	0.00	0.0	0.1	15.884	C
4 - Quadrant Access	23.00	23.00	303.90	130.97	0.176	22.79	8.94	0.0	0.2	8.304	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	213.00	213.00	56.03	362.93	0.587	213.12	253.19	1.6	1.4	6.012	A
1 - A23	183.00	183.00	157.11	312.62	0.585	183.06	112.03	1.5	1.4	6.950	A
2 - Marketfield Way	164.00	164.00	133.03	335.70	0.489	164.02	207.14	1.0	1.0	5.245	A
3 - Station Road	4.00	4.00	297.06	64.89	0.062	4.05	0.00	0.1	0.1	14.806	B
4 - Quadrant Access	11.00	11.00	298.07	119.12	0.093	11.15	3.04	0.2	0.1	8.340	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	246.00	246.00	42.14	385.27	0.638	245.71	267.95	1.4	1.7	6.433	A
1 - A23	190.00	190.00	163.91	323.32	0.587	190.00	123.93	1.4	1.4	6.750	A
2 - Marketfield Way	163.00	163.00	138.98	339.93	0.479	163.03	214.93	1.0	0.9	5.088	A
3 - Station Road	1.00	1.00	301.02	67.00	0.015	1.05	0.99	0.1	0.0	13.656	B
4 - Quadrant Access	11.00	11.00	299.07	122.22	0.090	11.01	3.00	0.1	0.1	8.092	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	249.00	249.00	57.96	377.87	0.659	248.84	194.65	1.7	1.9	6.963	A
1 - A23	147.00	147.00	162.94	315.69	0.466	147.55	143.86	1.4	0.9	5.371	A
2 - Marketfield Way	138.00	138.00	108.35	350.11	0.394	138.25	202.14	0.9	0.7	4.253	A
3 - Station Road	6.00	6.00	243.61	76.26	0.079	5.93	2.99	0.0	0.1	12.786	B
4 - Quadrant Access	11.00	11.00	241.59	175.51	0.063	11.03	7.95	0.1	0.1	5.472	A

Nutfield - 2029 Future Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	8.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	23.00	118.00	137.00	1.00	8.00
	1 - A23	90.00	1.00	53.00	1.00	0.00
	2 - Marketfield Way	118.00	76.00	17.00	0.00	0.00
	3 - Station Road	0.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	7.00	6.00	6.00	0.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	31.00	125.00	109.00	0.00	3.00
	1 - A23	64.00	0.00	50.00	0.00	3.00
	2 - Marketfield Way	109.00	88.00	11.00	2.00	4.00
	3 - Station Road	0.00	2.00	0.00	0.00	0.00
	4 - Quadrant Access	4.00	5.00	8.00	0.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	26.00	101.00	129.00	0.00	4.00
	1 - A23	70.00	0.00	63.00	0.00	3.00
	2 - Marketfield Way	97.00	101.00	10.00	0.00	3.00
	3 - Station Road	6.00	0.00	1.00	0.00	0.00
	4 - Quadrant Access	6.00	5.00	7.00	0.00	1.04

Demand (Veh/TS)

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	32.00	94.00	127.00	1.00	4.00
	1 - A23	81.00	0.00	39.00	0.00	4.00
	2 - Marketfield Way	109.00	75.00	7.00	1.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	11.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	3	0	0	0
	1 - A23	4	0	6	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	43	48	100	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	3	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	8	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	25	38	38	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	1	2	0	0
	1 - A23	2	0	0	0	0
	2 - Marketfield Way	9	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	19	57	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	6	0	0	0	0
	2 - Marketfield Way	3	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	0	45	36	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.81	12.06	4.0	B	268.25	1072.99
1 - A23	0.48	5.66	0.9	A	130.50	522.01
2 - Marketfield Way	0.58	5.87	1.4	A	207.99	831.97
3 - Station Road	0.12	16.65	0.1	C	2.50	10.00
4 - Quadrant Access	0.16	8.74	0.2	A	18.99	75.98

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	287.00	287.00	106.25	354.12	0.810	283.02	236.28	0.0	4.0	12.061	B
1 - A23	145.00	145.00	190.47	302.19	0.480	144.09	198.80	0.0	0.9	5.660	A
2 - Marketfield Way	211.00	211.00	122.98	361.66	0.583	209.62	211.58	0.0	1.4	5.868	A
3 - Station Road	1.00	1.00	330.62	56.41	0.018	0.98	1.98	0.0	0.0	16.233	C
4 - Quadrant Access	19.00	19.00	323.71	121.55	0.156	18.82	7.89	0.0	0.2	8.744	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	268.00	268.00	113.96	347.69	0.771	268.47	208.29	4.0	3.5	11.452	B
1 - A23	117.00	117.00	162.51	328.31	0.356	117.35	219.93	0.9	0.6	4.274	A
2 - Marketfield Way	214.00	214.00	101.27	370.94	0.577	214.00	178.59	1.4	1.4	5.737	A
3 - Station Road	2.00	2.00	313.26	62.45	0.032	1.99	2.01	0.0	0.0	14.882	B
4 - Quadrant Access	17.00	17.00	305.22	152.72	0.111	17.04	10.03	0.2	0.1	6.636	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	260.00	260.00	124.96	341.57	0.761	260.21	204.94	3.5	3.3	11.112	B
1 - A23	136.00	136.00	177.87	319.76	0.425	135.82	207.29	0.6	0.7	4.889	A
2 - Marketfield Way	211.00	211.00	104.02	364.53	0.579	211.00	209.67	1.4	1.4	5.861	A
3 - Station Road	7.00	7.00	315.01	60.86	0.115	6.91	0.01	0.0	0.1	16.653	C
4 - Quadrant Access	19.04	19.04	310.89	137.63	0.138	19.01	11.02	0.1	0.2	7.585	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	258.00	258.00	95.26	361.38	0.714	258.73	230.01	3.3	2.6	8.834	A
1 - A23	124.00	124.00	182.41	308.38	0.402	124.06	171.58	0.7	0.7	4.883	A
2 - Marketfield Way	196.00	196.00	121.95	364.10	0.538	196.19	184.51	1.4	1.2	5.368	A
3 - Station Road	0.00	0.00	316.16	61.96	0.000	0.13	1.98	0.1	0.0	0.000	A
4 - Quadrant Access	21.00	21.00	304.27	168.68	0.124	20.99	12.01	0.2	0.1	6.094	A

Nutfield - 2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stations Roundabout	Standard Roundabout		5, 1, 2, 3, 4	9.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	DIRECT	16:00	17:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
5 - Princess Way		DIRECT	✓	100.000
1 - A23		DIRECT	✓	100.000
2 - Marketfield Way		DIRECT	✓	100.000
3 - Station Road		DIRECT	✓	100.000
4 - Quadrant Access		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	18.00	84.00	114.00	0.00	2.00
	1 - A23	62.00	0.00	51.00	0.00	2.00
	2 - Marketfield Way	133.00	43.00	11.00	1.00	1.00
	3 - Station Road	0.00	1.00	1.00	0.00	0.00
	4 - Quadrant Access	8.00	2.00	3.00	0.00	0.00

Demand (Veh/TS)

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	27.00	102.00	120.00	0.00	2.00
	1 - A23	81.00	0.00	50.00	0.00	2.00
	2 - Marketfield Way	116.00	57.00	5.00	1.00	6.00
	3 - Station Road	2.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	7.00	7.00	0.00	0.00

Demand (Veh/TS)

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	21.00	130.00	127.00	0.00	3.00
	1 - A23	73.00	0.00	50.00	0.00	2.00
	2 - Marketfield Way	131.00	68.00	4.00	0.00	4.00
	3 - Station Road	0.00	0.00	0.00	0.00	1.00
	4 - Quadrant Access	3.00	1.00	6.00	0.00	0.00

Demand (Veh/TS)

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	31.00	132.00	141.00	0.00	2.00
	1 - A23	77.00	0.00	47.00	0.00	2.00
	2 - Marketfield Way	125.00	69.00	9.00	0.00	0.00
	3 - Station Road	1.00	0.00	0.00	0.00	0.00
	4 - Quadrant Access	3.00	2.00	9.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	6	1	3	0	0
	1 - A23	7	0	10	0	0
	2 - Marketfield Way	5	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	38	44	67	0	0

Heavy Vehicle Percentages

16:15 - 16:30

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	8	5	3	0	0
	1 - A23	3	0	4	0	0
	2 - Marketfield Way	3	0	0	0	17
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	33	32	43	0	0

Heavy Vehicle Percentages

16:30 - 16:45

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	5	1	2	0	0
	1 - A23	1	0	6	0	0
	2 - Marketfield Way	4	0	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	0	67	0	0

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		5 - Princess Way	1 - A23	2 - Marketfield Way	3 - Station Road	4 - Quadrant Access
From	5 - Princess Way	10	1	1	0	0
	1 - A23	5	0	7	0	0
	2 - Marketfield Way	3	3	0	0	0
	3 - Station Road	0	0	0	0	0
	4 - Quadrant Access	67	44	44	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
5 - Princess Way	0.84	14.41	4.8	B	263.99	1055.97
1 - A23	0.42	5.22	0.7	A	124.75	499.00
2 - Marketfield Way	0.55	5.48	1.2	A	196.00	784.01
3 - Station Road	0.03	14.74	0.0	B	1.50	6.00
4 - Quadrant Access	0.11	7.34	0.1	A	13.50	54.01

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	218.00	218.00	60.67	381.86	0.571	216.69	219.85	0.0	1.3	5.408	A
1 - A23	115.00	115.00	148.10	316.62	0.363	114.43	129.25	0.0	0.6	4.438	A
2 - Marketfield Way	189.00	189.00	83.56	383.32	0.493	188.04	178.97	0.0	1.0	4.587	A
3 - Station Road	2.00	2.00	270.61	80.22	0.025	1.97	0.99	0.0	0.0	11.499	B
4 - Quadrant Access	13.00	13.00	267.61	157.17	0.083	12.91	4.97	0.0	0.1	6.234	A

16:15 - 16:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	251.00	251.00	75.90	364.77	0.688	250.17	228.82	1.3	2.1	7.794	A
1 - A23	133.00	133.00	160.54	322.79	0.412	132.87	165.52	0.6	0.7	4.736	A
2 - Marketfield Way	185.00	185.00	111.75	370.09	0.500	184.98	181.66	1.0	1.0	4.861	A
3 - Station Road	2.00	2.00	295.73	71.19	0.028	2.00	1.00	0.0	0.0	13.006	B
4 - Quadrant Access	17.00	17.00	287.75	160.54	0.106	16.97	9.97	0.1	0.1	6.267	A

16:30 - 16:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	281.00	281.00	78.97	372.83	0.754	280.20	227.97	2.1	2.9	9.625	A
1 - A23	125.00	125.00	160.70	324.52	0.385	125.06	198.47	0.7	0.6	4.513	A
2 - Marketfield Way	207.00	207.00	99.05	379.52	0.545	206.81	186.71	1.0	1.2	5.204	A
3 - Station Road	1.00	1.00	305.86	67.91	0.015	1.01	0.01	0.0	0.0	13.454	B
4 - Quadrant Access	10.00	10.00	296.89	134.55	0.075	10.05	9.98	0.1	0.1	7.232	A

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
5 - Princess Way	306.00	306.00	88.91	364.67	0.839	304.16	236.65	2.9	4.8	14.410	B
1 - A23	126.00	126.00	190.81	298.41	0.422	125.91	202.27	0.6	0.7	5.215	A
2 - Marketfield Way	203.00	203.00	111.66	367.15	0.553	202.96	205.05	1.2	1.2	5.479	A
3 - Station Road	1.00	1.00	314.63	62.04	0.016	1.00	0.00	0.0	0.0	14.743	B
4 - Quadrant Access	14.00	14.00	311.59	136.47	0.103	13.97	4.04	0.1	0.1	7.345	A

