

TECHNICAL NOTE

Project Title: Bognor Regis Golf Club

Report Reference: JNY10830-08

Date: 20th May 2022

APPLICATION REF: FP/274/21/OUT – WSCC HIGHWAY AUTHORITY COMMENTS

Introduction

- 1.1 This Technical Note (TN) has been prepared on behalf of Hallam Land Management (HLM) to address the comments provided by the Local Highway Authority, West Sussex County Council (WSCC) dated 31st March 2022 in respect of the Transport Assessment and Travel Plan submitted in support of the above planning application.
- 1.2 This TN also includes responses to further emails from WSCC following receipt of the formal comments identified above.
- 1.3 The comments provided by WSCC are identified in *blue italics* and the response provided by RPS is provided in black text.
- 1.4 The Appendices included within this TN are as follows;
Appendix 1 – Proposed Site access layout & Swept Path analysis including RSA review
Appendix 2 – Proposed Bus Stop Improvements
Appendix 3 – Updated & Off Site Highway Improvements RSA & Designers Response
Appendix 4 – Potential Mitigation at the B2259/ A259 junction & Swept Path Analysis
Appendix 5 – B2259/A259 Capacity analysis output
Appendix 6 – Proposed Layout & Swept Path Analysis at the B2259/B2132
Appendix 7 – Revised Junction Modelling Output – B2259/Downview Road Junction
Appendix 8 - Swept Path Analysis at the B2259/Downview Road junction

Site location and access arrangements

- 1.5 *With regard to the access junction/interface of the site access road with Downview Road/Golf Links Road and Shirley Drive, the design includes shared foot/cycleway on its eastern-side. In light of LTN 1/20 (Cycle Design and Infrastructure) produced by the DfT, the applicant should look into whether segregated foot and cycle provision can be provided for the site on both sides*

of the access road where it meets the existing Downview Road - possibly starting on Downview Road before they reach the site boundary - and, additionally, to explore whether cycle routes could extend from the site along Downview Road to Downview traffic signals (in both directions). Any revisions to the junction and provision of any works to Downview Road will require further Safety Auditing.

- 1.6 The level of traffic associated with the proposed development on the site access will only be slightly greater than the suggested threshold identified in LTN 1/20 for all cyclists on a 20mph road, however to encourage the use of cycles the access layout has been amended to facilitate a 3m wide footway/cycleway on both sides of the access leading into the site which is shown on Drawing No. JNY10830/04F, this has also been tracked to ensure a car and refuse vehicle can pass copies of which are provided in **Appendix 1**.
- 1.7 The revised layout has been reviewed by an independent Road Safety Auditor, the comments presented and designers response are included in **Appendix 1**.
- 1.1 It should also be noted that to the west of the access there will be an emergency access that will be used by pedestrians and cyclists and in addition the developer contributing towards the upgrading of the existing PRow route 153 between the site boundary and The Strafford (Downview Primary School) to provide a surface route for use by cyclists and pedestrians as well as contributing towards the upgrade of PRow route 154 to the north of the site, this has been agreed as being acceptable by the PRow officer.
- 1.2 The latest revision to the Highway Code also advises cyclists that ride on road that they should ride in the centre of the lane and only move to the left if a vehicle is needing to pass. It is considered that the level of traffic movements through the site would be sufficiently low to allow cyclists to safely ride on road, although the provision of off road routes will make it easier for those that are less experienced.
- 1.3 A review of potentially continuing the pedestrian/cycleway further on Downview Road has been undertaken, however at the point closest to the site, the width of the footway on the eastern side of Downview Road is only around 2m wide and there is no room to provide any further widening. In addition further down Downview Road the footways although have verges in part also have a number of existing trees which would make it difficult to accommodate a 3m wide footway/cycleway. The proposal will be to encourage cyclists to use the proposed off road route that will continue alongside Downview Primary school to the B2259 which is being implemented by WSCC. The routing for cyclists will be assisted through the provision of way finding direction signs.
- 1.4 WSCC confirmed in a meeting on 5th May that the existing highway layout does not readily allow for an off road cycle route along Downview Road due to the presence of trees and footway widths that are limited in places. Therefore on the basis that Downview Road is restricted to a 20mph speed limit and is traffic calmed on road cycling would be considered acceptable, especially as alternative off road routes will also be available.
- 1.5 *There is also a shared footway/cycle route to the east of the site in the vicinity of the site which continues north through the new housing development to the east of the site (Public Footpath 154*). The applicant should look to provide connections to this from their site and through the site to Public Footpath 153* (and to be all off-road for pedestrians and cyclists) and, additionally, explore the provision of a foot and cycle path from the point the existing shared-*

use path meets Shirley Drive and continue this to the foot and cycle network at Downview Road and Golf Links Road.

*(*The status of these paths will need altering to cater for new end users such as cyclists)*

- 1.6 The PRow route through the site will be accessible by pedestrians and cyclists and where possible will be an off road route as identified in the Design and Access Statement.
- 1.7 The Movement and Connectivity Parameter Plan (171-UW-P-A-009) submitted as part of the planning application shows a proposed permissive public footpath to the eastern boundary of the site. Any onwards connection east of the Public Footpath 154 is outside of the application redline and would need to be provided by a third party.
- 1.8 Shirley Drive is currently a private access road and not public highway or a PRow, therefore it would not be possible to provide a connection that could be used by the general public, I expect that this was the same issue with the new development that has improved the PRow that joins Shirley Drive as this does not connect with any existing footways.
- 1.9 *Please also see comments made above under 'Site Location and Access' to do with improving the proposed junction arrangement with improved facilities for pedestrians and cyclists.*
- 1.10 Addressed above.

Public Rights of Way (PRow).

- 1.11 *As part of local transport improvements in the area, WSCC is undertaking feasibility work to widen the surfaced section of PRow route 153 to provide a shared footway/cycleway route. The scheme also includes the upgrading of the existing pelican crossing on Felpham Way to a Toucan Crossing for dual-use by pedestrians and cyclists.*
- 1.12 *PRow route 153 also joins the A259 Felpham Bypass to the north of the site where it joins with the existing footway cycleway that continues along the A259 and A29 into Bognor.*
- 1.13 *Commitment to provision of an LTN 1/20-compliant walking and cycling off-road paths from the school site (the WSCC route terminates at the northern end of the yellow line shown on the plan above) then on through the site to the existing shared-use path the runs along the eastern boundary of the site (PRow 154) – details to be submitted at any reserved matters/discharge of condition stage (affects PRow – Public Footpaths – 153 and 154) and to the new A259 Felpham By-Pass (which will extend the WSCC route) should be provided.*
- 1.14 *Measures to further enhance the opportunities for future connections are provided in **Section 5** of the TA. Please also see comment made by the CHA under sub-heading 'access by sustainable modes of transport – walking' above.*
- 1.15 *Further comments will be made separately about PRow by the WSCC PRow Team.*
- 1.16 The developer is willing to contribute towards the upgrading of offsite PRow routes that provide connections to the A259 and Downsends School as stated in the TA, which will be included as part of a S106 agreement. This has been agreed with the PRow Team.

Public transport

Bus

- 1.17 *To encourage use of public transport by residents and others wishing to travel this way to and from the site, the applicants proposed that the bus stop on Wroxham Way near to the junction with Stalham Way be improved to include a raised kerb to make it easier for disabled, elderly and people with pushchairs to access the bus. There is insufficient room at this location to provide a bus shelter.*
- 1.18 *The applicant also proposes to upgrade the bus stops on B2259 east of the junction with Downview Road. The bus stop on the northern side has an existing cantilever bus shelter and this will be upgraded to include real-time information and the existing kerb raised to make access easier for disabled, elderly and people with pushchairs. The bus stop on the southern side is a simple bus flag arrangement, although there appears to be sufficient room to provide a cantilever bus shelter which would also include real-time information and raised kerbs.*
- 1.19 Attached in **Appendix 2** is a plan showing the existing bus stop arrangements to the east of the Downview Road signalised junction, based on OS mapping, the footway width in the location of the westbound bus stop is 2.6m which will be wide enough to allow room for pedestrians to pass those waiting for a bus assuming an open ended cantilever style bus shelter is used. In addition there is sufficient room between existing driveways for the bus shelter to sit either against the wall or adjacent to the road. The footway width for the eastbound bus stop which already has a cantilever style bus stop is of a similar width of 2.3m. It is considered that the provision of real time information and a new cantilever bus shelter for the westbound services is achievable.
- 1.20 *With regard to raised kerbs, this is generally not done now as most buses now include air suspension which allows for the step height from roadside to the vehicle to be made level if necessary. This is certainly the case for the 600 and 700 services running along the B2259. Therefore they should be omitted from plans for Felpham Way. However, the applicant should check with Compass Travel what their requirements are as they operate different buses than Stagecoach PLC.*
- 1.21 Contact has been made with Compass Travel and they have advised that they also do not require raised kerbs and therefore improvements to the local bus stops will therefore include new bus flags with timetable information.
- 1.22 *Additionally, any improvements to bus shelters, waiting facilities must be considered as part of the Safety Audit process. Applicant to consult with the Road Safety Audit Team and seek their written responses which should be forwarded to the LPA and CHA to consider.*
- 1.23 The proposal to improve the existing bus stops on B2259 has been advised to the Road Safety Auditor. Details of which are provided later in this TN.

Road safety

- 1.24 *Road Safety Audit – A Stage 1 Road Safety Audit and accompanying Road Safety Audit Decision Log (Designer's Response) have been submitted alongside the planning application for the proposed junction works at the site access point.*

- 1.25 *The report raises three items needing attention. They are as follows:*
- ‘Problem GENERAL throughout junction scheme extents’ – Insufficient drainage may result in single vehicle loss of control type collisions or a slip/fall hazard for pedestrians/cyclists (general, throughout the scheme).*
- Audit Team’s Recommendation - The Audit Team recommends that at the next stage of design, new drainage appropriate for the proposed highway works is incorporated into the scheme proposals.*
- Designer’s Response – Recommendation Agreed. At the detail design stage, a review of drainage will be undertaken.*
- CHA (Overseeing Organisation’s Response) – Agree with Audit Team.*
- Agreed Action - That at the detail design stage, a review of drainage will be undertaken and that new and/or amended drainage for the proposed highway works is incorporated into the scheme proposals.*
- 1.26 Agreed Action and CHA response noted that the drainage review will be undertaken at the detail design stage.
- ‘Problem 1’ – Increased risk of kerb strikes and/or vehicle to pedestrians/cyclist type collisions (at junction with Downview Road).*
- Audit Team’s Recommendation - The Audit Team recommend that vehicle swept paths are carried out to confirm that vehicles can safely negotiate the reduced kerb radii without overrunning footway/verge areas.*
- Designer’s Response - The existing kerb radii are excessive for a residential area and encourage high vehicle speeds. The radii has been reduced to slow vehicle movements down and make it more accessible for pedestrians. vehicle tracking has been carried out and included in the TA.*
- CHA (Overseeing Organisation’s Response) – Agree with Audit Team. Swept-path diagrams (on drawing JNY10830-11 A) demonstrate that vehicles can negotiate the proposed junction arrangements but there is some overhang/sweeping-across into opposing lanes (but not on footway or verge areas) when a large vehicle (a refuse vehicle is shown) makes the manoeuvres. However, the use of the junction by such vehicles would be infrequent, would be expected by locals and as such, highway users will react accordingly and visibility around the junction would be good which would assist. Therefore, the junction as currently submitted is acceptable to the CHA. However, if the junction is altered/amended following review of pedestrian and cycle comments made elsewhere in the CHA response to the planning application or at any other time prior to construction, then the junction should be ‘re-tracked’ to demonstrate suitability.*
- Agreed Action - That any agreed junction arrangements proposed to access the site are suitably designed to ensure no overhang of vehicles onto any footways, cycleways nor verges.*
- 1.27 The CHA response and Agreed Action is noted. In respect of the comments provided in ‘Site location and access arrangements.’ A slight adjustment has been made to the access leading into the site to accommodate 3m wide shared footway/cycleways on both sides of the access

road and therefore the tracking has been updated accordingly and included in **Appendix 1**. An addendum note from the RSA has been provided and a copy is provided in **Appendix 1**.

'Problem 2' – Increased risk of cyclist to pedestrian type collisions (where shared-use pedestrian and cycle facility joins access road).

Audit Team's Recommendation - The Audit Team recommend that the appropriate form of tactile paving and signing is provided where required.

Designer's Response – Recommendation Agreed. The detail of signage and tactile paving has been added to the proposed access arrangement.

CHA (Overseeing Organisation's Response) – Agree with Audit Team.

Agreed Action - That the appropriate form of tactile paving and signing is provided where required (to be checked again at detailed design/S38/278 stage).

Applicant to respond to the above comments contained under 'Overseeing Organisation's Response' and 'Agreed Action'.

- 1.28 The CHA response and Agreed Actions are noted and the tactile paving and signing will be reviewed at the detail design stage.

In addition to the Road Safety Audit already undertaken and referred to above, the applicant should also provide Safety Audits for the following:

- *All off-site highways works; and*
- *Bus stop improvements.*

- 1.29 Safety Audits have been undertaken for the proposed off site highway works copies of which are included in **Appendix 3** together with the designers' responses.

Traffic impact of development

Assessment Scenarios

- 1.30 *On the basis of the above, this TA includes a future assessment year of 2031 with the full development. This latter date also coincides with the end of the current Arun Local Plan period. The 2031 assessment includes background growth from TEMPro and committed/allocated developments as follows:*
- 1.31 *TEMPro growth for the local area between 2021 and 2031 is 7% & 8% in the AM and PM Peaks respectively. The assumptions identified in TEMPro are that this includes for 366 Houses and 62 new jobs. In addition to the background growth, the following committed developments and strategic developments have also been added to the base 2031 flows:*
- *App Ref: Y/91/17/OUT – 250 Dwellings Land at Bilsham Road, Yapton;*
 - *App Ref: AL/87/21/PL – 11,412sqm Employment Use at Oldlands Farm. Bognor Regis;*
 - *App Ref: Y/92/17/OUT – 300 Dwellings, Land South of B2233 Main Road, Yapton;*
 - *App Ref: F/4/20/OUT – 1,200 Dwellings, Ford Airfield (100% Occupation);*
 - *Strategic Development – Land West of Bersted (2,500 dwellings + Employment); and*

- *Strategic Development – Land at Barnham, Eastergate & Westergate (3,200 dwellings and employment). Arun District Council has an aspiration for a higher number of dwellings on this site but to date, only 3000 have been tested in highways terms.*
- 1.32 *The 2031 assessment is therefore considered as a robust assessment as it is likely to be double counting through the use of TEMPro growth and overestimating the flows associated with the strategic sites.*
- 1.33 Noted that the LHA consider the growth applied is suitably robust.
- 1.34 *The trips associated with the existing golf course as identified in Section 6 have been removed from the local road network. The new golf course trips to the proposed site south of Grevatt's Lane have been added onto the local road network for the future scenario based on the TA to support the proposed golf course site.*
- 1.35 *The proposed traffic movements to the new golf course are based on those provided in the TA submitted to support the proposed golf course application. Whilst the new site will be in a location which is less accessible to sustainable travel, a review of the TRICS database for standalone sites shows lower trips in the AM peak compared to the existing use, therefore it has been considered appropriate to use the existing trips for the new golf course site.*
- 1.36 Noted that the trips associated with the proposed golf course are considered acceptable.

Distribution

- 1.37 *The distribution of traffic movements to and from the site has been based on the 2011 Journey-to-work Census database as set out in Table 2.2 found in the TA. Whilst the mode of travel, post the COVID Pandemic has changed, the workplace destinations is considered to still be relevant. The use of this data has been confirmed as being acceptable in WSCC pre-app discussions.*
- 1.38 Noted that the distribution using the 2011 journey to work census data is considered acceptable.

Impacts at junctions tested and proposed mitigation, where proposed.

- 1.39 ***A29 Shripney Road/A259 Felpham Relief Road roundabout** - The modelled results show that in 2031 with the strategic development sites, this junction could potentially exceed its design capacity. The change with the proposed development traffic shows a maximum change in Ratio of Flow to Capacity (RFC) of 0.04.*
- 1.40 ***Shirley Drive/Golf Links Road/Downview Road/proposed site access priority junction** - The results show that this junction will operate well within its design capacity and will only have minimal impact on existing traffic movements on Golf Links or Shirley Drive.*
- 1.41 ***A259/B2259 Flansham Lane/Hoe Lane roundabout** - The above results show that this junction is currently operating within its design capacity although in 2031 it will be operating close to its design capacity. The increase in RFC with development is 0.03 on arms that are close to capacity. An increased in RFC of less than 0.10 on arms that are close-to or exceeding capacity is considered negligible and not likely to materially affect the operation of this junction compared to the without development scenario.*

- 1.42 *The main issue with the B2259 at this junction is that the approach width and lack of centreline markings for northbound traffic is such that it tends to lead to single lane queueing, whereas with some minor widening and road markings applied delineating a two-lane approach, this might have the effect of improving capacity at this junction. As such, the applicant should explore this, albeit being mindful of the need to also accommodate (and not prejudice) the adjacent cycling facilities. Any changes must be Safety Audited.*
- 1.43 A proposed arrangement as advised above is included in **Appendix 4** together with swept path analysis. As this improvement will affect the operation of the junction the junction has been assessed in Junctions 9 for the 2031 scenario with development and the results are provided below and the outputs are included in **Appendix 5**.
- 1.44 Table 1.1 – B2259/A259 Proposed Junction Improvements

Scenario	A259 (East)		B2259		A259 (West)		Hoe Lane	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
2031 Base + Development AM Peak	0.51	1	0.82	4	0.97	17	0.50	1
2031 Base + Development PM Peak	0.71	2	0.80	4	0.96	15	0.39	1

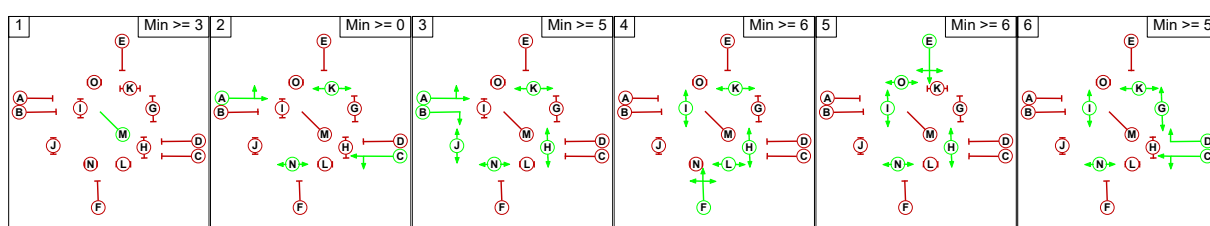
- 1.45 The above results show that the impact on the B2259 arm is reduced with the RFC reducing by 0.15 in the AM Peak and by 0.17 in the PM Peak when compared to the 2031 Base + Committed scenario provided in the TA.
- 1.46 This proposed improvement has also been subject to an independent Road Safety Audit which is included in **Appendix 3** together with the Designers Response.
- 1.47 *B2259/B2132 Middleton Road mini roundabout - The applicant has said that the assessment of this junction has used the "Slope Intercept" values to reflect the observed queues more accurately. In this regard it is only possible to provide one value which means that it is not possible to accurately model the queues in both the AM and PM peaks.*
- 1.48 *Notwithstanding this, the results show that this junction is currently operating close to its design capacity. In 2031 without development, this junction is expected to exceed its design capacity.*
- 1.49 *The impact of the proposed development traffic will see a maximum RFC increase of 0.15 which will occur on the B2259 (West) arm of the junction in the AM Peak*
- 1.50 *This junction is currently constrained with limited highway land available and a large number of statutory undertaker plant and access chambers, together with two mobile phone masts in this location. However, the applicants have said that it is possible to provide some improvements to the B2259 (west) arm which includes the widening of the approach to two lanes. Furthermore, it is possible to reduce the width of the island on B2259 (north) arm and increase the lane width of the existing two-lane approach, all of which are within the extent of public highway.*
- 1.51 *Looking at the traffic figures supplied by the applicant, some of these (predominantly B2259) appear somewhat large and unusual. As such, it is difficult to establish whether they are correct or not. Applicant to explain please.*
- 1.52 The observed flows are correct although they do include the movements from the Tesco express which may be the reason why the movements appear higher than would be expected.

- The queues therefore will be an over estimation as some vehicles will be queuing from within the Tesco express car park and not just on Middleton Road. It should also be advised that growth has been applied equally to all movements although in reality the movements in and out of the Tesco express are unlikely to increase much beyond the level they are currently.
- 1.53 *Additionally, the proposed changes must be safety audited. Furthermore, swept path diagrams for a selection of vehicles should be provided for the access point to Tesco (western-arm) where the majority of the changes are proposed (and take into account vehicles parked within the Tesco entrance which do occasionally lead to junction 'blocking').*
- 1.54 The proposed arrangement has been amended following further comments received from WSCC and tracked to ensure that movements into and out of the Tesco express are not adversely affected. A copy of the swept paths is included in **Appendix 6**.
- 1.55 The tracking allows for vehicles parking on the access road outside of the store which is understood to be a regular occurrence. With regard to deliveries to the site, a delivery management plan was prepared by Tesco Stores Ltd and approved by WSCC which required the area outside of the store to be coned off prior to vehicle arriving. The expectations identified in the TA that was submitted to support the application for the proposed store is that large delivery vehicles would access the site from the west, however tracking has been undertaken for all potential movements. In addition **Appendix 6** also includes tracking of delivery vehicles in the existing situation to demonstrate that the movement of vehicles into the site is unchanged by the proposals.
- 1.56 The proposal has also been subject to an independent Stage 1 RSA, a copy of which is included in **Appendix 3** together with the designer's response.
- 1.57 *B2259/Summerley Lane mini-roundabout - The results show that this junction is operating close to its design capacity in the AM Peak on the B2259(E) arm, this arm exceeds its design capacity in 2031 in the AM Peak but remains within capacity in the PM Peak. The maximum change on B2259(E) in RFC is 0.02 and therefore the applicant considers that the development traffic is considered to be minimal. The other arms remain within capacity until 2031 with development.*
- 1.58 *Whilst there will be some additional delay at this junction with the development, the applicant considers that the traffic impact is not considered severe and therefore no mitigation measures are considered necessary at this junction.*
- 1.59 *B2259/Downview Road/Felpham Road signalised junction - This junction is a signalised junction and has been modelled using LINSIG. The junction currently operates using MOVA 'Microprocessor Optimised Vehicle Actuation' which enables the junction to alter the green times and in turn operate more efficiently than a fixed cycle time system.*
- 1.60 *The applicant states that LINSIG does not currently allow for this type of operation in the modelling software therefore to provide a model that simulates as close as possible to the existing arrangement the signal timings have been based on a review of the observed signal timings. The assessments below include the average cycle time of 120 seconds and the maximum observed cycle time of 169 seconds.*
- 1.61 *The modelled results show that the junction is currently operating close to its design capacity in the AM Peak and exceeds its design capacity in 2031 with the proposed development traffic.*

- Whilst MOVA will vary its cycle time to minimise the impact the 2031 considers the impact using both the average cycle time of 120 seconds and also the maximum observed cycle time of 169 seconds, with either option the junction is likely to exceed its design capacity although the applicant considers that in 2031 the longer cycle time will operate more regularly in the peak periods.*
- 1.62 *To improve the operation of this junction the proposal is to provide staggered crossing facilities on the Downview Road and the Felpham Road arms, this will remove the need for an all-round red stage when the pedestrian phase is called improving the operational capacity. All improvements shown are within the extent of public highway.*
- 1.63 *The applicant considers that based on the results set-out in the TA, these show that with the proposed improvements, the junction will operate better than it does currently. Therefore, the applicant considers that the measures will ensure that the junction will continue to operate within capacity beyond 2031.*
- 1.64 *The CHA has had a detailed look at the LINSIG calculations provided by the applicants and the following comments are made:*
- 1.65 *Some of the scenarios have unacceptable (overlong) cycle times of 169 seconds. Altering these to a more realistic 120 seconds still produces results showing the junction operates over capacity, yet to a lesser extent, even before the benefits of MOVA are considered. For example, Scenario 13 of the Proposed Model has a PRC of 20% with a cycle time of 169 seconds, yet 120 seconds still shows 11.4% over capacity. Neither of which work well, considering this scenario does not take into account additional traffic generated by the development.*
- 1.66 *The assessment includes for two scenarios one with a fixed cycle time of 120 seconds and the other with a fixed cycle time of 169 seconds. The 169 second cycle time was observed on site during the busier peak periods. MOVA will adjust the cycle times to suit the traffic flows, however this cannot be replicated in LINSIG so a review of both cycle times was carried out.*
- 1.67 *Following further discussions with WSCC, all scenarios have been re-run based on a maximum cycle time of 120 seconds.*
- 1.68 *The staging of the proposed model is also of concern. Presently, east and westbound traffic is held for the respective right turning vehicles to receive green. Under the staging for the proposed model, these right turning vehicles receive a green at the same time as the through traffic, progressing in gaps as they see fit. Given the frequency of right turning vehicles shown within the flow groups - particularly once the development has been completed - the 2031 figures show as much as 199 pcu/hr. This is too high and therefore the CHA cannot agree to this staging alteration on safety grounds.*
- 1.69 *Altering the staging to represent the current arrangement also has an effect on the model. Taking the above Scenario 13 as an example, the PRC changes from 11% to -25.5% which suggests some possible improvement. Unfortunately, the delays experienced increase greatly; 25.35 pcu/hr up to 140.76 pcu/hr. These delays are not acceptable in this scenario with eastbound queues predicted to be in excess of 550m, as a result of the high numbers of traffic turning right from the east.*

1.70 Therefore, based on the work done to date for this junction, the CHA cannot accept what is currently proposed by the applicant. The applicant is, of course, invited to re-evaluate the scenarios here and/or to look to see if other options and/or changes might be available at the junction.

1.71 Following on from discussions with WSCC, the staging of the proposed model has been amended to reflect closely the existing arrangement a copy of the revised modelling output is included in **Appendix 7** and the staging diagram is illustrated below showing that the right turn into Downview Road is a separate phase that allows them to turn without waiting for gaps.



1.72 The output results are provided in the tables below.

Existing Layout – 120 Second Cycle Time

Scenario	Downview Road		Felpham Way (East)		Felpham Road		Felpham Way (West)		PRC (%)
	Max Deg of Sat	Max Q	Max Deg of Sat	Max Q	Max Deg of Sat	Max Q	Max Deg of Sat	Max Q	
AM Peak									
2021 Base	88.4%	9	95.3%	34	89.0%	7	76.5%	20	-5.9
2031 Base + Committed & Allocated Dev	102.7%	15	108.0%	76	61.5%	8	95.1%	32	-20
2031 Base + committed + Proposed Dev	117.1%	36	116.4%	108	81.5%	8	102.6%	50	-30.1
PM Peak									
2021 Base	85.0%	7	80.8%	14	84.5%	8	89.6%	28	0.2
2031 Base + Committed & Allocated Dev	97.1%	9	88.5%	20	100.7%	14	103.6%	57	-15.1
2031 Base + committed + Proposed Dev	119.1%	22	111.3%	22	111.5%	21	117.2%	114	-32.3

Proposed Layout – 120 Second Cycle Time

Scenario	Downview Road		Felpham Way (East)		Felpham Road		Felpham Way (West)		PRC (%)
	Max Deg of Sat	Max Q	Max Deg of Sat	Max Q	Max Deg of Sat	Max Q	Max Deg of Sat	Max Q	
AM Peak									
2031 Base + committed + Proposed Dev	83.0%	9	91.4%	34	76.1%	6	77.9%	23	-1.5
PM Peak									
2031 Base + committed + Proposed Dev	86.3%	7	78.6%	16	86.3%	9	86.6%	29	4.0

- 1.73 The above results are improved compared to the original TA assessment work as the LINSIG outputs were not previously optimised for PRC,
- 1.74 As can be seen, the proposed measures will improve the Practical Reserve Capacity (PRC) of the junction by 28.6% in the AM Peak and 28.3% in the PM Peak. The measures will significantly improve the operation of a junction providing results similar to the existing levels even with committed/ allocated developments and the proposed development traffic.
- 1.75 *Additionally, any changes must be safety audited. Applicant to provide the Audit for the CHA to review. It is acknowledged that swept path tracking diagrams have been provided showing a bus and large fixed-axle HGV's. However, swept path diagrams for articulated vehicles should also be provided.*
- 1.76 The proposed arrangement has been subject to an independent Stage 1 RSA a copy of which is included in **Appendix 3** together with the designer's response.
- 1.77 The swept paths for the junction including a 13.4m articulated vehicle and a 16.5m max legal articulated vehicle have been carried out are included in **Appendix 8**. It should be noted that a max legal artic cannot currently turn left into Downview Road from B2259 and therefore has not been shown for the proposed layout. All other movements can be achieved.
- 1.78 *B2259/Drygrounds Lane Close roundabout - The data supplied in the TA shows that this junction currently operates within its design capacity although there do appear to have been longer queues observed forming on B2259 Northbound during the AM Peak, although the PM Peak model reflects more closely the observed queues. Therefore, the additional queuing in the AM Peak may have been as a result of other delays or incidents on B2259 at the time of the survey.*
- 1.79 *The assessment shows that this junction will continue to operate well within its design capacity with the proposed development traffic.*
- 1.80 *B2259/Upper Bognor Road/Ocean Hotel Road roundabout - The junction is shown to operate within its design capacity and will not be affected by the proposed development traffic.*

- 1.81 ***B2259/High Street/Mostar Avenue roundabout** - The results show that this junction currently operates within its design capacity and will continue to operate within capacity with the proposed development.*
- 1.82 ***High Street/Gloucester Road mini roundabout** - The results show that this junction is currently operating within its design capacity and will continue to operate within capacity with the proposed development traffic.*

Parking

- 1.83 *The applicant states that parking on the site will conform to Arun District Council's parking standards as set out Section 4 of the TA. They also state that electric charging facilities (EV) will be provided at all properties that have a garage or driveway. On the latter subject, the applicant should be mindful of proposed changes to EV criteria and policy proposed by the UK Government which may require provision above the current WSCC and Arun DC standards. Furthermore, any spaces not 'actively' provided for will need to be 'passively' provided for to assist with future upgrading to 'active' points for charging.*
- 1.84 *The potential requirement for additional electric charging points is noted and will be provided as required.*

Travel Plan

- 1.85 *In order to encourage new residents to travel to/from the site by more sustainable modes of travel, a site-wide Residential Travel Plan has been produced. The Travel Plan has been submitted as a separate document as part of this application and seeks to reduce single car occupancy and encourage the use of public transport, cycling and walking.*
- 1.86 *There are a range of facilities that are within easy walking or cycling distance of the site reducing the need for new residents to use their cars. The development proposal will include a network of footways/cycleways. The layout has been designed to allow cycling on roads where the volume of traffic movements and speeds will be low and also along dedicated off road routes which traverse the site.*
- 1.87 *The Travel Plan includes for a Travel Information pack to be issued to each household which will provide a range of information including:*
- *Walking and cycling routes;*
 - *Bus stop locations, routes, and timetables;*
 - *Train Station locations, routes, and timetables; and*
 - *Web sites which include:*
 - *Journey Planner (all sustainable routes available for any journey) www.transportdirect.info;*
 - *Cycle Journey Planner (with quietest, balanced and quickest route with average times) www.cyclestreet.net;*
 - *Cycle maps and cycle information - www.sustrans.org.uk;*
 - *Bus information via Traveline - www.traveline.org.uk;*

- Calorie calculator (gives you an idea on how many calories burnt by walking or cycling) www.eatwell.gov.uk/healthydiet/healthyweight/caloriescalculator;
- Carbon calculator (this works out the equivalent amount of carbon used or saved when using a car / not using a car) - www.actionco2.direct.gov.uk/index.html;

and,

- Car Sharing schemes such as the westsussexcarshare.com scheme.
- The key aims of the Travel Plan are to increase walking and cycling as well as reducing single occupancy car travel.

1.88 In addition to the above, the applicant should:

1. consider inclusion of a car club;
2. provide a trip rate reduction target; and,
3. Include commitment to SAM surveys.

1.89 Both the Travel Plan and it's monitoring fee (currently £3,500 at the time of writing) will need to be secured within a S106 Agreement in accordance with WSCC policy.

1.90 The Travel Plan has been updated to address the points raised above including the trip rate reduction target (section 6) and SAM Surveys (Section 4). The Travel Plan also includes for the potential to include a car club within the site although the finalised details will need to be discussed further with the relevant operators such as vehicle type, number of cars, location etc.

1.91 It is accepted that there is a monitoring fee associated with the Travel Plan.

Conclusion

1.92 Based on the traffic data provided so far, in particular for the Downview traffic signal junction, the B2259/Flansham Lane/Hoe Lane junction and the B2259/Middleton Road junction, the CHA raises concerns with the impact that the additional development traffic would have on these junctions. The applicant is invited to respond to this in an endeavour to try to overcome the concerns stated. Additionally, the following information is required in order that the CHA can consider other parts of the proposal further. The details of this can be found in the main body of this response but are summarised below:

1. Provision of amended plan/s showing the site access with foot and cycle revisions as mentioned (+ Safety Audit of the same).
2. Consideration of provision of a foot/cycle way from the point the existing shared-use path emerges from the adjacent housing estate to Shirley Drive and linking to Downview Road and Golf Links Road (+ Safety Audit of the same).
3. Consideration of extended cycle infrastructure on Downview Road (+ Safety Audit of the same).
4. Safety Audit for Downview Road/Felpham Way/Felpham Road junction changes and the same for the works shown at the junction of Felpham Way with Middleton Road (Tesco roundabout) + Designer's Response/Road Safety Audit Log.
5. Commitment to provision of an LTN 1/20-compliant off-road path for pedestrians and cyclists from the corner of the school site (Downview Primary) through the site to the

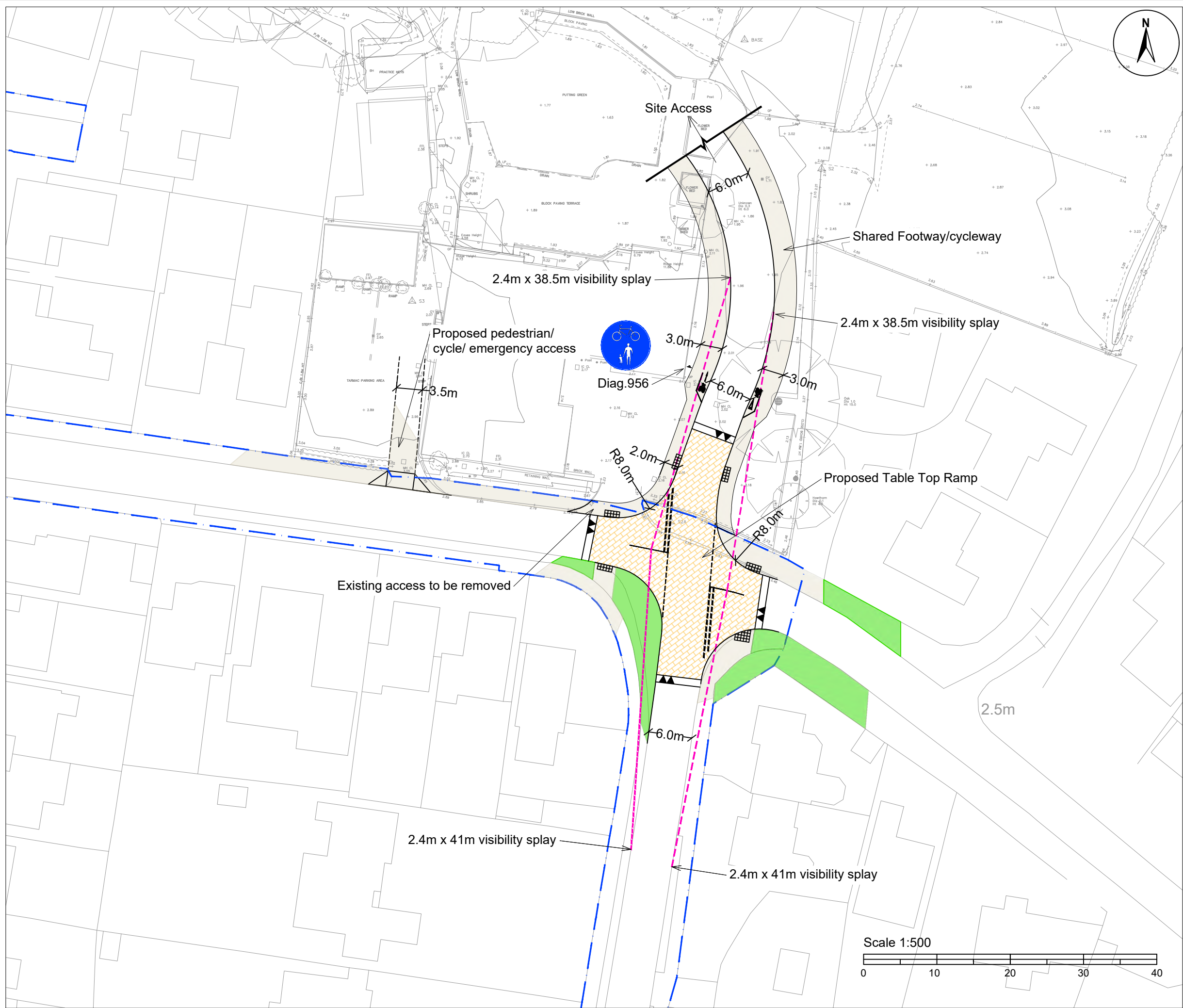
existing shared-use path that runs along the eastern boundary of the site – details to be submitted at any reserved matters/discharge of condition stage (affects PRow – Public Footpaths – 153 and 154) and also to a continuation of the path through to the A259.