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.2.1013 © Copyright TRL Limited, 2019	
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Filename: UPDATE.j9

Path: O:\London\Vectos\Projects\Projects\220000\226799 - Nutfield Green Park\MODELLING\Junctions\High Street - Mid Street - Park Works Road Junction

Report generation date: 27/03/2024 16:43:49

»2024 Base + Com Dev, AM (08:00-09:00)
 »2024 Base + Com Dev, PM (17:00-18:00)
 »2024 Base + Com Dev, PM (16:00-17:00)
 »2024 Base + Com Dev + Dev, AM (08:00-09:00)
 »2024 Base + Com Dev + Dev, PM (17:00-18:00)
 »2024 Base + Com Dev + Dev, PM (16:00-17:00)
 »2029 Future Base + Com Dev, AM (08:00-09:00)
 »2029 Future Base + Com Dev, PM (17:00-18:00)
 »2029 Future Base + Com Dev, PM (16:00-17:00)
 »2029 Future Base + Com Dev + Dev, AM (08:00-09:00)
 »2029 Future Base + Com Dev + Dev, PM (17:00-18:00)
 »2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Summary of junction performance

	AM (08:00-09:00)					PM (17:00-18:00)					PM (16:00-17:00)				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2024 Base + Com Dev														
Stream B-CD	D1	0.4	14.90	0.30	B	D2	0.5	22.85	0.36	C	D3	0.7	22.07	0.40	C
Stream B-A		1.5	32.56	0.60	D		3.7	55.50	0.81	F		3.4	49.69	0.79	E
Stream AB-CD		0.0	4.13	0.01	A		0.0	4.90	0.01	A		0.0	4.80	0.01	A
Stream D-ABC		0.0	8.03	0.01	A		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream CD-AB		0.6	7.07	0.26	A		1.0	5.78	0.35	A		0.6	5.05	0.23	A
	2024 Base + Com Dev + Dev														
Stream B-CD	D4	0.6	16.45	0.39	C	D5	1.0	37.99	0.51	E	D6	1.2	36.98	0.55	E
Stream B-A		1.6	37.13	0.63	E		4.8	73.72	0.86	F		4.7	68.99	0.85	F
Stream AB-CD		0.0	4.00	0.01	A		0.0	4.81	0.01	A		0.0	4.68	0.01	A
Stream D-ABC		0.0	8.15	0.01	A		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream CD-AB		0.9	7.78	0.36	A		1.2	6.02	0.39	A		0.7	5.17	0.26	A
	2029 Future Base + Com Dev														
Stream B-CD	D7	0.5	16.52	0.33	C	D8	0.9	35.75	0.48	E	D9	0.9	31.47	0.50	D
Stream B-A		1.7	37.26	0.64	E		4.8	70.84	0.86	F		4.4	62.48	0.84	F
Stream AB-CD		0.0	4.09	0.01	A		0.0	4.87	0.01	A		0.0	4.77	0.01	A
Stream D-ABC		0.0	8.12	0.01	A		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream CD-AB		0.7	7.18	0.27	A		1.1	5.88	0.37	A		0.6	5.08	0.24	A
	2029 Future Base + Com Dev + Dev														
Stream B-CD	D10	0.9	23.61	0.48	C	D11	3.2	123.98	0.86	F	D12	2.9	90.69	0.81	F
Stream B-A		2.4	53.87	0.73	F		6.7	98.01	0.92	F		6.4	91.71	0.91	F
Stream AB-CD		0.0	4.01	0.02	A		0.0	4.78	0.01	A		0.0	4.66	0.01	A
Stream D-ABC		0.0	8.46	0.02	A		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream CD-AB		1.1	8.46	0.39	A		1.3	6.16	0.41	A		0.8	5.21	0.27	A

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

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

File summary

File Description

Title	
Location	
Site number	
Date	27/03/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\ethan.terry
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D2	2024 Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D3	2024 Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D4	2024 Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D5	2024 Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D6	2024 Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024 Base + Com Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		2.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	High Street (E)		Major
B	Mid Street		Minor
C	High Street (W)		Major
D	Park Works Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - High Street (E)	6.52			105.3	✓	0.00
C - High Street (W)	6.75			182.7	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Mid Street	One lane plus flare		10.00	6.31	4.76	4.34	3.50	✓	2.00	48	37
D - Park Works Road	One lane	2.90								20	17

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
AB-D	635	-	-	-	-	-	0.240	0.240	0.240	-	-
B-A	558	0.098	0.249	0.249	-	-	0.156	0.355	-	0.156	0.355
B-CD	654	0.097	0.245	0.245	-	-	-	-	-	-	-
CD-B	680	0.255	0.255	0.255	-	-	-	-	-	-	-
D-AB	629	-	-	-	-	-	0.238	0.238	0.094	-	-
D-C	488	-	0.138	0.313	0.138	0.313	0.219	0.219	0.087	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	817	100.000
B - Mid Street		✓	246	100.000
C - High Street (W)		✓	391	100.000
D - Park Works Road		✓	6	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	278	536	3
	B - Mid Street	151	0	94	1
	C - High Street (W)	312	78	0	1
	D - Park Works Road	2	3	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	3	4	0
	B - Mid Street	1	0	3	0
	C - High Street (W)	11	1	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.30	14.90	0.4	B
B-A	0.60	32.56	1.5	D
A-B				
A-C				
A-D				
AB-CD	0.01	4.13	0.0	A
AB-C				
D-ABC	0.01	8.03	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.26	7.07	0.6	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	72	471	0.152	71	0.2	8.976	A
B-A	114	365	0.311	112	0.4	14.114	B
A-B	209			209			
A-C	404			404			
A-D	2			2			
AB-CD	7	879	0.007	6	0.0	4.125	A
AB-C	470			470			
D-ABC	5	503	0.009	4	0.0	7.218	A
C-D	0.75			0.75			
C-A	235			235			
C-B	59			59			
CD-AB	94	674	0.139	93	0.3	6.191	A
CD-A	203			203			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	85	430	0.199	85	0.2	10.442	B
B-A	136	328	0.414	135	0.7	18.509	C
A-B	250			250			
A-C	482			482			
A-D	3			3			
AB-CD	9	932	0.010	9	0.0	3.898	A
AB-C	561			561			
D-ABC	5	483	0.011	5	0.0	7.532	A
C-D	0.90			0.90			
C-A	280			280			
C-B	70			70			
CD-AB	125	680	0.184	125	0.4	6.467	A
CD-A	230			230			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	105	350	0.299	104	0.4	14.577	B
B-A	166	276	0.602	163	1.4	31.146	D
A-B	306			306			
A-C	590			590			
A-D	3			3			
AB-CD	14	1006	0.014	14	0.0	3.623	A
AB-C	683			683			
D-ABC	7	455	0.015	7	0.0	8.032	A
C-D	1			1			
C-A	344			344			
C-B	86			86			
CD-AB	179	691	0.260	178	0.6	7.014	A
CD-A	255			255			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	105	346	0.302	105	0.4	14.897	B
B-A	166	276	0.602	166	1.5	32.555	D
A-B	306			306			
A-C	590			590			
A-D	3			3			
AB-CD	14	1007	0.014	14	0.0	3.628	A
AB-C	684			684			
D-ABC	7	455	0.015	7	0.0	8.033	A
C-D	1			1			
C-A	344			344			
C-B	86			86			
CD-AB	180	691	0.260	180	0.6	7.068	A
CD-A	255			255			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	85	426	0.200	86	0.3	10.604	B
B-A	136	328	0.413	139	0.7	19.252	C
A-B	250			250			
A-C	482			482			
A-D	3			3			
AB-CD	9	932	0.010	9	0.0	3.908	A
AB-C	561			561			
D-ABC	5	483	0.011	5	0.0	7.533	A
C-D	0.90			0.90			
C-A	280			280			
C-B	70			70			
CD-AB	125	680	0.184	126	0.4	6.560	A
CD-A	230			230			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	72	469	0.152	72	0.2	9.061	A
B-A	114	365	0.311	115	0.5	14.439	B
A-B	209			209			
A-C	404			404			
A-D	2			2			
AB-CD	7	880	0.007	7	0.0	4.129	A
AB-C	471			471			
D-ABC	5	503	0.009	5	0.0	7.219	A
C-D	0.75			0.75			
C-A	235			235			
C-B	59			59			
CD-AB	94	674	0.140	95	0.3	6.250	A
CD-A	203			203			

2024 Base + Com Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		6.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024 Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	467	100.000
B - Mid Street		✓	312	100.000
C - High Street (W)		✓	670	100.000
D - Park Works Road		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	120	346	1
	B - Mid Street	233	0	78	1
	C - High Street (W)	558	110	0	2
	D - Park Works Road	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	1	3	0
	B - Mid Street	0	0	0	0
	C - High Street (W)	2	2	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.36	22.85	0.5	C
B-A	0.81	55.50	3.7	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.90	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.35	5.78	1.0	A
CD-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	59	477	0.125	59	0.1	8.602	A
B-A	175	403	0.435	172	0.7	15.423	C
A-B	90			90			
A-C	260			260			
A-D	0.75			0.75			
AB-CD	3	737	0.004	3	0.0	4.900	A
AB-C	318			318			
D-ABC	0	399	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	420			420			
C-B	83			83			
CD-AB	162	859	0.189	160	0.4	5.150	A
CD-A	341			341			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	71	419	0.169	71	0.2	10.326	B
B-A	209	367	0.570	207	1.3	22.231	C
A-B	108			108			
A-C	311			311			
A-D	0.90			0.90			
AB-CD	4	763	0.005	4	0.0	4.739	A
AB-C	379			379			
D-ABC	0	369	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	502			502			
C-B	99			99			
CD-AB	224	902	0.248	223	0.6	5.311	A
CD-A	377			377			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	87	266	0.327	86	0.5	19.886	C
B-A	257	317	0.809	248	3.3	47.383	E
A-B	132			132			
A-C	381			381			
A-D	1			1			
AB-CD	5	799	0.007	5	0.0	4.528	A
AB-C	463			463			
D-ABC	0	326	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	614			614			
C-B	121			121			
CD-AB	337	964	0.349	335	1.0	5.744	A
CD-A	399			399			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	87	244	0.357	87	0.5	22.850	C
B-A	257	317	0.809	255	3.7	55.498	F
A-B	132			132			
A-C	381			381			
A-D	1			1			
AB-CD	5	800	0.007	5	0.0	4.531	A
AB-C	463			463			
D-ABC	0	326	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	614			614			
C-B	121			121			
CD-AB	338	965	0.350	338	1.0	5.776	A
CD-A	398			398			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	71	405	0.175	72	0.2	10.870	B
B-A	209	367	0.570	219	1.4	25.506	D
A-B	108			108			
A-C	311			311			
A-D	0.90			0.90			
AB-CD	4	764	0.005	4	0.0	4.744	A
AB-C	381			381			
D-ABC	0	369	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	502			502			
C-B	99			99			
CD-AB	225	904	0.249	227	0.6	5.348	A
CD-A	376			376			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	59	473	0.126	60	0.1	8.727	A
B-A	175	403	0.436	178	0.8	16.170	C
A-B	90			90			
A-C	260			260			
A-D	0.75			0.75			
AB-CD	3	738	0.004	3	0.0	4.901	A
AB-C	318			318			
D-ABC	0	399	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	420			420			
C-B	83			83			
CD-AB	163	860	0.190	164	0.4	5.186	A
CD-A	340			340			