- 6. Applicant to respond to the CHA comments found alongside the as-submitted Road Safety Audit comments made above in this response contained under 'Overseeing Organisation's Response' and 'Agreed Action'.*
- 7. Bus stop improvements to be Safety Audited.*
- 8. Commitment to provision of real-time passenger information to be provided at **all** bus stops.*
- 9. Swept path vehicle analysis for articulated heavy goods vehicles to be provided for Downview Road/Felpham Way traffic signal junction works.*
- 10. Swept path vehicle analysis for a selection of vehicles (including heavy good vehicles) at the revised access to Tesco adjacent to the B2259/Middleton Road junction.*
- 11. Travel Plan update.*

1.93 It is considered that all of the above points have been addressed within this TN.

Appendices

Appendix 1 – Proposed Site Access Layout & Swept Path Analysis inc. Addendum RSA Note & Designers Response



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 2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
 3. This drawing is to be read in conjunction with all relevant scheme drawings.

Key:

Extent of public highway

For swept path analysis see drawing JNY10830-11C

F	Cycle Lanes moved away from pedestrian crossing point as per RSA recommendations	MA		18.06.22
E	Access amended to accommodate 3m cycle/footway on western side	AJ	MA	26.04.22
D	Following RSA	AJ	MA	25.11.21
C	Shirley Drive arm adjusted	AJ	MA	10.11.21
B	Table Top Ramp & Footway cycleway added	MA		15.10.21
A	Vis splay added and access realigned	AJ	MA	11.10.21
Rev	Description	By	CB	Date



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Project Bognor Regis

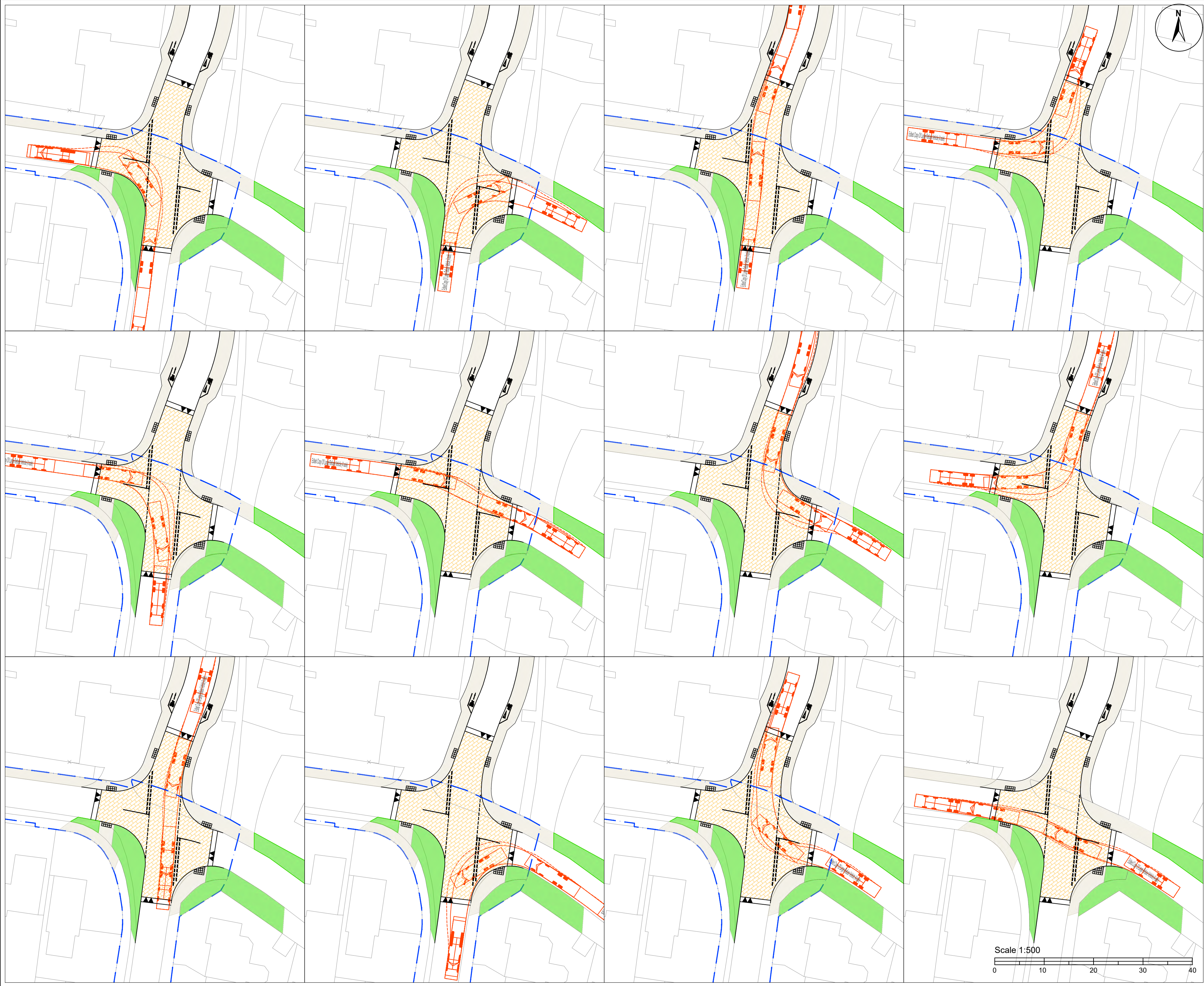
Title Proposed Site Access

Status Drawn By PM/Checked by
INFORMATION AJ MA

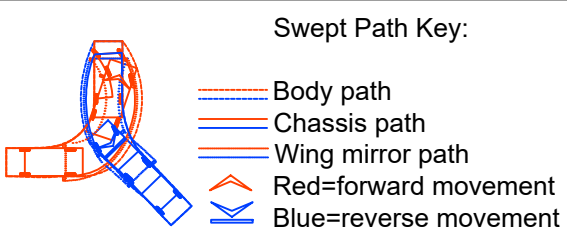
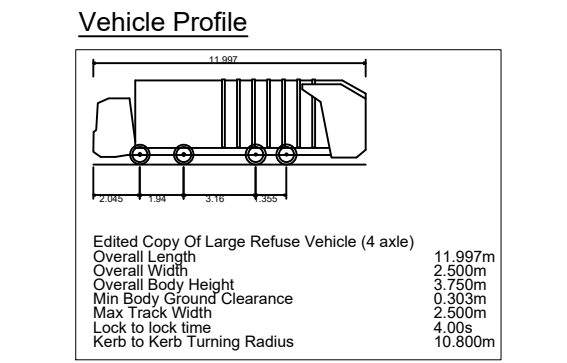
Project Number Scale @ A3 Date Created
JNY10830 1:500 21/09/21

RPS Drawing/Figure Number Rev
JNY10830-04 F

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PRELIMINARY
NOT FOR
CONSTRUCTION

Based on drawing JNY10830-04F

C	Cycle route amended as per RSA	MA		18.05.22
B	Access width amended from 6m to 5.5m	AJ	MA	26.04.22
A	Following RSA comments	AJ	MA	25.11.21
Rev	Description	By	CB	Date



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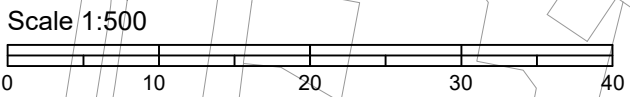
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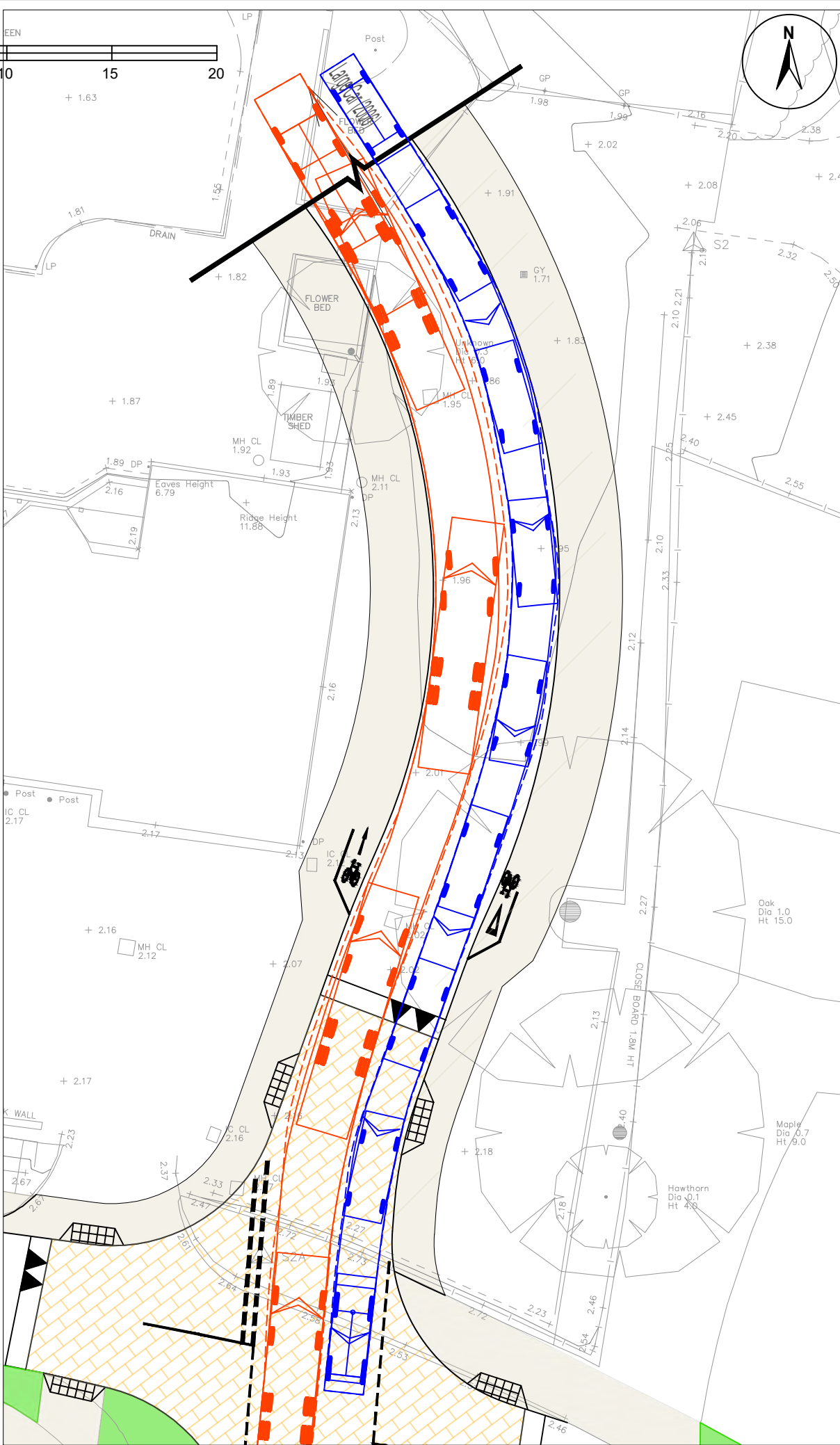
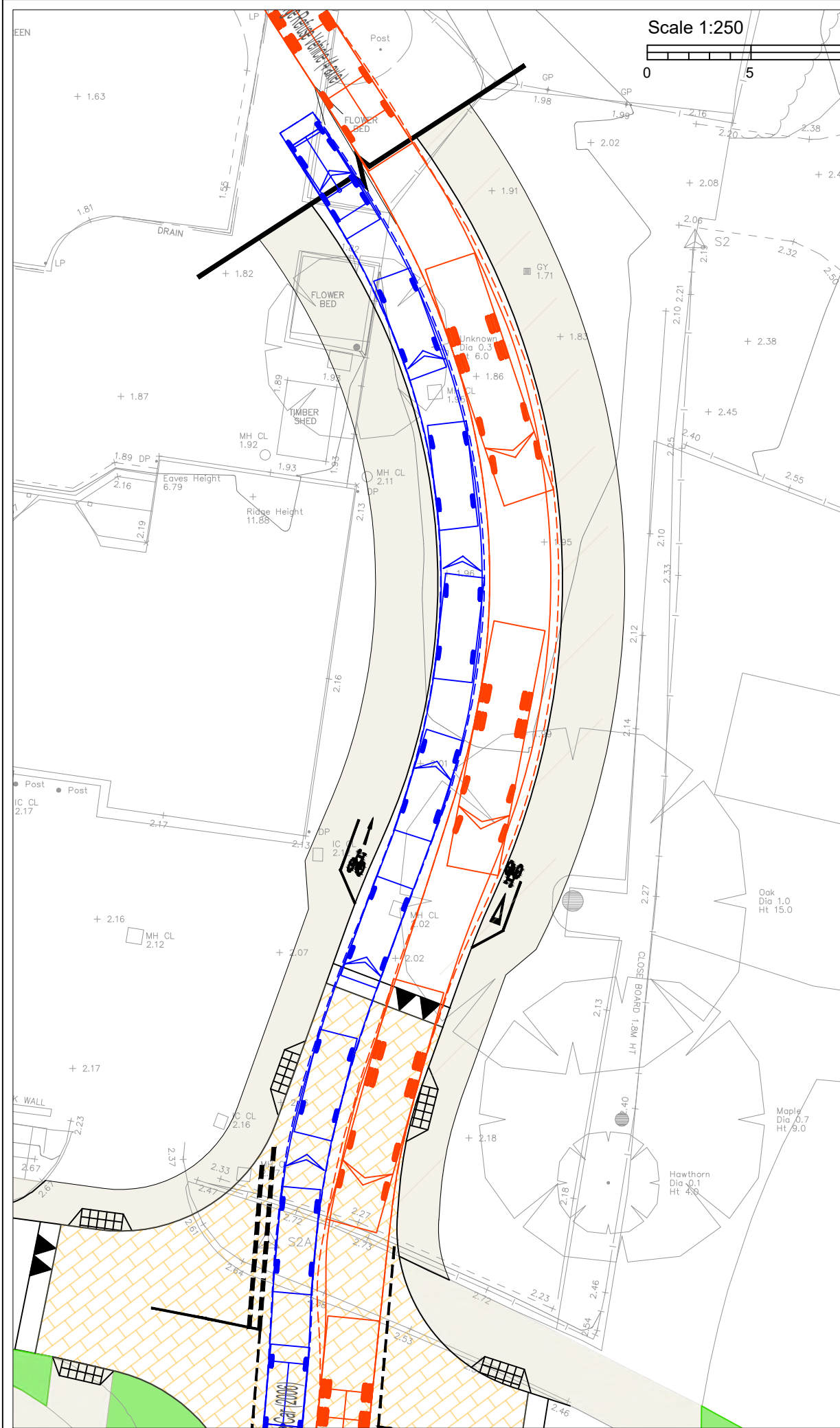
Project Bognor Regis

Title Proposed Site Access
Swept Path Analysis

Status	Drawn By	PM/Checked by
INFORMATION	AJ	MA
Project Number	Scale @ A2	Date Created
JNY10830	1:500	21/09/21
RPS Drawing/Figure Number	Rev	
JNY10830-11	C	

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 3. This drawing is to be read in conjunction with all relevant scheme drawings.

Vehicle Profile

Edited Copy Of Large Refuse Vehicle (4 axle)

Overall Length	11.997m
Overall Width	2.500m
Overall Body Height	3.750m
Min Body Ground Clearance	0.303m
Max Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.800m

Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m

For swept path analysis see drawing
JNY10830-11C

A	Layout updated as per JNY10830-04F	MA		18.05.22
Rev	Description	By	CB	Date



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Project Bognor Regis

Title Proposed Site Access Swept Path Analysis

Status Drawn By PM/Checked by
INFORMATION AJ MA

Project Number Scale @ A3 Date Created
JNY10830 1:250 26/04/22

RPS Drawing/Figure Number Rev
JNY10830-23 A

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1 INTRODUCTION

1.1 Design Manual for Roads & Bridges – GG 119 Road Safety Audit

The Terms of Reference for the undertaking of Road Safety Audits are as described in the Highways England's Design Manual for Roads and Bridges (DMRB) document GG 119 - Road Safety Audit. This Standard sets out the procedures that are required to implement Road Safety Audits - defining the relevant schemes and stages in the design and construction process at which audits shall be undertaken. It is the Standard generally adopted by most Highway Authorities for highway improvement schemes.

2 DESIGN CONSIDERATIONS

2.1 Introduction

Firstly, it is important to reiterate that the Road Safety Audit process is to identify any aspects of the proposed scheme that may give rise to road safety concerns and, where possible, to suggest modifications that would improve the road safety of the resultant scheme. It is not for the purposes of technical audit. As such, it is the responsibility of the Design Organisation to ensure that the proposed scheme meets the relevant Design Standards.

The terms of reference of this Audit (Addendum Note) are as described in GG 119. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.2 Design Changes

RPS has submitted one drawing which show revisions since the original road safety audit was undertaken.

JNY10830-04 Rev E	Proposed Site Access
-------------------	----------------------

The Design Organisation provided the following information on these proposals:

- A shared footway/cycleway facility is proposed on both sides of the development access road.

No Departures from Design Standards have been reported by the Design Organisation RPS.

3 PREVIOUS SAFETY AUDITS - TIMELINE

3.1 Stage 1 Road Safety Audit - November 2021 – Ref TBL19/247

The safety aspects of the Proposed Site Access at Golf Links Rad, Bognor Regis were the subject of comment in the November 2021 Stage 1 Road Safety Audit undertaken by Taylor Bowie Ltd.

A Designers Response to the November 2021 Stage 1 Road Safety Audit has not been supplied to the Audit Team.

4 ROAD SAFETY AUDIT ADDENDUM NOTE

4.1 Safety Implications of Proposed Design Changes

Taylor Bowie Ltd has been instructed to review the Drawing(s) listed in Para 2.2.

The Stage 1 Road Safety Audit raised three problems:

PROBLEM	General
Location	Throughout the scheme extents (Drg No. JNY10830-04 Rev E)
Summary	Insufficient drainage may result in single vehicle loss of control type collisions or a slip/fall hazard for pedestrians/cyclists.
Drainage proposals have not been submitted at this stage of audit. The implementation of the proposals will result in a significant change to the existing kerb lines. Lack of surface water drainage may result in surface water ponding with the potential slide risk for vehicles during wet and subsequent cold/freezing weather conditions. This may increase the risk of single vehicle loss of control type collisions. In the vicinity of new crossing facilities this may result in an increased risk of slip/fall by pedestrians.	
RECOMMENDATION	
The Audit Team recommends that at the next stage of design, new drainage appropriate for the proposed highway works is incorporated into the scheme proposals.	

Drawing(s) Amendment/Note: No changes indicated on the revised drawing.

Audit Team Review: This road safety concern remains.

PROBLEM	1
Location	Proposed junction (Drg.no. JNY10830-04 Rev E)
Summary	Increased risk of kerb strikes and/or vehicle to pedestrians/cyclist type collisions.
As part of the scheme proposals the existing kerb radii are to be significantly reduced to accommodate the new through road layout and table top hump feature. At this stage of audit, vehicle swept paths have not been provided for this junction. without this information it is unclear whether the relevant design vehicles that may use this junction can safely carry out their turning movements without hitting kerbs or overrunning adjacent verge/footway areas. This may increase the risk of kerb strikes and vehicle to pedestrian/cyclist type collisions.	

RECOMMENDATION

The Audit Team recommend that vehicle swept paths are carried out to confirm that vehicles can safely negotiate the reduced kerb radii without overrunning footway/verge areas.

Drawing(s) Amendment/Note: No changes indicated on the revised drawing.

Audit Team Review: This road safety concern remains.

PROBLEM	2
Location	Shared facility along eastern side of development access road (Drg.no. JNY10830-04 Rev E)
Summary	Increased risk of cyclist to pedestrian type collisions.
As part of the scheme proposals a shared facility is to be provided along the eastern side of the new section of development access road. The facility along the western side of the access road and all other existing facilities are footway only. At this stage of audit, no signing or tactile paving warning blind/partially sighted pedestrians of the likely presence of cyclists have been proposed. This may result in an increased risk of cyclist to pedestrian type collisions along this eastern facility.	
RECOMMENDATION	
The Audit Team recommend that the appropriate form of tactile paving and signing is provided where required.	

Drawing(s) Amendment/Note: No changes indicated on the revised drawing.

Audit Team Review: This road safety concern remains.

4.2 New Safety Implications of Proposed Design Changes

PROBLEM	3
Location	Development access road (Drg.no. JNY10830-04 Rev E)
Summary	Increased risk of cyclist to pedestrian type collisions.

As part of the scheme proposals, guidance is to be provided for cyclists within the length of the table top measure for cyclists to join/leave the off-road shared facility on either side of the development access road.

Due to the compact nature of the scheme proposals, this results in a pedestrian crossing area and associated tactile paving, corduroy paving (Problem 2) and this guidance for cyclists over a short distance.

This is likely to result in confusion for users of the facility and may increase the risk of cyclist to pedestrian type collisions in this area.

RECOMMENDATION

The Audit Team recommend that a greater distance is provided between the proposed measures or that the guidance is removed in order to minimise confusion and associated collision risks.

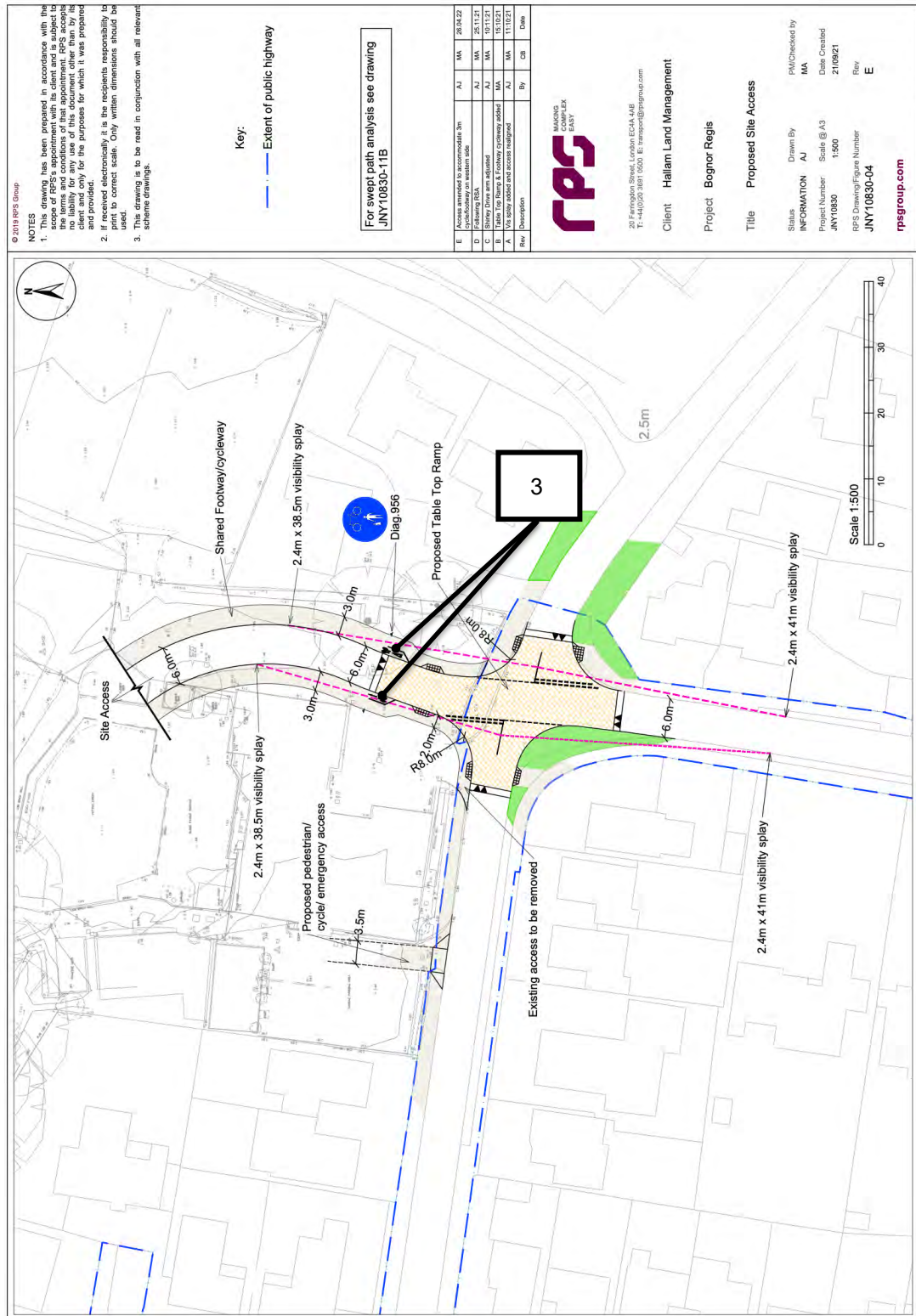
5 Conclusion

The Audit Team are satisfied that, pursuant to items raised in the Stage 1 RSA (referenced in Para 3.3 and 4.1), that the drawing submitted as part of this Addendum Note raises one additional safety concern as a result of the proposed changes (Para 4.2 - Problem 3).

6 Report Approval

Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	15 th May 2022

Golf Links Road, Bognor Regis
Proposed Site Access
 RSA Addendum Note - May 2022



BOGNOR REGIS GOLF COURSE – PROPOSED RESIDENTIAL ACCESS

Stage 1 Road Safety Audit – Designers Response

JNY10830-05
RSA 1 Designers
Response
Version 2
19 May 2022

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
01	Designers Response to RSA	MA	BP	MA	26 November 21
02	Addendum Note Added	MA	BP	MA	19 May 2022

This report was prepared by **RPS Consulting Services Ltd** ('RPS') within the terms of its engagement and in direct response to a scope of services. This report is strictly limited to the purpose and the facts and matters stated in it and does not apply directly or indirectly and must not be used for any other application, purpose, use or matter. In preparing the report, RPS may have relied upon information provided to it at the time by other parties. RPS accepts no responsibility as to the accuracy or completeness of information provided by those parties at the time of preparing the report. The report does not take into account any changes in information that may have occurred since the publication of the report. If the information relied upon is subsequently determined to be false, inaccurate or incomplete then it is possible that the observations and conclusions expressed in the report may have changed. RPS does not warrant the contents of this report and shall not assume any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report howsoever. No part of this report, its attachments or appendices may be reproduced by any process without the written consent of RPS. All enquiries should be directed to RPS.

Prepared by:

Prepared for:

RPS Consulting Services Ltd

Hallam Land Management

Name: Melanie A'Lee
Title: Associate Director

20 Farringdon Street, London EC4A 4AB

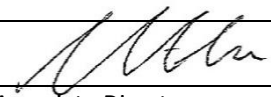
T 020 7280 3300
E

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
3.2- General	Summary: Insufficient drainage may result in single vehicle loss control type collisions or a slip/fall for pedestrians / cyclists Detail - Drainage proposals have not been submitted at this stage of audit. The implementation of the proposals will result in a significant change to the existing kerb lines. Lack of surface water drainage may result in surface water ponding with the potential slide risk for vehicles during wet and subsequent cold/freezing weather conditions. This may increase the risk of single vehicle loss of control type collisions. In the vicinity of new crossing facilities this may result in an increased risk of slip/fall by pedestrians. Recommendation: The Audit Team recommends that at the next stage of design, new drainage appropriate for the proposed highway works is incorporated into the scheme proposals.	Recommendation Agreed. At the detail design stage, a review of drainage will be undertaken.	
3.3 - 1	Summary: Increase risk of kerb strikes and/or vehicle to pedestrian /cyclist type collisions. Detail - As part of the scheme proposals the existing kerb radii are to be significantly reduced to accommodate the new through road layout and tabletop hump feature. At this stage of audit, vehicle swept paths have not been provided for this junction. Without this information it is unclear whether the relevant design vehicles that may use this junction can safely carry out their turning movements without hitting kerbs of overrunning adjacent verge/ footway areas. This may increase the risk of kerb strikes and vehicle to pedestrian/ cyclists' type collisions. Recommendation: The Audit Team recommend that vehicle swept paths are carried out to confirm that vehicles can safely	The existing kerb radii are excessive for a residential area and encourage high vehicle speeds. The radii has been reduced to slow vehicle movements down and make it more accessible for pedestrians. vehicle tracking has been carried out and included in the TA. Additional Tracking has also been undertaken based on the amended arrangement.	

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	negotiate the reduced kerb radii without overrunning footway/verge areas.		
3.4 - 2	Summary: Increased risk of cyclists to pedestrian type collisions Detail - As part of the scheme proposals a shared facility is to be provided along the eastern side of the new section of development access road. The facility along the western side of the access road and all other existing facilities are footway only. At this stage of audit, no signing or tactile paving warning blind / partially sighted pedestrians of the likely presence of cyclists have been proposed. This may result in an increased risk of cyclist to pedestrian type collisions along this eastern facility. Recommendation: The Audit Team recommend that the appropriate form of tactile paving and signing is provided where required.	Recommendation Agreed. The detail of signage and tactile paving has been added to the proposed access arrangement.	
3 Addendum Note	– Summary – Increased risk of cyclists to pedestrian type collisions. Detail – As part of the scheme proposals, guidance is to be provided for cyclists within the length of the table top measures to join/leave the off-road shared facility on either side of the development access road. Due to the compact nature of the scheme proposals, this results in a pedestrian crossing area and associated tactile paving, corduroy paving (problem 2) and this guidance for cyclists over a short distance. This is likely to result in confusion for users of the facility and may increase the risk of cyclist to pedestrian type collisions in this area. Recommendation – The Audit Team recommend that a greater distance is provided between the proposed measures	Recommendation accepted, the distance between the pedestrian crossing point and the point where cyclists are advised to join/leave the road has been increased and shown on drawing No, JNY10830/04F	

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	or that the guidance is removed in order to minimise confusion and associated collision risks.		

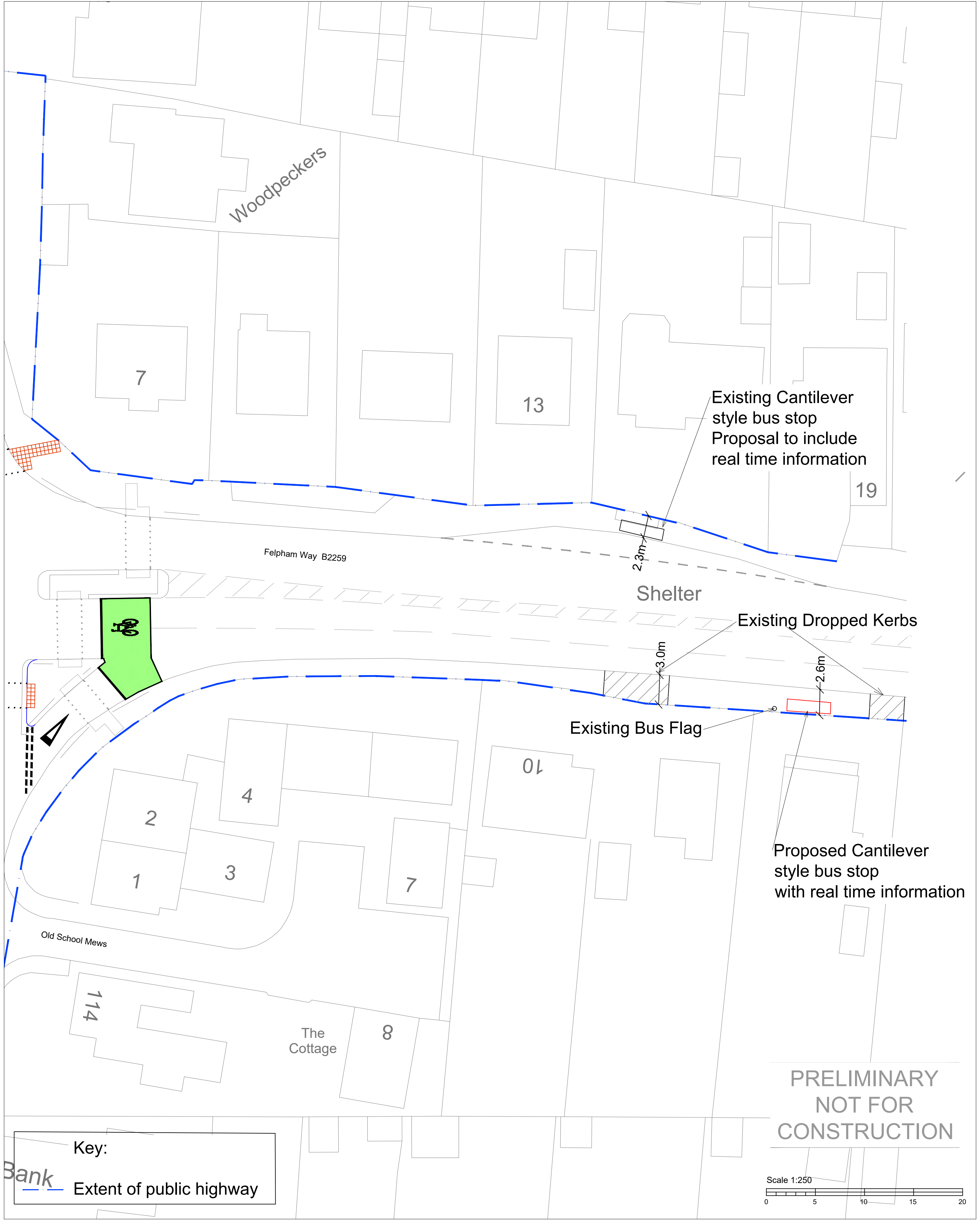
Design Organisation Statement

On behalf of the design organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation	
Name	Melanie A'Lee
Signed	
Position	Associate Director
Organisation	RPS
Date	19/05/2022

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and	
2) The agreed RSA actions will be progressed	
Name	
Signed	
Position	
Organisation	West Sussex County Council
Date	

Appendix 2 – Proposed Bus Stop Improvements



rps MAKING COMPLEX EASY 20 Farringdon Street, London EC4A 4AB T: +44(0)20 3691 0500 E: transport@rpsgroup.com	Client Hallam Land Management						Status Drawn By PM/Checked by PRELIMINARY AJ MA	
	Project Bognor Regis						Project Number Scale @ A2 Date Created JNY10830 1:250 18/10/21	
	Title Bus Stop Improvement Plan						RPS Drawing/Figure Number Rev JNY10830-26	
Rev Description		By	CB	Date	rpsgroup.com			

Appendix 3 – Updated & Off Site Highway Improvements RSA & Designers Response

22nd April 2022

Dear Melanie

**FELPHAM ROAD/FELPHAM WAY/DOWNVIEW ROAD JUNCTION
PROPOSED JUNCTION IMPROVEMENTS
STAGE 1 ROAD SAFETY AUDIT**

Please find enclosed the signed and dated PDF of the Stage 1 Road Safety Audit (RSA) Report for this project.

As referred to in Section 1.3 of the RSA Report, there is one issue identified and observation made during the Stage 1 Road Safety Audit and site inspection, which the Terms of Reference exclude from the Road Safety Audit Report, but which the Audit Team wishes to draw to the attention of yourself and the Overseeing Organisation:

- i. Whilst it may be a drawing error, the northern arm of the junction appears to be missing some roadmarkings to guide southbound vehicles intending to turn right into Drygrounds Lane.

I look forward to receiving your response to this Covering Letter and the provision of the RSA Decision Log for the purposes of retention on my file.

Should you have any queries, please do not hesitate to contact me.

Yours sincerely



Sarah Bowie

FELPHAM ROAD/ FELPHAM WAY/ DOWNVIEW ROAD JUNCTION

Proposed Junction Improvements

Road Safety Audit - Stage 1

Final Report

April 2022

TBL19/287

Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

REPORT APPROVAL

Project Details

Project Title	Felpham Road/Felpham Way/Downview Road Junction		
Project Subtitle	Proposed Junction Improvements		
Road Safety Audit	Stage 1		
Document Reference	TBL19/287 Rev 0	Audit Brief Date	4 th April 2022
Overseeing Organisation	West Sussex County Council		
Design Organisation	Melanie A'Lee	RPS	
Client	-	Hallam Land Management	
Maintaining Agent Details	-	-	

Approvals

This document requires the following approvals:

Name	Title
Sarah Bowie	Audit Team Leader
Linda Irons	Audit Team Member

Distribution

This document has also been distributed to:

Name	Title & Organisation
Melanie A'Lee	Associate Director – RPS (Transport & Engineering)

1 INTRODUCTION

1.1 The Scheme and its Purpose

This report results from a Stage 1 Road Safety Audit (RSA) carried out on proposed highway improvements to the Felpham Road/Felpham Way/Downview Road signal junction, Bognor Regis, West Sussex.

The works consist of minor improvements to this existing four-arm signalised junction consisting of works to improve pedestrian crossing facilities.

1.2 Terms of Reference & Audit Report

The Road Safety Audit Brief was approved and issued by Melanie A'Lee of the Design Organisation. The RSA team has been approved by the Design Organisation.

Table 1 - Audit Team Membership

Membership	Name	Details
Audit Team Leader	Sarah Bowie	IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Audit Team Member	Linda Irons	MCIHT, MSoRSA, HE RSA Cert Comp

The Road Safety Audit was undertaken in accordance with the requirements of GG 119. No additional audit requirements were requested. The audit comprised of an examination of the brief and the documents provided to the Audit Team, listed in **Appendix A**.

The audit took place at Taylor Bowie Ltd Cambridgeshire office during April 2022 and both Audit Team Members examined the site together in daylight hours on the morning and afternoon of 9th April 2022 between the times of 0930 and 1030hrs. The weather during the site visit was mild and sunny. The carriageway was dry. Traffic flows at all times were moderate. Two pedestrians and one cyclist were observed during the site visit.

The scheme has been examined, and this report compiled only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

No Departures from Standards (DfS) have been provided to the Audit Team. It is important that if there are any DfS, then they are submitted to the Overseeing Organisation (OO) as soon as possible with appropriate mitigating measures for the OO to approve.

The Audit Team have been advised of improvements to the existing bus stops located on Felpham Way to the east of Downview Road. Proposals consist of upgrades to the existing bus shelter and provision of real time information. No detail has been provided at this stage of audit, and no safety issues have been raised in this regard. At the next stage of audit it will be important to ensure that the relevant mounting height of any street furniture is achieved and an appropriate footway width is maintained.

All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in **Appendix B** (where applicable).

1.3 Audit Administration

Issues identified during the audit and site visit which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the OO, will be set out in a separate letter. These issues could include maintenance items and operational issues.

In this regard, the Audit Team have made reference to one item as referred to in a covering letter to the Design Organisation, RPS, dated 22nd April 2022. This covering letter should be supplied to the OO and be considered in conjunction with this Stage 1 RSA.

2 ITEMS RAISED AT PREVIOUS ROAD SAFETY AUDITS

No previous Road Safety Audits have been undertaken on these proposals.

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 Local Alignment

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.2 General

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.3 Junctions

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.4 Walking, Cycling and Horse Riding

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.5 Traffic Signs, Carriageway Markings and Lighting

PROBLEM	General
Location	Throughout the scheme extents (Drwg No. JNY10830-05 Rev A)
Summary	Existing signing may be vulnerable to vehicular strikes and/or cause injury to pedestrians due to insufficient lateral clearance.

The scheme proposals indicate that localised widening is proposed in order to accommodate the improvements together with changes to the existing refuge islands.

The site visit has established that there are existing signs located within footways areas and on the existing refuge islands. From the drawings provided for this audit it is unclear where these will end up being located.

Concern arises that after the scheme is implemented, inappropriately sited signs may be vulnerable to vehicular strikes due to insufficient lateral clearance. Furthermore, signs remaining close to or within footway areas may not currently be at an appropriate mounting height whereby pedestrians may sustain injury.

RECOMMENDATION

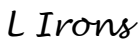
The Audit Team recommend that at the detailed design stage that signs are sited appropriately and at suitable mounting heights.

END OF PROBLEMS IDENTIFIED & RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

4 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER	
Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	22 nd April 2022

AUDIT TEAM MEMBER	
Name	Linda Irons - MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Associate Consultant
Organisation	Taylor Bowie Ltd
Date	22 nd April 2022

APPENDIX A

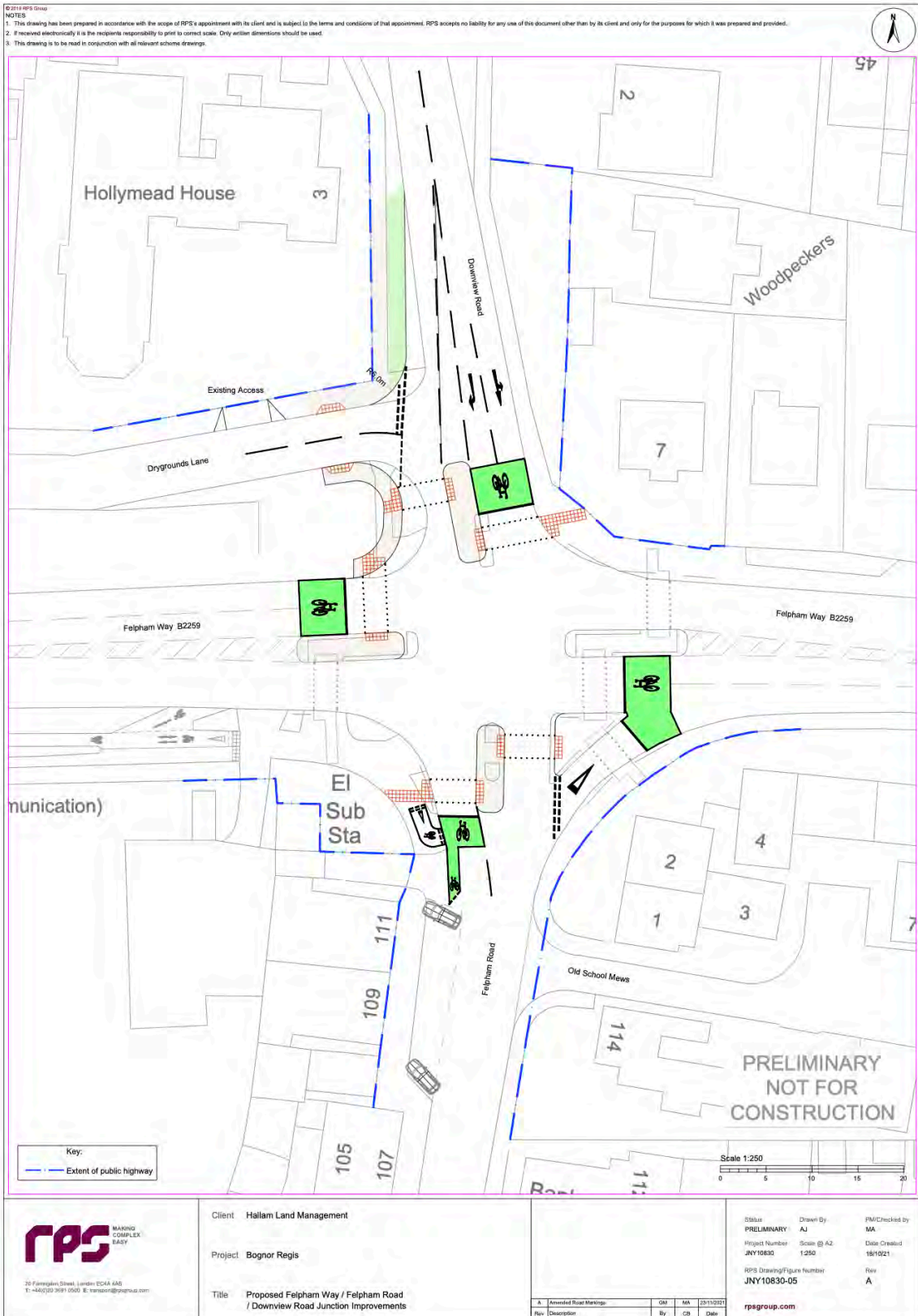
Documents Forming the Audit Brief

Drawings:

DRAWING NO.	TITLE
JNY10830-05 Rev A	Junction Improvements
JNY10830-06	12m Rigid Swept Path Analysis
JNY10830-07	Refuse Vehicle Swept Path Analysis
JNY10830-08	Bus Swept Path Analysis

APPENDIX B

Problem Location Plan



Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

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BOGNOR REGIS GOLF COURSE – B2259/ DOWNVIEW ROAD JUNCTION IMPROVEMENTS

Stage 1 Road Safety Audit – Designers Response

JNY10830-11
RSA 1 Designers
Response
Version 1
27 April 2022

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
01	Designers Response to RSA	MA	BP	MA	27 April 2022

This report was prepared by **RPS Consulting Services Ltd** ('RPS') within the terms of its engagement and in direct response to a scope of services. This report is strictly limited to the purpose and the facts and matters stated in it and does not apply directly or indirectly and must not be used for any other application, purpose, use or matter. In preparing the report, RPS may have relied upon information provided to it at the time by other parties. RPS accepts no responsibility as to the accuracy or completeness of information provided by those parties at the time of preparing the report. The report does not take into account any changes in information that may have occurred since the publication of the report. If the information relied upon is subsequently determined to be false, inaccurate or incomplete then it is possible that the observations and conclusions expressed in the report may have changed. RPS does not warrant the contents of this report and shall not assume any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report howsoever. No part of this report, its attachments or appendices may be reproduced by any process without the written consent of RPS. All enquiries should be directed to RPS.

Prepared by:

Prepared for:

RPS Consulting Services Ltd

Hallam Land Management

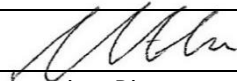
Name: Melanie A'Lee
Title: Associate Director

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E

AUDIT REF	Problem Summary and Recommendation	Designers Response	WSSC Comments
3.5 - General	Summary – Existing signing may be vulnerable to vehicular strikes and/or cause injury to pedestrians due to insufficient lateral clearance. Detail – The scheme proposals indicate that localised widening is proposed in order to accommodate the improvements together with changes to the existing refuge islands. The site visit has established that there are existing signs located within footway areas and on the existing refuge islands. From the drawings provided for this audit it is unclear where these will end up being located. Concern arises that after the scheme is implemented, in appropriately sited signs may be vulnerable to vehicular strikes due to insufficient lateral clearance. Furthermore, signs remaining close to or within footway area may not currently be at an appropriate mounting height whereby pedestrians may sustain injury. Recommendation – The Audit Team recommend that at the detailed design stage that signs are sited appropriately and as suitable mounting heights.	From a review of the junction based on the photos taken from a recent site visit there is only one sign which is a road name plate situated on Downview Road western arm, that would need to be repositioned. There does not appear to be any other signage to be considered. This however will be reviewed in detail as part of the detail design process.	

Design Organisation Statement

On behalf of the design organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation	
Name	Melanie A'Lee
Signed	
Position	Associate Director
Organisation	RPS
Date	27/04/2022

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and	
2) The agreed RSA actions will be progressed	
Name	
Signed	
Position	
Organisation	West Sussex County Council
Date	

22nd April 2022

Dear Melanie

**FELPHAM ROAD/MIDDLETON WAY/FLANSHAM LANE ROUNDABOUT
PROPOSED HIGHWAY IMPROVEMENTS
STAGE 1 ROAD SAFETY AUDIT**

Please find enclosed the signed and dated PDF of the Stage 1 Road Safety Audit (RSA) Report for this project.

As referred to in Section 1.3 of the RSA Report, there is one issue identified and observation made during the Stage 1 Road Safety Audit and site inspection, which the Terms of Reference exclude from the Road Safety Audit Report, but which the Audit Team wishes to draw to the attention of yourself and the Overseeing Organisation:

- i. It was noted that a number of existing tactile paving slabs in areas around the junction were damaged, increasing the risk of a trip hazard. Additionally, some were overgrown by grass which may make them harder to detect by blind or partially sighted users.

I look forward to receiving your response to this Covering Letter and the provision of the RSA Decision Log for the purposes of retention on my file.

Should you have any queries, please do not hesitate to contact me.

Yours sincerely



Sarah Bowie

FELPHAM ROAD/ MIDDLETON WAY/ FLANSHAM LANE ROUNDABOUT

Proposed Highway Improvements

Road Safety Audit - Stage 1

Final Report

April 2022

TBL19/288

Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

REPORT APPROVAL

Project Details

Project Title	Felpham Road/ Middleton Way/Flansham Lane Roundabout		
Project Subtitle	Proposed Highway Improvements		
Road Safety Audit	Stage 1		
Document Reference	TBL19/288 Rev 0	Audit Brief Date	4 th April 2022
Overseeing Organisation	West Sussex County Council		
Design Organisation	Melanie A'Lee	RPS	
Client	-	Hallam Land Management	
Maintaining Agent Details	-	-	

Approvals

This document requires the following approvals:

Name	Title
Sarah Bowie	Audit Team Leader
Linda Irons	Audit Team Member

Distribution

This document has also been distributed to:

Name	Title & Organisation
Melanie A'Lee	Associate Director – RPS (Transport & Engineering)

1 INTRODUCTION

1.1 The Scheme and its Purpose

This report results from a Stage 1 Road Safety Audit (RSA) carried out on proposed highway improvements to the Felpham Road/Middleton Way/Flansham Lane roundabout, Bognor Regis, West Sussex.

The works consist of minor improvements to this existing three-arm roundabout junction consisting of minor widening works to accommodate a two-lane entry from the western arm and changes to the existing traffic splitter island on the northern arm.

1.2 Terms of Reference & Audit Report

The Road Safety Audit Brief was approved and issued by Melanie A'Lee of the Design Organisation. The RSA team has been approved by the Design Organisation.

Table 1 - Audit Team Membership

Membership	Name	Details
Audit Team Leader	Sarah Bowie	IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Audit Team Member	Linda Irons	MCIHT, MSoRSA, HE RSA Cert Comp

The Road Safety Audit was undertaken in accordance with the requirements of GG 119. No additional audit requirements were requested. The audit comprised of an examination of the brief and the documents provided to the Audit Team, listed in **Appendix A**.

The audit took place at Taylor Bowie Ltd Cambridgeshire office during April 2022 and both Audit Team Members examined the site together in daylight hours on the morning and afternoon of 9th April 2022 between the times of 1030 and 1130hrs. The weather during the site visit was mild and sunny. The carriageway was dry. Traffic flows at all times were moderate. Three pedestrians and no cyclists were observed during the site visit.

The scheme has been examined, and this report compiled only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

No Departures from Standards (DfS) have been provided to the Audit Team. It is important that if there are any DfS, then they are submitted to the Overseeing Organisation (OO) as soon as possible with appropriate mitigating measures for the OO to approve.

All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in **Appendix B** (where applicable).

1.3 Audit Administration

Issues identified during the audit and site visit which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the OO, will be set out in a separate letter. These issues could include maintenance items and operational issues.

In this regard, the Audit Team have made reference to one item as referred to in a covering letter to the Design Organisation, RPS, dated 22nd April 2022. This covering letter should be supplied to the OO and be considered in conjunction with this Stage 1 RSA.

2 ITEMS RAISED AT PREVIOUS ROAD SAFETY AUDITS

No previous Road Safety Audits have been undertaken on these proposals.

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 Local Alignment

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.2 General

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.3 Junctions

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.4 Walking, Cycling and Horse Riding

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.5 Traffic Signs, Carriageway Markings and Lighting

PROBLEM	1
Location	Felpham Way/Middleton Road - Southern footway area (Drwg No. JNY10830-12)
Summary	Existing signing may be vulnerable to vehicular strikes due to insufficient lateral clearance.

The scheme proposals indicate that localised widening is proposed in order to accommodate the improvements.

The site visit has established that there are existing signs located within the southern footway area. From the drawings provided for this audit it is unclear where these will end up being located.

Concern arises that after the scheme is implemented, inappropriately sited signs may be vulnerable to vehicular strikes due to insufficient lateral clearance.

RECOMMENDATION

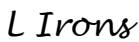
The Audit Team recommend that at the detailed design stage that signs are sited appropriately.

END OF PROBLEMS IDENTIFIED & RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

4 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER	
Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	22 nd April 2022

AUDIT TEAM MEMBER	
Name	Linda Irons - MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Associate Consultant
Organisation	Taylor Bowie Ltd
Date	22 nd April 2022

APPENDIX A

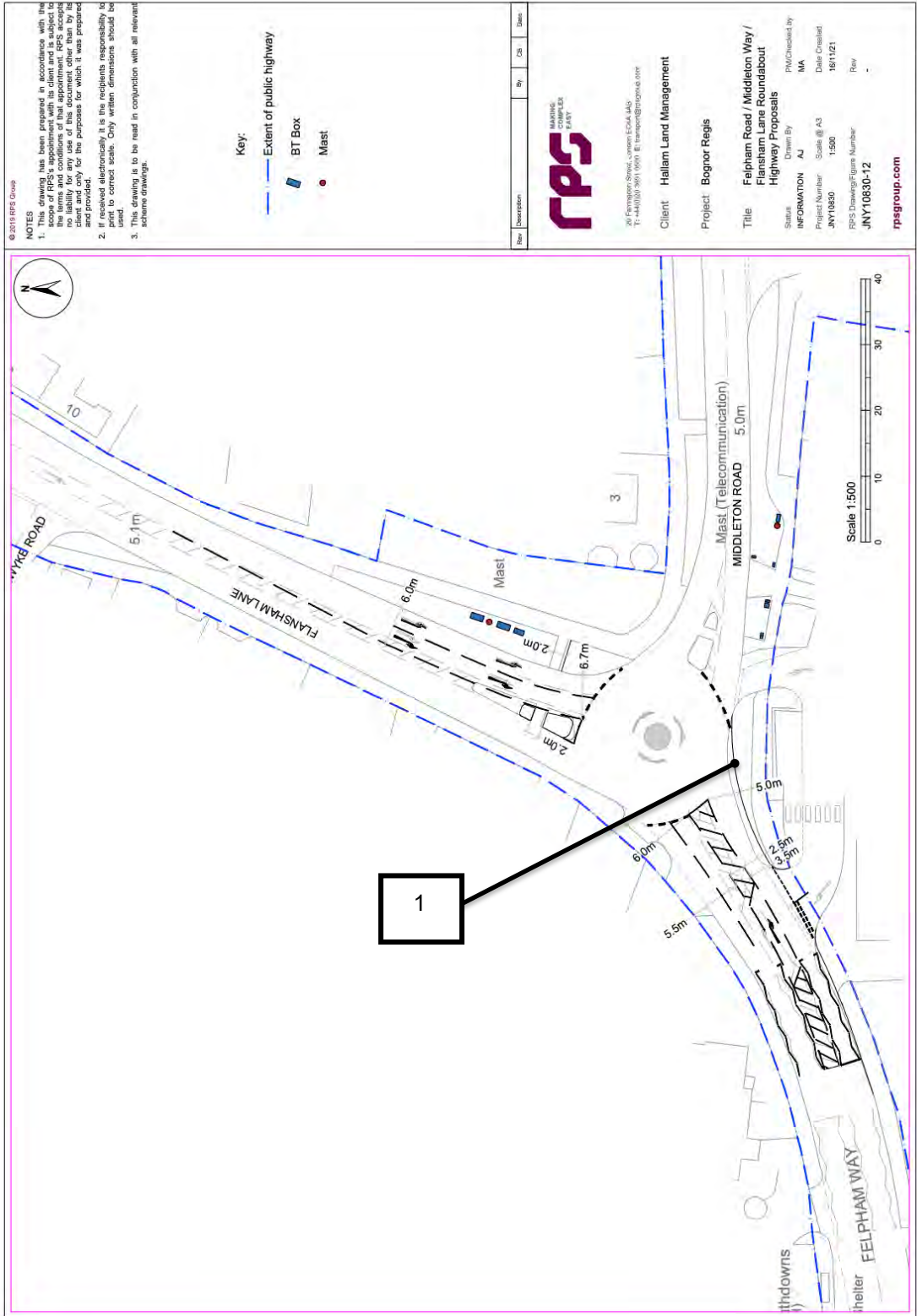
Documents Forming the Audit Brief

Drawings:

DRAWING NO.	TITLE
JNY10830-12	Highway Proposals
JNY10830-16	Tesco Access Swept Path Analysis

APPENDIX B

Problem Location Plan



Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

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1 INTRODUCTION

1.1 Design Manual for Roads & Bridges – GG 119 Road Safety Audit

The Terms of Reference for the undertaking of Road Safety Audits are as described in the Highways England's Design Manual for Roads and Bridges (DMRB) document GG 119 - Road Safety Audit. This Standard sets out the procedures that are required to implement Road Safety Audits - defining the relevant schemes and stages in the design and construction process at which audits shall be undertaken. It is the Standard generally adopted by most Highway Authorities for highway improvement schemes.

2 DESIGN CONSIDERATIONS

2.1 Introduction

Firstly, it is important to reiterate that the Road Safety Audit process is to identify any aspects of the proposed scheme that may give rise to road safety concerns and, where possible, to suggest modifications that would improve the road safety of the resultant scheme. It is not for the purposes of technical audit. As such, it is the responsibility of the Design Organisation to ensure that the proposed scheme meets the relevant Design Standards.

The terms of reference of this Audit (Addendum Note) are as described in GG 119. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.2 Design Changes

RPS has submitted four drawings which show revisions since the original road safety audit was undertaken.

JNY10830-12 Rev A	Highway Proposals
JNY10830-16 Rev B	Tesco Access Swept Path Analysis (Large Car)
JNY10830-24	Tesco Access Rigid Service Vehicle Swept Path Analysis
JNY10830-25	Existing Tesco Access Layout Rigid Service Vehicle Swept Path Analysis

The Design Organisation provided the following information on these proposals:

- The amended proposed improvements reduce the amount of work near to the Tesco access. The Tesco store currently has restricted delivery hours which are outside of peak periods and as part of their site management they cone off the area for deliveries which is outside of the store.

No Departures from Design Standards have been reported by the Design Organisation RPS.

3 PREVIOUS SAFETY AUDITS - TIMELINE

3.1 Stage 1 Road Safety Audit – April 2022 – Ref TBL19/288

The safety aspects of the Proposed Highway Improvements at Felpham Road/Middleton Way/Flansham Lane roundabout, Bognor Regis were the subject of comment in the April 2022 Stage 1 Road Safety Audit undertaken by Taylor Bowie Ltd.

A Designers Response to the April 2022 Stage 1 Road Safety Audit has not been supplied to the Audit Team.

4 ROAD SAFETY AUDIT ADDENDUM NOTE

4.1 Safety Implications of Proposed Design Changes

Taylor Bowie Ltd has been instructed to review the Drawing(s) listed in Para 2.2.

The Stage 1 Road Safety Audit raised one problem:

PROBLEM	1
Location	Felpham Way/Middleton Road - Southern footway area (Drg No. JNY10830-12)
Summary	Existing signing may be vulnerable to vehicular strikes due to insufficient lateral clearance.
The scheme proposals indicate that localised widening is proposed in order to accommodate the improvements. The site visit has established that there are existing signs located within the southern footway area. From the drawings provided for this audit it is unclear where these will end up being located. Concern arises that after the scheme is implemented, inappropriately sited signs may be vulnerable to vehicular strikes due to insufficient lateral clearance.	
RECOMMENDATION	
The Audit Team recommend that at the detailed design stage that signs are sited appropriately.	

Drawing(s) Amendment/Note: The revised drawing (JNY10830-12 Rev A) indicates that only minor kerb realignment works are proposed at the Tesco access junction.

Audit Team Review: The revised proposals would remove this road safety concern.

4.2 New Safety Implications of Proposed Design Changes

PROBLEM	2
Location	Tesco site access (Drg No. JNY10830-12 Rev A)
Summary	Existing lighting column may be vulnerable to vehicular strikes due to insufficient lateral clearance.
The site visit has established that there is an existing lighting column in the location of the proposed kerb realignment works. From the drawings provided for this audit it is unclear where this will end up being located. Concern rises that after the scheme is implemented, inappropriately sited lighting columns may be vulnerable to vehicular strikes due to insufficient lateral clearance.	
RECOMMENDATION	
The Audit Team recommend that at the detailed design stage that checks are undertaken to ensure that lighting columns are sited appropriately.	

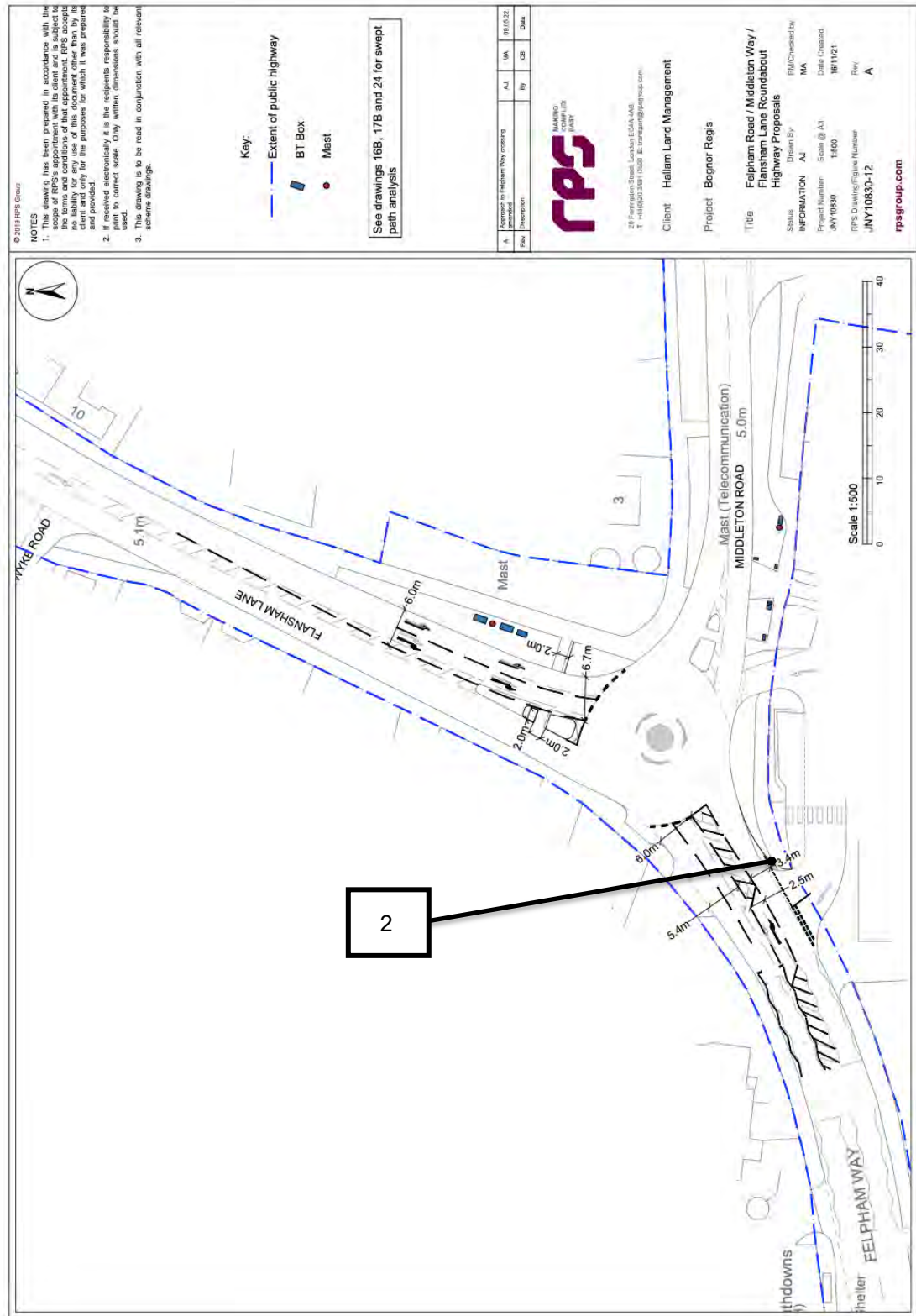
5 Conclusion

The Audit Team conclude that the drawing submitted as part of this Addendum Note raises one additional safety concern as a result of the proposed changes (Para 4.2 – Problem 2).

6 Report Approval

Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	16 th May 2022

Felpham Road/Middleton Way/Flansham Lane Roundabout Proposed Highway Improvements RSA Addendum Note - May 2022



BOGNOR REGIS GOLF COURSE – B2259/ MIDDLETON WAY JUNCTION IMPROVEMENTS

Stage 1 Road Safety Audit – Designers Response

JNY10830-12
RSA 1 Designers
Response
Version 2
19 May 2022

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
01	Designers Response to RSA	MA	BP	MA	27 April 2022
02	Addendum Note included	MA	BP	MA	19 May 2022

This report was prepared by **RPS Consulting Services Ltd** ('RPS') within the terms of its engagement and in direct response to a scope of services. This report is strictly limited to the purpose and the facts and matters stated in it and does not apply directly or indirectly and must not be used for any other application, purpose, use or matter. In preparing the report, RPS may have relied upon information provided to it at the time by other parties. RPS accepts no responsibility as to the accuracy or completeness of information provided by those parties at the time of preparing the report. The report does not take into account any changes in information that may have occurred since the publication of the report. If the information relied upon is subsequently determined to be false, inaccurate or incomplete then it is possible that the observations and conclusions expressed in the report may have changed. RPS does not warrant the contents of this report and shall not assume any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report howsoever. No part of this report, its attachments or appendices may be reproduced by any process without the written consent of RPS. All enquiries should be directed to RPS.

Prepared by:

Prepared for:

RPS Consulting Services Ltd

Hallam Land Management

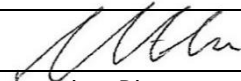
Name: Melanie A'Lee
Title: Associate Director

20 Farringdon Street, London EC4A 4AB

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E

AUDIT REF	Problem Summary and Recommendation	Designers Response	WSCC Comments
3.5 - 1	Summary – Existing signing may be vulnerable to vehicular strikes due to insufficient lateral clearance. Detail – The scheme proposals indicate that localised widening is proposed in order to accommodate the improvements. The site visit has established that there are existing signs within the southern footway area. From the drawings provided for this audit it is unclear where these will end up being located. Concern arises that after the scheme is implemented, in appropriately sited signs may be vulnerable to vehicular strikes due to insufficient lateral clearance. Recommendation – The Audit Team recommend that at the detailed design stage that signs are sited appropriately.	From a review of the junction based on the photos taken from a recent site visit there are two direction signs and a low mounted street name plate on the southern verge at the junction, whilst the proposal will reduce the width of the verge in this location it is considered that there will still be sufficient room to accommodate these signs. This however will be reviewed in detail as part of the detail design process.	
4.2 - 2	Summary – Existing lighting column may be vulnerable to vehicular strikes due to insufficient lateral clearance. Detail – the site visit has established that there is an existing lighting column in the location of the proposed kerb realignment works. From the drawings provided for this audit it is unclear where this will end up being located. Concern rises that after the scheme is implemented, inappropriately sited lighting columns may be vulnerable to vehicular strikes due to insufficient lateral clearance. Recommendation: The Audit Team recommend that at the detailed design stage that checks are undertaken to ensure that lighting columns are sited appropriately.	Agree with Recommendation. The lighting column is currently situated close to the Tesco Access, there is sufficient land available to reposition this as part of the proposed improvements and will be dealt with at the detail design stage.	

Design Organisation Statement

On behalf of the design organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation	
Name	Melanie A'Lee
Signed	
Position	Associate Director
Organisation	RPS
Date	19/05/2022

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and	
2) The agreed RSA actions will be progressed	
Name	
Signed	
Position	
Organisation	West Sussex County Council
Date	

B2259/A259 ROUNDABOUT BOGNOR REGIS

Proposed Junction Improvements

Road Safety Audit - Stage 1

Final Report

May 2022

TBL19/288

Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

REPORT APPROVAL

Project Details

Project Title	B2259/A259 Roundabout, Bognor Regis		
Project Subtitle	Proposed Junction Improvements		
Road Safety Audit	Stage 1		
Document Reference	TBL19/294 Rev 0	Audit Brief Date	28 th April 2022
Overseeing Organisation	West Sussex County Council		
Design Organisation	Melanie A'Lee	RPS	
Client	-	Hallam Land Management	
Maintaining Agent Details	-	-	

Approvals

This document requires the following approvals:

Name	Title
Sarah Bowie	Audit Team Leader
Mario Gatti	Audit Team Member

Distribution

This document has also been distributed to:

Name	Title & Organisation
Melanie A'Lee	Associate Director – RPS (Transport & Engineering)

1 INTRODUCTION

1.1 The Scheme and its Purpose

This report results from a Stage 1 Road Safety Audit (RSA) carried out on proposed junction improvements to the B2259/A259 roundabout, Bognor Regis, West Sussex.

The works consist of minor improvements to this existing three-arm roundabout junction consisting of minor widening works to accommodate a two-lane entry from the southern arm.

1.2 Terms of Reference & Audit Report

The Road Safety Audit Brief was approved and issued by Melanie A'Lee of the Design Organisation. The RSA team has been approved by the Design Organisation.

Table 1 - Audit Team Membership

Membership	Name	Details
Audit Team Leader	Sarah Bowie	IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Audit Team Member	Mario Gatti	BSc Civ Eng, MCIHT, MSoRSA, HE RSA Cert Comp

The Road Safety Audit was undertaken in accordance with the requirements of GG 119. No additional audit requirements were requested. The audit comprised of an examination of the brief and the documents provided to the Audit Team, listed in **Appendix A**.

The audit took place at Taylor Bowie Ltd Cambridgeshire office during May 2022 and both Audit Team Members examined the site together in daylight hours on the morning of Wednesday 11th May 2022 between the times of 0945 and 1030hrs. The weather during the site visit was mild and cloudy. The carriageway was dry. Traffic flows at all times were light to moderate. No pedestrians and no cyclists were observed during the site visit.

The scheme has been examined, and this report compiled only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

No Departures from Standards (DfS) have been provided to the Audit Team. It is important that if there are any DfS, then they are submitted to the Overseeing Organisation (OO) as soon as possible with appropriate mitigating measures for the OO to approve.

All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in **Appendix B** (where applicable).

1.3 Audit Administration

Issues identified during the audit and site visit which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the OO, will be set out in a separate letter. These issues could include maintenance items and operational issues.

The Audit Team have not identified any issues during this Stage 1 RSA and site visit that are considered to be outside the Terms of Reference.

2 ITEMS RAISED AT PREVIOUS ROAD SAFETY AUDITS

No previous Road Safety Audits have been undertaken on these proposals.

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 Local Alignment

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.2 General

PROBLEM	General
Location	Throughout the scheme extents (Drwg no. JNY10830-20 Rev A)
Summary	Insufficient drainage may result in single vehicle loss of control or rear end shunt type collisions.
Drainage proposals have not been submitted at this stage of audit. It is likely that the localised kerblines changes will affect the existing drainage (gullies). Lack of surface water drainage provision may result in surface water ponding with the potential slide risk for vehicles during wet and subsequent cold/freezing weather conditions. This may increase the risk of single vehicle loss of control or rear end shunt type collisions.	
RECOMMENDATION	
The Audit Team recommend that at the next stage of design, new drainage appropriate for the proposed highway works is incorporated into the scheme proposals.	

3.3 Junctions

PROBLEM	1
Location	Northbound roundabout approach (Drwg No. JNY10830-20 Rev A)
Summary	Insufficient carriageway width may increase the risk of side-swipe type collisions.

The drawing provided at this stage of audit indicates that a two-lane entry is proposed for the northbound roundabout junction entry. The current arrangement incorporates a single-lane entry.

At this stage of audit, vehicle swept paths have not been provided. Without this information it is unclear whether two vehicles can safely enter the roundabout side by side.

Insufficient carriageway widths may increase the risk of vehicle to vehicle side swipe type collisions.

RECOMMENDATION

The Audit Team recommends that the lane/carriageway widths are sufficient to cater for the intended movements i.e., accommodate two vehicles entering the roundabout side by side. As such, vehicle swept paths should be undertaken to ensure that all turning movements can be safely accommodated.

3.4 Walking, Cycling and Horse Riding

PROBLEM	2
Location	Throughout the scheme extents (Drwg No. JNY10830-20 Rev A)
Summary	Overhanging vegetation may result in pedestrian/cyclist injury.
The scheme proposals indicate that the existing pedestrian and cyclist facilities are to be realigned to accommodate the proposed carriageway widening. The site visit has established that there are a number of areas where vegetation overhangs areas of proposed facility which if still present after construction may result in cyclist or pedestrian injury.	
RECOMMENDATION	
The Audit Team recommends that existing vegetation does not cause injury to users of the facilities.	

3.5 Traffic Signs, Carriageway Markings and Lighting

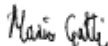
No Problems identified in this category at this Stage 1 Road Safety Audit.