2024 Base + Com Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		6.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024 Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	463	100.000
B - Mid Street		✓	339	100.000
C - High Street (W)		✓	579	100.000
D - Park Works Road		✓	3	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	125	338	0
	B - Mid Street	240	0	96	3
	C - High Street (W)	499	77	0	3
	D - Park Works Road	1	1	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	2	5	0
	B - Mid Street	1	0	1	0
	C - High Street (W)	2	0	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.40	22.07	0.7	C
B-A	0.79	49.69	3.4	E
A-B				
A-C				
A-D				
AB-CD	0.01	4.80	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.23	5.05	0.6	A
CD-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	75	478	0.156	74	0.2	8.879	A
B-A	181	411	0.440	178	0.8	15.259	C
A-B	94			94			
A-C	254			254			
A-D	0			0			
AB-CD	4	755	0.005	4	0.0	4.794	A
AB-C	324			324			
D-ABC	0	414	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	376			376			
C-B	58			58			
CD-AB	105	838	0.125	104	0.3	4.909	A
CD-A	329			329			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	89	423	0.210	89	0.3	10.755	B
B-A	216	379	0.570	214	1.3	21.555	C
A-B	112			112			
A-C	304			304			
A-D	0			0			
AB-CD	5	783	0.007	5	0.0	4.623	A
AB-C	387			387			
D-ABC	0	387	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	449			449			
C-B	69			69			
CD-AB	143	873	0.164	143	0.4	4.927	A
CD-A	375			375			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	109	288	0.378	108	0.6	19.792	C
B-A	264	333	0.793	257	3.1	43.388	E
A-B	138			138			
A-C	372			372			
A-D	0			0			
AB-CD	8	824	0.009	8	0.0	4.406	A
AB-C	472			472			
D-ABC	0	349	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	549			549			
C-B	85			85			
CD-AB	210	925	0.227	209	0.6	5.035	A
CD-A	424			424			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	109	271	0.402	109	0.7	22.073	C
B-A	264	333	0.794	263	3.4	49.686	E
A-B	138			138			
A-C	372			372			
A-D	0			0			
AB-CD	8	824	0.010	8	0.0	4.410	A
AB-C	473			473			
D-ABC	0	349	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	549			549			
C-B	85			85			
CD-AB	211	925	0.228	210	0.6	5.051	A
CD-A	424			424			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	89	411	0.217	90	0.3	11.277	B
B-A	216	379	0.569	224	1.4	24.278	C
A-B	112			112			
A-C	304			304			
A-D	0			0			
AB-CD	5	784	0.007	5	0.0	4.631	A
AB-C	389			389			
D-ABC	0	387	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	449			449			
C-B	69			69			
CD-AB	143	874	0.164	144	0.4	4.953	A
CD-A	374			374			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	75	474	0.157	75	0.2	9.021	A
B-A	181	411	0.440	183	0.8	15.971	C
A-B	94			94			
A-C	254			254			
A-D	0			0			
AB-CD	4	755	0.005	4	0.0	4.797	A
AB-C	325			325			
D-ABC	0	414	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	376			376			
C-B	58			58			
CD-AB	106	838	0.126	106	0.3	4.929	A
CD-A	328			328			

2024 Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		3.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2024 Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	836	100.000
B - Mid Street		✓	276	100.000
C - High Street (W)		✓	444	100.000
D - Park Works Road		✓	6	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
From		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
	A - High Street (E)	0	278	555	3
	B - Mid Street	151	0	124	1
	C - High Street (W)	332	111	0	1
	D - Park Works Road	2	3	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	0	0	0
	B - Mid Street	0	0	0	0
	C - High Street (W)	0	0	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.39	16.45	0.6	C
B-A	0.63	37.13	1.6	E
A-B				
A-C				
A-D				
AB-CD	0.01	4.00	0.0	A
AB-C				
D-ABC	0.01	8.15	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.36	7.78	0.9	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	94	496	0.190	93	0.2	8.917	A
B-A	114	355	0.320	112	0.5	14.685	B
A-B	209			209			
A-C	418			418			
A-D	2			2			
AB-CD	7	908	0.008	7	0.0	3.996	A
AB-C	506			506			
D-ABC	5	499	0.009	4	0.0	7.278	A
C-D	0.75			0.75			
C-A	250			250			
C-B	84			84			
CD-AB	134	698	0.192	133	0.3	6.359	A
CD-A	203			203			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	112	451	0.249	112	0.3	10.605	B
B-A	136	317	0.428	135	0.7	19.630	C
A-B	250			250			
A-C	499			499			
A-D	3			3			
AB-CD	10	966	0.010	10	0.0	3.762	A
AB-C	604			604			
D-ABC	5	478	0.011	5	0.0	7.613	A
C-D	0.90			0.90			
C-A	298			298			
C-B	100			100			
CD-AB	179	707	0.253	178	0.5	6.812	A
CD-A	224			224			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	138	362	0.380	137	0.6	15.900	C
B-A	166	262	0.633	163	1.6	35.000	E
A-B	306			306			
A-C	611			611			
A-D	3			3			
AB-CD	15	1049	0.015	15	0.0	3.480	A
AB-C	736			736			
D-ABC	7	448	0.015	7	0.0	8.151	A
C-D	1			1			
C-A	366			366			
C-B	122			122			
CD-AB	257	723	0.356	256	0.9	7.728	A
CD-A	236			236			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	138	356	0.386	138	0.6	16.446	C
B-A	166	262	0.634	166	1.6	37.132	E
A-B	306			306			
A-C	611			611			
A-D	3			3			
AB-CD	15	1050	0.015	15	0.0	3.481	A
AB-C	737			737			
D-ABC	7	448	0.015	7	0.0	8.152	A
C-D	1			1			
C-A	366			366			
C-B	122			122			
CD-AB	258	723	0.356	258	0.9	7.777	A
CD-A	236			236			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	112	447	0.252	113	0.3	10.838	B
B-A	136	317	0.428	139	0.8	20.620	C
A-B	250			250			
A-C	499			499			
A-D	3			3			
AB-CD	10	967	0.010	10	0.0	3.761	A
AB-C	605			605			
D-ABC	5	478	0.011	5	0.0	7.615	A
C-D	0.90			0.90			
C-A	298			298			
C-B	100			100			
CD-AB	180	708	0.253	181	0.5	6.866	A
CD-A	223			223			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	94	494	0.191	95	0.2	9.026	A
B-A	114	355	0.320	115	0.5	15.064	C
A-B	209			209			
A-C	418			418			
A-D	2			2			
AB-CD	7	909	0.008	7	0.0	3.992	A
AB-C	508			508			
D-ABC	5	499	0.009	5	0.0	7.280	A
C-D	0.75			0.75			
C-A	250			250			
C-B	84			84			
CD-AB	135	699	0.193	136	0.4	6.410	A
CD-A	202			202			

2024 Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		8.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2024 Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	497	100.000
B - Mid Street		✓	319	100.000
C - High Street (W)		✓	703	100.000
D - Park Works Road		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	120	376	1
	B - Mid Street	233	0	85	1
	C - High Street (W)	585	116	0	2
	D - Park Works Road	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	1	3	0
	B - Mid Street	0	0	0	0
	C - High Street (W)	2	2	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.51	37.99	1.0	E
B-A	0.86	73.72	4.8	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.81	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.39	6.02	1.2	A
CD-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	65	471	0.137	64	0.2	8.825	A
B-A	175	390	0.450	172	0.8	16.330	C
A-B	90			90			
A-C	283			283			
A-D	0.75			0.75			
AB-CD	3	752	0.004	3	0.0	4.804	A
AB-C	345			345			
D-ABC	0	390	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	440			440			
C-B	87			87			
CD-AB	177	869	0.204	175	0.4	5.191	A
CD-A	351			351			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	77	407	0.190	77	0.2	10.910	B
B-A	209	352	0.595	207	1.4	24.469	C
A-B	108			108			
A-C	338			338			
A-D	0.90			0.90			
AB-CD	4	781	0.005	4	0.0	4.628	A
AB-C	412			412			
D-ABC	0	358	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	526			526			
C-B	104			104			
CD-AB	247	914	0.270	246	0.7	5.404	A
CD-A	383			383			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	95	223	0.425	93	0.7	27.336	D
B-A	257	298	0.860	245	4.2	58.437	F
A-B	132			132			
A-C	414			414			
A-D	1			1			
AB-CD	6	823	0.007	6	0.0	4.402	A
AB-C	502			502			
D-ABC	0	313	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	644			644			
C-B	128			128			
CD-AB	376	979	0.384	374	1.2	5.973	A
CD-A	395			395			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	95	187	0.506	94	1.0	37.994	E
B-A	257	298	0.861	254	4.8	73.719	F
A-B	132			132			
A-C	414			414			
A-D	1			1			
AB-CD	6	823	0.007	6	0.0	4.404	A
AB-C	503			503			
D-ABC	0	312	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	644			644			
C-B	128			128			
CD-AB	378	981	0.385	378	1.2	6.018	A
CD-A	394			394			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	77	385	0.201	80	0.3	11.930	B
B-A	209	352	0.596	223	1.6	30.248	D
A-B	108			108			
A-C	338			338			
A-D	0.90			0.90			
AB-CD	4	783	0.005	4	0.0	4.627	A
AB-C	415			415			
D-ABC	0	358	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	526			526			
C-B	104			104			
CD-AB	248	916	0.271	250	0.7	5.449	A
CD-A	382			382			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	65	466	0.139	65	0.2	8.985	A
B-A	175	389	0.450	178	0.8	17.275	C
A-B	90			90			
A-C	283			283			
A-D	0.75			0.75			
AB-CD	3	753	0.004	3	0.0	4.807	A
AB-C	346			346			
D-ABC	0	390	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	440			440			
C-B	87			87			
CD-AB	178	870	0.205	179	0.5	5.233	A
CD-A	349			349			

2024 Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		8.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2024 Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	502	100.000
B - Mid Street		✓	347	100.000
C - High Street (W)		✓	623	100.000
D - Park Works Road		✓	3	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	125	377	0
	B - Mid Street	240	0	104	3
	C - High Street (W)	536	84	0	3
	D - Park Works Road	1	1	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	2	4	0
	B - Mid Street	1	0	1	0
	C - High Street (W)	2	0	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.55	36.98	1.2	E
B-A	0.85	68.99	4.7	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.68	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.26	5.17	0.7	A
CD-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	81	471	0.171	80	0.2	9.176	A
B-A	181	395	0.458	177	0.8	16.330	C
A-B	94			94			
A-C	284			284			
A-D	0			0			
AB-CD	4	774	0.005	4	0.0	4.678	A
AB-C	359			359			
D-ABC	0	403	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	404			404			
C-B	63			63			
CD-AB	120	851	0.141	119	0.3	4.918	A
CD-A	346			346			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	96	408	0.236	96	0.3	11.515	B
B-A	216	360	0.599	213	1.4	24.131	C
A-B	112			112			
A-C	339			339			
A-D	0			0			
AB-CD	6	806	0.007	6	0.0	4.491	A
AB-C	429			429			
D-ABC	0	373	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	482			482			
C-B	76			76			
CD-AB	166	890	0.186	165	0.4	4.969	A
CD-A	392			392			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	118	242	0.487	115	0.9	27.926	D
B-A	264	310	0.852	254	4.1	55.491	F
A-B	138			138			
A-C	415			415			
A-D	0			0			
AB-CD	8	853	0.010	8	0.0	4.257	A
AB-C	522			522			
D-ABC	0	331	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	590			590			
C-B	92			92			
CD-AB	247	946	0.262	246	0.7	5.153	A
CD-A	435			435			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	118	213	0.554	117	1.2	36.984	E
B-A	264	310	0.854	262	4.7	68.992	F
A-B	138			138			
A-C	415			415			
A-D	0			0			
AB-CD	9	854	0.010	9	0.0	4.258	A
AB-C	523			523			
D-ABC	0	331	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	590			590			
C-B	92			92			
CD-AB	248	947	0.262	248	0.7	5.174	A
CD-A	435			435			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	96	388	0.248	99	0.3	12.608	B
B-A	216	360	0.599	228	1.6	29.399	D
A-B	112			112			
A-C	339			339			
A-D	0			0			
AB-CD	6	809	0.007	6	0.0	4.490	A
AB-C	432			432			
D-ABC	0	373	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	482			482			
C-B	76			76			
CD-AB	166	891	0.187	167	0.4	5.002	A
CD-A	391			391			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	81	466	0.173	81	0.2	9.361	A
B-A	181	395	0.458	184	0.9	17.266	C
A-B	94			94			
A-C	284			284			
A-D	0			0			
AB-CD	4	775	0.006	4	0.0	4.679	A
AB-C	361			361			
D-ABC	0	403	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	404			404			
C-B	63			63			
CD-AB	121	852	0.142	122	0.3	4.948	A
CD-A	346			346			

2029 Future Base + Com Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		3.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	842	100.000
B - Mid Street		✓	254	100.000
C - High Street (W)		✓	403	100.000
D - Park Works Road		✓	6	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	287	552	3
	B - Mid Street	156	0	97	1
	C - High Street (W)	322	80	0	1
	D - Park Works Road	2	3	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	3	4	0
	B - Mid Street	1	0	3	0
	C - High Street (W)	11	1	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.33	16.52	0.5	C
B-A	0.64	37.26	1.7	E
A-B				
A-C				
A-D				
AB-CD	0.01	4.09	0.0	A
AB-C				
D-ABC	0.01	8.12	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.27	7.18	0.7	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	74	465	0.159	73	0.2	9.162	A
B-A	117	360	0.327	116	0.5	14.637	B
A-B	216			216			
A-C	416			416			
A-D	2			2			
AB-CD	7	887	0.008	7	0.0	4.089	A
AB-C	484			484			
D-ABC	5	500	0.009	4	0.0	7.263	A
C-D	0.75			0.75			
C-A	242			242			
C-B	60			60			
CD-AB	98	675	0.145	97	0.3	6.222	A
CD-A	209			209			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	88	421	0.209	88	0.3	10.805	B
B-A	140	321	0.436	139	0.7	19.622	C
A-B	258			258			
A-C	496			496			
A-D	3			3			
AB-CD	9	941	0.010	9	0.0	3.858	A
AB-C	577			577			
D-ABC	5	479	0.011	5	0.0	7.592	A
C-D	0.90			0.90			
C-A	289			289			
C-B	72			72			
CD-AB	131	681	0.192	130	0.4	6.520	A
CD-A	235			235			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	108	331	0.326	107	0.5	15.998	C
B-A	172	267	0.642	168	1.6	35.094	E
A-B	316			316			
A-C	608			608			
A-D	3			3			
AB-CD	15	1019	0.014	15	0.0	3.580	A
AB-C	703			703			
D-ABC	7	450	0.015	7	0.0	8.121	A
C-D	1			1			
C-A	355			355			
C-B	88			88			
CD-AB	189	693	0.273	188	0.7	7.112	A
CD-A	259			259			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	108	326	0.331	108	0.5	16.522	C
B-A	172	267	0.643	171	1.7	37.256	E
A-B	316			316			
A-C	608			608			
A-D	3			3			
AB-CD	15	1019	0.014	15	0.0	3.585	A
AB-C	704			704			
D-ABC	7	450	0.015	7	0.0	8.122	A
C-D	1			1			
C-A	355			355			
C-B	88			88			
CD-AB	190	694	0.274	190	0.7	7.178	A
CD-A	258			258			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	88	416	0.212	89	0.3	11.022	B
B-A	140	322	0.436	144	0.8	20.644	C
A-B	258			258			
A-C	496			496			
A-D	3			3			
AB-CD	10	942	0.010	10	0.0	3.866	A
AB-C	578			578			
D-ABC	5	479	0.011	5	0.0	7.594	A
C-D	0.90			0.90			
C-A	289			289			
C-B	72			72			
CD-AB	131	682	0.193	132	0.4	6.617	A
CD-A	235			235			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	74	463	0.159	74	0.2	9.261	A
B-A	117	360	0.327	119	0.5	15.022	C
A-B	216			216			
A-C	416			416			
A-D	2			2			
AB-CD	7	888	0.008	7	0.0	4.092	A
AB-C	485			485			
D-ABC	5	500	0.009	5	0.0	7.264	A
C-D	0.75			0.75			
C-A	242			242			
C-B	60			60			
CD-AB	98	675	0.146	99	0.3	6.287	A
CD-A	208			208			

2029 Future Base + Com Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		8.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	482	100.000
B - Mid Street		✓	322	100.000
C - High Street (W)		✓	691	100.000
D - Park Works Road		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
From		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
	A - High Street (E)	0	124	357	1
	B - Mid Street	240	0	81	1
	C - High Street (W)	576	113	0	2
	D - Park Works Road	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
	A - High Street (E)	0	1	3	0
	B - Mid Street	0	0	0	0
	C - High Street (W)	2	2	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.48	35.75	0.9	E
B-A	0.86	70.84	4.8	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.87	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.37	5.88	1.1	A
CD-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	62	470	0.131	61	0.1	8.793	A
B-A	181	397	0.455	177	0.8	16.137	C
A-B	93			93			
A-C	269			269			
A-D	0.75			0.75			
AB-CD	3	741	0.004	3	0.0	4.872	A
AB-C	328			328			
D-ABC	0	394	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	434			434			
C-B	85			85			
CD-AB	170	866	0.197	169	0.4	5.158	A
CD-A	348			348			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	74	405	0.182	73	0.2	10.844	B
B-A	216	360	0.599	213	1.4	24.118	C
A-B	111			111			
A-C	321			321			
A-D	0.90			0.90			
AB-CD	4	768	0.005	4	0.0	4.706	A
AB-C	392			392			
D-ABC	0	363	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	518			518			
C-B	102			102			
CD-AB	237	911	0.260	236	0.6	5.346	A
CD-A	383			383			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	90	223	0.405	89	0.6	26.424	D
B-A	264	308	0.857	253	4.2	56.610	F
A-B	137			137			
A-C	393			393			
A-D	1			1			
AB-CD	5	806	0.007	5	0.0	4.491	A
AB-C	477			477			
D-ABC	0	319	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	634			634			
C-B	124			124			
CD-AB	359	975	0.368	357	1.1	5.847	A
CD-A	400			400			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	90	189	0.477	89	0.9	35.748	E
B-A	264	308	0.858	262	4.8	70.838	F
A-B	137			137			
A-C	393			393			
A-D	1			1			
AB-CD	5	807	0.007	5	0.0	4.491	A
AB-C	478			478			
D-ABC	0	319	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	634			634			
C-B	124			124			
CD-AB	360	976	0.369	360	1.1	5.884	A
CD-A	399			399			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	74	383	0.192	76	0.2	11.803	B
B-A	216	360	0.599	229	1.6	29.609	D
A-B	111			111			
A-C	321			321			
A-D	0.90			0.90			
AB-CD	4	770	0.005	4	0.0	4.704	A
AB-C	394			394			
D-ABC	0	363	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	518			518			
C-B	102			102			
CD-AB	238	912	0.261	240	0.7	5.388	A
CD-A	381			381			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	62	465	0.133	62	0.2	8.950	A
B-A	181	397	0.455	184	0.9	17.099	C
A-B	93			93			
A-C	269			269			
A-D	0.75			0.75			
AB-CD	3	742	0.004	3	0.0	4.873	A
AB-C	329			329			
D-ABC	0	394	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	434			434			
C-B	85			85			
CD-AB	172	867	0.198	172	0.4	5.200	A
CD-A	347			347			

2029 Future Base + Com Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		7.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	478	100.000
B - Mid Street		✓	350	100.000
C - High Street (W)		✓	597	100.000
D - Park Works Road		✓	3	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	129	349	0
	B - Mid Street	248	0	99	3
	C - High Street (W)	515	79	0	3
	D - Park Works Road	1	1	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	2	5	0
	B - Mid Street	1	0	1	0
	C - High Street (W)	2	0	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.50	31.47	0.9	D
B-A	0.84	62.48	4.4	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.77	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.24	5.08	0.6	A
CD-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	77	471	0.163	76	0.2	9.098	A
B-A	187	406	0.460	183	0.8	15.977	C
A-B	97			97			
A-C	263			263			
A-D	0			0			
AB-CD	4	759	0.005	4	0.0	4.765	A
AB-C	335			335			
D-ABC	0	410	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	388			388			
C-B	59			59			
CD-AB	110	844	0.130	109	0.3	4.899	A
CD-A	337			337			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	92	409	0.224	91	0.3	11.312	B
B-A	223	373	0.598	221	1.4	23.326	C
A-B	116			116			
A-C	314			314			
A-D	0			0			
AB-CD	5	789	0.007	5	0.0	4.590	A
AB-C	400			400			
D-ABC	0	382	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	463			463			
C-B	71			71			
CD-AB	150	881	0.171	150	0.4	4.932	A
CD-A	384			384			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	112	251	0.448	110	0.8	25.302	D
B-A	273	325	0.840	263	3.9	51.470	F
A-B	142			142			
A-C	384			384			
A-D	0			0			
AB-CD	8	831	0.010	8	0.0	4.368	A
AB-C	487			487			
D-ABC	0	342	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	567			567			
C-B	87			87			
CD-AB	223	934	0.238	222	0.6	5.062	A
CD-A	431			431			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	112	225	0.499	112	0.9	31.470	D
B-A	273	325	0.841	271	4.4	62.481	F
A-B	142			142			
A-C	384			384			
A-D	0			0			
AB-CD	8	832	0.010	8	0.0	4.372	A
AB-C	488			488			
D-ABC	0	342	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	567			567			
C-B	87			87			
CD-AB	223	935	0.239	223	0.6	5.079	A
CD-A	431			431			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	92	391	0.234	94	0.3	12.218	B
B-A	223	373	0.598	234	1.6	27.784	D
A-B	116			116			
A-C	314			314			
A-D	0			0			
AB-CD	6	791	0.007	6	0.0	4.593	A
AB-C	402			402			
D-ABC	0	382	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	463			463			
C-B	71			71			
CD-AB	151	881	0.171	152	0.4	4.957	A
CD-A	383			383			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	77	466	0.165	77	0.2	9.274	A
B-A	187	406	0.460	190	0.9	16.864	C
A-B	97			97			
A-C	263			263			
A-D	0			0			
AB-CD	4	760	0.005	4	0.0	4.768	A
AB-C	336			336			
D-ABC	0	410	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	388			388			
C-B	59			59			
CD-AB	111	844	0.131	111	0.3	4.925	A
CD-A	336			336			