END OF PROBLEMS IDENTIFIED & RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

4 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER	
Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	17 th May 2022

AUDIT TEAM MEMBER	
Name	Mario Gatti - BSc Civ Eng, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Associate Consultant
Organisation	Taylor Bowie Ltd
Date	17 th May 2022

APPENDIX A

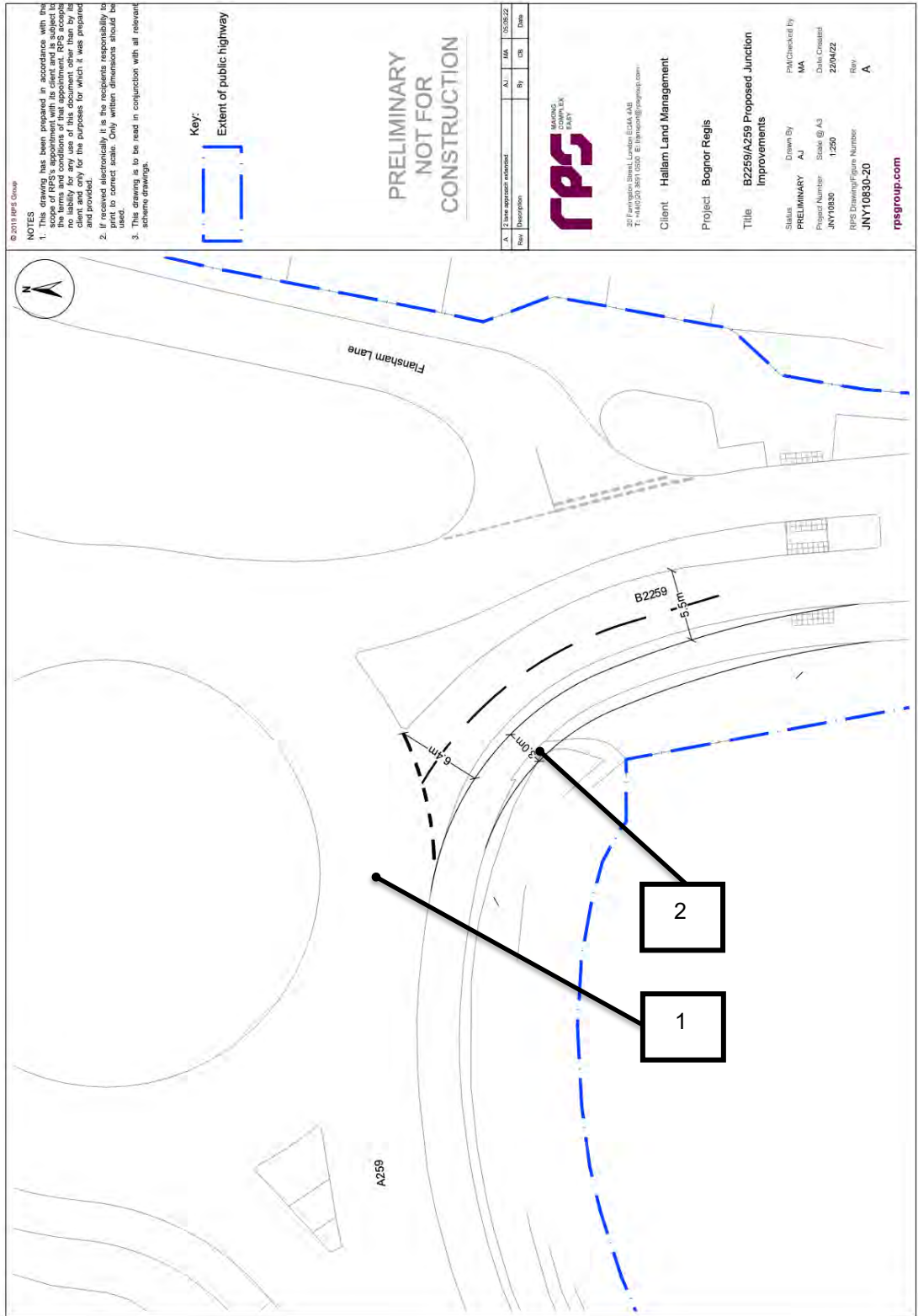
Documents Forming the Audit Brief

Drawings:

DRAWING NO.	TITLE
JNY10830-20 Rev A	B2259/A259 Proposed Junction Improvements

APPENDIX B

Problem Location Plan



Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

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BOGNOR REGIS GOLF COURSE – PROPOSED IMPROVEMENTS AT B2259/A259 JUNCTION

Stage 1 Road Safety Audit – Designers Response

JNY10830-15
RSA 1 Designers
Response
Version 1
19 May 2022

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
01	Designers Response to RSA	MA	BP	MA	19 May 2022

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Prepared by:

Prepared for:

RPS Consulting Services Ltd

Hallam Land Management

Name: Melanie A'Lee
Title: Associate Director

20 Farringdon Street, London EC4A 4AB

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E

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
3.2 - General	Summary – Insufficient drainage may result in single vehicle loss of control or rear end shunt type collisions. Detail – Drainage proposals have not been submitted at this stage of audit. It is likely that the localised kerb line changes will affect the existing drainage (gullies). Lack of surface water drainage provision may result in surface water ponding with the potential slide risk for vehicles during wet and subsequent cold/ freezing weather conditions. This may increase the risk of single vehicle loss of control or rear end shunt type collisions. Recommendation – The Audit Team recommend that at the next stage of design, new drainage appropriate for the proposed highway works is incorporated into the scheme proposals.	Recommendation accepted. At the detail design stage a review of levels will be undertaken to determine whether any additional drainage is required.	
3.3 - 1	Summary – Insufficient carriageway width may increase the risk of side-swipe type collisions. Detail – The drawing provided at this stage of audit indicated that a two-lane entry is proposed for the northbound roundabout junction entry. The current arrangement incorporates a single-lane entry. At this stage of audit, vehicle swept paths have not been provided. Without this information it is unclear whether two vehicles can safely enter the roundabout side by side. Insufficient carriageway widths may increase the risk of vehicle to vehicle side swipe type collisions. Recommendation – The Audit Team recommends that the lane/ carriageway widths are sufficient to cater for the intended movements i.e. accommodate two vehicles entering the roundabout side by side. As such, vehicle swept paths should	Recommendation accepted. Swept path analysis has been carried out and is shown on drawing No, JNY10830/27	

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	be undertaken to ensure that all turning movements can be safely accommodated.		
3.4 -2	Summary – Overhanging vegetation may result in pedestrian / cyclist injury. Detail – The scheme proposals indicate that the existing pedestrian and cyclist facilities are to be realigned to accommodate the proposed carriageway widening. The site visit has established that there are a number of areas where vegetation overhangs areas of the proposed facility which if still present after constriction may result in cyclist or pedestrian injury. Recommendation – The Audit Team recommends that existing vegetation does not cause injury to users of the facilities.	Recommendation accepted. Any vegetation adjacent to the footway/cycleway will be cut back as part of these proposals where they fall within the extent of highway.	

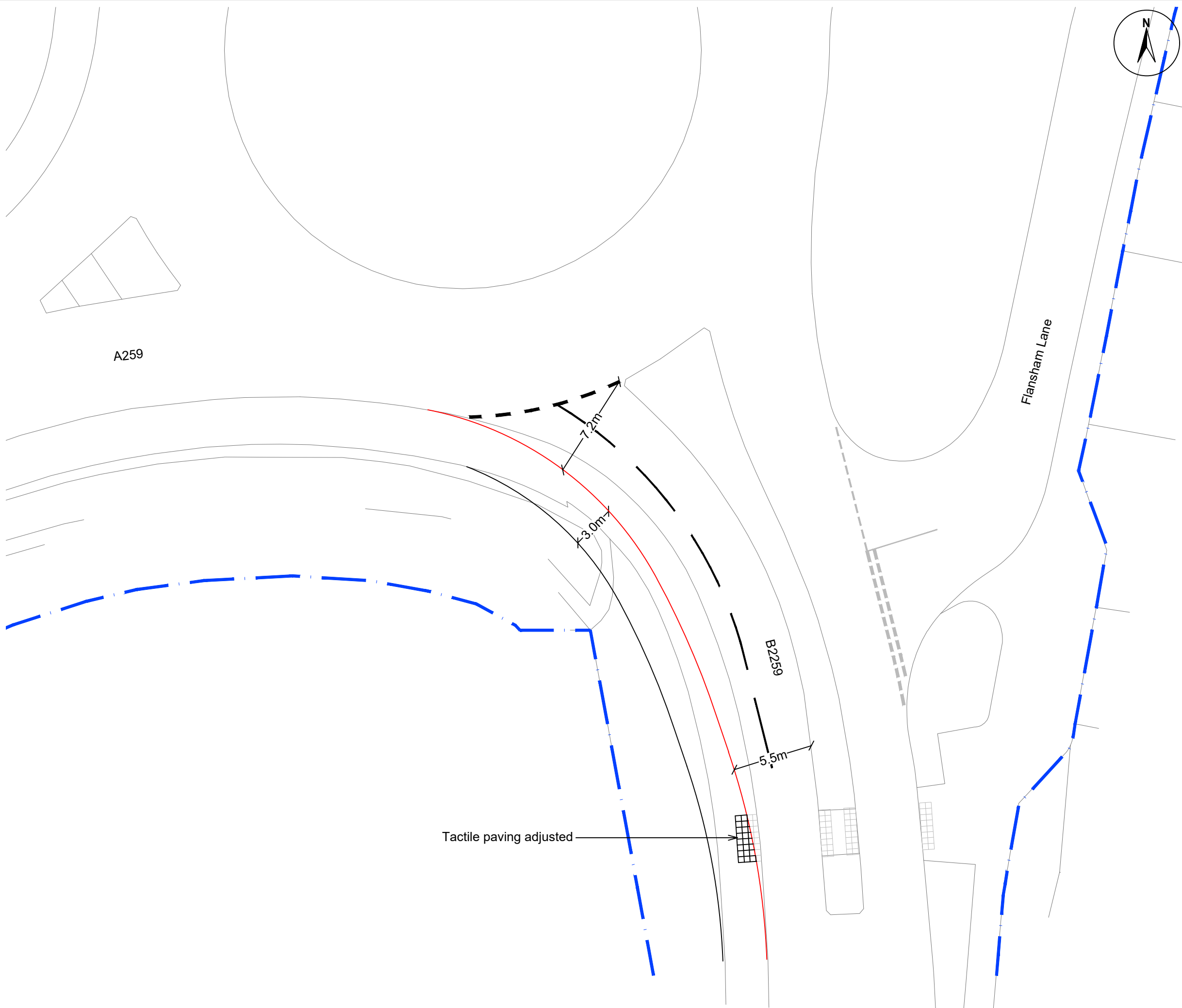
Design Organisation Statement

On behalf of the design organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation	
Name	Melanie A'Lee
Signed	
Position	Associate Director
Organisation	RPS
Date	19/05/2022

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and	
2) The agreed RSA actions will be progressed	
Name	
Signed	
Position	
Organisation	West Sussex County Council
Date	

Appendix 4 – Potential Mitigation at the B2259/A259 Junction & Swept Path Analysis



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- NOTES
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
 2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
 3. This drawing is to be read in conjunction with all relevant scheme drawings.

Key:

Extent of public highway

See drawing JNY10830_27A for swept path analysis

PRELIMINARY
NOT FOR
CONSTRUCTION

B	Approach adjusted to accommodate HGV and car	AJ	MA	23:05:22
A	2 lane approach extended	AJ	MA	05:05:22
Rev	Description	By	CB	Date



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Client Hallam Land Management

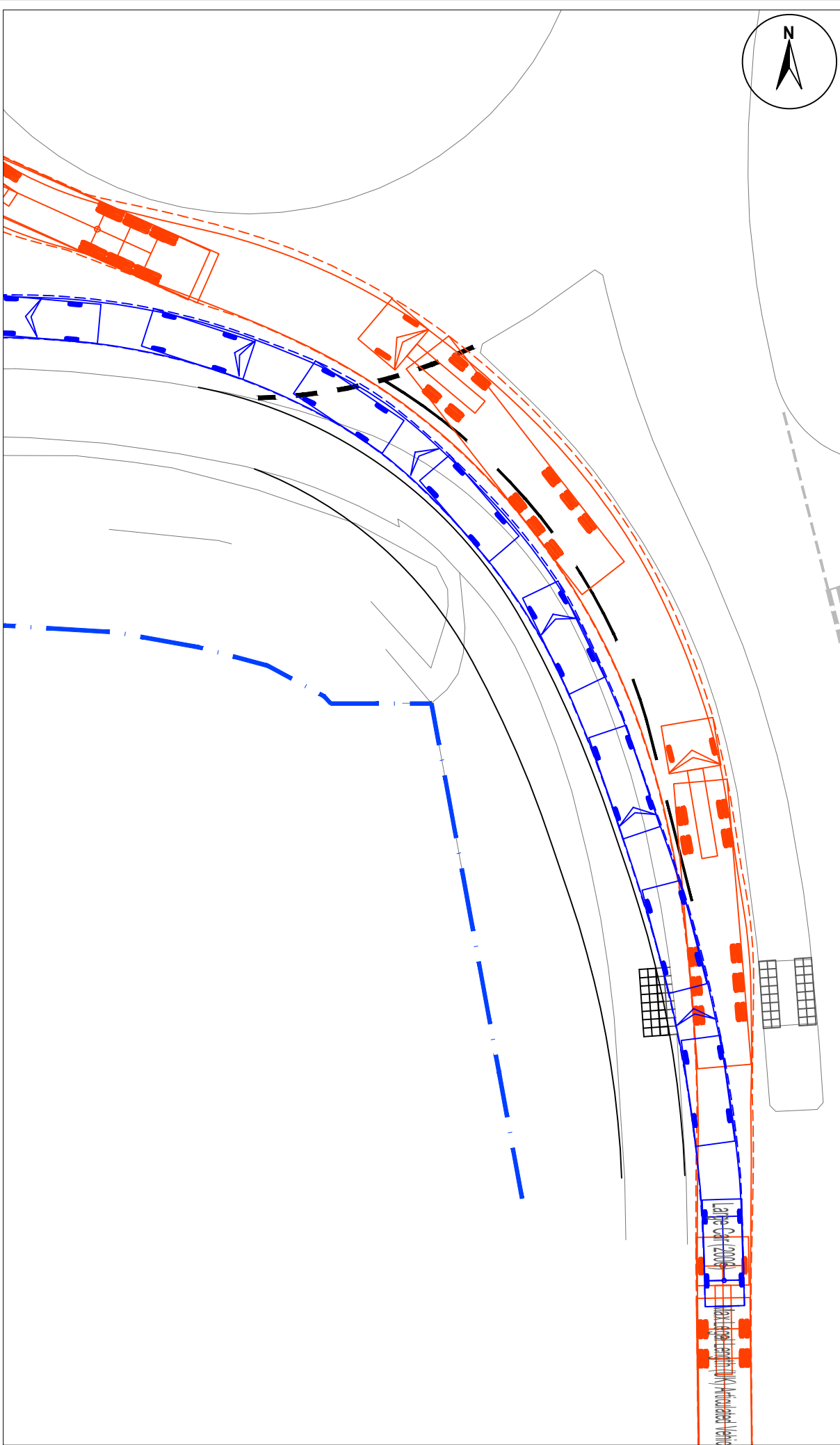
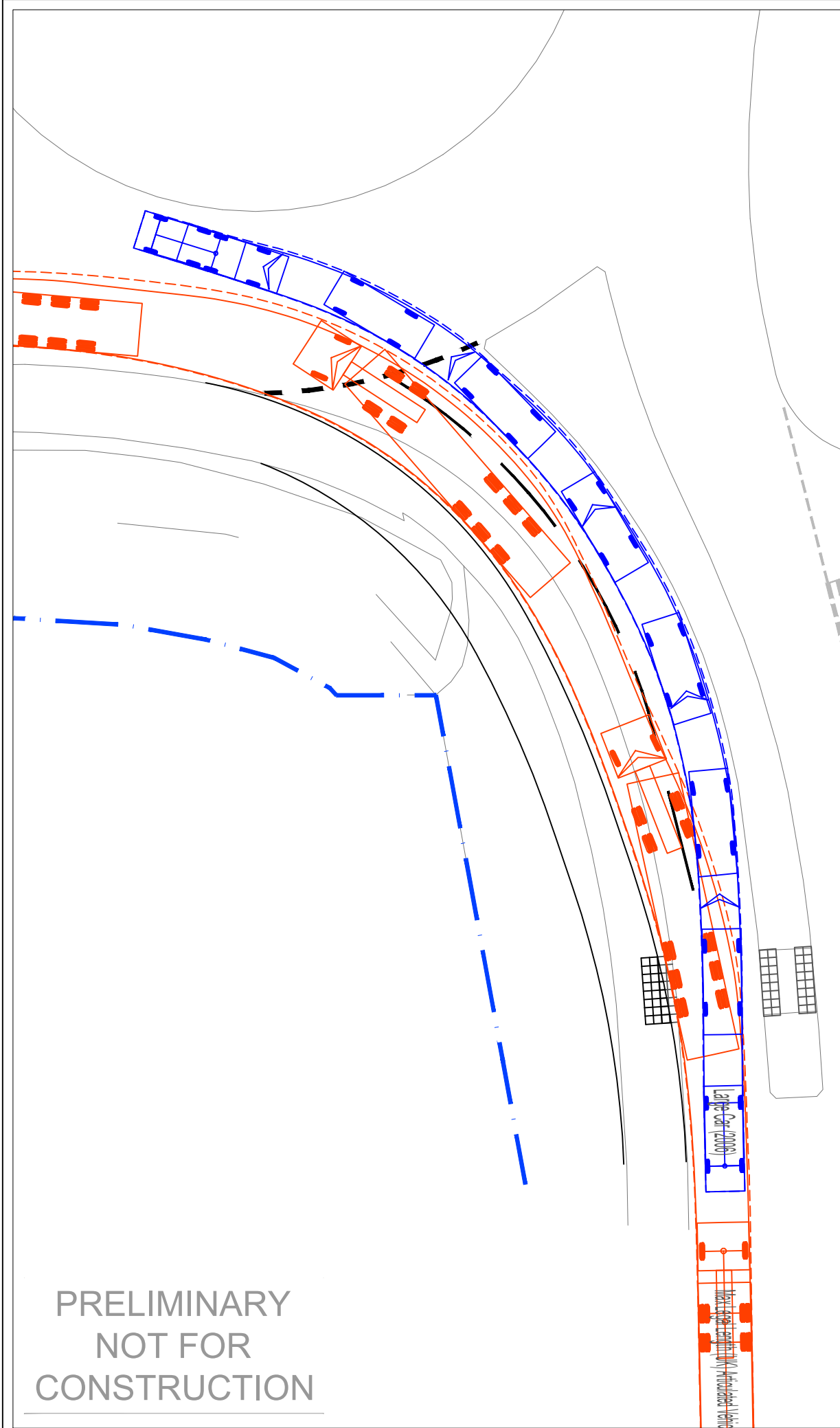
Project Bognor Regis

Title B2259/A259 Proposed Junction Improvements

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	Scale @ A3	Date Created
JNY10830	1:250	22/04/22

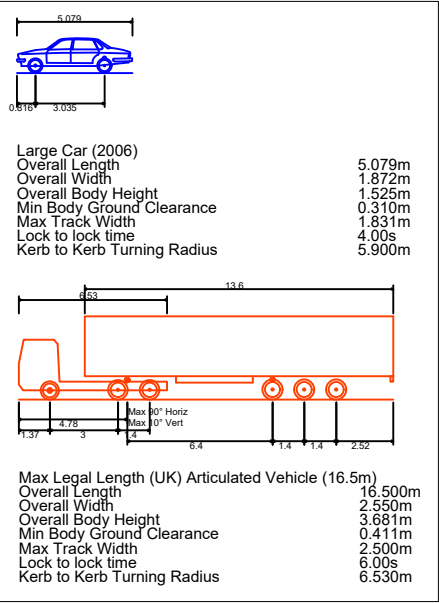
RPS Drawing/Figure Number	Rev
JNY10830-20	B

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 3. This drawing is to be read in conjunction with all relevant scheme drawings.

Vehicle Profile



Based on drawing JNY10830-20B

A	Amended to drawing JNY10830-20B	AJ	MA	23.05.22
Rev	Description	By	CB	Date



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Client Hallam Land Management

Project Bognor Regis

Title B2259/A259 Proposed Junction Improvements - Swept Path Analysis

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA

Project Number	Scale @ A3	Date Created
JNY10830	1:250	20/05/22

RPS Drawing/Figure Number	Rev
JNY10830-27	A

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Appendix 5 – B2259/A259 junction Capacity analysis output

Junctions 10									
ARCADY 10 - Roundabout Module									
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021									
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: A259.B2259.Hoe Lane Roundabout (Junction 3 - Mitigation Model_19_5).j10

Path: P:\JNY10830 - Bognor Regis\Transport\Arcady

Report generation date: 19/05/2022 13:30:15

»2031 Base + Committed + Dev, AM

»2031 Base + Committed + Dev, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2031 Base + Committed + Dev										
1 - A259 (E)	D9	1.0	2.90	0.51	A	D10	2.4	4.93	0.71	A
2 - B2259		4.3	15.12	0.82	C		3.7	16.35	0.80	C
3 - A259 (W)		17.4	50.53	0.97	F		14.8	40.69	0.96	E
4 - Hoe Lane		0.8	135.35	0.50	F		0.6	71.76	0.39	F

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

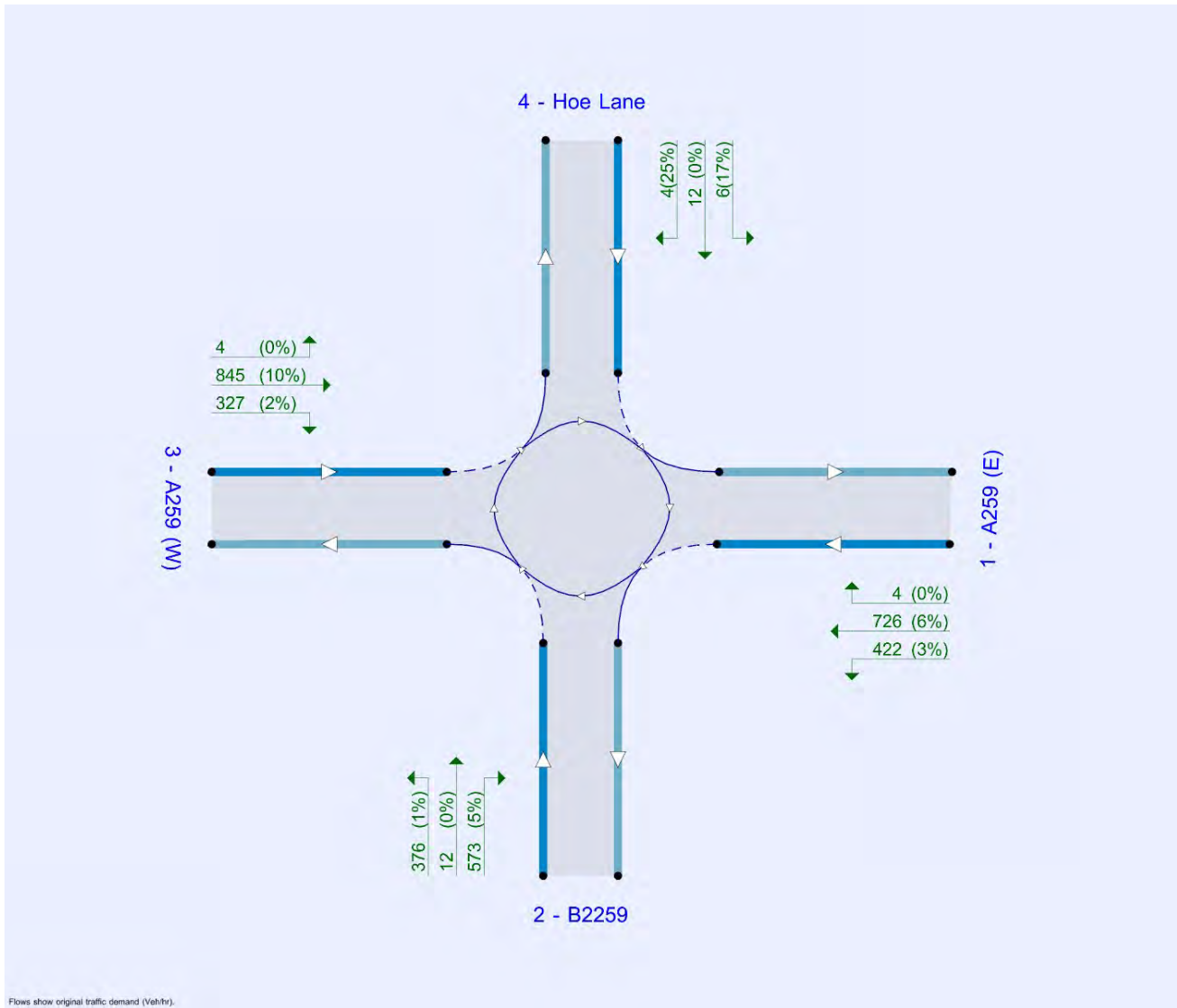
File summary

File Description

Title	
Location	
Site number	
Date	24/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Danesh.Aryan
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2031 Base + Committed + Dev	AM	ONE HOUR	00:00	01:30	15	✓
D10	2031 Base + Committed + Dev	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

2031 Base + Committed + Dev, AM

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	untitled	Standard Roundabout		1, 2, 3, 4	24.57	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	24.57	C

Arms

Arms

Arm	Name	Description	No give-way line
1	A259 (E)		
2	B2259		
3	A259 (W)		
4	Hoe Lane		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A259 (E)	3.78	7.66	8.6	25.0	50.0	32.0		
2 - B2259	4.19	6.80	21.6	22.0	50.0	22.0		
3 - A259 (W)	4.68	6.99	15.0	20.3	50.0	33.0		
4 - Hoe Lane	2.39	5.19	5.4	11.3	50.0	38.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
1 - A259 (E)	Percentage		175.00
2 - B2259	None		
3 - A259 (W)	None		
4 - Hoe Lane	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A259 (E)	0.597	2857
2 - B2259	0.655	1899
3 - A259 (W)	0.638	1868
4 - Hoe Lane	0.451	972

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2031 Base + Committed + Dev	AM	ONE HOUR	00:00	01:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 (E)		ONE HOUR	✓	1152	100.000
2 - B2259		ONE HOUR	✓	961	100.000
3 - A259 (W)		ONE HOUR	✓	1176	100.000
4 - Hoe Lane		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		1 - A259 (E)	2 - B2259	3 - A259 (W)	4 - Hoe Lane
From	1 - A259 (E)	0	422	726	4
	2 - B2259	573	0	376	12
	3 - A259 (W)	845	327	0	4
	4 - Hoe Lane	6	12	4	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - A259 (E)	2 - B2259	3 - A259 (W)	4 - Hoe Lane
From	1 - A259 (E)	0	3	6	0
	2 - B2259	5	0	1	0
	3 - A259 (W)	10	2	0	0
	4 - Hoe Lane	17	0	25	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 (E)	0.51	2.90	1.0	A	1057	1586
2 - B2259	0.82	15.12	4.3	C	882	1323
3 - A259 (W)	0.97	50.53	17.4	F	1079	1619
4 - Hoe Lane	0.50	135.35	0.8	F	20	30

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	867	217	256	2575	0.337	865	1065	0.0	0.5	2.103	A
2 - B2259	723	181	551	1466	0.493	720	570	0.0	1.0	4.795	A
3 - A259 (W)	885	221	441	1460	0.606	879	830	0.0	1.5	6.136	A
4 - Hoe Lane	17	4	1305	313	0.053	16	15	0.0	0.1	12.107	B

00:15 - 00:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1036	259	307	2546	0.407	1035	1275	0.5	0.7	2.382	A
2 - B2259	864	216	659	1394	0.620	861	682	1.0	1.6	6.730	A
3 - A259 (W)	1057	264	528	1406	0.752	1052	993	1.5	2.9	9.990	A
4 - Hoe Lane	20	5	1562	200	0.099	20	18	0.1	0.1	19.902	C

00:30 - 00:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1268	317	365	2512	0.505	1267	1531	0.7	1.0	2.890	A
2 - B2259	1058	265	807	1294	0.817	1048	825	1.6	4.1	14.063	B
3 - A259 (W)	1295	324	642	1335	0.970	1253	1213	2.9	13.5	33.289	D
4 - Hoe Lane	24	6	1873	63	0.386	22	22	0.1	0.5	86.417	F

00:45 - 01:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1268	317	372	2507	0.506	1268	1556	1.0	1.0	2.905	A
2 - B2259	1058	265	808	1294	0.818	1057	833	4.1	4.3	15.116	C
3 - A259 (W)	1295	324	648	1332	0.972	1279	1217	13.5	17.4	50.531	F
4 - Hoe Lane	24	6	1905	49	0.499	23	22	0.5	0.8	135.351	F

01:00 - 01:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1036	259	326	2534	0.409	1037	1328	1.0	0.7	2.406	A
2 - B2259	864	216	661	1392	0.620	874	702	4.3	1.7	7.084	A
3 - A259 (W)	1057	264	536	1401	0.754	1114	1000	17.4	3.2	14.818	B
4 - Hoe Lane	20	5	1632	169	0.117	22	18	0.8	0.1	24.949	C

01:15 - 01:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	867	217	260	2572	0.337	868	1079	0.7	0.5	2.114	A
2 - B2259	723	181	553	1465	0.494	726	575	1.7	1.0	4.891	A
3 - A259 (W)	885	221	445	1458	0.607	892	834	3.2	1.6	6.436	A
4 - Hoe Lane	17	4	1322	306	0.054	17	15	0.1	0.1	12.459	B

2031 Base + Committed + Dev, PM

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	untitled	Standard Roundabout		1, 2, 3, 4	20.19	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.19	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 Base + Committed + Dev	PM	ONE HOUR	00:00	01:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 (E)		ONE HOUR	✓	1592	100.000
2 - B2259		ONE HOUR	✓	774	100.000
3 - A259 (W)		ONE HOUR	✓	1258	100.000
4 - Hoe Lane		ONE HOUR	✓	28	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		1 - A259 (E)	2 - B2259	3 - A259 (W)	4 - Hoe Lane
From	1 - A259 (E)	0	539	1049	4
	2 - B2259	486	0	279	9
	3 - A259 (W)	840	410	0	8
	4 - Hoe Lane	12	10	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - A259 (E)	2 - B2259	3 - A259 (W)	4 - Hoe Lane
From	1 - A259 (E)	0	3	4	0
	2 - B2259	4	0	2	0
	3 - A259 (W)	5	2	0	0
	4 - Hoe Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 (E)	0.71	4.93	2.4	A	1461	2191
2 - B2259	0.80	16.35	3.7	C	710	1065
3 - A259 (W)	0.96	40.69	14.8	E	1154	1732
4 - Hoe Lane	0.39	71.76	0.6	F	26	39

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1199	300	319	2569	0.467	1195	1001	0.0	0.9	2.613	A
2 - B2259	583	146	795	1315	0.443	580	719	0.0	0.8	4.875	A
3 - A259 (W)	947	237	374	1559	0.608	941	1001	0.0	1.5	5.774	A
4 - Hoe Lane	21	5	1299	362	0.058	21	16	0.0	0.1	10.541	B

00:15 - 00:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1431	358	381	2532	0.565	1430	1198	0.9	1.3	3.260	A
2 - B2259	696	174	951	1212	0.574	694	860	0.8	1.3	6.916	A
3 - A259 (W)	1131	283	447	1512	0.748	1126	1197	1.5	2.9	9.200	A
4 - Hoe Lane	25	6	1554	242	0.104	25	19	0.1	0.1	16.550	C

00:30 - 00:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1753	438	456	2488	0.704	1749	1442	1.3	2.3	4.838	A
2 - B2259	852	213	1163	1072	0.795	843	1042	1.3	3.6	15.167	C
3 - A259 (W)	1385	346	544	1450	0.955	1348	1462	2.9	12.0	28.521	D
4 - Hoe Lane	31	8	1869	94	0.327	29	23	0.1	0.4	54.608	F

00:45 - 01:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1753	438	465	2483	0.706	1753	1465	2.3	2.4	4.926	A
2 - B2259	852	213	1166	1070	0.796	852	1052	3.6	3.7	16.352	C
3 - A259 (W)	1385	346	549	1447	0.957	1374	1468	12.0	14.8	40.686	E
4 - Hoe Lane	31	8	1900	80	0.386	30	23	0.4	0.6	71.764	F

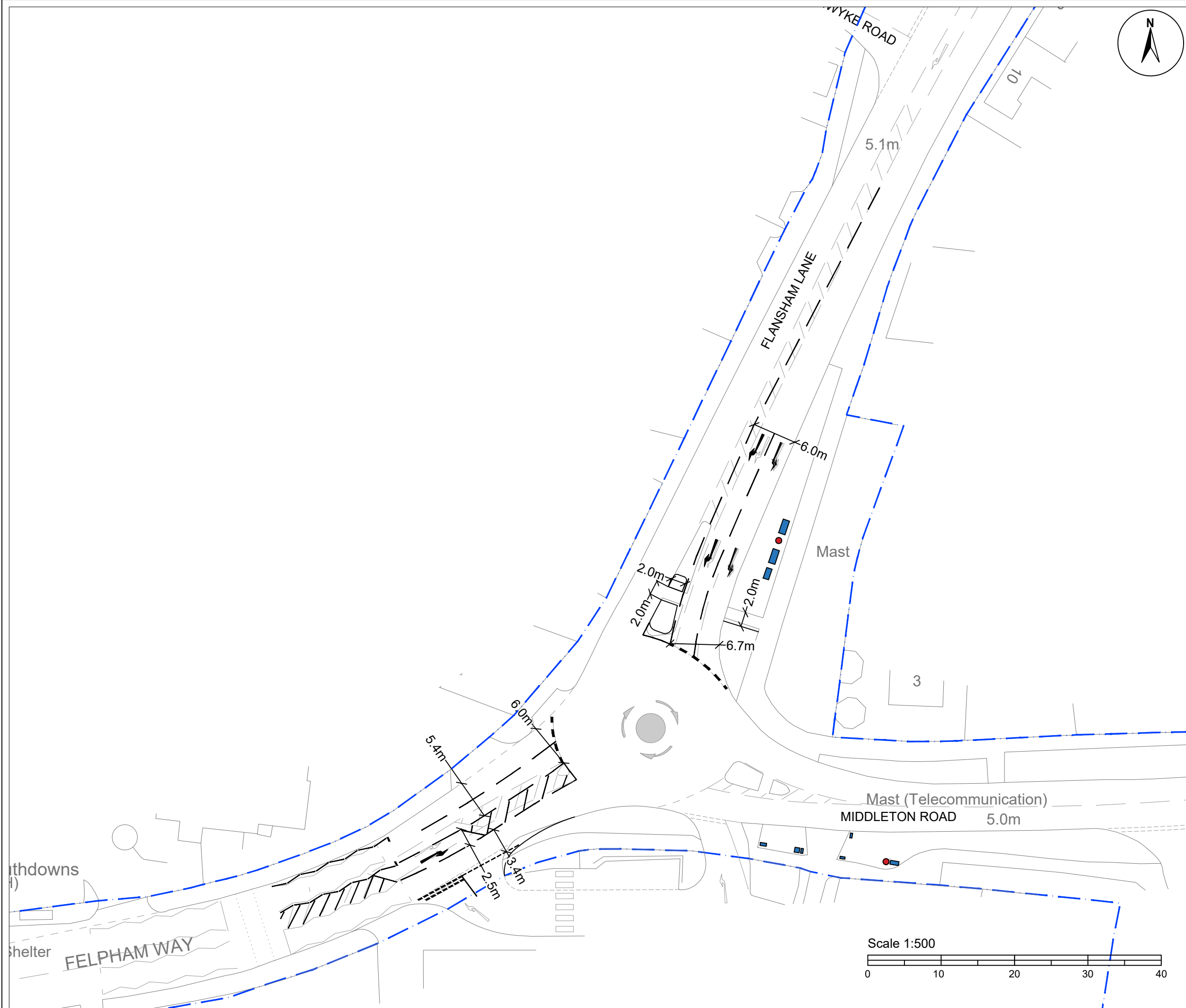
01:00 - 01:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1431	358	399	2522	0.567	1435	1241	2.4	1.3	3.325	A
2 - B2259	696	174	955	1209	0.575	705	879	3.7	1.4	7.272	A
3 - A259 (W)	1131	283	455	1507	0.750	1177	1206	14.8	3.1	12.360	B
4 - Hoe Lane	25	6	1613	215	0.117	27	19	0.6	0.1	19.338	C

01:15 - 01:30

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 (E)	1199	300	323	2567	0.467	1200	1013	1.3	0.9	2.639	A
2 - B2259	583	146	799	1313	0.444	585	725	1.4	0.8	4.964	A
3 - A259 (W)	947	237	377	1556	0.609	953	1006	3.1	1.6	6.030	A
4 - Hoe Lane	21	5	1315	355	0.059	21	16	0.1	0.1	10.807	B

Appendix 6 – Swept Path Analysis at the B2259/B2132 junction



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Key:

-  Extent of public highway
-  BT Box
-  Mast

See drawings 16B, 17B and 24 for swept path analysis

A	Approach to Felpham Way crossing amended	AJ	MA	09.05.22
Rev	Description	By	CB	Date



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Client Hallam Land Management

Project Bognor Regis

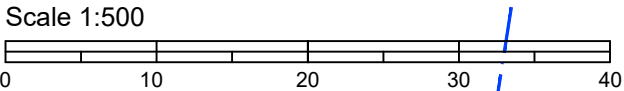
Title Felpham Road / Middleton Way / Flansham Lane Roundabout Highway Proposals

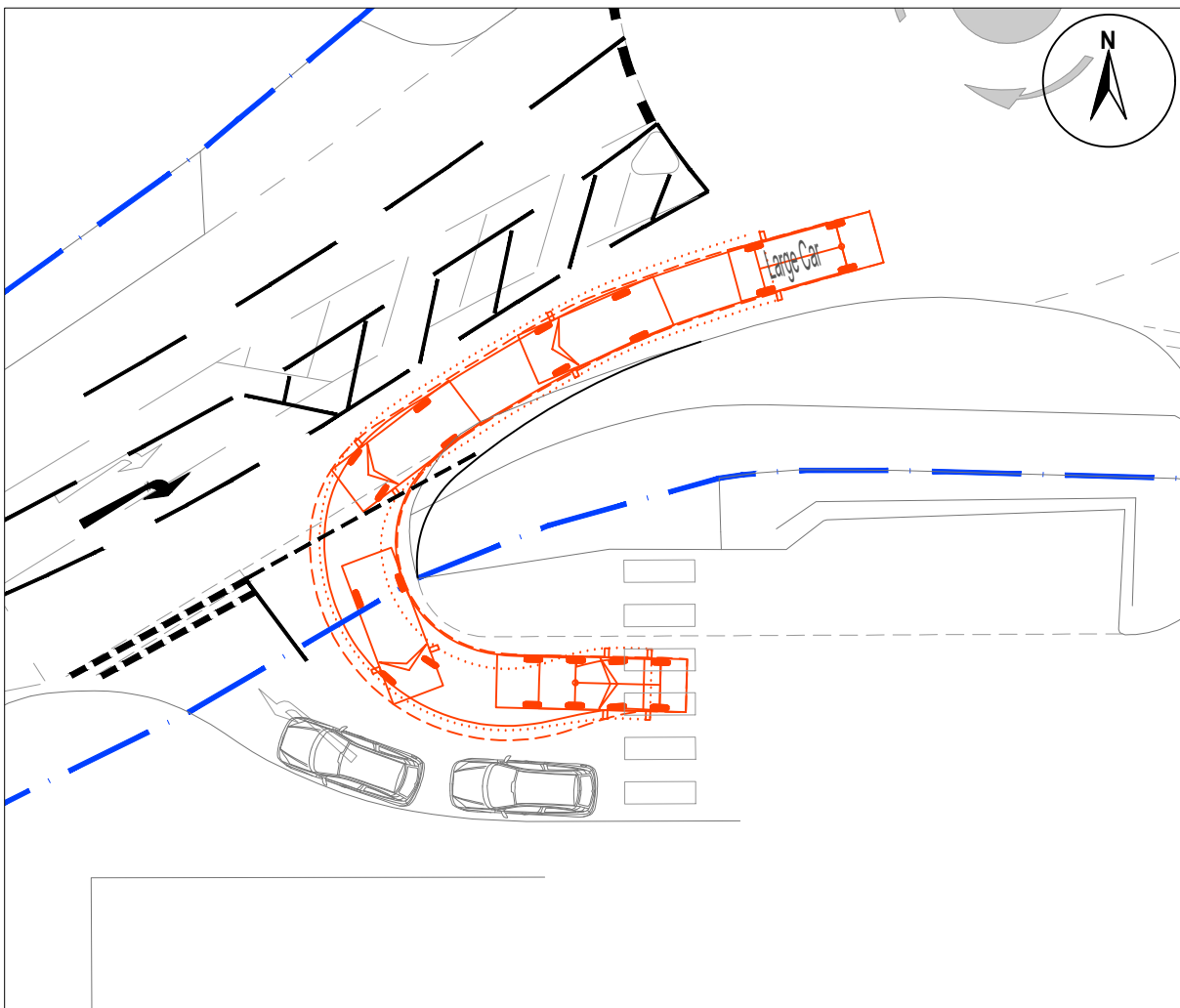
Status Drawn By PM/Checked by
INFORMATION AJ MA