2029 Future Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		4.71	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	861	100.000
B - Mid Street		✓	283	100.000
C - High Street (W)		✓	455	100.000
D - Park Works Road		✓	6	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	287	571	3
	B - Mid Street	156	0	126	1
	C - High Street (W)	341	113	0	1
	D - Park Works Road	2	3	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
	A - High Street (E)	0	3	4	0
	B - Mid Street	1	0	3	0
	C - High Street (W)	10	1	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.48	23.61	0.9	C
B-A	0.73	53.87	2.4	F
A-B				
A-C				
A-D				
AB-CD	0.02	4.01	0.0	A
AB-C				
D-ABC	0.02	8.46	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.39	8.46	1.1	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	96	469	0.204	95	0.3	9.596	A
B-A	117	337	0.348	115	0.5	16.074	C
A-B	216			216			
A-C	430			430			
A-D	2			2			
AB-CD	7	905	0.008	7	0.0	4.009	A
AB-C	520			520			
D-ABC	5	489	0.009	4	0.0	7.430	A
C-D	0.75			0.75			
C-A	257			257			
C-B	85			85			
CD-AB	140	682	0.206	139	0.4	6.617	A
CD-A	205			205			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	114	418	0.273	114	0.4	11.832	B
B-A	140	296	0.473	139	0.9	22.653	C
A-B	258			258			
A-C	513			513			
A-D	3			3			
AB-CD	10	964	0.011	10	0.0	3.769	A
AB-C	619			619			
D-ABC	5	466	0.012	5	0.0	7.818	A
C-D	0.90			0.90			
C-A	307			307			
C-B	102			102			
CD-AB	189	691	0.274	188	0.6	7.156	A
CD-A	223			223			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	140	303	0.461	138	0.8	21.527	C
B-A	172	237	0.725	166	2.2	47.761	E
A-B	316			316			
A-C	629			629			
A-D	3			3			
AB-CD	16	1048	0.016	16	0.0	3.485	A
AB-C	754			754			
D-ABC	7	432	0.015	7	0.0	8.454	A
C-D	1			1			
C-A	375			375			
C-B	124			124			
CD-AB	277	706	0.392	275	1.1	8.348	A
CD-A	229			229			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	140	292	0.480	140	0.9	23.610	C
B-A	172	236	0.728	171	2.4	53.873	F
A-B	316			316			
A-C	629			629			
A-D	3			3			
AB-CD	16	1049	0.016	16	0.0	3.489	A
AB-C	755			755			
D-ABC	7	432	0.015	7	0.0	8.456	A
C-D	1			1			
C-A	375			375			
C-B	124			124			
CD-AB	278	706	0.393	278	1.1	8.464	A
CD-A	228			228			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	114	410	0.278	116	0.4	12.326	B
B-A	140	296	0.474	146	0.9	24.831	C
A-B	258			258			
A-C	513			513			
A-D	3			3			
AB-CD	10	966	0.011	10	0.0	3.774	A
AB-C	622			622			
D-ABC	5	466	0.012	5	0.0	7.822	A
C-D	0.90			0.90			
C-A	307			307			
C-B	102			102			
CD-AB	190	692	0.275	192	0.6	7.305	A
CD-A	222			222			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	96	466	0.205	96	0.3	9.749	A
B-A	117	337	0.348	119	0.5	16.626	C
A-B	216			216			
A-C	430			430			
A-D	2			2			
AB-CD	7	906	0.008	7	0.0	4.013	A
AB-C	521			521			
D-ABC	5	489	0.009	5	0.0	7.431	A
C-D	0.75			0.75			
C-A	257			257			
C-B	85			85			
CD-AB	141	683	0.207	142	0.4	6.709	A
CD-A	204			204			

2029 Future Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		12.96	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	512	100.000
B - Mid Street		✓	329	100.000
C - High Street (W)		✓	724	100.000
D - Park Works Road		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	124	387	1
	B - Mid Street	240	0	88	1
	C - High Street (W)	603	119	0	2
	D - Park Works Road	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
	A - High Street (E)	0	1	3	0
	B - Mid Street	0	0	0	0
	C - High Street (W)	2	2	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.86	123.98	3.2	F
B-A	0.92	98.01	6.7	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.78	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.41	6.16	1.3	A
CD-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	67	464	0.144	66	0.2	9.038	A
B-A	181	384	0.471	177	0.9	17.153	C
A-B	93			93			
A-C	291			291			
A-D	0.75			0.75			
AB-CD	3	756	0.004	3	0.0	4.777	A
AB-C	356			356			
D-ABC	0	385	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	454			454			
C-B	90			90			
CD-AB	186	876	0.212	184	0.5	5.205	A
CD-A	358			358			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	80	391	0.205	80	0.3	11.550	B
B-A	216	345	0.626	213	1.6	26.732	D
A-B	111			111			
A-C	348			348			
A-D	0.90			0.90			
AB-CD	4	787	0.005	4	0.0	4.596	A
AB-C	425			425			
D-ABC	0	352	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	542			542			
C-B	107			107			
CD-AB	261	923	0.283	260	0.7	5.446	A
CD-A	388			388			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	98	171	0.574	94	1.2	45.150	E
B-A	264	289	0.913	249	5.4	71.170	F
A-B	137			137			
A-C	426			426			
A-D	1			1			
AB-CD	6	829	0.007	6	0.0	4.370	A
AB-C	516			516			
D-ABC	0	305	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	664			664			
C-B	131			131			
CD-AB	401	991	0.405	399	1.3	6.106	A
CD-A	394			394			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	98	113	0.864	90	3.2	123.985	F
B-A	264	288	0.916	259	6.7	98.013	F
A-B	137			137			
A-C	426			426			
A-D	1			1			
AB-CD	6	826	0.007	6	0.0	4.391	A
AB-C	511			511			
D-ABC	0	305	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	664			664			
C-B	131			131			
CD-AB	403	992	0.406	402	1.3	6.157	A
CD-A	392			392			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	80	356	0.225	92	0.3	14.210	B
B-A	216	342	0.630	235	1.9	38.252	E
A-B	111			111			
A-C	348			348			
A-D	0.90			0.90			
AB-CD	4	795	0.005	4	0.0	4.556	A
AB-C	436			436			
D-ABC	0	351	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	542			542			
C-B	107			107			
CD-AB	263	925	0.284	265	0.8	5.500	A
CD-A	387			387			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	67	457	0.146	67	0.2	9.244	A
B-A	181	384	0.471	184	0.9	18.383	C
A-B	93			93			
A-C	291			291			
A-D	0.75			0.75			
AB-CD	3	757	0.004	3	0.0	4.776	A
AB-C	357			357			
D-ABC	0	385	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	454			454			
C-B	90			90			
CD-AB	187	877	0.214	189	0.5	5.250	A
CD-A	356			356			

2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A25 / Mid Street / Park Works Road	Left-Right Stagger	Two-way		12.60	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	516	100.000
B - Mid Street		✓	358	100.000
C - High Street (W)		✓	641	100.000
D - Park Works Road		✓	3	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
From	A - High Street (E)	0	129	387	0
	B - Mid Street	248	0	107	3
	C - High Street (W)	552	86	0	3
	D - Park Works Road	1	1	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Mid Street	C - High Street (W)	D - Park Works Road
	A - High Street (E)	0	2	4	0
	B - Mid Street	1	0	1	0
	C - High Street (W)	2	0	0	0
	D - Park Works Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.81	90.69	2.9	F
B-A	0.91	91.71	6.4	F
A-B				
A-C				
A-D				
AB-CD	0.01	4.66	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.27	5.21	0.8	A
CD-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	83	463	0.179	82	0.2	9.418	A
B-A	187	390	0.479	183	0.9	17.125	C
A-B	97			97			
A-C	291			291			
A-D	0			0			
AB-CD	4	778	0.006	4	0.0	4.653	A
AB-C	369			369			
D-ABC	0	399	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	416			416			
C-B	65			65			
CD-AB	126	857	0.147	124	0.3	4.914	A
CD-A	355			355			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	99	392	0.252	98	0.3	12.223	B
B-A	223	354	0.629	220	1.6	26.290	D
A-B	116			116			
A-C	348			348			
A-D	0			0			
AB-CD	6	812	0.007	6	0.0	4.462	A
AB-C	440			440			
D-ABC	0	368	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	496			496			
C-B	77			77			
CD-AB	174	897	0.194	173	0.5	4.976	A
CD-A	400			400			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	121	197	0.616	117	1.4	43.067	E
B-A	273	302	0.904	258	5.2	67.205	F
A-B	142			142			
A-C	426			426			
A-D	0			0			
AB-CD	9	859	0.010	9	0.0	4.229	A
AB-C	534			534			
D-ABC	0	325	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	608			608			
C-B	95			95			
CD-AB	262	956	0.274	261	0.8	5.188	A
CD-A	441			441			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	121	150	0.808	115	2.9	90.691	F
B-A	273	301	0.908	268	6.4	91.706	F
A-B	142			142			
A-C	426			426			
A-D	0			0			
AB-CD	8	858	0.010	8	0.0	4.238	A
AB-C	533			533			
D-ABC	0	324	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	608			608			
C-B	95			95			
CD-AB	263	957	0.274	262	0.8	5.211	A
CD-A	440			440			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	99	361	0.274	109	0.4	14.818	B
B-A	223	353	0.632	241	1.9	36.441	E
A-B	116			116			
A-C	348			348			
A-D	0			0			
AB-CD	7	819	0.008	7	0.0	4.437	A
AB-C	450			450			
D-ABC	0	367	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	496			496			
C-B	77			77			
CD-AB	175	898	0.194	176	0.5	5.011	A
CD-A	399			399			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	83	457	0.181	83	0.2	9.656	A
B-A	187	390	0.479	190	1.0	18.337	C
A-B	97			97			
A-C	291			291			
A-D	0			0			
AB-CD	4	779	0.006	4	0.0	4.655	A
AB-C	370			370			
D-ABC	0	399	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	416			416			
C-B	65			65			
CD-AB	127	858	0.148	127	0.3	4.946	A
CD-A	354			354			

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.2.1013 © Copyright TRL Limited, 2019	
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Filename: Church Hill - High Street - Coopers Hill 230904.j9

Path: O:\London\Vectos\Projects\Projects\220000\226799 - Nutfield Green Park\MODELLING\Junctions\Church Hill - High Street - Coopers Hill

Report generation date: 25/03/2024 16:06:21

»Nutfield - 2022 Base + Com Devs, AM (08:00-09:00)
 »Nutfield - 2022 Base + Com Devs, PM (17:00-18:00)
 »Nutfield - 2022 Base + Com Devs, PM (16:00-17:00)
 »Nutfield - 2022 Base + Com Dev + Dev, AM (08:00-09:00)
 »Nutfield - 2022 Base + Com Dev + Dev, PM (17:00-18:00)
 »Nutfield - 2022 Base + Com Dev + Dev, PM (16:00-17:00)
 »Nutfield - 2029 Future Base + Com Dev, AM (08:00-09:00)
 »Nutfield - 2029 Future Base + Com Dev, PM (17:00-18:00)
 »Nutfield - 2029 Future Base + Com Dev, PM (16:00-17:00)
 »Nutfield - 2029 Future Base + Com Dev + Dev, AM (08:00-09:00)
 »Nutfield - 2029 Future Base + Com Dev + Dev, PM (17:00-18:00)
 »Nutfield - 2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Summary of junction performance

	AM (08:00-09:00)					PM (17:00-18:00)					PM (16:00-17:00)				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	Nutfield - 2022 Base + Com Devs														
Stream B-ACD	D1	3.3	82.99	0.80	F	D2	0.9	29.71	0.49	D	D3	0.9	26.82	0.49	D
Stream A-BCD		0.4	9.46	0.29	A		0.2	10.50	0.19	B		0.2	9.28	0.14	A
Stream D-ABC		1.2	28.49	0.56	D		4.1	73.92	0.84	F		1.3	29.05	0.57	D
Stream C-ABD		0.0	10.12	0.05	B		0.1	7.88	0.10	A		0.1	7.50	0.05	A
	Nutfield - 2022 Base + Com Dev + Dev														
Stream B-ACD	D4	4.3	104.80	0.86	F	D5	1.1	33.41	0.54	D	D6	1.2	30.80	0.55	D
Stream A-BCD		0.4	9.62	0.30	A		0.2	10.78	0.19	B		0.2	9.58	0.14	A
Stream D-ABC		1.4	31.58	0.59	D		5.3	94.36	0.88	F		1.5	34.04	0.61	D
Stream C-ABD		0.1	10.50	0.07	B		0.1	8.10	0.12	A		0.1	7.80	0.08	A
	Nutfield - 2029 Future Base + Com Dev														
Stream B-ACD	D7	5.0	121.63	0.89	F	D8	1.2	35.00	0.55	E	D9	1.1	30.45	0.54	D
Stream A-BCD		0.5	9.63	0.30	A		0.2	10.80	0.20	B		0.2	9.50	0.14	A
Stream D-ABC		1.4	32.85	0.60	D		6.0	104.14	0.90	F		1.5	33.55	0.61	D
Stream C-ABD		0.1	10.42	0.05	B		0.1	8.00	0.10	A		0.1	7.60	0.05	A
	Nutfield - 2029 Future Base + Com Dev + Dev														
Stream B-ACD	D10	6.9	154.27	0.95	F	D11	1.4	40.52	0.60	E	D12	1.4	35.83	0.60	E
Stream A-BCD		0.5	9.78	0.31	A		0.3	11.08	0.20	B		0.2	9.80	0.15	A
Stream D-ABC		1.6	36.08	0.62	E		8.1	135.43	0.96	F		1.8	39.40	0.65	E
Stream C-ABD		0.1	10.79	0.07	B		0.1	8.21	0.12	A		0.1	7.91	0.08	A