Project Number Scale @ A3 Date Created
JNY10830 1:500 16/11/21

RPS Drawing/Figure Number Rev
JNY10830-12 A

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Vehicle Profile

Large Car	
Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.502m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.200m

Swept Path Key:

- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

Based on drawing JNY10830_12A layout

B	Amended to drawing 12A	AJ	MA	09.05.22
A	Parked cars in store access added	AJ	MA	05.05.22
Rev	Description	By	CB	Date



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Client Hallam Land Management

Project Bognor Regis

Title Tesco Access
Swept Path Analysis

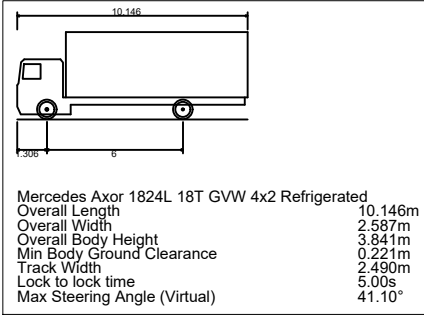
Status	Drawn By	PM/Checked by
INFORMATION	AJ	MA

Project Number	Scale @ A3	Date Created
JNY10830	1:250	29/03/22

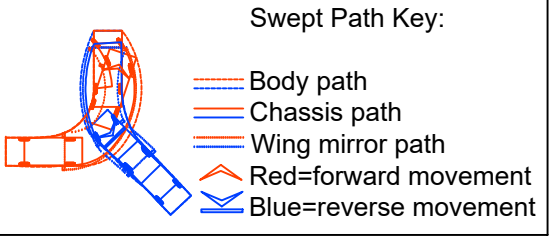
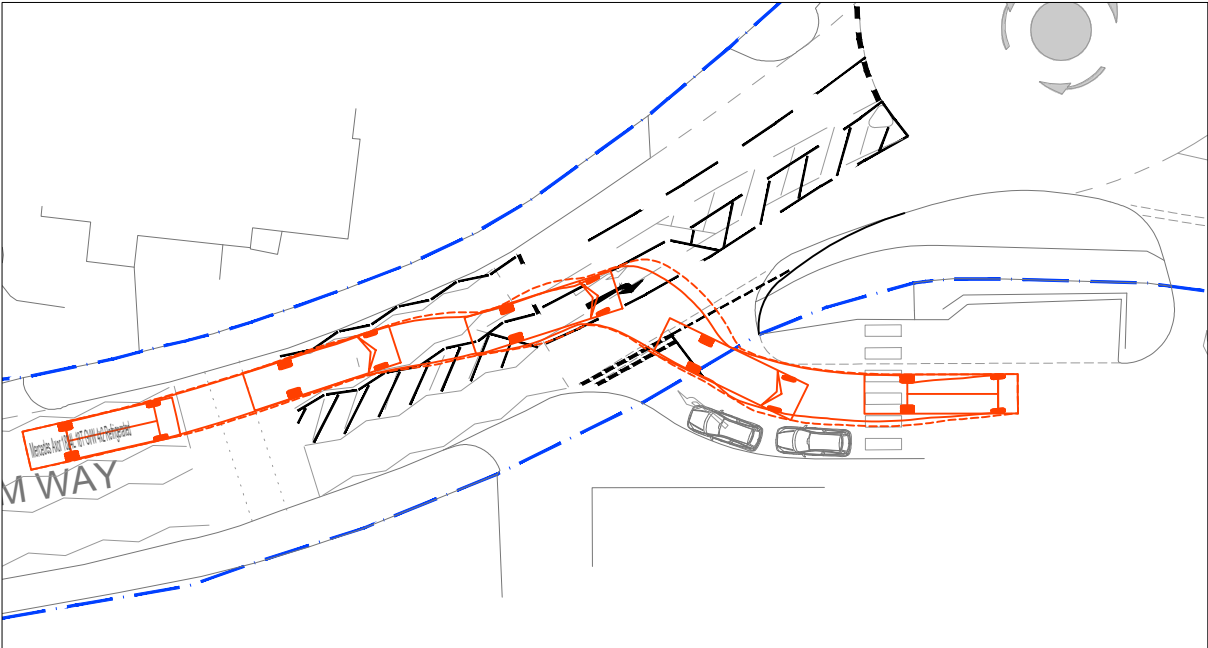
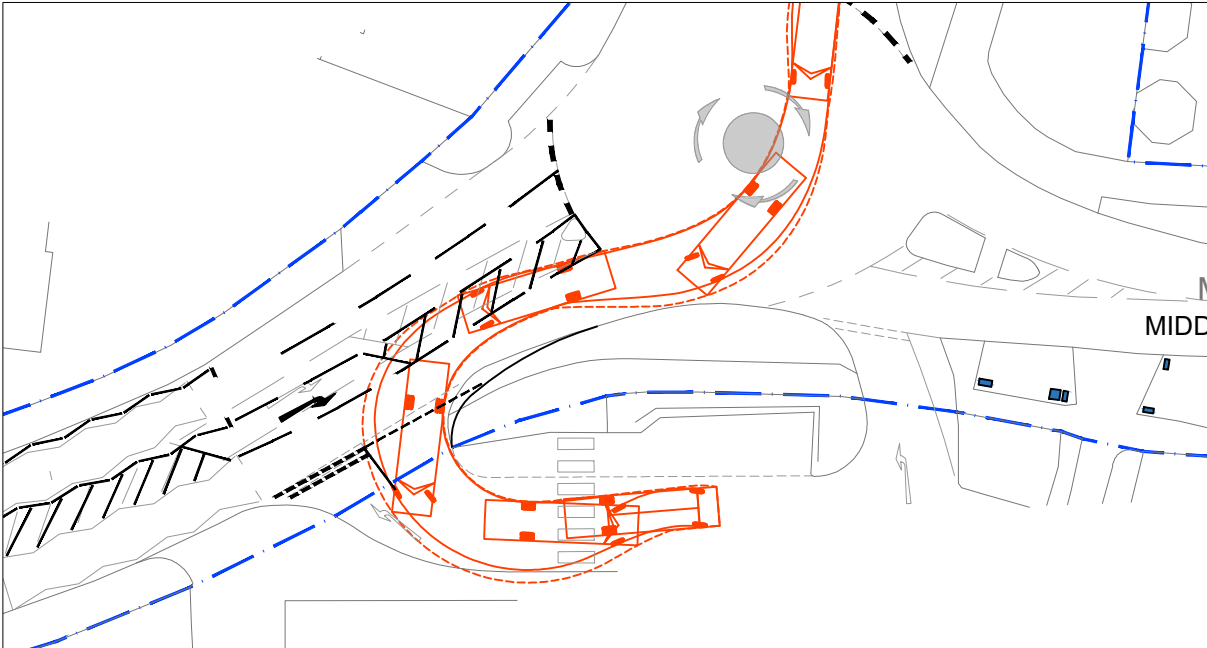
RPS Drawing/Figure Number	Rev
JNY10830-16	B

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Vehicle Profile

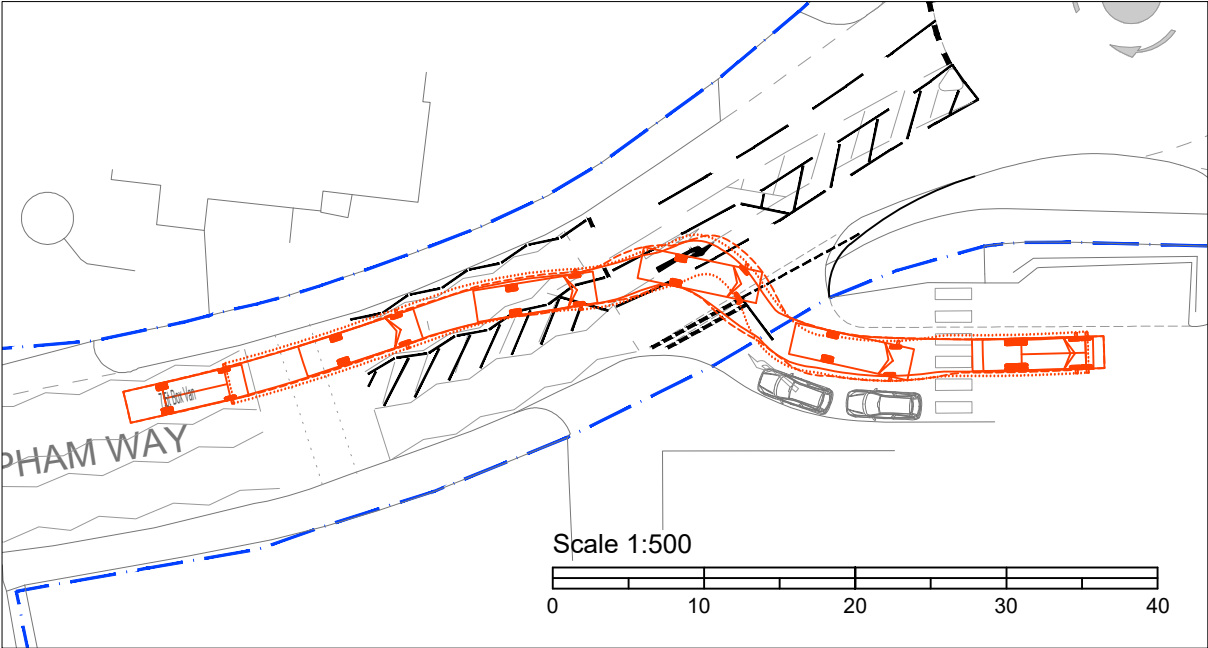
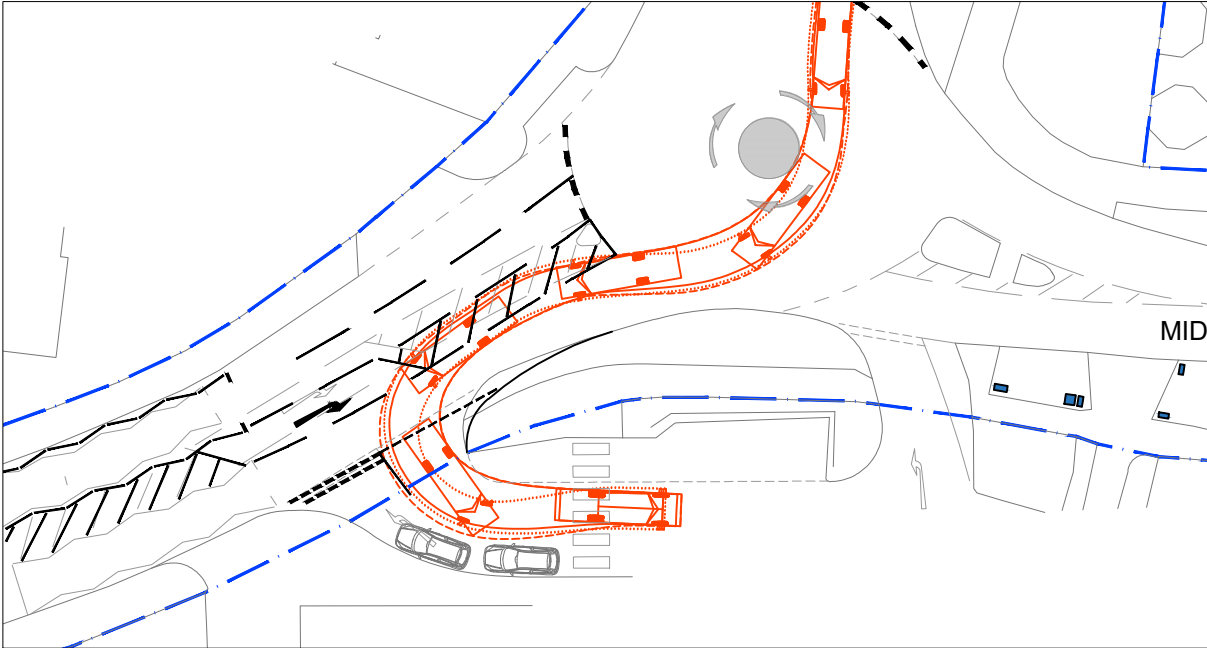
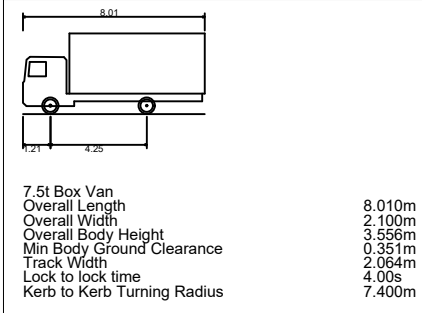


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Based on drawing JNY10830_12A layout

Vehicle Profile



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Client Hallam Land Management

Project Bognor Regis

Title Tesco Access
Rigid Service Vehicle
Swept Path Analysis

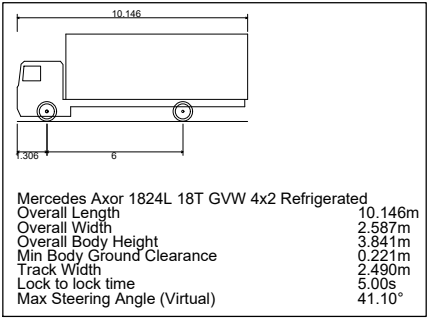
Status Drawn By PM/Checked by
INFORMATION AJ MA

Project Number Scale @ A3 Date Created
JNY10830 1:500 09/05/22

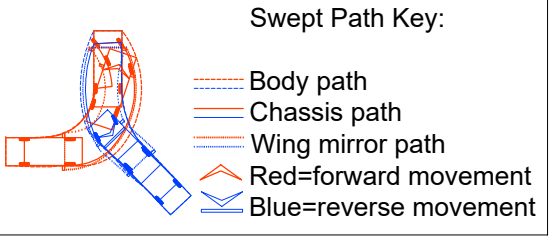
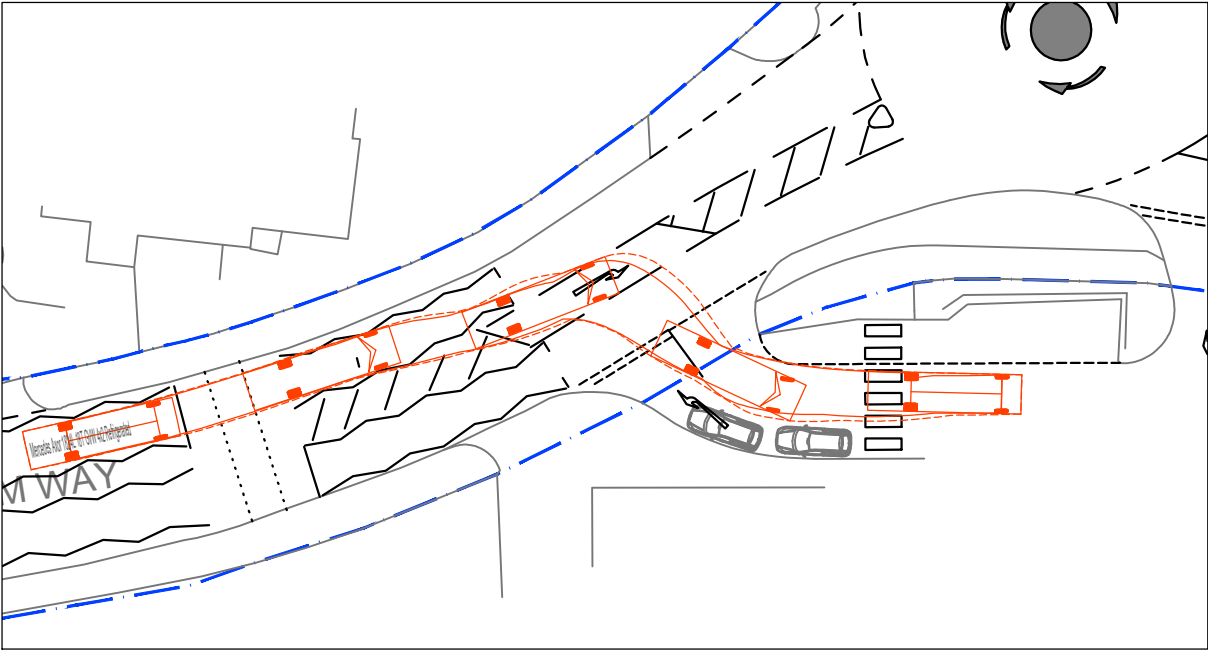
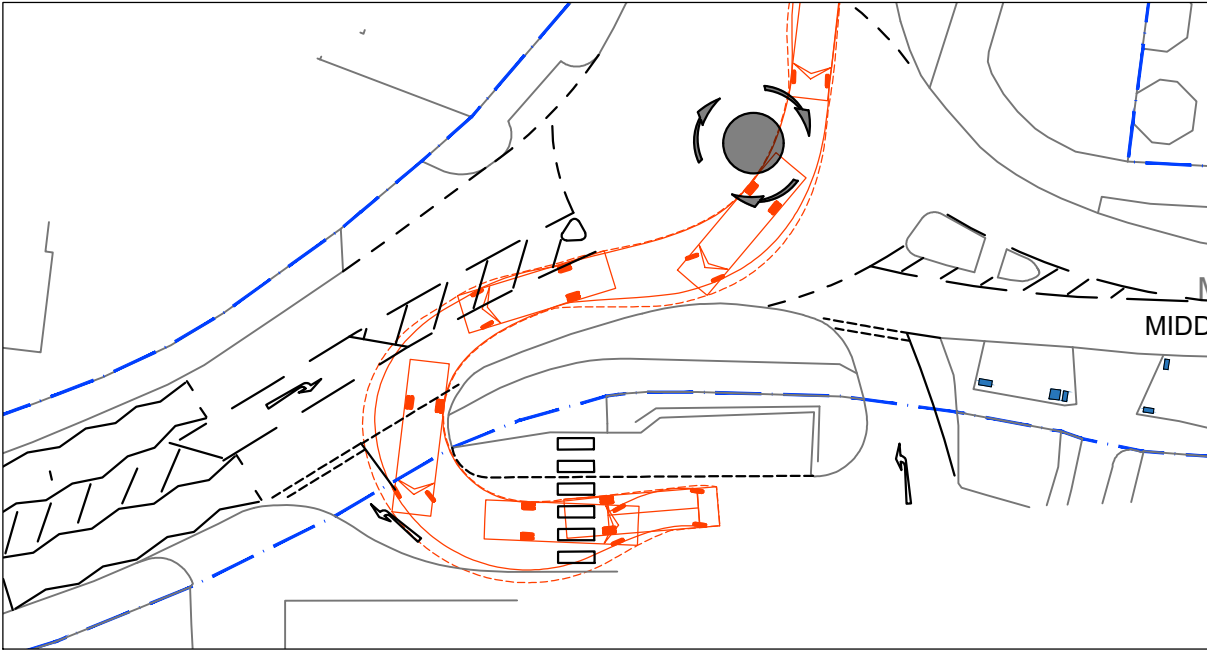
RPS Drawing/Figure Number Rev
JNY10830-24

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Vehicle Profile

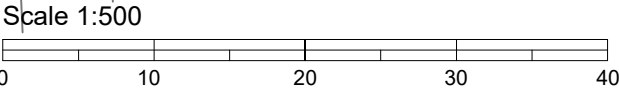
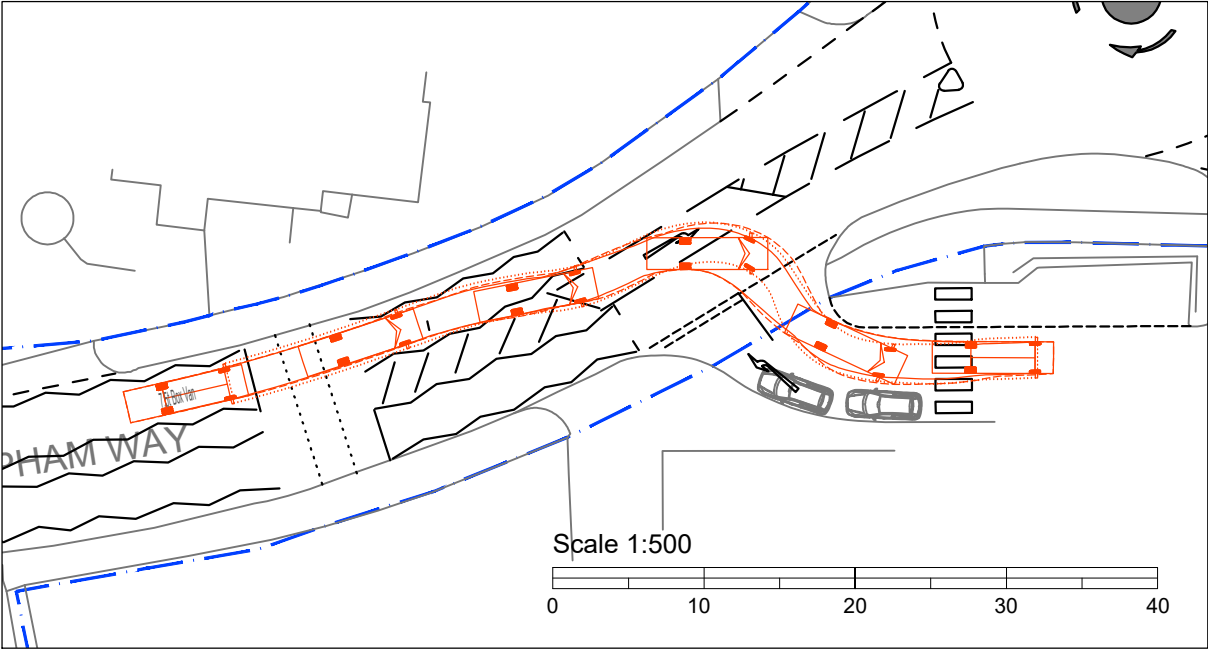
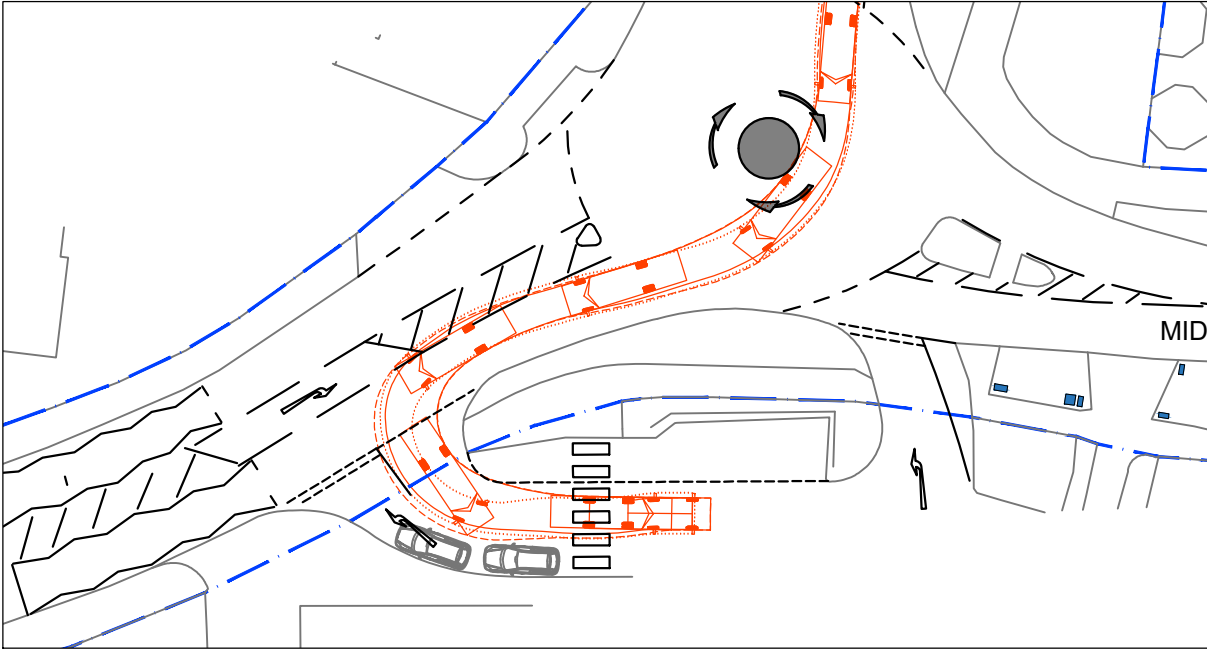
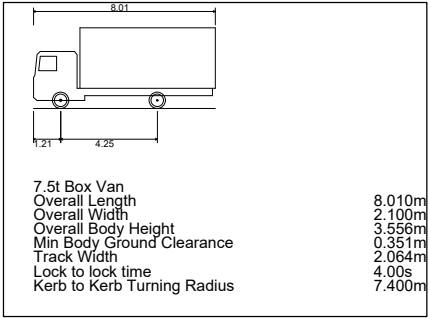


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Based on drawing JNY10830_12A layout

Vehicle Profile



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Client Hallam Land Management

Project Bognor Regis

Title Existing Tesco Access Layout
Rigid Service Vehicle
Swept Path Analysis

Status Drawn By PM/Checked by
INFORMATION AJ MA

Project Number Scale @ A3 Date Created
JNY10830 1:500 09/05/22

RPS Drawing/Figure Number Rev
JNY10830-25

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Appendix 7 – Revised Modelling output – B2259/ Downview Road Junction

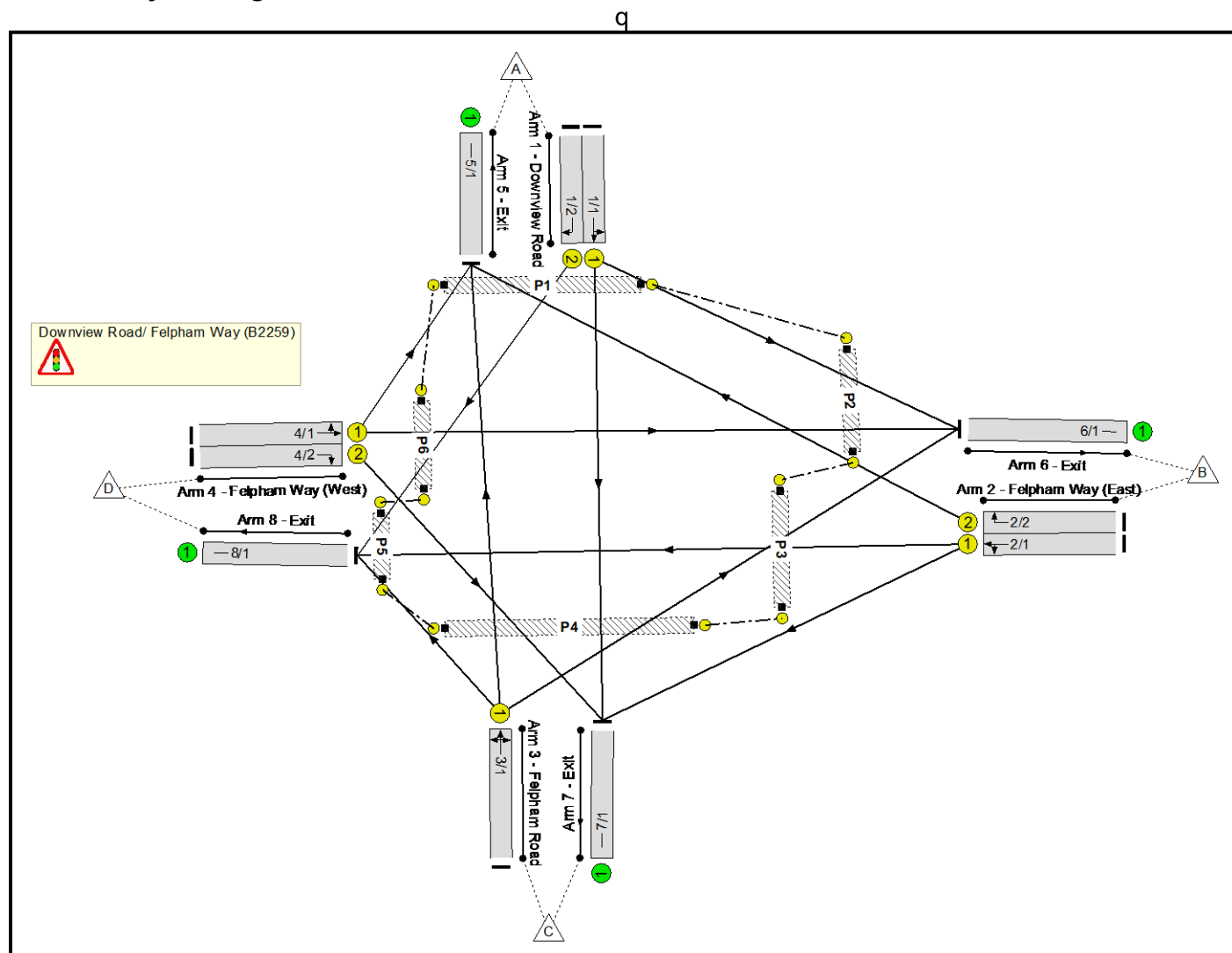
Full Input Data And Results

Full Input Data And Results

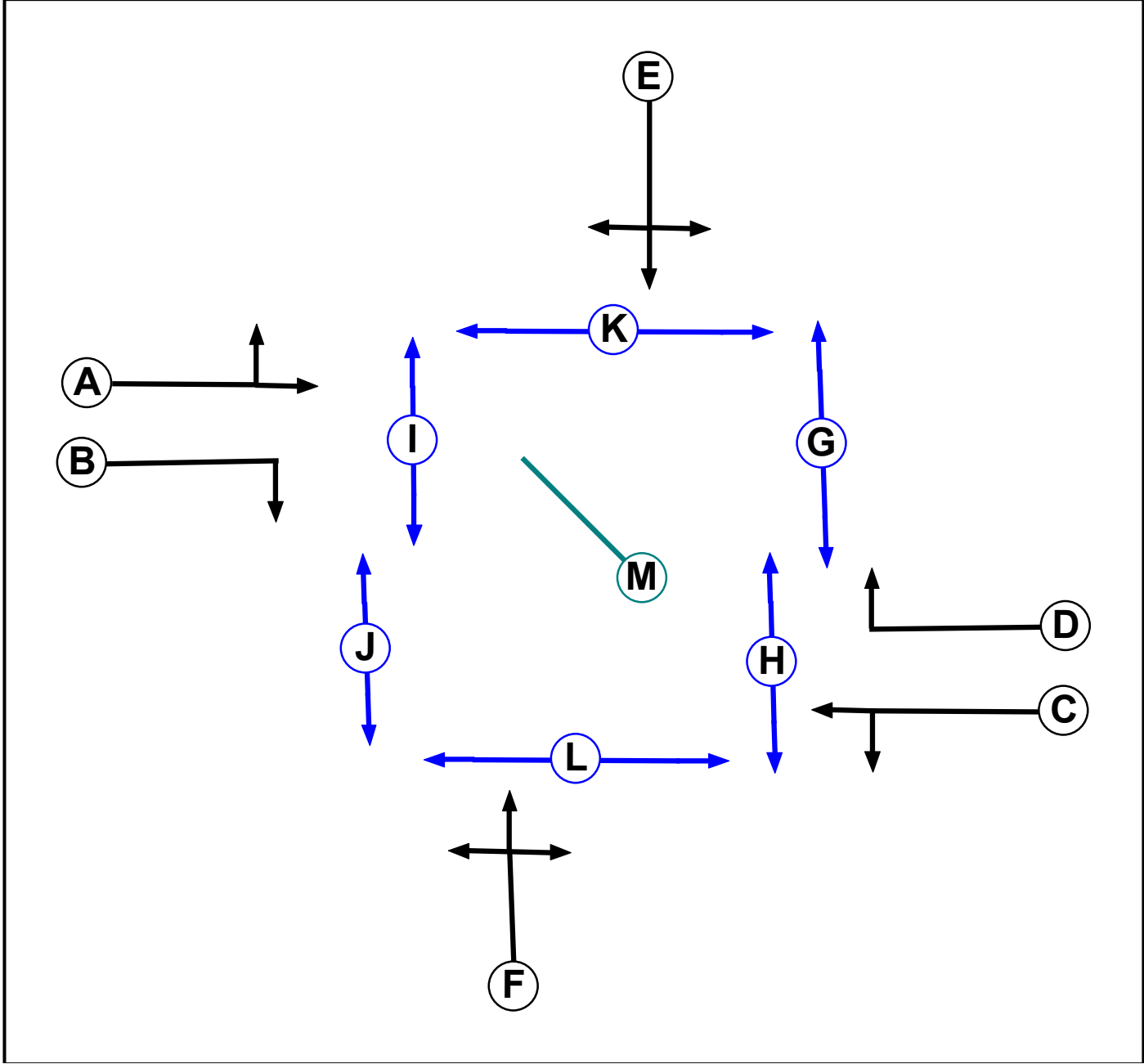
User and Project Details

Project:	JNY10830 Bognor Regis
Title:	Downview Road/ Felpham Way (B2259) Junction
Location:	
Additional detail:	
File name:	Downview Road_Felpham Way (B2259) Junction (120sec Baseline Model).lsg3x
Author:	George Magnisalis
Company:	RPS Group
Address:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		6	6
L	Pedestrian		6	6
M	Dummy		3	3

Phase Intergreens Matrix

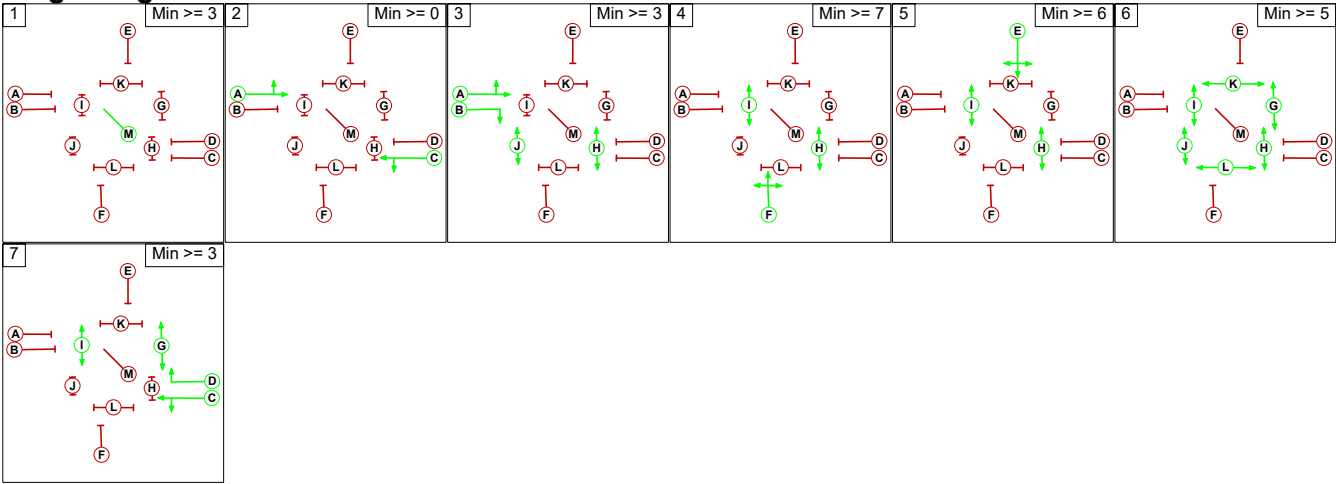
Phase Interlocks Matrix														
	Starting Phase													
Terminating Phase		A	B	C	D	E	F	G	H	I	J	K	L	M
	A		-	-	6	6	6	10	-	6	-	7	-	3
	B	-		8	6	6	6	-	-	6	-	-	9	3
	C	-	6		-	6	7	-	7	-	10	-	8	3
	D	7	6	-		6	6	-	7	-	-	9	-	3
	E	6	6	6	6		6	7	-	-	9	6	8	3
	F	6	6	6	6	7		9	-	-	7	8	6	3
	G	5	-	-	-	5	5		-	-	-	-	-	3
	H	-	-	5	5	-	-	-		-	-	-	-	3
	I	5	5	-	-	-	-	-	-		-	-	-	3
	J	-	-	5	-	5	5	-	-	-		-	-	3
	K	6	-	-	6	6	6	-	-	-	-		-	3
	L	-	6	6	-	6	6	-	-	-	-	-		3
	M	2	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