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

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

File summary

File Description

Title	
Location	
Site number	
Date	08/08/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\ethan.terry
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base + Com Devs	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D2	2022 Base + Com Devs	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D3	2022 Base + Com Devs	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D4	2022 Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D5	2022 Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D6	2022 Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Nutfield	100.000

Nutfield - 2022 Base + Com Devs, AM (08:00-09:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		9.97	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	High Street (E)		Major
B	Coopers Hill Road		Minor
C	High Street (W)		Major
D	Church Hill Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - High Street (E)	5.50		✓	2.65	90.6	✓	3.00
C - High Street (W)	5.50		✓	2.20	187.8	✓	2.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Coopers Hill Road	One lane	3.72	20	63
D - Church Hill Road	One lane	2.78	19	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	657	-	-	-	-	-	-	0.260	0.372	0.260	-	-	-
B-A	552	0.103	0.260	0.260	-	-	-	0.163	0.371	-	0.260	0.260	0.130
B-C	712	0.111	0.282	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	552	0.103	0.260	0.260	-	-	-	0.163	0.371	0.163	-	-	-
B-D, offside lane	552	0.103	0.260	0.260	-	-	-	0.163	0.371	0.163	-	-	-
C-B	683	0.270	0.270	0.386	-	-	-	-	-	-	-	-	-
D-A	621	-	-	-	-	-	-	0.246	-	0.097	-	-	-
D-B, nearside lane	482	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
D-B, offside lane	482	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
D-C	482	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base + Com Devs	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	949	100.000
B - Coopers Hill Road		✓	142	100.000
C - High Street (W)		✓	454	100.000
D - Church Hill Road		✓	145	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	49	764	136
	B - Coopers Hill Road	43	0	27	72
	C - High Street (W)	404	16	0	34
	D - Church Hill Road	88	34	23	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	6	4	0
	B - Coopers Hill Road	2	0	4	0
	C - High Street (W)	9	0	0	0
	D - Church Hill Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.80	82.99	3.3	F
A-BCD	0.29	9.46	0.4	A
A-B				
A-C				
D-ABC	0.56	28.49	1.2	D
C-ABD	0.05	10.12	0.0	B
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	107	319	0.335	105	0.5	16.681	C
A-BCD	103	563	0.183	102	0.2	7.789	A
A-B	37			37			
A-C	575			575			
D-ABC	109	388	0.281	108	0.4	12.777	B
C-ABD	12	471	0.026	12	0.0	7.838	A
C-D	26			26			
C-A	304			304			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	128	268	0.477	126	0.9	25.147	D
A-BCD	124	549	0.226	124	0.3	8.459	A
A-B	44			44			
A-C	685			685			
D-ABC	130	348	0.375	130	0.6	16.422	C
C-ABD	14	430	0.033	14	0.0	8.663	A
C-D	31			31			
C-A	363			363			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	156	195	0.800	148	2.9	67.404	F
A-BCD	156	536	0.291	156	0.4	9.437	A
A-B	54			54			
A-C	835			835			
D-ABC	160	286	0.557	157	1.2	27.372	D
C-ABD	18	374	0.047	18	0.0	10.111	B
C-D	37			37			
C-A	445			445			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	156	195	0.802	155	3.3	82.989	F
ABCD	156	537	0.291	156	0.4	9.464	A
A-B	54			54			
A-C	835			835			
D-ABC	160	285	0.559	159	1.2	28.487	D
C-ABD	18	373	0.047	18	0.0	10.118	B
C-D	37			37			
C-A	445			445			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	128	267	0.478	137	1.0	29.394	D
ABCD	124	550	0.226	125	0.3	8.491	A
A-B	44			44			
A-C	685			685			
D-ABC	130	347	0.376	133	0.6	17.003	C
C-ABD	14	430	0.034	14	0.0	8.673	A
C-D	31			31			
C-A	363			363			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	107	318	0.336	109	0.5	17.313	C
ABCD	103	564	0.183	103	0.2	7.830	A
A-B	37			37			
A-C	575			575			
D-ABC	109	387	0.282	110	0.4	13.022	B
C-ABD	12	471	0.026	12	0.0	7.851	A
C-D	26			26			
C-A	304			304			

Nutfield - 2022 Base + Com Devs, PM (17:00-18:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		11.27	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Base + Com Devs	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	571	100.000
B - Coopers Hill Road		✓	107	100.000
C - High Street (W)		✓	797	100.000
D - Church Hill Road		✓	197	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
From	A - High Street (E)	0	62	437	72
	B - Coopers Hill Road	44	0	23	40
	C - High Street (W)	722	45	0	30
	D - Church Hill Road	116	57	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	2	3	0
	B - Coopers Hill Road	2	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	3	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.49	29.71	0.9	D
ABCD	0.19	10.50	0.2	B
A-B				
A-C				
D-ABC	0.84	73.92	4.1	F
C-ABD	0.10	7.88	0.1	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	81	353	0.228	79	0.3	13.101	B
ABCD	54	495	0.110	54	0.1	8.151	A
A-B	47			47			
A-C	329			329			
D-ABC	148	358	0.414	146	0.7	16.725	C
C-ABD	34	559	0.061	34	0.1	6.845	A
C-D	23			23			
C-A	543			543			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	96	307	0.314	96	0.4	17.010	C
ABCD	65	464	0.140	65	0.2	9.010	A
A-B	56			56			
A-C	393			393			
D-ABC	177	319	0.556	175	1.2	24.749	C
C-ABD	41	537	0.076	41	0.1	7.257	A
C-D	27			27			
C-A	649			649			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	118	240	0.490	116	0.9	28.538	D
ABCD	80	423	0.189	80	0.2	10.485	B
A-B	68			68			
A-C	481			481			
D-ABC	217	260	0.835	207	3.6	59.868	F
C-ABD	50	507	0.099	50	0.1	7.875	A
C-D	33			33			
C-A	794			794			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	118	239	0.494	118	0.9	29.707	D
ABCD	80	423	0.189	80	0.2	10.502	B
A-B	68			68			
A-C	481			481			
D-ABC	217	260	0.835	215	4.1	73.917	F
C-ABD	50	507	0.099	50	0.1	7.882	A
C-D	33			33			
C-A	794			794			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	96	304	0.316	98	0.5	17.607	C
ABCD	65	464	0.140	65	0.2	9.036	A
A-B	56			56			
A-C	393			393			
D-ABC	177	318	0.556	188	1.3	29.684	D
C-ABD	41	537	0.076	41	0.1	7.263	A
C-D	27			27			
C-A	649			649			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	81	352	0.229	81	0.3	13.327	B
ABCD	54	495	0.110	54	0.1	8.177	A
A-B	47			47			
A-C	329			329			
D-ABC	148	358	0.414	151	0.7	17.565	C
C-ABD	34	559	0.061	34	0.1	6.858	A
C-D	23			23			
C-A	543			543			

Nutfield - 2022 Base + Com Devs, PM (16:00-17:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		5.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 Base + Com Devs	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	560	100.000
B - Coopers Hill Road		✓	118	100.000
C - High Street (W)		✓	709	100.000
D - Church Hill Road		✓	148	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
From	A - High Street (E)	0	59	446	55
	B - Coopers Hill Road	54	0	23	41
	C - High Street (W)	656	23	0	30
	D - Church Hill Road	86	47	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	0	4	0
	B - Coopers Hill Road	4	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	1	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.49	26.82	0.9	D
ABCD	0.14	9.28	0.2	A
A-B				
A-C				
D-ABC	0.57	29.05	1.3	D
C-ABD	0.05	7.50	0.1	A
C-D				
C-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	89	364	0.244	88	0.3	12.969	B
ABCD	41	514	0.081	41	0.1	7.608	A
A-B	44			44			
A-C	336			336			
D-ABC	111	374	0.298	110	0.4	13.538	B
C-ABD	17	561	0.031	17	0.0	6.620	A
C-D	23			23			
C-A	494			494			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	323	0.329	105	0.5	16.532	C
ABCD	49	486	0.102	49	0.1	8.236	A
A-B	53			53			
A-C	401			401			
D-ABC	133	338	0.393	132	0.6	17.388	C
C-ABD	21	537	0.039	21	0.0	6.967	A
C-D	27			27			
C-A	590			590			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	130	264	0.492	128	0.9	26.124	D
A-BCD	61	449	0.135	61	0.2	9.269	A
A-B	65			65			
A-C	491			491			
D-ABC	163	286	0.569	161	1.2	28.065	D
C-ABD	25	505	0.050	25	0.1	7.498	A
C-D	33			33			
C-A	722			722			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	130	264	0.493	130	0.9	26.824	D
A-BCD	61	449	0.135	61	0.2	9.277	A
A-B	65			65			
A-C	491			491			
D-ABC	163	286	0.569	163	1.3	29.053	D
C-ABD	25	505	0.050	25	0.1	7.499	A
C-D	33			33			
C-A	722			722			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	322	0.330	108	0.5	16.950	C
A-BCD	49	486	0.102	50	0.1	8.247	A
A-B	53			53			
A-C	401			401			
D-ABC	133	338	0.393	135	0.7	17.961	C
C-ABD	21	537	0.039	21	0.0	6.969	A
C-D	27			27			
C-A	590			590			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	89	363	0.244	90	0.3	13.180	B
A-BCD	41	514	0.081	42	0.1	7.621	A
A-B	44			44			
A-C	336			336			
D-ABC	111	374	0.298	112	0.4	13.812	B
C-ABD	17	561	0.031	17	0.0	6.628	A
C-D	23			23			
C-A	494			494			