Stage No.	Phases in Stage
1	M
2	A C
3	A B H J
4	F H I
5	E H I
6	G H I J K L
7	C D G I

Full Input Data And Results

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage						
	1	2	3	4	5	6	7
	1		2	2	2	2	2
	2	3		10	7	7	10
	3	3	8		6	6	10
	4	3	6	7		7	9
	5	3	6	9	6		9
	6	3	6	6	6		6
	7	3	7	10	7	10	

Give-Way Lane Input Data

Junction: Downview Road/ Felpham Way (B2259)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Downview Road/ Felpham Way (B2259)												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Downview Road)	U	E	2	3	7.8	Geom	-	2.55	0.00	Y	Arm 6 Left	Inf
											Arm 7 Ahead	Inf
1/2 (Downview Road)	U	E	2	3	7.8	Geom	-	2.55	0.00	Y	Arm 8 Right	Inf
2/1 (Felpham Way (East))	U	C	2	3	15.4	Geom	-	3.35	0.00	Y	Arm 7 Left	Inf
											Arm 8 Ahead	Inf
2/2 (Felpham Way (East))	U	D	2	3	15.4	Geom	-	3.35	0.00	Y	Arm 5 Right	Inf
											Arm 5 Ahead	Inf
3/1 (Felpham Road)	U	F	2	3	12.2	Geom	-	3.41	0.00	Y	Arm 6 Right	Inf
											Arm 8 Left	Inf
4/1 (Felpham Way (West))	U	A	2	3	16.4	Geom	-	3.01	0.00	Y	Arm 5 Left	Inf
											Arm 6 Ahead	Inf
4/2 (Felpham Way (West))	U	B	2	3	16.4	Geom	-	3.01	0.00	Y	Arm 7 Right	Inf
5/1 (Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/1 (Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
7/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2021 Base AM Peak'	08:00	09:00	01:00	
2: '2021 Base PM Peak'	17:00	18:00	01:00	
3: '2031 Base + Committed AM Peak'	08:00	09:00	01:00	
4: '2031 Base + Committed PM Peak'	17:00	18:00	01:00	
5: '2031 Base + Development AM Peak'	08:00	09:00	01:00	
6: '2031 Base + Development PM Peak'	17:00	18:00	01:00	
7: '2031 Base AM Peak'	08:00	09:00	01:00	
8: '2031 Base PM Peak'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: '2021 Base AM Peak' (FG1: '2021 Base AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	115	52	179	346
	B	73	0	158	678	909
	C	48	54	0	14	116
	D	168	504	32	0	704
	Tot.	289	673	242	871	2075

Traffic Lane Flows

Lane	Scenario 1: 2021 Base AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	167
1/2	179
2/1	836
2/2	73
3/1	116
4/1	672
4/2	32
5/1	289
6/1	673
7/1	242
8/1	871

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	68.9 %	1870	1870
				Arm 7 Ahead	Inf	31.1 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.9 %	1950	1950
				Arm 8 Ahead	Inf	81.1 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	41.4 %	1956	1956
				Arm 6 Right	Inf	46.6 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.1 %	1916	1916
				Arm 5 Left	Inf	25.0 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	75.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2021 Base PM Peak' (FG2: '2021 Base PM Peak', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

		Destination				
Origin	A	0	68	38	112	218
	B	105	0	76	453	634
	C	36	116	0	27	179
	D	176	611	12	0	799
	Tot.	317	795	126	592	1830

Traffic Lane Flows

Lane	Scenario 2: 2021 Base PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	106
1/2	112
2/1	529
2/2	105
3/1	179
4/1	787
4/2	12
5/1	317
6/1	795
7/1	126
8/1	592

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	64.2 %	1870	1870
				Arm 7 Ahead	Inf	35.8 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	14.4 %	1950	1950
				Arm 8 Ahead	Inf	85.6 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	20.1 %	1956	1956
				Arm 6 Right	Inf	64.8 %		
				Arm 8 Left	Inf	15.1 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	22.4 %	1916	1916
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	77.6 %		
				Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2031 Base AM Peak' (FG7: '2031 Base AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	123	56	192	371
	B	78	0	169	727	974
	C	51	58	0	15	124
	D	180	540	34	0	754
	Tot.	309	721	259	934	2223

Traffic Lane Flows

Lane	Scenario 3: 2031 Base AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	179
1/2	192
2/1	896
2/2	78
3/1	124
4/1	720
4/2	34
5/1	309
6/1	721
7/1	259
8/1	934

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	68.7 %	1870	1870
				Arm 7 Ahead	Inf	31.3 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.9 %	1950	1950
				Arm 8 Ahead	Inf	81.1 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	41.1 %	1956	1956
				Arm 6 Right	Inf	46.8 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.1 %	1916	1916
				Arm 5 Left	Inf	25.0 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	75.0 %	1916	1916
				Arm 7 Right	Inf	100.0 %		
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2031 Base PM Peak' (FG8: '2031 Base PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	73	41	121	235
	B	113	0	82	489	684
	C	39	125	0	29	193
	D	190	660	13	0	863
	Tot.	342	858	136	639	1975

Traffic Lane Flows

Lane	Scenario 4: 2031 Base PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	114
1/2	121
2/1	571
2/2	113
3/1	193
4/1	850
4/2	13
5/1	342
6/1	858
7/1	136
8/1	639

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	64.0 %	1870	1870
				Arm 7 Ahead	Inf	36.0 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	14.4 %	1950	1950
				Arm 8 Ahead	Inf	85.6 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	20.2 %	1956	1956
				Arm 6 Right	Inf	64.8 %		
				Arm 8 Left	Inf	15.0 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	22.4 %	1916	1916
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	77.6 %		
				Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2031 Base + Committed AM Peak' (FG3: '2031 Base + Committed AM Peak', Plan 1: 'Network Control

Full Input Data And Results
Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	125	56	192	373
	B	80	0	174	791	1045
	C	51	58	0	15	124
	D	180	653	34	0	867
	Tot.	311	836	264	998	2409

Traffic Lane Flows

Lane	Scenario 5: 2031 Base + Committed AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	181
1/2	192
2/1	965
2/2	80
3/1	124
4/1	833
4/2	34
5/1	311
6/1	836
7/1	264
8/1	998

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	69.1 %	1870	1870
				Arm 7 Ahead	Inf	30.9 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.0 %	1950	1950
				Arm 8 Ahead	Inf	82.0 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	41.1 %	1956	1956
				Arm 6 Right	Inf	46.8 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.1 %	1916	1916
				Arm 5 Left	Inf	21.6 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	78.4 %	1916	1916
				Arm 7 Right	Inf	100.0 %		
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2031 Base + Committed PM Peak' (FG4: '2031 Base + Committed PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	78	41	121	240
	B	115	0	84	597	796
	C	39	129	0	29	197
	D	190	736	13	0	939
	Tot.	344	943	138	747	2172

Traffic Lane Flows

Lane	Scenario 6: 2031 Base + Committed PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	119
1/2	121
2/1	681
2/2	115
3/1	197
4/1	926
4/2	13
5/1	344
6/1	943
7/1	138
8/1	747

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	65.5 %	1870	1870
				Arm 7 Ahead	Inf	34.5 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	12.3 %	1950	1950
				Arm 8 Ahead	Inf	87.7 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	19.8 %		
				Arm 6 Right	Inf	65.5 %		
				Arm 8 Left	Inf	14.7 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	20.5 %	1916	1916
				Arm 6 Ahead	Inf	79.5 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)				Infinite Saturation Flow			Inf	Inf
8/1 (Exit Lane 1)				Infinite Saturation Flow			Inf	Inf

Scenario 7: '2031 Base + Development AM Peak' (FG5: '2031 Base + Development AM Peak', Plan 1: 'Network

Full Input Data And Results
Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	232	60	279	571
	B	106	0	174	791	1071
	C	48	59	0	15	122
	D	191	661	34	0	886
	Tot.	345	952	268	1085	2650

Traffic Lane Flows

Lane	Scenario 7: 2031 Base + Development AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	292
1/2	279
2/1	965
2/2	106
3/1	122
4/1	852
4/2	34
5/1	345
6/1	952
7/1	268
8/1	1085

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	79.5 %	1870	1870
				Arm 7 Ahead	Inf	20.5 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.0 %	1950	1950
				Arm 8 Ahead	Inf	82.0 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	39.3 %	1956	1956
				Arm 6 Right	Inf	48.4 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.3 %	1916	1916
				Arm 5 Left	Inf	22.4 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	77.6 %	1916	1916
				Arm 7 Right	Inf	100.0 %		
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2031 Base + Development PM Peak' (FG6: '2031 Base + Development PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	127	40	157	324
	B	199	0	84	601	884
	C	42	129	0	29	200
	D	256	736	13	0	1005
	Tot.	497	992	137	787	2413

Traffic Lane Flows

Lane	Scenario 8: 2031 Base + Development PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	167
1/2	157
2/1	685
2/2	199
3/1	200
4/1	992
4/2	13
5/1	497
6/1	992
7/1	137
8/1	787

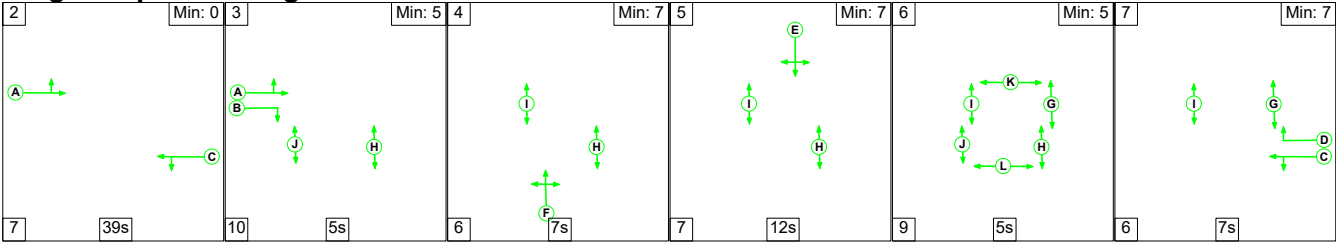
Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	76.0 %	1870	1870
				Arm 7 Ahead	Inf	24.0 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	12.3 %	1950	1950
				Arm 8 Ahead	Inf	87.7 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
				Arm 5 Ahead	Inf	21.0 %		
3/1 (Felpham Road)	3.41	0.00	Y	Arm 6 Right	Inf	64.5 %	1956	1956
				Arm 8 Left	Inf	14.5 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	25.8 %	1916	1916
				Arm 6 Ahead	Inf	74.2 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)				Infinite Saturation Flow			Inf	Inf
8/1 (Exit Lane 1)				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 1: '2021 Base AM Peak' (FG1: '2021 Base AM Peak', Plan 1: 'Network Control Plan 1')

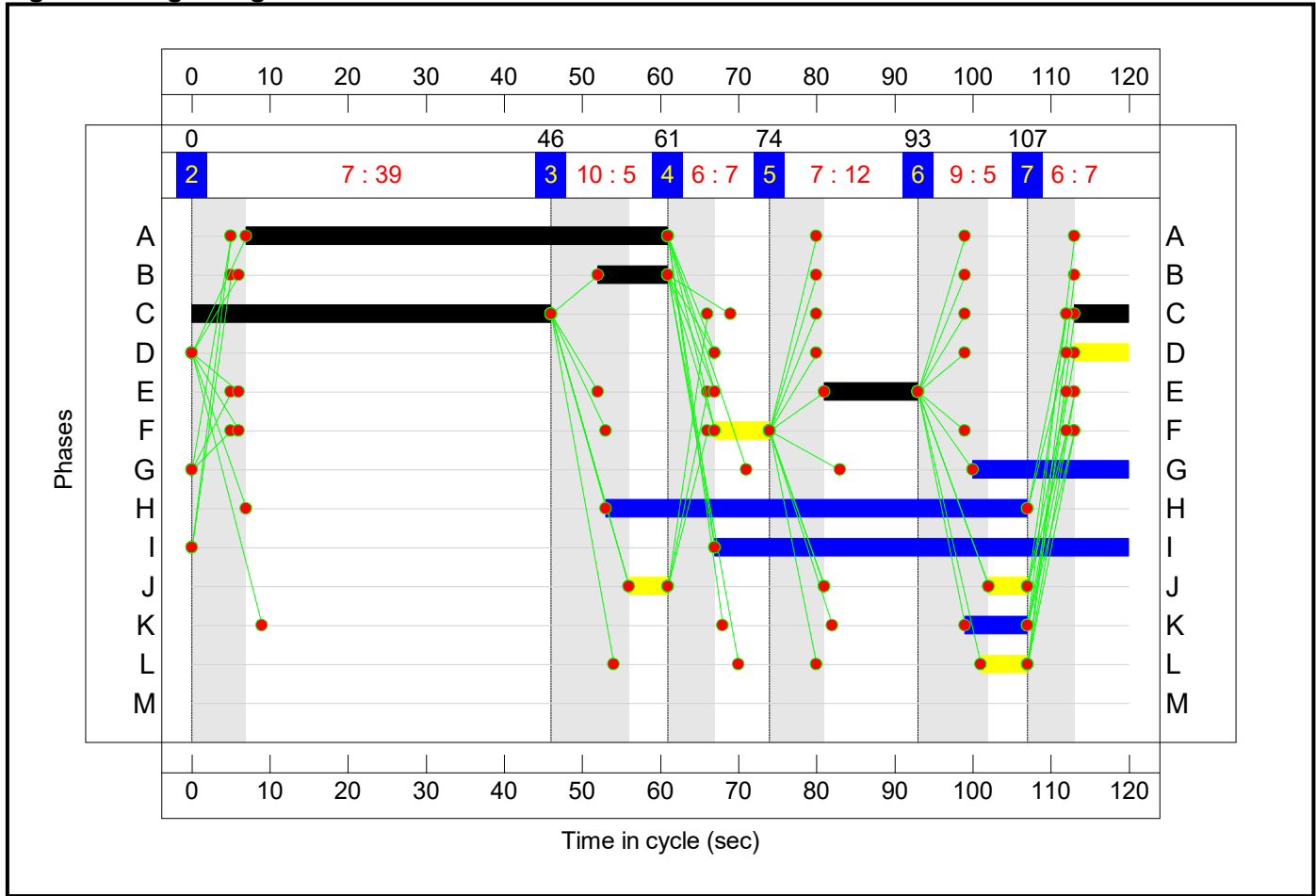
Stage Sequence Diagram



Stage Timings

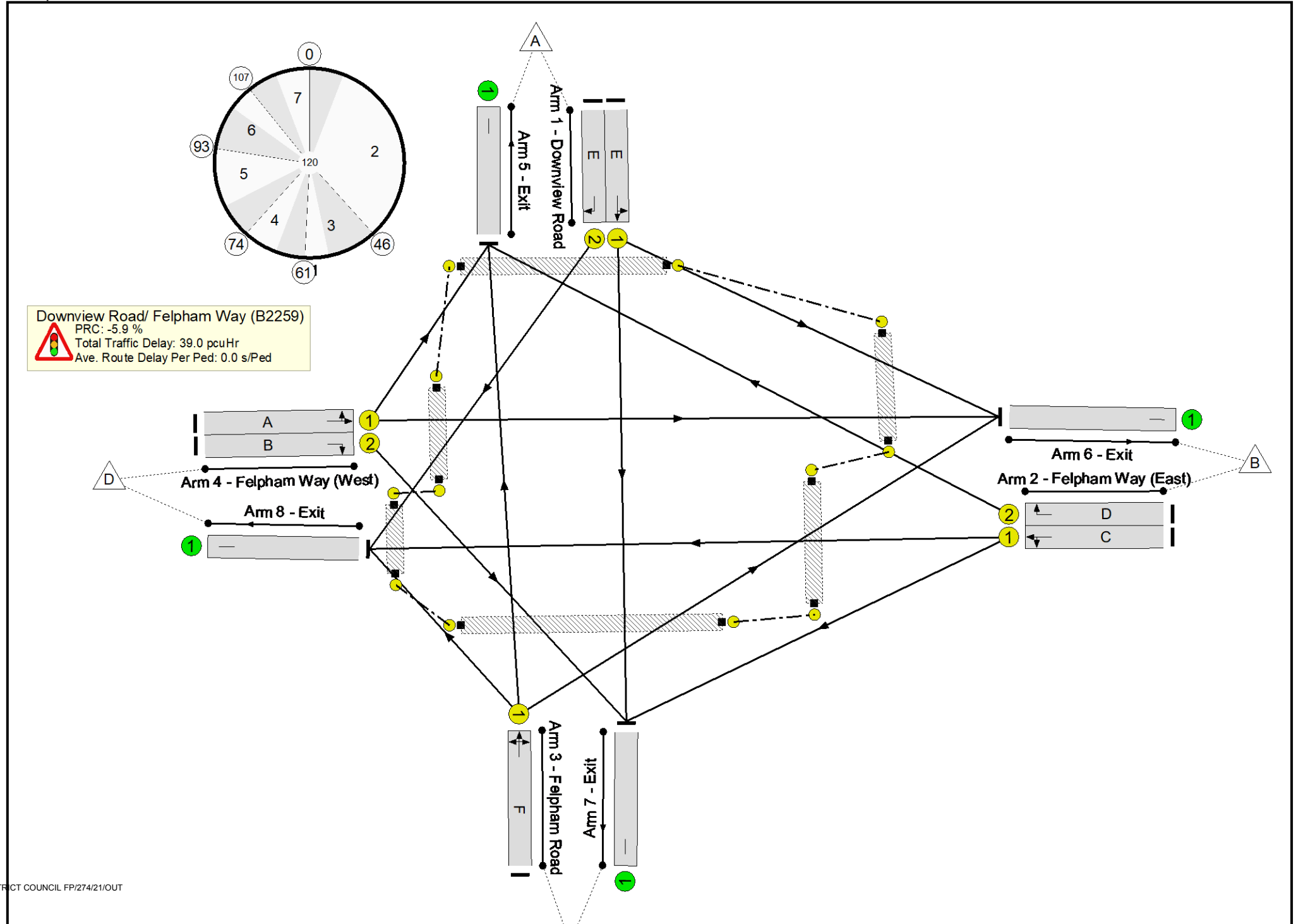
Stage	2	3	4	5	6	7
Duration	39	5	7	12	5	7
Change Point	0	46	61	74	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	95.3%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	95.3%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	12	-	167	1870	203	82.4%
1/2	Downview Road Right	U	N/A	N/A	E		1	12	-	179	1870	203	88.4%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	53	-	836	1950	878	95.3%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	73	1950	130	56.2%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	7	-	116	1956	130	89.0%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	54	-	672	1916	878	76.5%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	32	1916	160	20.0%
5/1	Exit	U	N/A	N/A	-		-	-	-	289	1940	1940	14.9%
6/1	Exit	U	N/A	N/A	-		-	-	-	673	1940	1940	34.7%
7/1	Exit	U	N/A	N/A	-		-	-	-	242	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	871	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	54	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

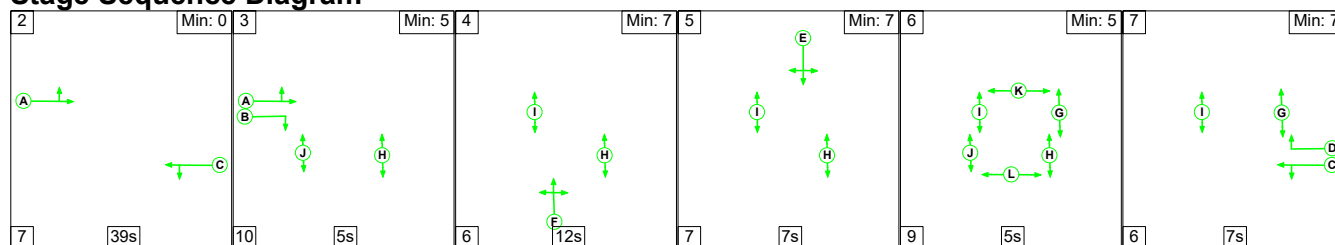
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	53	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	20.8	18.1	0.0	39.0	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	20.8	18.1	0.0	39.0	-	-	-	-
1/1	167	167	-	-	-	2.4	2.1	-	4.5	97.6	5.4	2.1	7.5
1/2	179	179	-	-	-	2.6	3.0	-	5.6	113.5	5.9	3.0	8.9
2/1	836	836	-	-	-	7.4	7.4	-	14.8	63.7	26.7	7.4	34.1
2/2	73	73	-	-	-	1.1	0.6	-	1.7	85.2	2.4	0.6	3.0
3/1	116	116	-	-	-	1.8	2.9	-	4.7	144.9	3.8	2.9	6.7
4/1	672	672	-	-	-	5.1	1.6	-	6.7	35.7	18.7	1.6	20.3
4/2	32	32	-	-	-	0.5	0.1	-	0.6	65.4	1.0	0.1	1.1
5/1	289	289	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	673	673	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/1	242	242	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	871	871	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -5.9 PRC Over All Lanes (%): -5.9 Total Delay for Signalled Lanes (pcuHr): 38.61 Total Delay Over All Lanes(pcuHr): 38.97 Cycle Time (s): 120													

Full Input Data And Results

Full Input Data And Results

Scenario 2: '2021 Base PM Peak' (FG2: '2021 Base PM Peak', Plan 1: 'Network Control Plan 1')

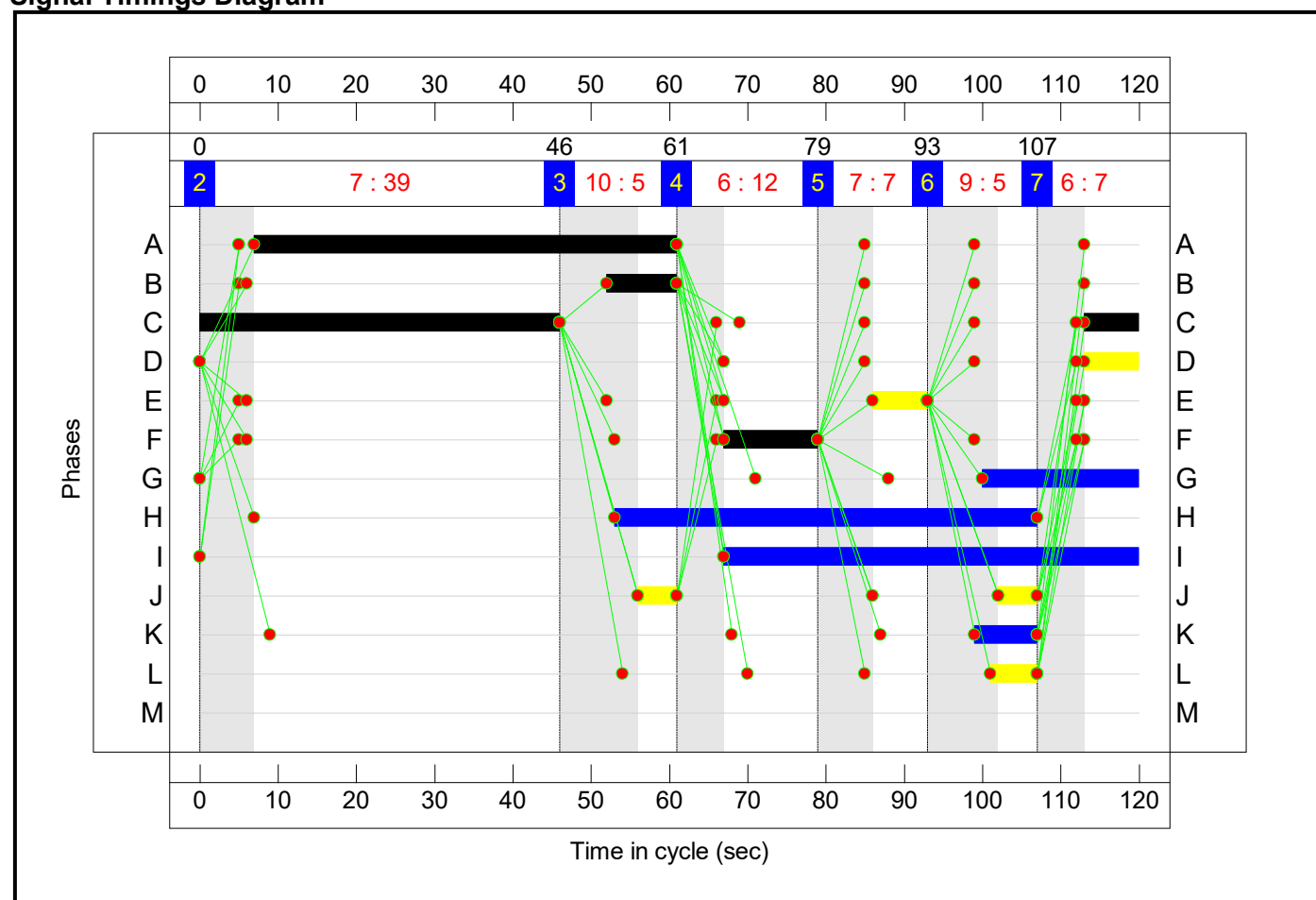
Stage Sequence Diagram



Stage Timings

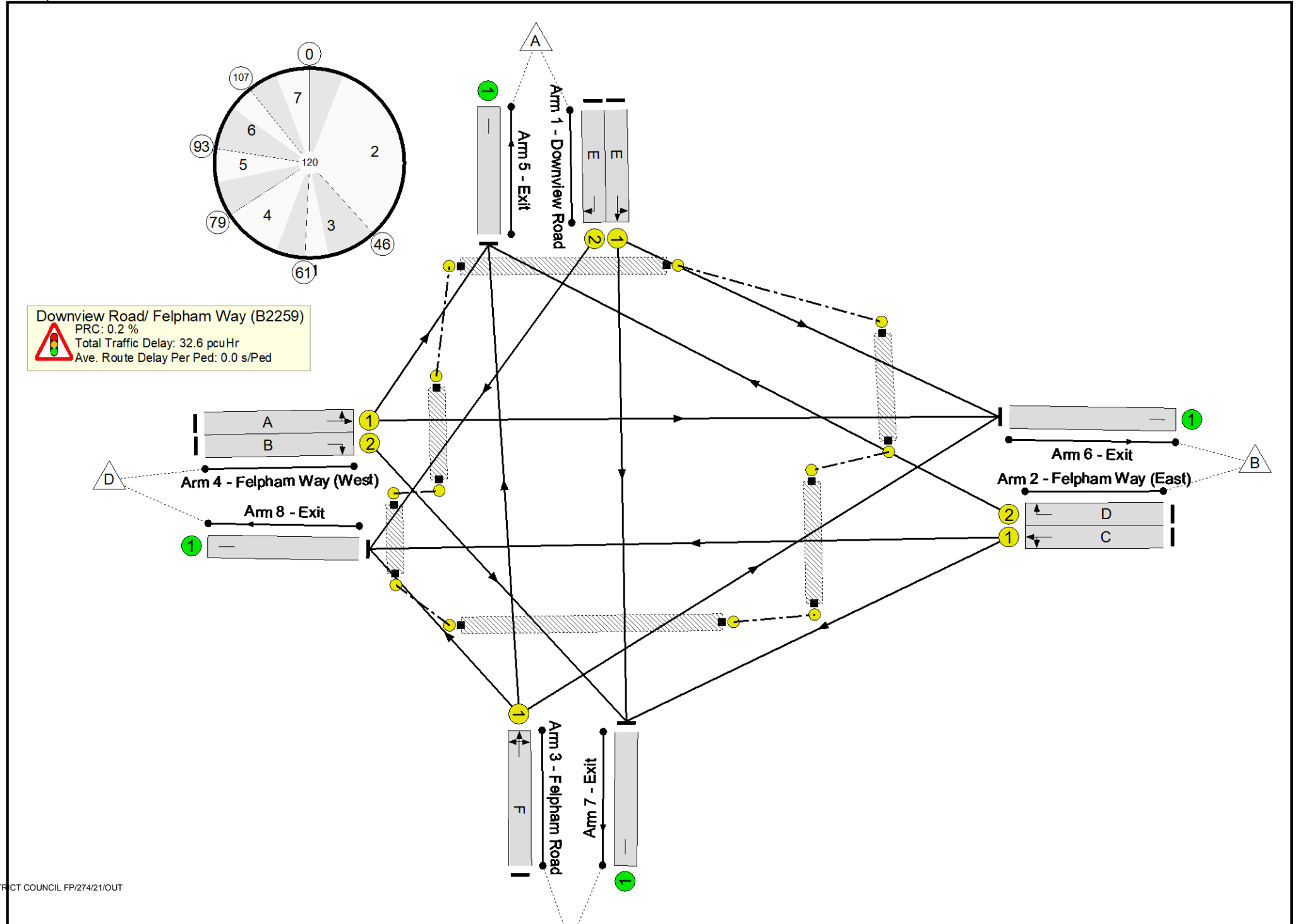
Stage	2	3	4	5	6	7
Duration	39	5	12	7	5	7
Change Point	0	46	61	79	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	7	-	106	1870	125	85.0%
1/2	Downview Road Right	U	N/A	N/A	E		1	7	-	112	1870	125	89.8%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	53	-	529	1950	878	60.3%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	105	1950	130	80.8%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	12	-	179	1956	212	84.5%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	54	-	787	1916	878	89.6%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	12	1916	160	7.5%
5/1	Exit	U	N/A	N/A	-		-	-	-	317	1940	1940	16.3%
6/1	Exit	U	N/A	N/A	-		-	-	-	795	1940	1940	41.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	126	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	592	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	54	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

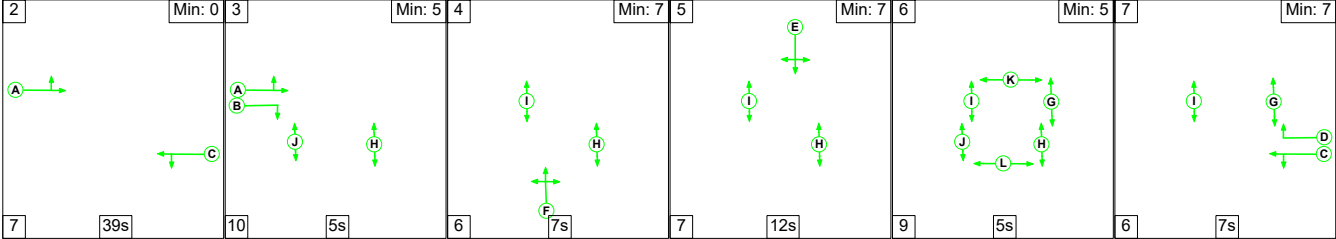
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	53	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	17.9	14.7	0.0	32.6	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	17.9	14.7	0.0	32.6	-	-	-	-
1/1	106	106	-	-	-	1.6	2.3	-	3.9	132.9	3.5	2.3	5.8
1/2	112	112	-	-	-	1.7	3.0	-	4.7	152.0	3.7	3.0	6.7
2/1	529	529	-	-	-	3.7	0.8	-	4.4	30.1	13.2	0.8	14.0
2/2	105	105	-	-	-	1.6	1.8	-	3.4	118.1	3.4	1.8	5.3
3/1	179	179	-	-	-	2.6	2.4	-	5.0	100.3	5.8	2.4	8.2
4/1	787	787	-	-	-	6.5	4.0	-	10.5	48.0	24.0	4.0	28.0
4/2	12	12	-	-	-	0.2	0.0	-	0.2	63.1	0.4	0.0	0.4
5/1	317	317	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	795	795	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
7/1	126	126	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	592	592	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		0.2	Total Delay for Signalled Lanes (pcuHr):			32.20	Cycle Time (s): 120			
			PRC Over All Lanes (%):		0.2	Total Delay Over All Lanes(pcuHr):			32.65				

Full Input Data And Results

Full Input Data And Results

Scenario 3: '2031 Base AM Peak' (FG7: '2031 Base AM Peak', Plan 1: 'Network Control Plan 1')

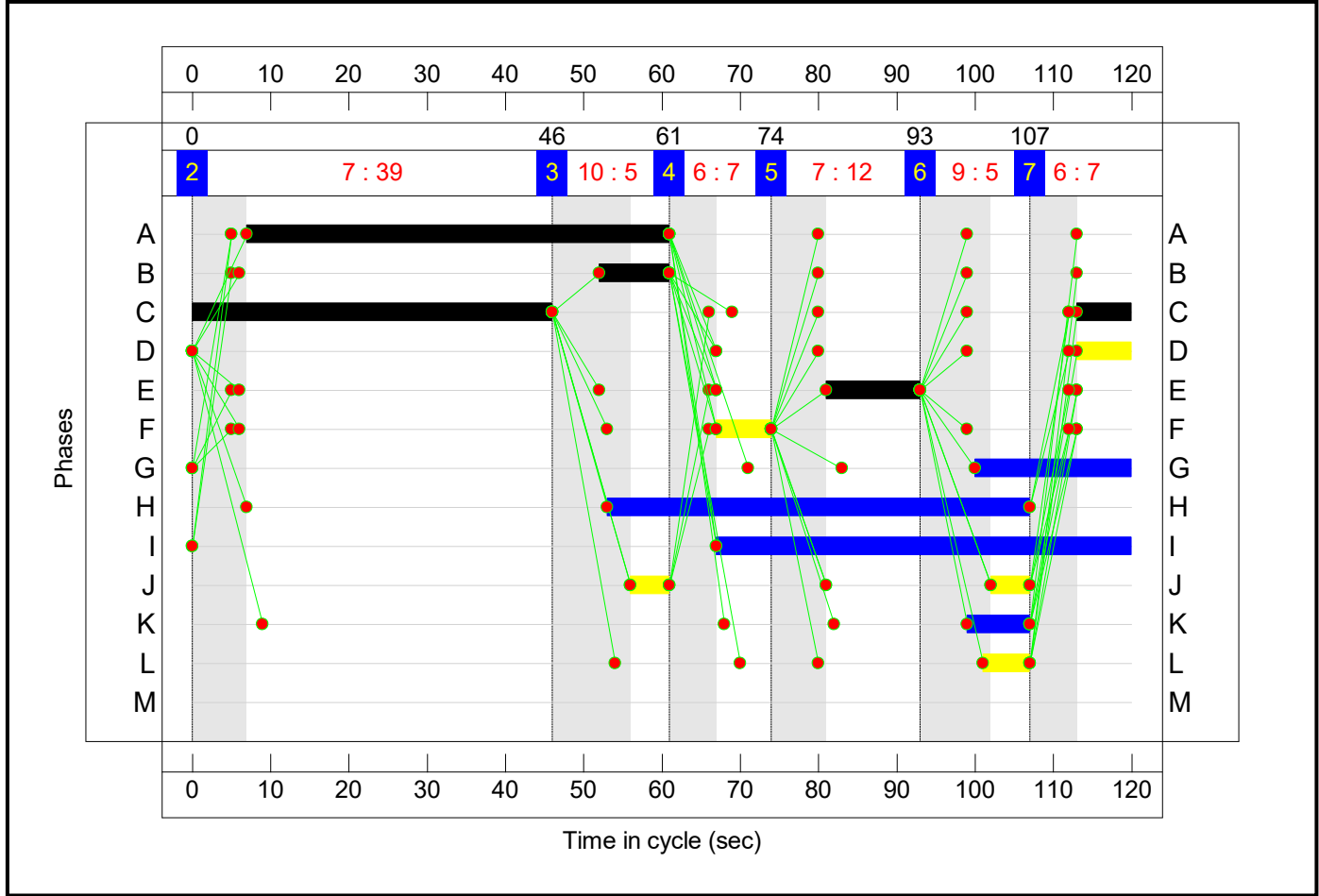
Stage Sequence Diagram



Stage Timings

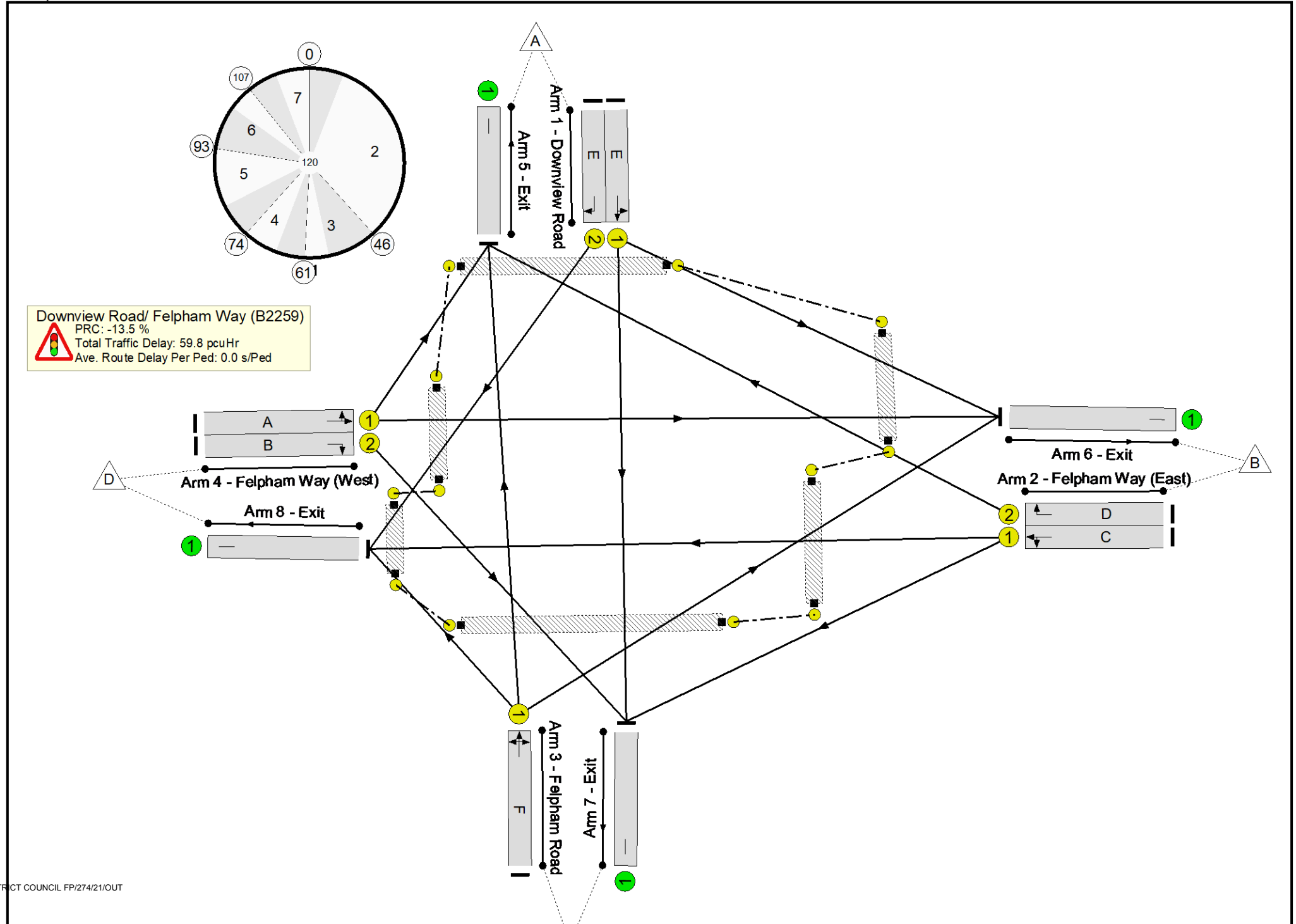
Stage	2	3	4	5	6	7
Duration	39	5	7	12	5	7
Change Point	0	46	61	74	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	102.1%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	102.1%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	12	-	179	1870	203	88.4%
1/2	Downview Road Right	U	N/A	N/A	E		1	12	-	192	1870	203	94.8%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	53	-	896	1950	878	102.1%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	78	1950	130	60.0%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	7	-	124	1956	130	95.1%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	54	-	720	1916	878	82.0%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	34	1916	160	21.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	309	1940	1940	15.9%
6/1	Exit	U	N/A	N/A	-		-	-	-	721	1940	1940	37.2%
7/1	Exit	U	N/A	N/A	-		-	-	-	259	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	934	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	54	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

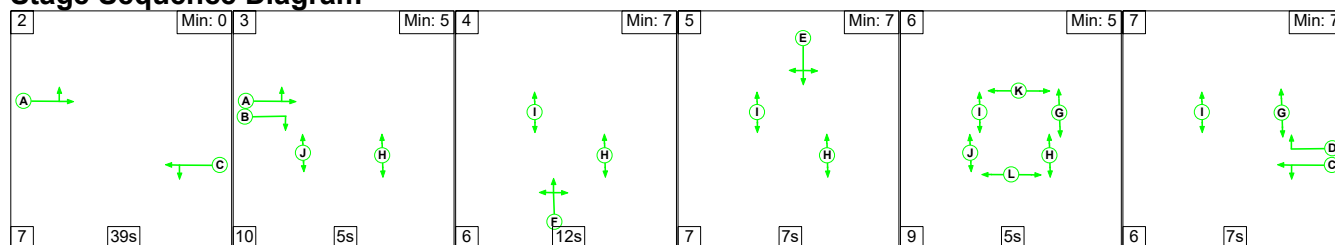
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	53	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	24.0	35.7	0.0	59.8	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	24.0	35.7	0.0	59.8	-	-	-	-
1/1	179	179	-	-	-	2.6	3.0	-	5.6	113.5	5.9	3.0	8.9
1/2	192	192	-	-	-	2.8	4.8	-	7.6	142.6	6.3	4.8	11.1
2/1	896	878	-	-	-	9.3	20.3	-	29.6	119.0	30.5	20.3	50.8
2/2	78	78	-	-	-	1.2	0.7	-	1.9	88.1	2.5	0.7	3.2
3/1	124	124	-	-	-	1.9	4.2	-	6.1	177.6	4.1	4.2	8.3
4/1	720	720	-	-	-	5.6	2.2	-	7.9	39.3	20.8	2.2	23.0
4/2	34	34	-	-	-	0.5	0.1	-	0.6	65.6	1.0	0.1	1.2
5/1	309	309	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	721	721	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/1	256	256	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	919	919	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -13.5 PRC Over All Lanes (%): -13.5 Total Delay for Signalled Lanes (pcuHr): 59.38 Total Delay Over All Lanes(pcuHr): 59.77 Cycle Time (s): 120													

Full Input Data And Results

Full Input Data And Results

Scenario 4: '2031 Base PM Peak' (FG8: '2031 Base PM Peak', Plan 1: 'Network Control Plan 1')

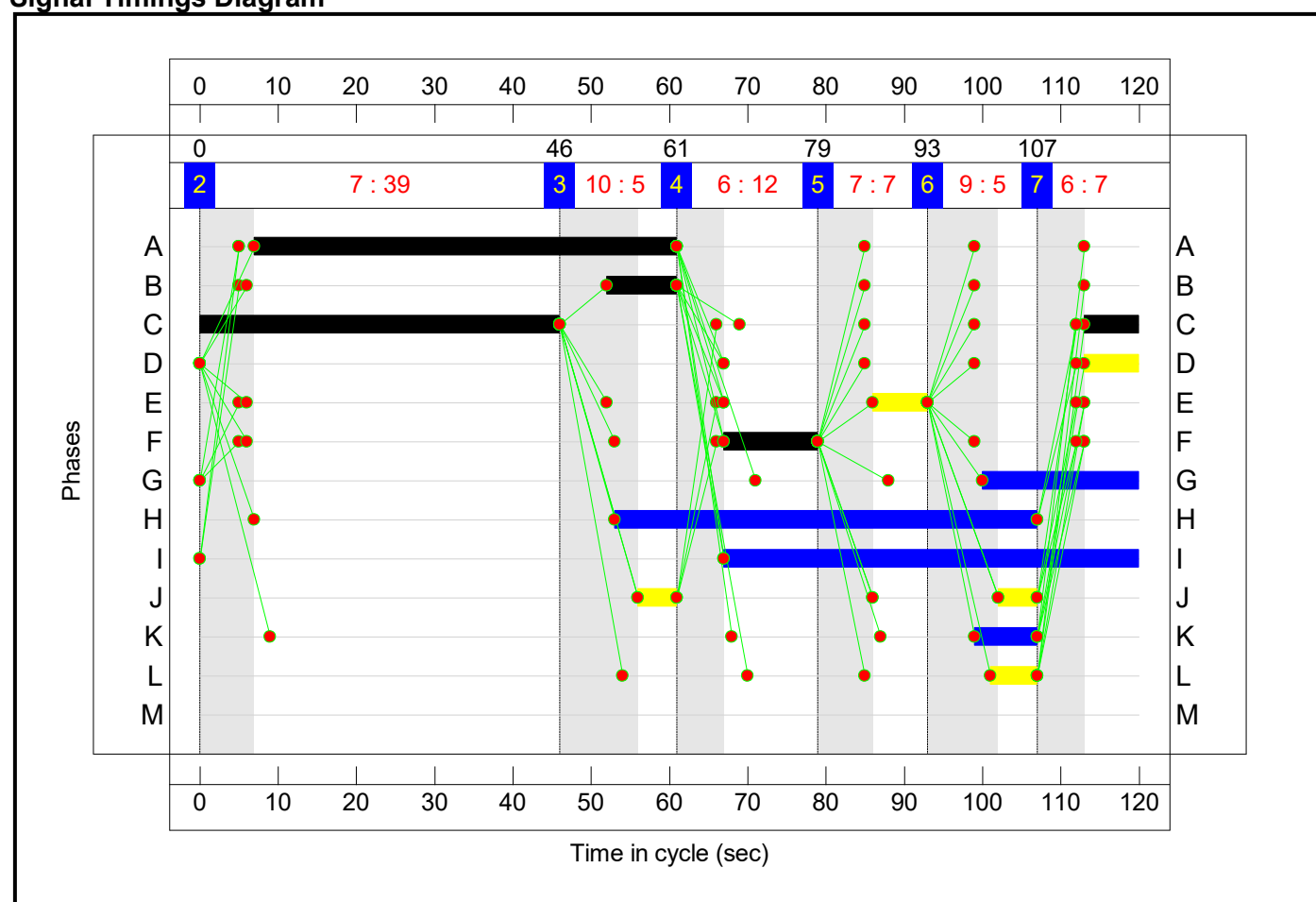
Stage Sequence Diagram



Stage Timings

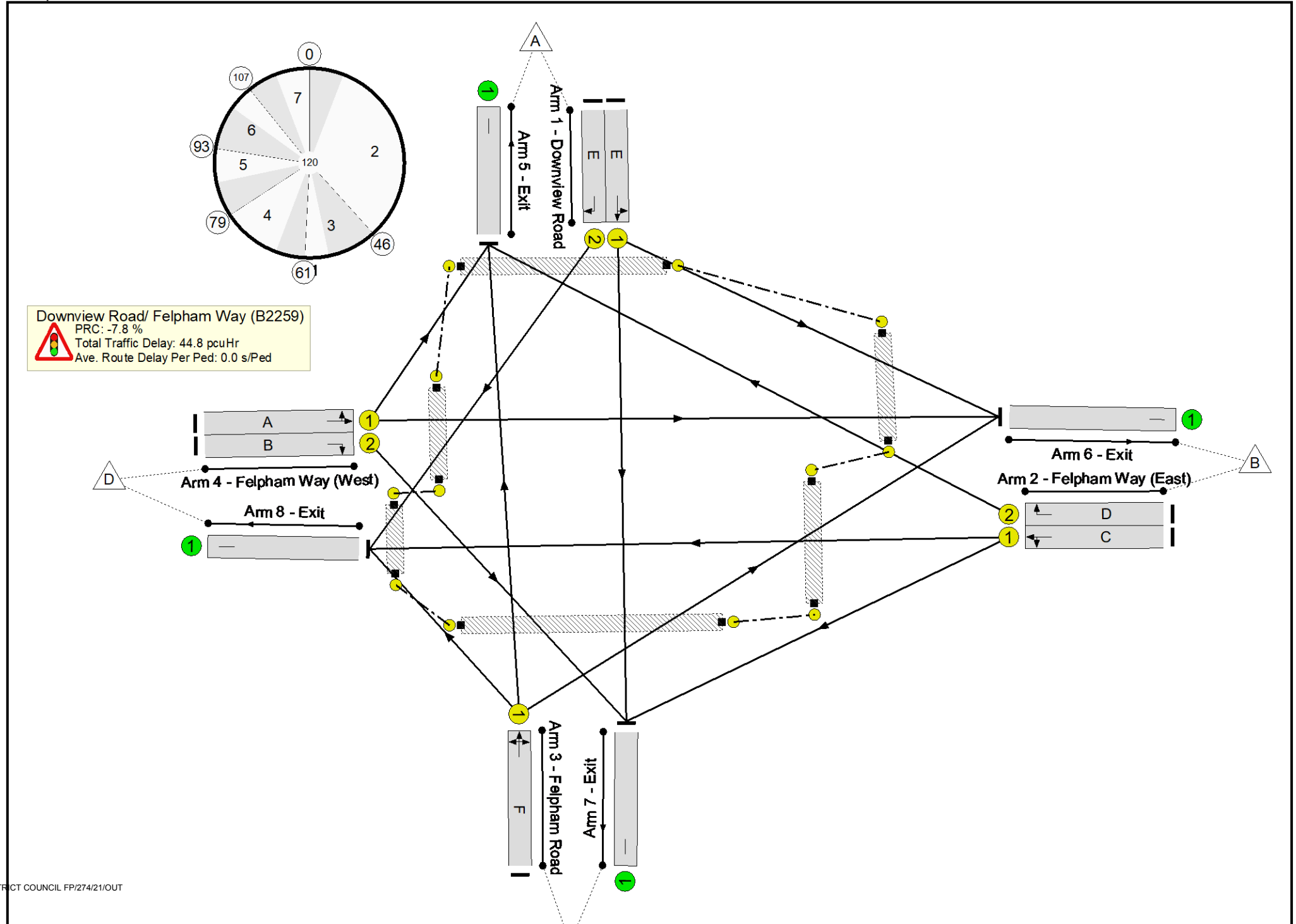
Stage	2	3	4	5	6	7
Duration	39	5	12	7	5	7
Change Point	0	46	61	79	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	97.1%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	97.1%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	7	-	114	1870	125	91.4%
1/2	Downview Road Right	U	N/A	N/A	E		1	7	-	121	1870	125	97.1%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	53	-	571	1950	878	65.1%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	113	1950	130	86.9%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	12	-	193	1956	212	91.1%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	54	-	850	1916	878	96.8%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	13	1916	160	8.1%
5/1	Exit	U	N/A	N/A	-		-	-	-	342	1940	1940	17.6%
6/1	Exit	U	N/A	N/A	-		-	-	-	858	1940	1940	44.2%
7/1	Exit	U	N/A	N/A	-		-	-	-	136	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	639	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	54	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

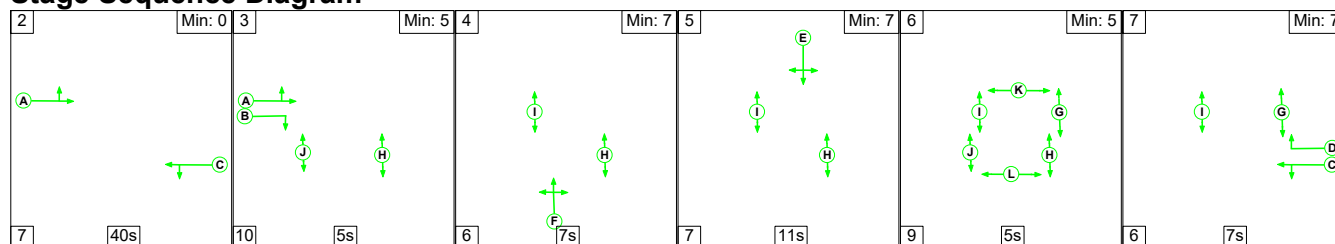
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	53	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	19.9	24.8	0.0	44.8	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	19.9	24.8	0.0	44.8	-	-	-	-
1/1	114	114	-	-	-	1.8	3.3	-	5.1	159.9	3.8	3.3	7.1
1/2	121	121	-	-	-	1.9	4.7	-	6.5	194.5	4.0	4.7	8.7
2/1	571	571	-	-	-	4.1	0.9	-	5.0	31.5	14.8	0.9	15.7
2/2	113	113	-	-	-	1.7	2.6	-	4.3	136.9	3.7	2.6	6.3
3/1	193	193	-	-	-	2.8	3.7	-	6.5	121.5	6.3	3.7	10.0
4/1	850	850	-	-	-	7.5	9.1	-	16.6	70.4	27.4	9.1	36.5
4/2	13	13	-	-	-	0.2	0.0	-	0.2	63.1	0.4	0.0	0.4
5/1	342	342	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	858	858	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
7/1	136	136	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	639	639	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -7.8 PRC Over All Lanes (%): -7.8 Total Delay for Signalled Lanes (pcuHr): 44.26 Total Delay Over All Lanes(pcuHr): 44.76 Cycle Time (s): 120													

Full Input Data And Results

Full Input Data And Results

Scenario 5: '2031 Base + Committed AM Peak' (FG3: '2031 Base + Committed AM Peak', Plan 1: 'Network Control Plan 1')

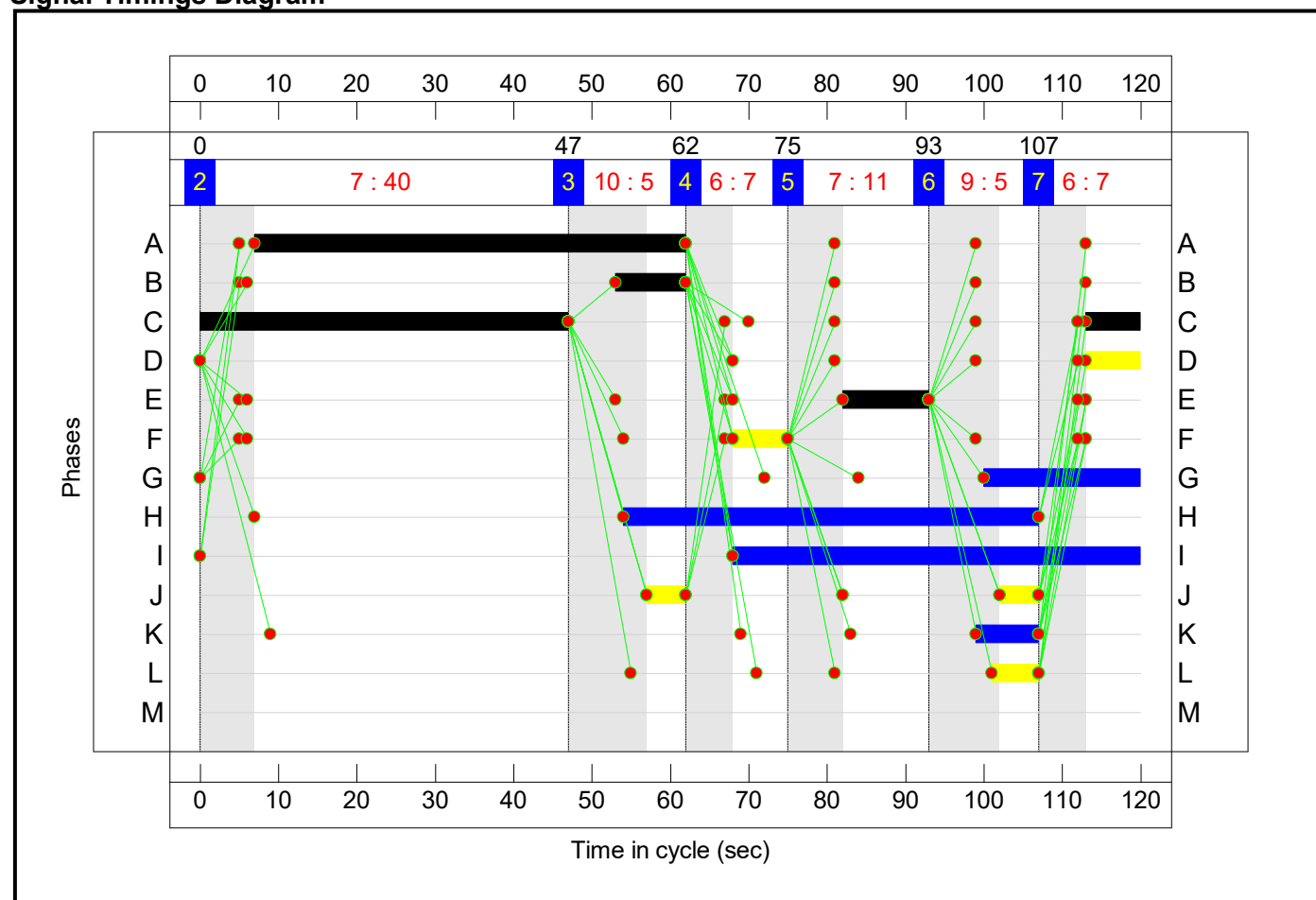
Stage Sequence Diagram



Stage Timings

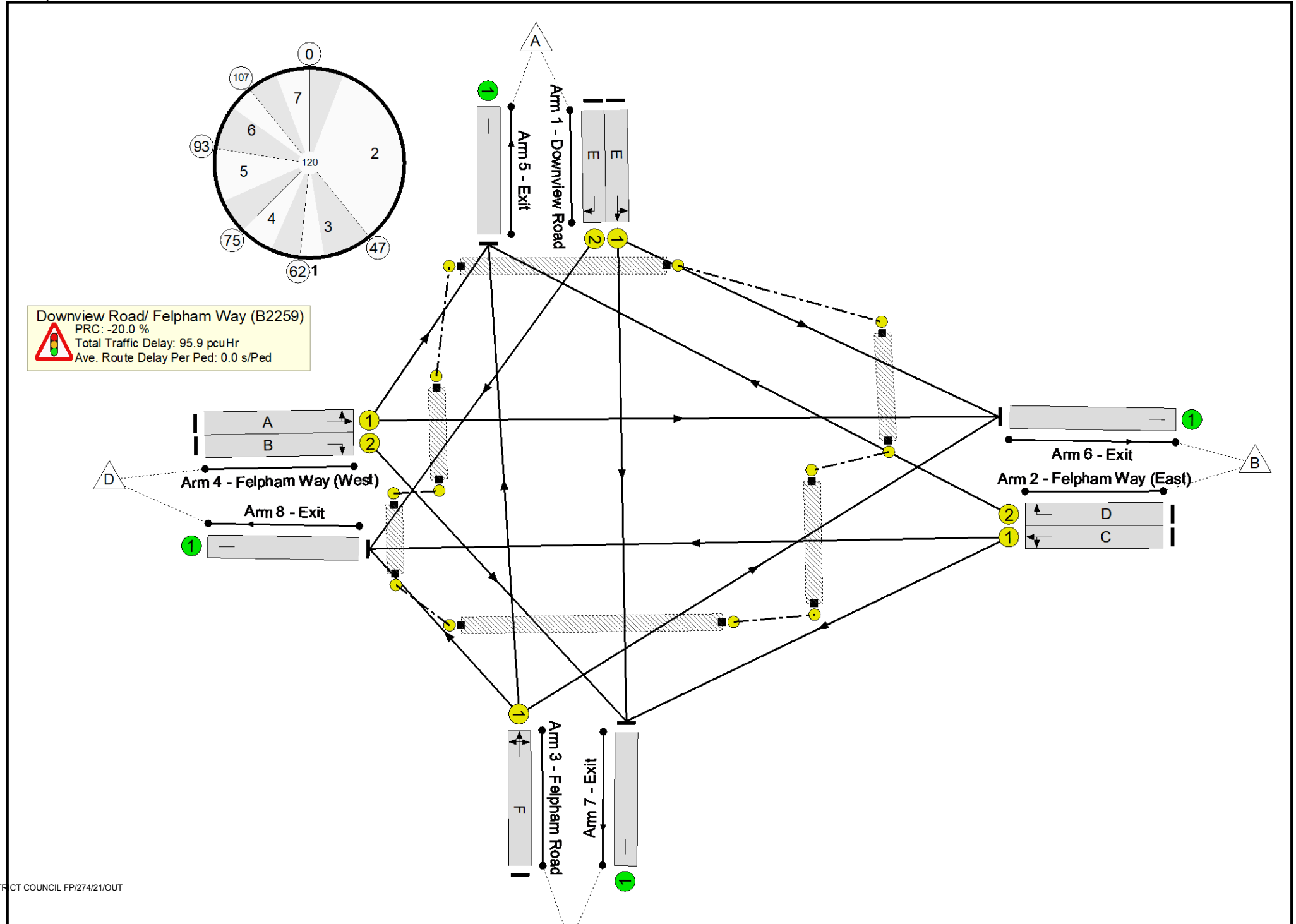
Stage	2	3	4	5	6	7
Duration	40	5	7	11	5	7
Change Point	0	47	62	75	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	108.0%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	108.0%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	11	-	181	1870	187	96.8%
1/2	Downview Road Right	U	N/A	N/A	E		1	11	-	192	1870	187	102.7%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	54	-	965	1950	894	108.0%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	80	1950	130	61.5%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	7	-	124	1956	130	95.1%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	55	-	833	1916	894	93.2%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	34	1916	160	21.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	311	1940	1940	16.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	836	1940	1940	43.1%
7/1	Exit	U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	998	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	53	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

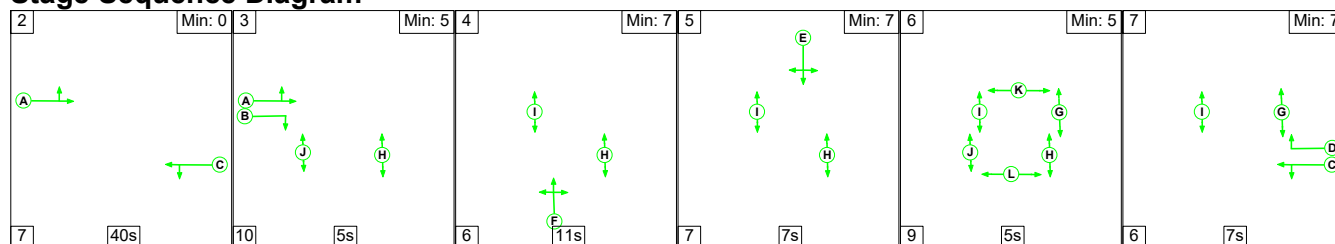
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	52	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	29.4	66.4	0.0	95.9	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	29.4	66.4	0.0	95.9	-	-	-	-
1/1	181	181	-	-	-	2.7	5.4	-	8.1	161.1	6.0	5.4	11.4
1/2	192	187	-	-	-	3.1	8.3	-	11.4	213.4	6.6	8.3	14.9
2/1	965	894	-	-	-	13.0	41.4	-	54.5	203.2	34.5	41.4	76.0
2/2	80	80	-	-	-	1.2	0.8	-	2.0	89.4	2.6	0.8	3.4
3/1	124	124	-	-	-	1.9	4.2	-	6.1	177.6	4.1	4.2	8.3
4/1	833	833	-	-	-	7.0	5.7	-	12.7	55.0	26.1	5.7	31.9
4/2	34	34	-	-	-	0.5	0.1	-	0.6	65.6	1.0	0.1	1.2
5/1	311	311	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	836	836	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
7/1	251	251	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -20.0 PRC Over All Lanes (%): -20.0 Total Delay for Signalled Lanes (pcuHr): 95.40 Total Delay Over All Lanes(pcuHr): 95.87 Cycle Time (s): 120													

Full Input Data And Results

Full Input Data And Results

Scenario 6: '2031 Base + Committed PM Peak' (FG4: '2031 Base + Committed PM Peak', Plan 1: 'Network Control Plan 1')

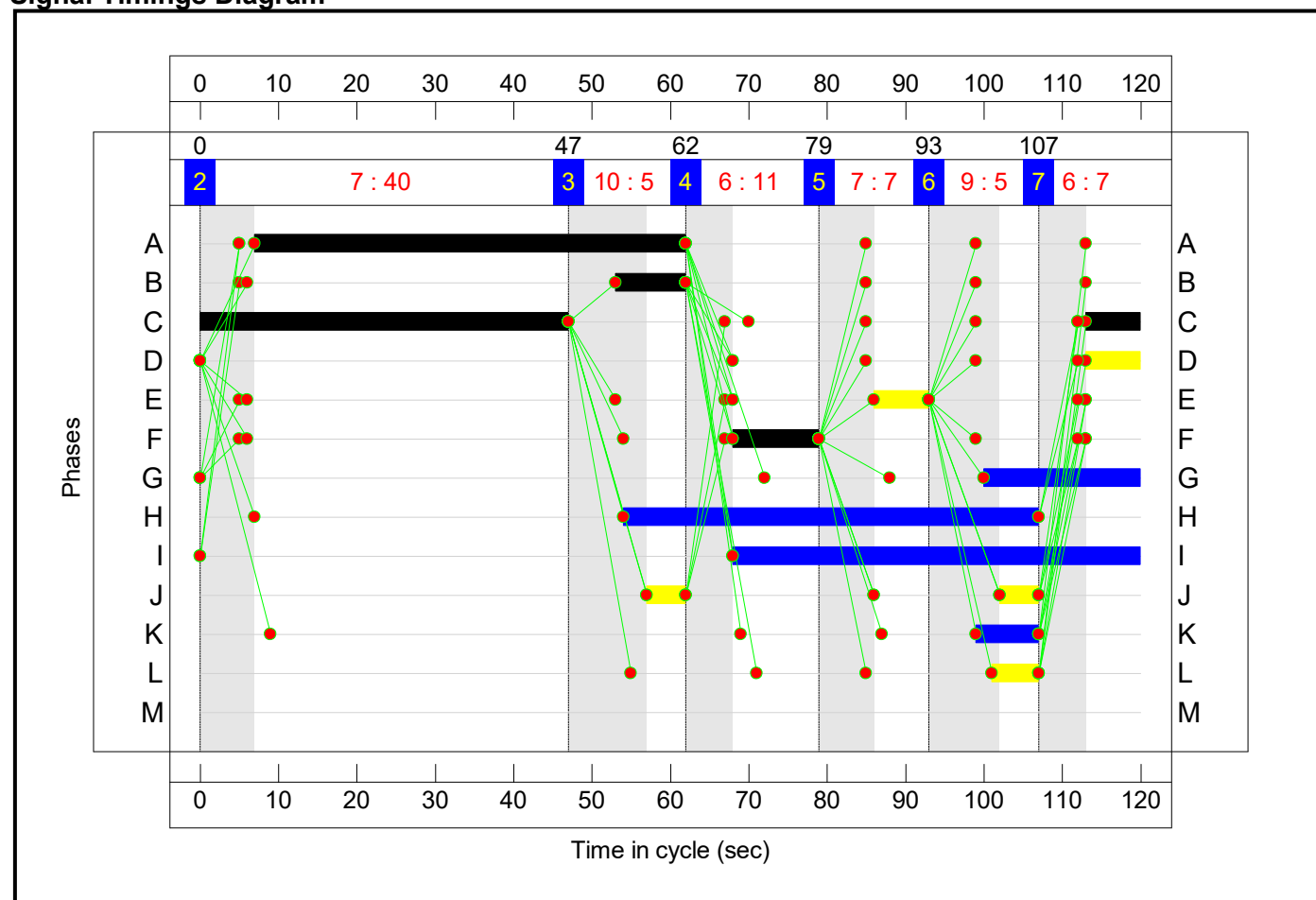
Stage Sequence Diagram



Stage Timings

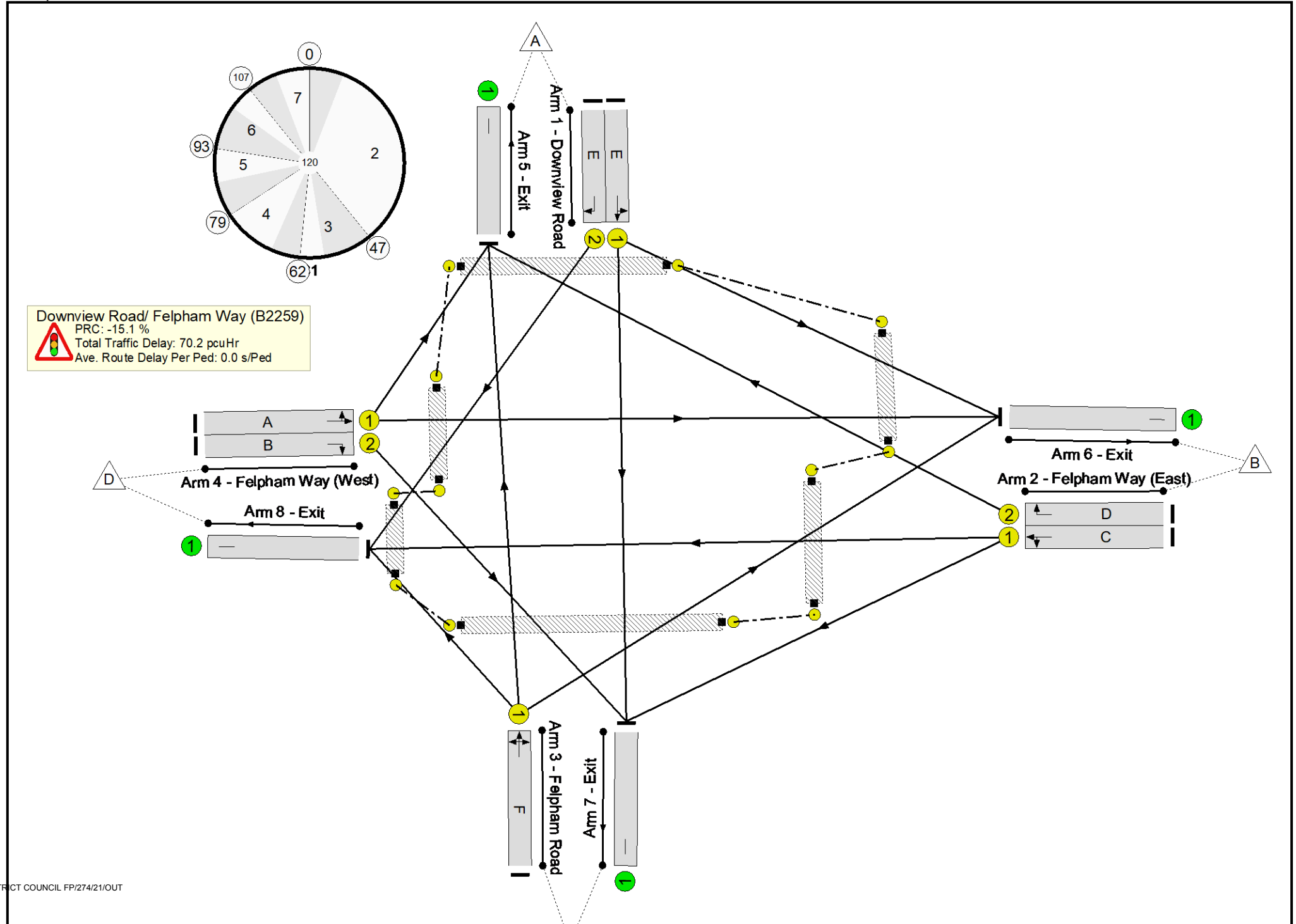
Stage	2	3	4	5	6	7
Duration	40	5	11	7	5	7
Change Point	0	47	62	79	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	103.6%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	103.6%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	7	-	119	1870	125	95.5%
1/2	Downview Road Right	U	N/A	N/A	E		1	7	-	121	1870	125	97.1%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	54	-	681	1950	894	76.2%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	115	1950	130	88.5%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	11	-	197	1956	196	100.7%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	55	-	926	1916	894	103.6%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	13	1916	160	8.1%
5/1	Exit	U	N/A	N/A	-		-	-	-	344	1940	1940	17.4%
6/1	Exit	U	N/A	N/A	-		-	-	-	943	1940	1940	47.3%
7/1	Exit	U	N/A	N/A	-		-	-	-	138	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	747	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	53	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

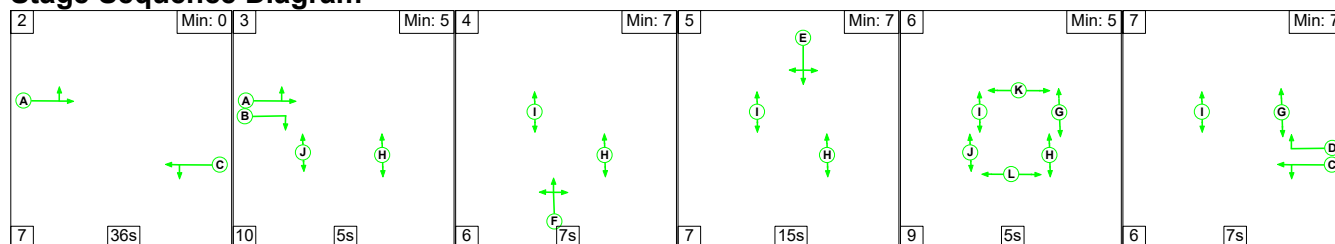
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	52	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	23.9	46.4	0.0	70.2	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	23.9	46.4	0.0	70.2	-	-	-	-
1/1	119	119	-	-	-	1.8	4.2	-	6.1	183.5	3.9	4.2	8.2
1/2	121	121	-	-	-	1.9	4.7	-	6.5	194.5	4.0	4.7	8.7
2/1	681	681	-	-	-	5.1	1.6	-	6.7	35.4	18.7	1.6	20.3
2/2	115	115	-	-	-	1.8	2.8	-	4.6	143.0	3.8	2.8	6.6
3/1	197	196	-	-	-	3.0	7.4	-	10.4	190.0	6.6	7.4	14.0
4/1	926	894	-	-	-	10.0	25.1	-	35.2	136.7	31.9	25.1	57.1
4/2	13	13	-	-	-	0.2	0.0	-	0.2	63.1	0.4	0.0	0.4
5/1	337	337	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	917	917	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
7/1	138	138	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	747	747	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -15.1 PRC Over All Lanes (%): -15.1 Total Delay for Signalled Lanes (pcuHr): 69.66 Total Delay Over All Lanes(pcuHr): 70.21 Cycle Time (s): 120													

Full Input Data And Results

Full Input Data And Results

Scenario 7: '2031 Base + Development AM Peak' (FG5: '2031 Base + Development AM Peak', Plan 1: 'Network Control Plan 1')