Nutfield - 2022 Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		12.16	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2022 Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	961	100.000
B - Coopers Hill Road		✓	148	100.000
C - High Street (W)		✓	474	100.000
D - Church Hill Road		✓	146	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	From A - High Street (E)	0	49	776	136
	From B - Coopers Hill Road	43	0	33	72
	From C - High Street (W)	417	22	0	35
	From D - Church Hill Road	88	34	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	6	4	0
	B - Coopers Hill Road	2	0	4	0
	C - High Street (W)	9	1	0	0
	D - Church Hill Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.86	104.80	4.3	F
ABCD	0.30	9.62	0.4	A
A-B				
A-C				
D-ABC	0.59	31.58	1.4	D
C-ABD	0.07	10.50	0.1	B
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	111	318	0.350	109	0.5	17.090	C
ABCD	103	559	0.184	102	0.2	7.868	A
A-B	37			37			
A-C	584			584			
D-ABC	110	381	0.288	108	0.4	13.110	B
C-ABD	17	464	0.036	16	0.0	8.037	A
C-D	26			26			
C-A	314			314			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	133	265	0.501	131	1.0	26.508	D
ABCD	124	544	0.229	124	0.3	8.566	A
A-B	44			44			
A-C	696			696			
D-ABC	131	340	0.386	130	0.6	17.120	C
C-ABD	20	423	0.047	20	0.0	8.923	A
C-D	31			31			
C-A	375			375			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	163	190	0.855	152	3.6	79.195	F
ABCD	157	531	0.295	156	0.4	9.591	A
A-B	54			54			
A-C	848			848			
D-ABC	161	275	0.584	158	1.3	29.987	D
C-ABD	24	367	0.066	24	0.1	10.487	B
C-D	39			39			
C-A	459			459			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	163	190	0.858	160	4.3	104.804	F
ABCD	157	531	0.295	157	0.4	9.619	A
A-B	54			54			
A-C	848			848			
D-ABC	161	274	0.587	161	1.4	31.582	D
C-ABD	24	367	0.066	24	0.1	10.497	B
C-D	39			39			
C-A	459			459			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	133	265	0.503	146	1.1	33.170	D
ABCD	124	544	0.228	125	0.3	8.600	A
A-B	44			44			
A-C	696			696			
D-ABC	131	338	0.388	134	0.7	17.865	C
C-ABD	20	423	0.047	20	0.0	8.935	A
C-D	31			31			
C-A	375			375			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	111	317	0.351	113	0.6	17.828	C
ABCD	103	559	0.184	103	0.2	7.911	A
A-B	37			37			
A-C	584			584			
D-ABC	110	381	0.289	111	0.4	13.382	B
C-ABD	17	464	0.036	17	0.0	8.053	A
C-D	26			26			
C-A	314			314			

Nutfield - 2022 Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		13.74	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	591	100.000
B - Coopers Hill Road		✓	116	100.000
C - High Street (W)		✓	825	100.000
D - Church Hill Road		✓	198	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	From A - High Street (E)	0	62	457	72
	From B - Coopers Hill Road	44	0	32	40
	From C - High Street (W)	740	54	0	31
	From D - Church Hill Road	116	57	25	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	2	3	0
	B - Coopers Hill Road	2	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	3	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.54	33.41	1.1	D
ABCD	0.19	10.78	0.2	B
A-B				
A-C				
D-ABC	0.88	94.36	5.3	F
C-ABD	0.12	8.10	0.1	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	87	356	0.245	86	0.3	13.272	B
ABCD	54	489	0.111	54	0.1	8.269	A
A-B	47			47			
A-C	344			344			
D-ABC	149	351	0.425	146	0.7	17.349	C
C-ABD	41	556	0.074	41	0.1	6.976	A
C-D	23			23			
C-A	557			557			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	104	307	0.339	104	0.5	17.600	C
ABCD	65	457	0.142	65	0.2	9.185	A
A-B	56			56			
A-C	411			411			
D-ABC	178	309	0.575	176	1.3	26.483	D
C-ABD	49	534	0.092	49	0.1	7.428	A
C-D	28			28			
C-A	665			665			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	128	237	0.539	125	1.1	31.581	D
ABCD	80	414	0.193	80	0.2	10.765	B
A-B	68			68			
A-C	502			502			
D-ABC	218	248	0.881	206	4.4	71.182	F
C-ABD	61	505	0.121	61	0.1	8.096	A
C-D	34			34			
C-A	813			813			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	128	235	0.544	127	1.1	33.413	D
ABCD	80	414	0.193	80	0.2	10.784	B
A-B	68			68			
A-C	502			502			
D-ABC	218	247	0.881	215	5.3	94.361	F
C-ABD	61	505	0.121	61	0.1	8.103	A
C-D	34			34			
C-A	813			813			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	104	304	0.343	107	0.5	18.422	C
ABCD	65	456	0.142	65	0.2	9.208	A
A-B	56			56			
A-C	411			411			
D-ABC	178	309	0.576	193	1.5	34.382	D
C-ABD	49	534	0.092	49	0.1	7.435	A
C-D	28			28			
C-A	665			665			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	87	355	0.246	88	0.3	13.534	B
ABCD	54	489	0.111	54	0.1	8.298	A
A-B	47			47			
A-C	344			344			
D-ABC	149	351	0.425	152	0.8	18.340	C
C-ABD	41	556	0.074	41	0.1	6.990	A
C-D	23			23			
C-A	557			557			

Nutfield - 2022 Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		6.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	585	100.000
B - Coopers Hill Road		✓	130	100.000
C - High Street (W)		✓	746	100.000
D - Church Hill Road		✓	150	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
From	A - High Street (E)	0	59	471	55
	B - Coopers Hill Road	54	0	35	41
	C - High Street (W)	679	35	0	32
	D - Church Hill Road	86	47	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	0	4	0
	B - Coopers Hill Road	4	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	1	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.55	30.80	1.2	D
ABCD	0.14	9.58	0.2	A
A-B				
A-C				
D-ABC	0.61	34.04	1.5	D
C-ABD	0.08	7.80	0.1	A
C-D				
C-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	98	367	0.267	96	0.4	13.256	B
ABCD	41	506	0.082	41	0.1	7.744	A
A-B	44			44			
A-C	355			355			
D-ABC	113	364	0.310	111	0.4	14.141	B
C-ABD	26	556	0.047	26	0.0	6.790	A
C-D	24			24			
C-A	511			511			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	117	323	0.362	116	0.6	17.359	C
ABCD	49	476	0.104	49	0.1	8.428	A
A-B	53			53			
A-C	423			423			
D-ABC	135	326	0.414	134	0.7	18.641	C
C-ABD	32	532	0.059	32	0.1	7.187	A
C-D	29			29			
C-A	610			610			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	143	260	0.551	141	1.1	29.614	D
ABCD	61	437	0.139	61	0.2	9.567	A
A-B	65			65			
A-C	518			518			
D-ABC	165	270	0.611	162	1.4	32.411	D
C-ABD	39	501	0.078	39	0.1	7.796	A
C-D	35			35			
C-A	747			747			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	143	259	0.552	143	1.2	30.800	D
ABCD	61	437	0.139	61	0.2	9.575	A
A-B	65			65			
A-C	518			518			
D-ABC	165	270	0.612	165	1.5	34.040	D
C-ABD	39	500	0.078	39	0.1	7.798	A
C-D	35			35			
C-A	747			747			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	117	322	0.363	119	0.6	17.966	C
ABCD	49	476	0.104	50	0.1	8.440	A
A-B	53			53			
A-C	423			423			
D-ABC	135	326	0.414	138	0.7	19.464	C
C-ABD	32	532	0.059	32	0.1	7.194	A
C-D	29			29			
C-A	610			610			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	98	366	0.267	99	0.4	13.509	B
ABCD	41	506	0.082	42	0.1	7.761	A
A-B	44			44			
A-C	355			355			
D-ABC	113	364	0.310	114	0.5	14.474	B
C-ABD	26	556	0.047	26	0.1	6.799	A
C-D	24			24			
C-A	511			511			

Nutfield - 2029 Future Base + Com Dev, AM (08:00-09:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		13.54	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2029 Future Base + Com Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	978	100.000
B - Coopers Hill Road		✓	147	100.000
C - High Street (W)		✓	468	100.000
D - Church Hill Road		✓	149	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	51	787	140
	B - Coopers Hill Road	45	0	28	74
	C - High Street (W)	416	17	0	35
	D - Church Hill Road	90	35	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	6	4	0
	B - Coopers Hill Road	2	0	4	0
	C - High Street (W)	9	0	0	0
	D - Church Hill Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.89	121.63	5.0	F
ABCD	0.30	9.63	0.5	A
A-B				
A-C				
D-ABC	0.60	32.85	1.4	D
C-ABD	0.05	10.42	0.1	B
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	111	311	0.356	109	0.5	17.611	C
ABCD	106	561	0.189	105	0.2	7.885	A
A-B	38			38			
A-C	592			592			
D-ABC	112	381	0.294	111	0.4	13.229	B
C-ABD	13	465	0.028	13	0.0	7.962	A
C-D	26			26			
C-A	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	132	258	0.512	130	1.0	27.793	D
ABCD	128	547	0.234	128	0.3	8.587	A
A-B	46			46			
A-C	705			705			
D-ABC	134	339	0.395	133	0.6	17.389	C
C-ABD	15	422	0.036	15	0.0	8.845	A
C-D	31			31			
C-A	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	162	183	0.885	150	4.0	87.961	F
ABCD	162	535	0.302	161	0.4	9.605	A
A-B	56			56			
A-C	859			859			
D-ABC	164	274	0.598	161	1.4	31.030	D
C-ABD	19	364	0.052	19	0.1	10.414	B
C-D	39			39			
C-A	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	162	182	0.887	158	5.0	121.627	F
ABCD	162	536	0.302	162	0.5	9.635	A
A-B	56			56			
A-C	859			859			
D-ABC	164	273	0.602	164	1.4	32.851	D
C-ABD	19	364	0.052	19	0.1	10.422	B
C-D	39			39			
C-A	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	132	257	0.514	148	1.1	36.669	E
ABCD	128	547	0.234	129	0.3	8.622	A
A-B	46			46			
A-C	705			705			
D-ABC	134	337	0.397	137	0.7	18.218	C
C-ABD	15	422	0.036	15	0.0	8.855	A
C-D	31			31			
C-A	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	111	310	0.357	113	0.6	18.432	C
ABCD	106	561	0.189	107	0.2	7.928	A
A-B	38			38			
A-C	592			592			
D-ABC	112	380	0.295	113	0.4	13.523	B
C-ABD	13	464	0.028	13	0.0	7.975	A
C-D	26			26			
C-A	313			313			

Nutfield - 2029 Future Base + Com Dev, PM (17:00-18:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		15.24	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2029 Future Base + Com Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	589	100.000
B - Coopers Hill Road		✓	112	100.000
C - High Street (W)		✓	823	100.000
D - Church Hill Road		✓	204	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	64	451	74
	B - Coopers Hill Road	46	0	24	42
	C - High Street (W)	745	47	0	31
	D - Church Hill Road	120	59	25	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	2	3	0
	B - Coopers Hill Road	2	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	3	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.55	35.00	1.2	E
ABCD	0.20	10.80	0.2	B
A-B				
A-C				
D-ABC	0.90	104.14	6.0	F
C-ABD	0.10	8.00	0.1	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	84	345	0.244	83	0.3	13.661	B
ABCD	56	490	0.114	55	0.1	8.279	A
A-B	48			48			
A-C	339			339			
D-ABC	154	352	0.437	151	0.7	17.655	C
C-ABD	36	556	0.064	35	0.1	6.913	A
C-D	23			23			
C-A	561			561			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	101	297	0.339	100	0.5	18.197	C
ABCD	67	458	0.146	67	0.2	9.198	A
A-B	58			58			
A-C	405			405			
D-ABC	183	310	0.591	181	1.4	27.326	D
C-ABD	43	533	0.080	43	0.1	7.346	A
C-D	28			28			
C-A	669			669			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	123	228	0.541	121	1.1	32.920	D
ABCD	82	416	0.198	82	0.2	10.782	B
A-B	70			70			
A-C	496			496			
D-ABC	225	249	0.903	211	4.9	75.955	F
C-ABD	53	503	0.105	53	0.1	7.996	A
C-D	34			34			
C-A	819			819			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	123	225	0.547	123	1.2	35.003	E
ABCD	82	416	0.198	82	0.2	10.802	B
A-B	70			70			
A-C	496			496			
D-ABC	225	249	0.904	220	6.0	104.140	F
C-ABD	53	503	0.105	53	0.1	8.003	A
C-D	34			34			
C-A	819			819			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	101	294	0.343	103	0.5	19.129	C
ABCD	67	458	0.146	67	0.2	9.223	A
A-B	58			58			
A-C	405			405			
D-ABC	183	310	0.592	201	1.6	37.336	E
C-ABD	43	532	0.080	43	0.1	7.356	A
C-D	28			28			
C-A	669			669			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	84	344	0.245	85	0.3	13.944	B
ABCD	56	490	0.114	56	0.1	8.306	A
A-B	48			48			
A-C	339			339			
D-ABC	154	351	0.437	157	0.8	18.759	C
C-ABD	36	556	0.064	36	0.1	6.927	A
C-D	23			23			
C-A	561			561			

Nutfield - 2029 Future Base + Com Dev, PM (16:00-17:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		6.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2029 Future Base + Com Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	578	100.000
B - Coopers Hill Road		✓	123	100.000
C - High Street (W)		✓	733	100.000
D - Church Hill Road		✓	153	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
From	A - High Street (E)	0	61	460	57
	B - Coopers Hill Road	56	0	24	43
	C - High Street (W)	678	24	0	31
	D - Church Hill Road	88	49	16	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	0	4	0
	B - Coopers Hill Road	4	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	1	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.54	30.45	1.1	D
ABCD	0.14	9.50	0.2	A
A-B				
A-C				
D-ABC	0.61	33.55	1.5	D
C-ABD	0.05	7.60	0.1	A
C-D				
C-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	93	357	0.259	91	0.3	13.469	B
ABCD	43	509	0.084	43	0.1	7.716	A
A-B	46			46			
A-C	346			346			
D-ABC	115	367	0.314	113	0.4	14.112	B
C-ABD	18	557	0.032	18	0.0	6.677	A
C-D	23			23			
C-A	510			510			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	111	314	0.352	110	0.5	17.546	C
ABCD	51	481	0.107	51	0.1	8.381	A
A-B	55			55			
A-C	413			413			
D-ABC	138	329	0.417	137	0.7	18.562	C
C-ABD	22	533	0.041	22	0.0	7.041	A
C-D	28			28			
C-A	609			609			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	135	254	0.534	133	1.1	29.370	D
ABCD	63	442	0.143	63	0.2	9.490	A
A-B	67			67			
A-C	506			506			
D-ABC	168	275	0.612	165	1.5	31.975	D
C-ABD	27	500	0.053	26	0.1	7.602	A
C-D	34			34			
C-A	746			746			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	135	253	0.535	135	1.1	30.449	D
ABCD	63	442	0.143	63	0.2	9.500	A
A-B	67			67			
A-C	506			506			
D-ABC	168	275	0.613	168	1.5	33.549	D
C-ABD	27	500	0.053	27	0.1	7.604	A
C-D	34			34			
C-A	746			746			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	111	313	0.353	113	0.6	18.124	C
ABCD	51	481	0.107	51	0.1	8.394	A
A-B	55			55			
A-C	413			413			
D-ABC	138	329	0.418	141	0.7	19.376	C
C-ABD	22	533	0.041	22	0.0	7.045	A
C-D	28			28			
C-A	609			609			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	93	357	0.260	93	0.4	13.720	B
ABCD	43	509	0.084	43	0.1	7.726	A
A-B	46			46			
A-C	346			346			
D-ABC	115	367	0.314	116	0.5	14.447	B
C-ABD	18	557	0.032	18	0.0	6.685	A
C-D	23			23			
C-A	510			510			

Nutfield - 2029 Future Base + Com Dev + Dev, AM (08:00-09:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		16.70	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2029 Future Base + Com Dev + Dev	AM (08:00-09:00)	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	990	100.000
B - Coopers Hill Road		✓	153	100.000
C - High Street (W)		✓	487	100.000
D - Church Hill Road		✓	149	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	From A - High Street (E)	0	51	799	140
	From B - Coopers Hill Road	45	0	34	74
	From C - High Street (W)	429	22	0	36
	From D - Church Hill Road	90	35	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	6	4	0
	B - Coopers Hill Road	2	0	4	0
	C - High Street (W)	9	1	0	0
	D - Church Hill Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.95	154.27	6.9	F
ABCD	0.31	9.78	0.5	A
A-B				
A-C				
D-ABC	0.62	36.08	1.6	E
C-ABD	0.07	10.79	0.1	B
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	115	310	0.371	113	0.6	18.054	C
ABCD	106	557	0.191	105	0.2	7.960	A
A-B	38			38			
A-C	601			601			
D-ABC	112	376	0.298	111	0.4	13.480	B
C-ABD	17	458	0.036	16	0.0	8.153	A
C-D	27			27			
C-A	323			323			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	138	256	0.538	135	1.1	29.408	D
ABCD	128	542	0.237	128	0.3	8.689	A
A-B	46			46			
A-C	716			716			
D-ABC	134	333	0.403	133	0.7	17.956	C
C-ABD	20	416	0.048	20	0.0	9.094	A
C-D	32			32			
C-A	386			386			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	168	178	0.946	152	5.1	104.620	F
ABCD	162	530	0.306	162	0.5	9.752	A
A-B	56			56			
A-C	872			872			
D-ABC	164	265	0.620	161	1.5	33.582	D
C-ABD	24	358	0.068	24	0.1	10.776	B
C-D	40			40			
C-A	472			472			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	168	178	0.949	162	6.9	154.270	F
ABCD	162	530	0.306	162	0.5	9.781	A
A-B	56			56			
A-C	872			872			
D-ABC	164	263	0.625	164	1.6	36.078	E
C-ABD	24	358	0.068	24	0.1	10.787	B
C-D	40			40			
C-A	472			472			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	138	255	0.539	160	1.3	44.935	E
ABCD	128	542	0.236	129	0.3	8.728	A
A-B	46			46			
A-C	716			716			
D-ABC	134	330	0.406	137	0.7	19.002	C
C-ABD	20	415	0.048	20	0.1	9.107	A
C-D	32			32			
C-A	386			386			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	115	309	0.372	118	0.6	19.023	C
ABCD	106	557	0.191	107	0.2	8.004	A
A-B	38			38			
A-C	601			601			
D-ABC	112	375	0.299	113	0.4	13.796	B
C-ABD	17	457	0.036	17	0.0	8.170	A
C-D	27			27			
C-A	323			323			

Nutfield - 2029 Future Base + Com Dev + Dev, PM (17:00-18:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		19.02	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2029 Future Base + Com Dev + Dev	PM (17:00-18:00)	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	609	100.000
B - Coopers Hill Road		✓	121	100.000
C - High Street (W)		✓	850	100.000
D - Church Hill Road		✓	205	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
From	A - High Street (E)	0	64	471	74
	B - Coopers Hill Road	46	0	33	42
	C - High Street (W)	763	55	0	32
	D - Church Hill Road	120	59	26	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	2	3	0
	B - Coopers Hill Road	2	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	3	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.60	40.52	1.4	E
ABCD	0.20	11.08	0.3	B
A-B				
A-C				
D-ABC	0.96	135.43	8.1	F
C-ABD	0.12	8.21	0.1	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	91	348	0.262	90	0.3	13.863	B
ABCD	56	484	0.115	55	0.1	8.393	A
A-B	48			48			
A-C	355			355			
D-ABC	154	345	0.448	151	0.8	18.344	C
C-ABD	42	553	0.075	41	0.1	7.036	A
C-D	24			24			
C-A	574			574			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	109	298	0.366	108	0.6	18.897	C
ABCD	67	451	0.148	67	0.2	9.368	A
A-B	58			58			
A-C	423			423			
D-ABC	184	301	0.612	182	1.5	29.414	D
C-ABD	50	529	0.095	50	0.1	7.507	A
C-D	29			29			
C-A	685			685			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	133	224	0.594	130	1.3	37.060	E
ABCD	82	407	0.203	82	0.3	11.064	B
A-B	70			70			
A-C	518			518			
D-ABC	226	236	0.955	207	6.1	91.728	F
C-ABD	62	501	0.124	62	0.1	8.205	A
C-D	35			35			
C-A	838			838			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	133	221	0.603	133	1.4	40.520	E
ABCD	82	407	0.203	82	0.3	11.085	B
A-B	70			70			
A-C	518			518			
D-ABC	226	236	0.956	218	8.1	135.426	F
C-ABD	62	501	0.124	62	0.1	8.213	A
C-D	35			35			
C-A	838			838			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	109	293	0.372	112	0.6	20.255	C
ABCD	67	451	0.148	67	0.2	9.395	A
A-B	58			58			
A-C	423			423			
D-ABC	184	301	0.613	210	1.7	47.467	E
C-ABD	50	529	0.095	50	0.1	7.515	A
C-D	29			29			
C-A	685			685			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	91	347	0.263	92	0.4	14.191	B
ABCD	56	484	0.115	56	0.1	8.423	A
A-B	48			48			
A-C	355			355			
D-ABC	154	344	0.448	158	0.8	19.671	C
C-ABD	42	552	0.075	42	0.1	7.051	A
C-D	24			24			
C-A	574			574			

Nutfield - 2029 Future Base + Com Dev + Dev, PM (16:00-17:00)

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - High Street (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - High Street (W) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Church Hill / High Street / Coopers Hill	Crossroads	Two-way		7.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2029 Future Base + Com Dev + Dev	PM (16:00-17:00)	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - High Street (E)		✓	603	100.000
B - Coopers Hill Road		✓	135	100.000
C - High Street (W)		✓	769	100.000
D - Church Hill Road		✓	154	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	From A - High Street (E)	0	61	485	57
	From B - Coopers Hill Road	56	0	36	43
	From C - High Street (W)	700	36	0	33
	From D - Church Hill Road	88	49	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - High Street (E)	B - Coopers Hill Road	C - High Street (W)	D - Church Hill Road
	A - High Street (E)	0	0	4	0
	B - Coopers Hill Road	4	0	0	0
	C - High Street (W)	2	0	0	0
	D - Church Hill Road	1	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.60	35.83	1.4	E
ABCD	0.15	9.80	0.2	A
A-B				
A-C				
D-ABC	0.65	39.40	1.8	E
C-ABD	0.08	7.91	0.1	A
C-D				
C-A				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	102	359	0.283	100	0.4	13.799	B
ABCD	43	501	0.086	43	0.1	7.846	A
A-B	46			46			
A-C	365			365			
D-ABC	116	358	0.324	114	0.5	14.669	B
C-ABD	27	552	0.049	27	0.1	6.851	A
C-D	25			25			
C-A	527			527			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	121	314	0.387	120	0.6	18.516	C
ABCD	51	471	0.109	51	0.1	8.575	A
A-B	55			55			
A-C	436			436			
D-ABC	138	318	0.435	137	0.7	19.789	C
C-ABD	33	528	0.062	32	0.1	7.266	A
C-D	30			30			
C-A	629			629			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	149	249	0.597	146	1.4	33.903	D
ABCD	63	430	0.147	63	0.2	9.794	A
A-B	67			67			
A-C	534			534			
D-ABC	170	260	0.652	166	1.7	36.852	E
C-ABD	40	495	0.081	40	0.1	7.906	A
C-D	36			36			
C-A	770			770			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	149	248	0.599	148	1.4	35.831	E
ABCD	63	430	0.147	63	0.2	9.804	A
A-B	67			67			
A-C	534			534			
D-ABC	170	260	0.653	169	1.8	39.402	E
C-ABD	40	495	0.081	40	0.1	7.910	A
C-D	36			36			
C-A	770			770			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	121	313	0.388	124	0.7	19.379	C
ABCD	51	471	0.109	52	0.1	8.589	A
A-B	55			55			
A-C	436			436			
D-ABC	138	318	0.436	142	0.8	20.931	C
C-ABD	33	528	0.062	33	0.1	7.273	A
C-D	30			30			
C-A	629			629			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	102	359	0.283	103	0.4	14.108	B
ABCD	43	501	0.086	43	0.1	7.866	A
A-B	46			46			
A-C	365			365			
D-ABC	116	357	0.324	117	0.5	15.062	C
C-ABD	27	552	0.049	27	0.1	6.859	A
C-D	25			25			
C-A	527			527			

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