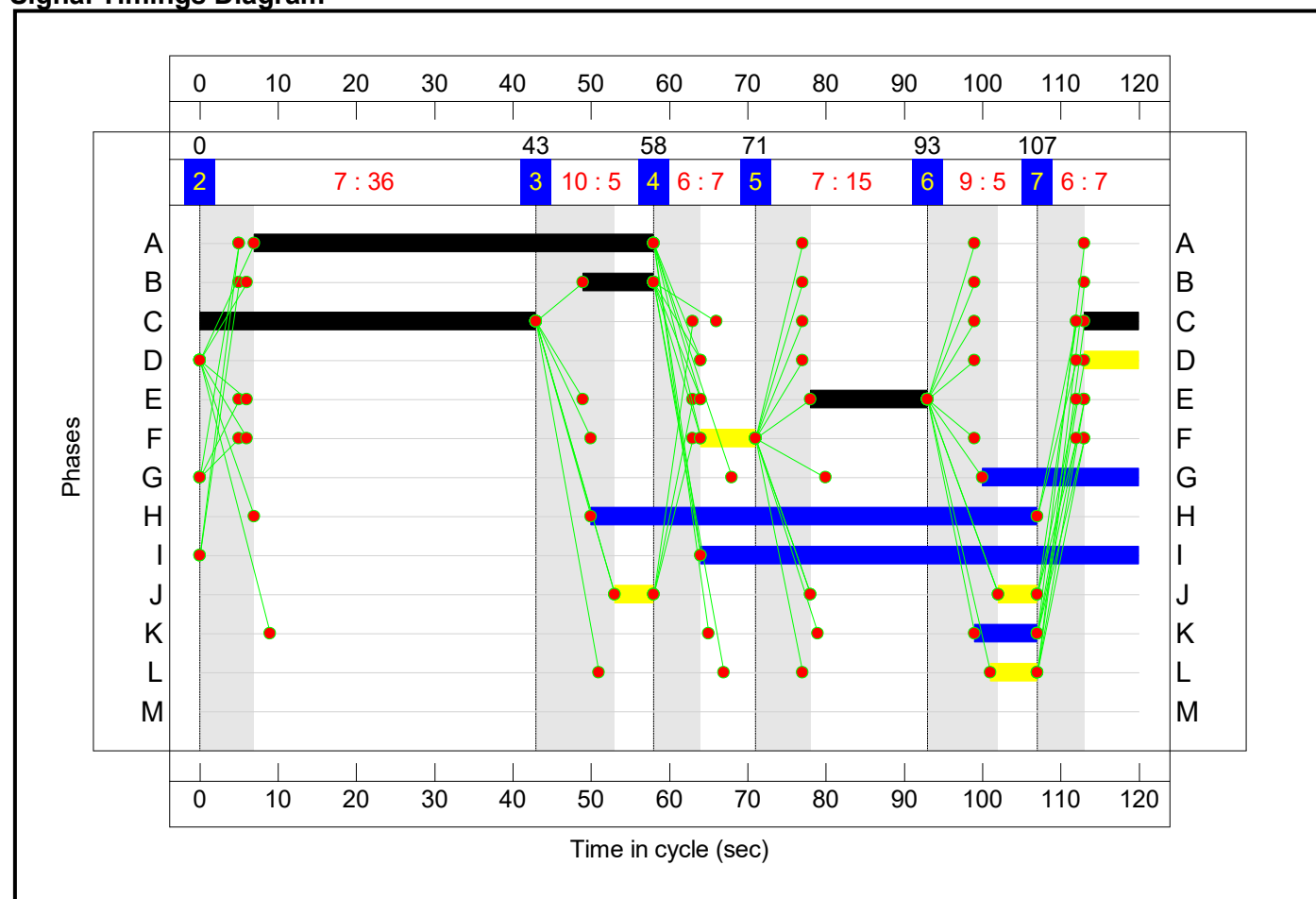
Stage Sequence Diagram



Stage Timings

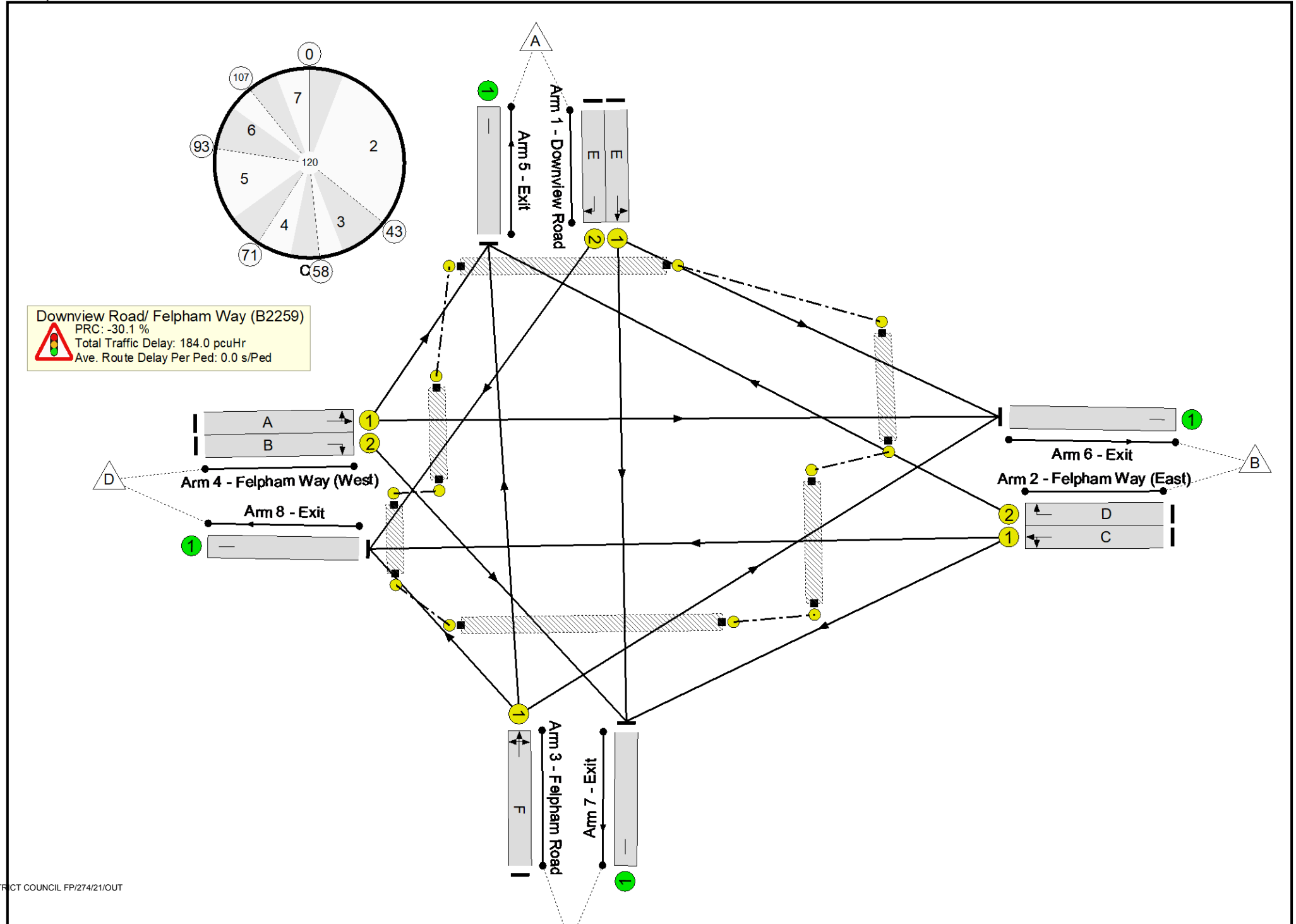
Stage	2	3	4	5	6	7
Duration	36	5	7	15	5	7
Change Point	0	43	58	71	93	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	117.1%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	117.1%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	15	-	292	1870	249	117.1%
1/2	Downview Road Right	U	N/A	N/A	E		1	15	-	279	1870	249	111.9%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	50	-	965	1950	829	116.4%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	7	-	106	1950	130	81.5%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	7	-	122	1956	130	93.6%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	51	-	852	1916	830	102.6%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	34	1916	160	21.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	345	1940	1940	17.5%
6/1	Exit	U	N/A	N/A	-		-	-	-	952	1940	1940	46.5%
7/1	Exit	U	N/A	N/A	-		-	-	-	268	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	1085	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	57	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

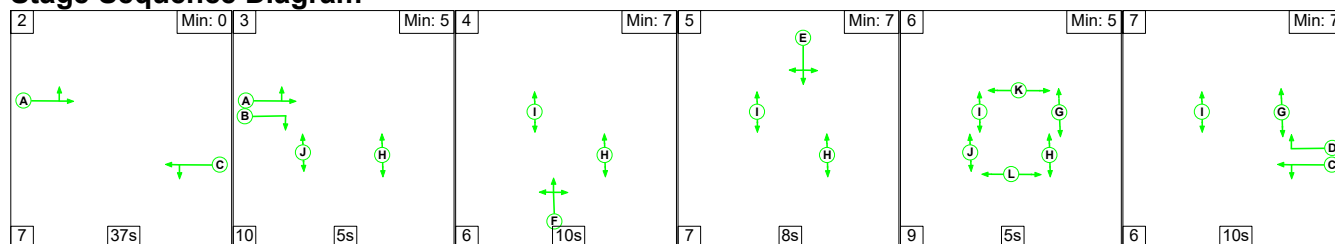
Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	56	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	42.2	141.8	0.0	184.0	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	42.2	141.8	0.0	184.0	-	-	-	-
1/1	292	249	-	-	-	6.0	24.3	-	30.4	374.3	11.2	24.3	35.5
1/2	279	249	-	-	-	5.3	18.6	-	23.9	308.0	10.3	18.6	28.9
2/1	965	829	-	-	-	17.6	71.5	-	89.1	332.3	36.7	71.5	108.2
2/2	106	106	-	-	-	1.6	1.9	-	3.5	120.0	3.5	1.9	5.4
3/1	122	122	-	-	-	1.9	3.8	-	5.7	168.1	4.0	3.8	7.8
4/1	852	830	-	-	-	9.3	21.0	-	30.3	128.0	29.1	21.0	50.1
4/2	34	34	-	-	-	0.5	0.1	-	0.6	65.6	1.0	0.1	1.2
5/1	340	340	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	901	901	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
7/1	235	235	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	944	944	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -30.1 PRC Over All Lanes (%): -30.1 Total Delay for Signalled Lanes (pcuHr): 183.45 Total Delay Over All Lanes(pcuHr): 183.99 Cycle Time (s): 120													

Full Input Data And Results

Full Input Data And Results

Scenario 8: '2031 Base + Development PM Peak' (FG6: '2031 Base + Development PM Peak', Plan 1: 'Network Control Plan 1')

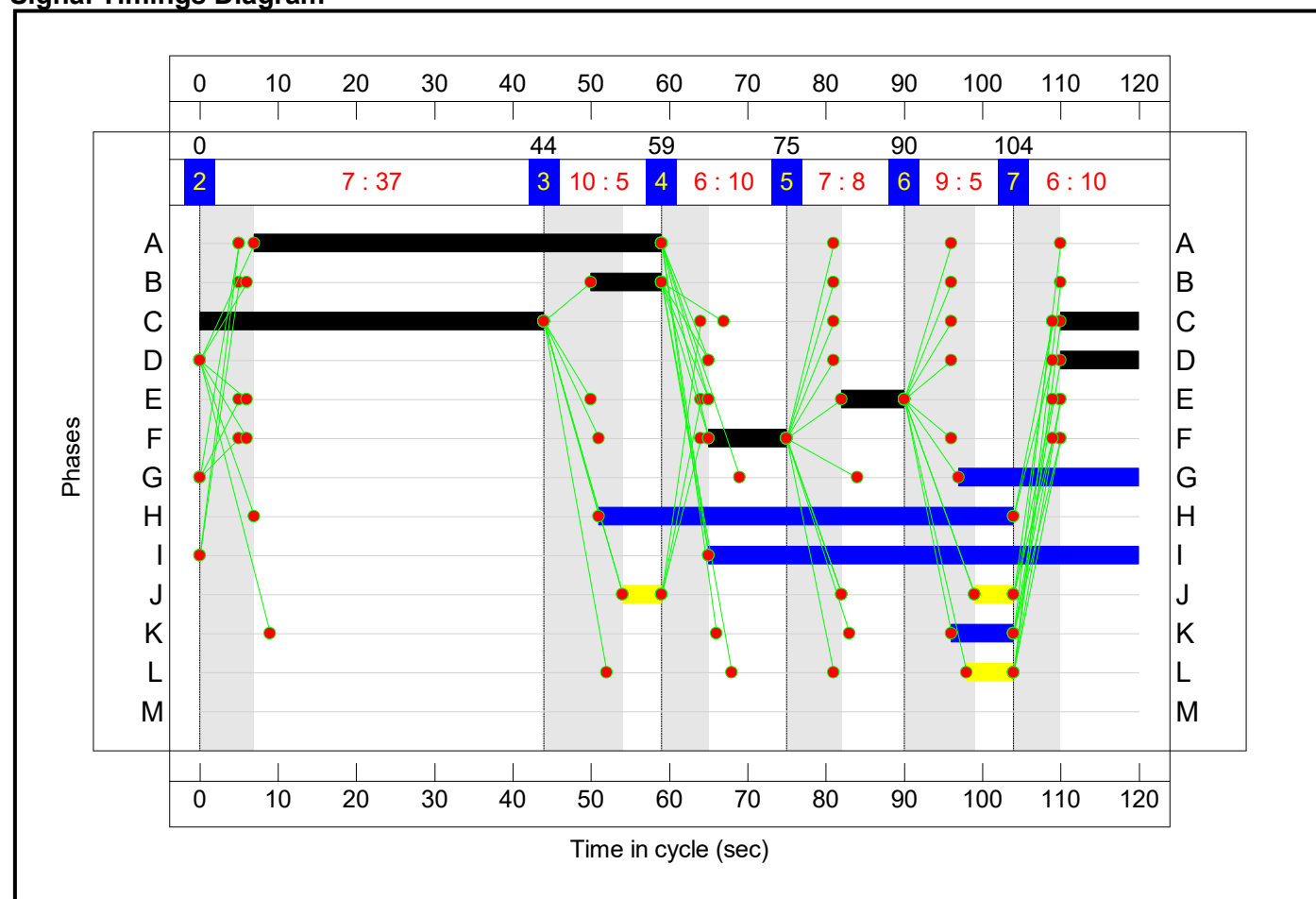
Stage Sequence Diagram



Stage Timings

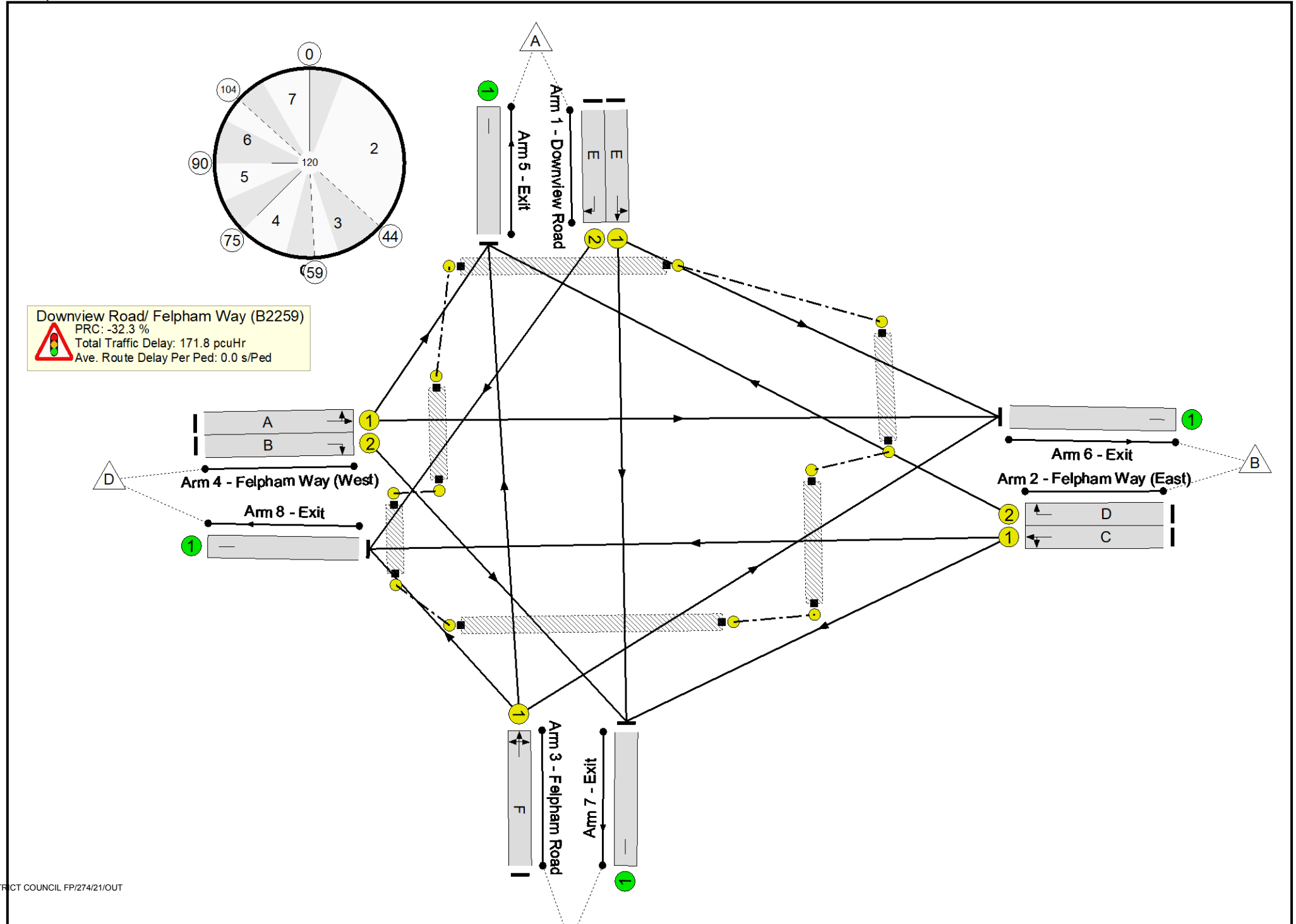
Stage	2	3	4	5	6	7
Duration	37	5	10	8	5	10
Change Point	0	44	59	75	90	104

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	119.1%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	119.1%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	8	-	167	1870	140	119.1%
1/2	Downview Road Right	U	N/A	N/A	E		1	8	-	157	1870	140	111.9%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	54	-	685	1950	894	76.6%
2/2	Felpham Way (East) Right	U	N/A	N/A	D		1	10	-	199	1950	179	111.3%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	10	-	200	1956	179	111.5%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	52	-	992	1916	846	117.2%
4/2	Felpham Way (West) Right	U	N/A	N/A	B		1	9	-	13	1916	160	8.1%
5/1	Exit	U	N/A	N/A	-		-	-	-	497	1940	1940	22.4%
6/1	Exit	U	N/A	N/A	-		-	-	-	992	1940	1940	43.8%
7/1	Exit	U	N/A	N/A	-		-	-	-	137	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	787	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	8	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	23	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	53	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		2	10	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	55	-	0	-	0	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	0	0	38.1	133.7	0.0	171.8	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	0	0	38.1	133.7	0.0	171.8	-	-	-	-
1/1	167	140	-	-	-	3.7	16.0	-	19.7	424.5	6.5	16.0	22.4
1/2	157	140	-	-	-	3.1	11.7	-	14.9	340.5	5.8	11.7	17.5
2/1	685	685	-	-	-	5.2	1.6	-	6.8	35.6	19.0	1.6	20.6
2/2	199	179	-	-	-	4.4	13.7	-	18.1	327.9	7.8	13.7	21.6
3/1	200	179	-	-	-	4.0	13.9	-	17.9	322.8	7.4	13.9	21.3
4/1	992	846	-	-	-	17.5	76.1	-	93.7	339.9	37.9	76.1	114.1
4/2	13	13	-	-	-	0.2	0.0	-	0.2	63.1	0.4	0.0	0.4
5/1	435	435	-	-	-	0.0	0.1	-	0.1	1.2	1.1	0.1	1.2
6/1	850	850	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
7/1	131	131	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	767	767	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -32.3 PRC Over All Lanes (%): -32.3 Total Delay for Signalled Lanes (pcuHr): 171.28 Total Delay Over All Lanes(pcuHr): 171.81 Cycle Time (s): 120													

Full Input Data And Results

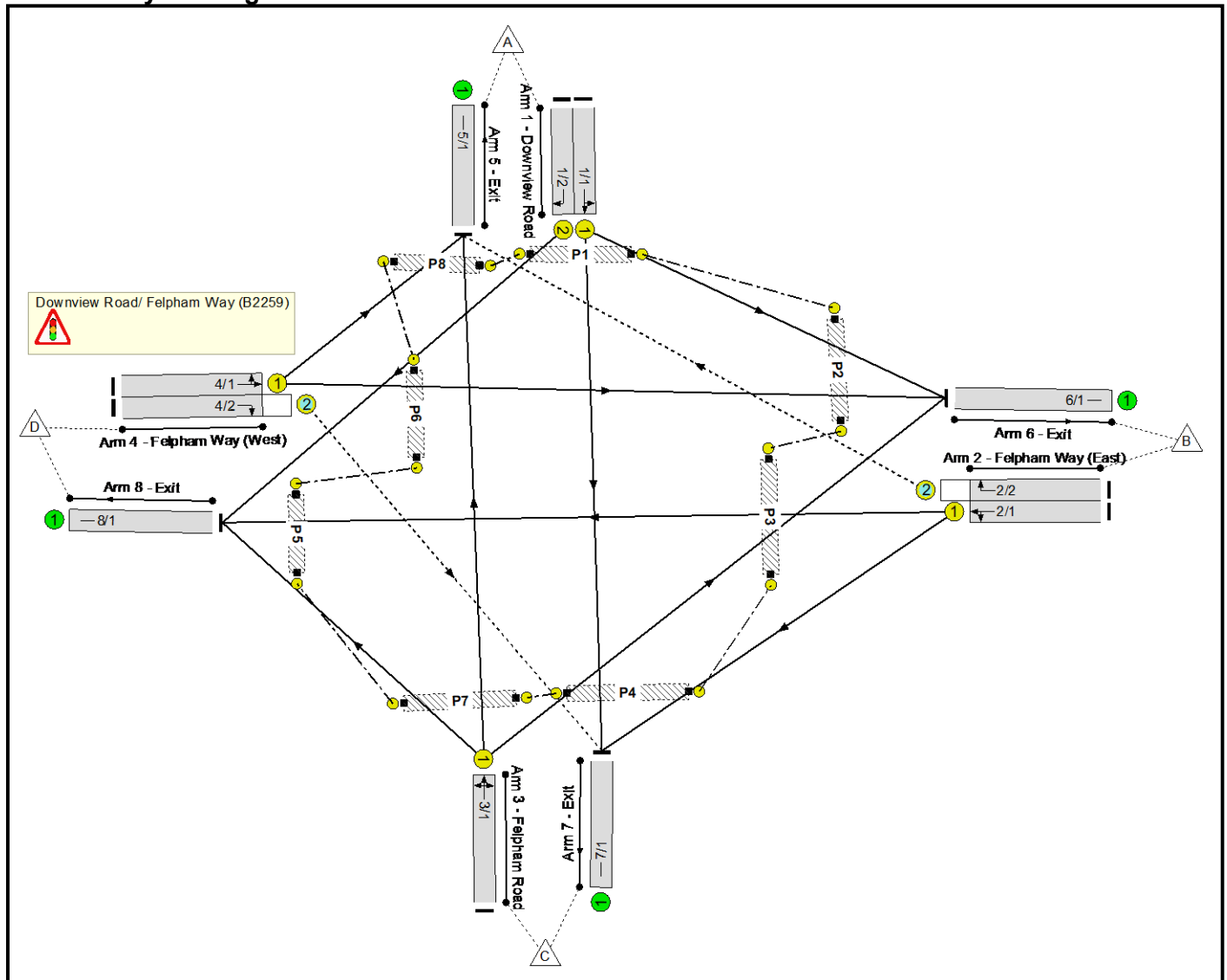
Full Input Data And Results

Full Input Data And Results

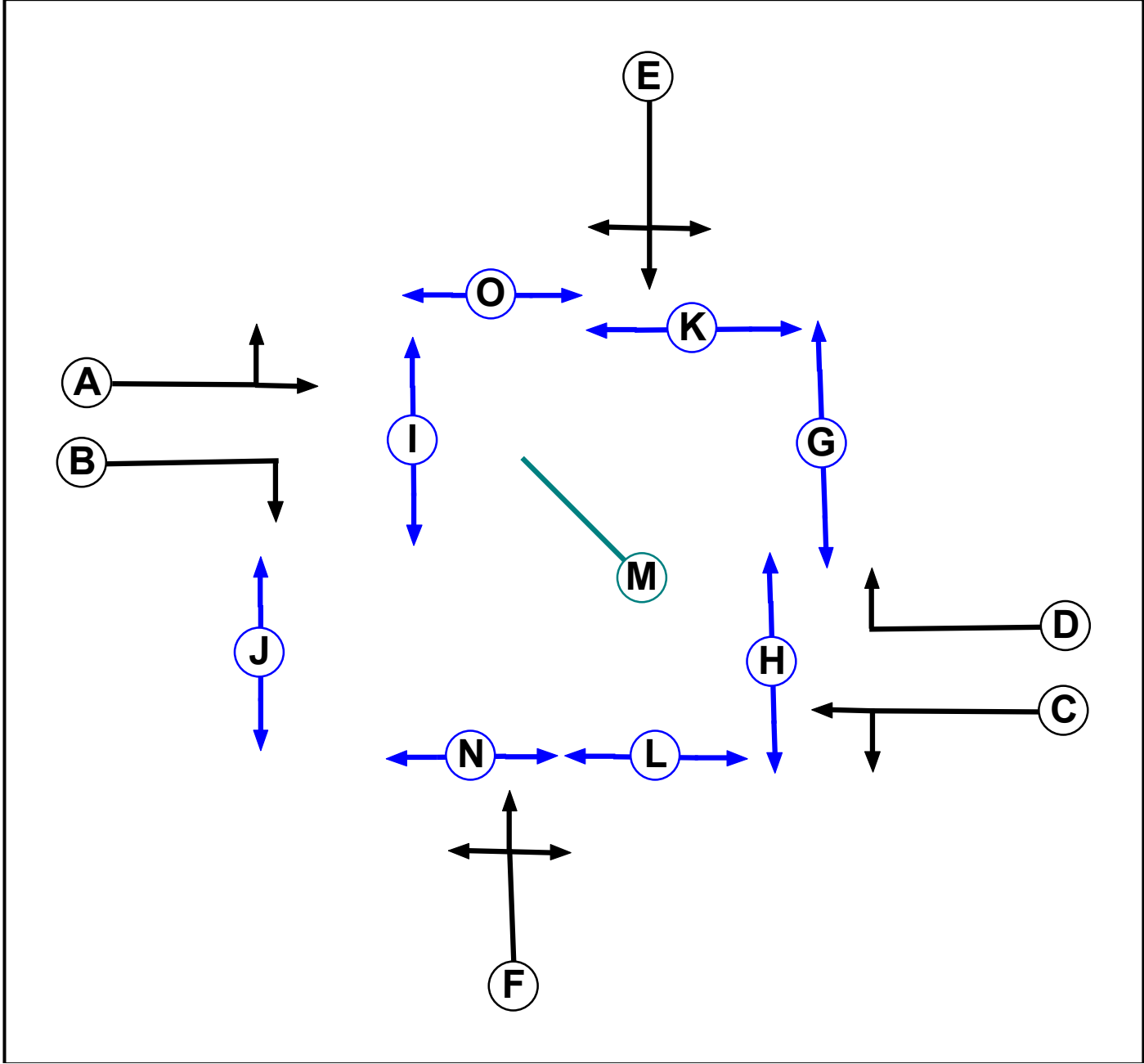
User and Project Details

Project:	JNY10830 Bognor Regis
Title:	Downview Road/ Felpham Way (B2259) Junction
Location:	
Additional detail:	
File name:	Downview Road_Felpham Way (B2259) Junction (120sec Proposed Model).lsg3x
Author:	George Magnisalis
Company:	RPS Group
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		6	6
L	Pedestrian		6	6
M	Dummy		3	3
N	Pedestrian		6	6
O	Pedestrian		6	6

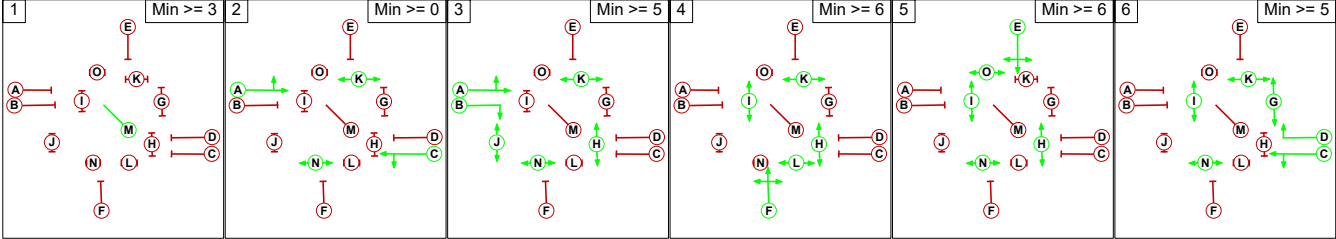
Phase Intergreens Matrix

Terminating Phase	Starting Phase															
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	A		-	-	6	6	6	10	-	6	-	-	-	3	-	6
	B	-		8	-	6	6	-	-	6	-	-	9	3	-	-
	C	-	6		-	6	7	-	7	-	10	-	8	3	-	-
	D	6	-	-		6	6	-	7	-	-	-	-	3	-	6
	E	6	6	6	6		6	7	-	-	9	6	8	3	-	-
	F	6	6	6	6	7		9	-	-	7	-	-	3	6	6
	G	5	-	-	-	5	5		-	-	-	-	-	3	-	-
	H	-	-	5	5	-	-	-		-	-	-	-	3	-	-
	I	5	5	-	-	-	-	-	-		-	-	-	3	-	-
	J	-	-	5	-	5	5	-	-	-		-	-	3	-	-
	K	-	-	-	-	6	-	-	-	-	-		-	3	-	-
	L	-	6	6	-	6	-	-	-	-	-	-		3	-	-
	M	2	2	2	2	2	2	2	2	2	2	2	2		2	2
	N	-	-	-	-	-	6	-	-	-	-	-	-	3	-	-
	O	6	-	-	6	-	6	-	-	-	-	-	-	3	-	-

Phases in Stage

Stage No.	Phases in Stage
1	M
2	A C K N
3	A B H J K N
4	F H I K L
5	E H I N O
6	C D G I K N

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage					
	1	2	3	4	5	6
	1		2	2	2	2
	2	3		10	8	7
	3	3	8		9	6
	4	3	6	7		7
	5	3	6	9	8	
	6	3	6	10	8	7

Full Input Data And Results

Give-Way Lane Input Data

Junction: Downview Road/ Felpham Way (B2259)											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/2 (Felpham Way (East))	5/1 (Right)	1439	0	4/1	1.09	All	2.00	-	0.50	2	2.00
4/2 (Felpham Way (West))	7/1 (Right)	1439	0	2/1	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Downview Road/ Felpham Way (B2259)												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Downview Road)	U	E	2	3	7.8	Geom	-	2.55	0.00	Y	Arm 6 Left	Inf
											Arm 7 Ahead	Inf
1/2 (Downview Road)	U	E	2	3	7.8	Geom	-	2.55	0.00	Y	Arm 8 Right	Inf
2/1 (Felpham Way (East))	U	C	2	3	15.4	Geom	-	3.35	0.00	Y	Arm 7 Left	Inf
											Arm 8 Ahead	Inf
2/2 (Felpham Way (East))	O	D	2	3	15.4	Geom	-	3.35	0.00	Y	Arm 5 Right	Inf
											Arm 5 Ahead	Inf
3/1 (Felpham Road)	U	F	2	3	12.2	Geom	-	3.41	0.00	Y	Arm 6 Right	Inf
											Arm 8 Left	Inf
4/1 (Felpham Way (West))	U	A	2	3	16.4	Geom	-	3.01	0.00	Y	Arm 5 Left	Inf
											Arm 6 Ahead	Inf
4/2 (Felpham Way (West))	O	B	2	3	16.4	Geom	-	3.01	0.00	Y	Arm 7 Right	Inf
5/1 (Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/1 (Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
7/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2021 Base AM Peak'	08:00	09:00	01:00	
2: '2021 Base PM Peak'	17:00	18:00	01:00	
3: '2031 Base AM Peak'	08:00	09:00	01:00	
4: '2031 Base PM Peak'	17:00	18:00	01:00	
5: '2031 Base + Committed AM Peak'	08:00	09:00	01:00	
6: '2031 Base + Committed PM Peak'	17:00	18:00	01:00	
7: '2031 Base + Development AM Peak'	08:00	09:00	01:00	
8: '2031 Base + Development PM Peak'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: '2021 Base AM Peak' (FG1: '2021 Base AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	115	52	179	346
	B	73	0	158	678	909
	C	48	54	0	14	116
	D	168	504	32	0	704
	Tot.	289	673	242	871	2075

Traffic Lane Flows

Lane	Scenario 1: 2021 Base AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	167
1/2	179
2/1	836
2/2	73
3/1	116
4/1	672
4/2	32
5/1	289
6/1	673
7/1	242
8/1	871

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	68.9 %	1870	1870
				Arm 7 Ahead	Inf	31.1 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.9 %	1950	1950
				Arm 8 Ahead	Inf	81.1 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	41.4 %	1956	1956
				Arm 6 Right	Inf	46.6 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.1 %	1916	1916
				Arm 5 Left	Inf	25.0 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	75.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2021 Base PM Peak' (FG2: '2021 Base PM Peak', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

		Destination				
Origin	A	0	68	38	112	218
	B	105	0	76	453	634
	C	36	116	0	27	179
	D	176	611	12	0	799
	Tot.	317	795	126	592	1830

Traffic Lane Flows

Lane	Scenario 2: 2021 Base PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	106
1/2	112
2/1	529
2/2	105
3/1	179
4/1	787
4/2	12
5/1	317
6/1	795
7/1	126
8/1	592

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	64.2 %	1870	1870
				Arm 7 Ahead	Inf	35.8 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	14.4 %	1950	1950
				Arm 8 Ahead	Inf	85.6 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	20.1 %	1956	1956
				Arm 6 Right	Inf	64.8 %		
				Arm 8 Left	Inf	15.1 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	22.4 %	1916	1916
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	77.6 %		
				Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2031 Base AM Peak' (FG3: '2031 Base AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	123	56	192	371
	B	78	0	169	727	974
	C	51	58	0	15	124
	D	180	540	34	0	754
	Tot.	309	721	259	934	2223

Traffic Lane Flows

Lane	Scenario 3: 2031 Base AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	179
1/2	192
2/1	896
2/2	78
3/1	124
4/1	720
4/2	34
5/1	309
6/1	721
7/1	259
8/1	934

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	68.7 %	1870	1870
				Arm 7 Ahead	Inf	31.3 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.9 %	1950	1950
				Arm 8 Ahead	Inf	81.1 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	41.1 %	1956	1956
				Arm 6 Right	Inf	46.8 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.1 %	1916	1916
				Arm 5 Left	Inf	25.0 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	75.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2031 Base PM Peak' (FG4: '2031 Base PM Peak', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

		Destination				
Origin	A	0	73	41	121	235
	B	113	0	82	489	684
	C	39	125	0	29	193
	D	190	660	13	0	863
	Tot.	342	858	136	639	1975

Traffic Lane Flows

Lane	Scenario 4: 2031 Base PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	114
1/2	121
2/1	571
2/2	113
3/1	193
4/1	850
4/2	13
5/1	342
6/1	858
7/1	136
8/1	639

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	64.0 %	1870	1870
				Arm 7 Ahead	Inf	36.0 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	14.4 %	1950	1950
				Arm 8 Ahead	Inf	85.6 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	20.2 %	1956	1956
				Arm 6 Right	Inf	64.8 %		
				Arm 8 Left	Inf	15.0 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	22.4 %	1916	1916
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	77.6 %		
				Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2031 Base + Committed AM Peak' (FG5: '2031 Base + Committed AM Peak', Plan 1: 'Network Control

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Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	125	56	192	373
	B	80	0	174	791	1045
	C	51	58	0	15	124
	D	180	653	34	0	867
	Tot.	311	836	264	998	2409

Traffic Lane Flows

Lane	Scenario 5: 2031 Base + Committed AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	181
1/2	192
2/1	965
2/2	80
3/1	124
4/1	833
4/2	34
5/1	311
6/1	836
7/1	264
8/1	998

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	69.1 %	1870	1870
				Arm 7 Ahead	Inf	30.9 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.0 %	1950	1950
				Arm 8 Ahead	Inf	82.0 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	41.1 %	1956	1956
				Arm 6 Right	Inf	46.8 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 8 Left	Inf	12.1 %	1916	1916
				Arm 5 Left	Inf	21.6 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 6 Ahead	Inf	78.4 %	1916	1916
				Arm 7 Right	Inf	100.0 %		
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2031 Base + Committed PM Peak' (FG6: '2031 Base + Committed PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	78	41	121	240
	B	115	0	84	597	796
	C	39	129	0	29	197
	D	190	736	13	0	939
	Tot.	344	943	138	747	2172

Traffic Lane Flows

Lane	Scenario 6: 2031 Base + Committed PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	119
1/2	121
2/1	681
2/2	115
3/1	197
4/1	926
4/2	13
5/1	344
6/1	943
7/1	138
8/1	747

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	65.5 %	1870	1870
				Arm 7 Ahead	Inf	34.5 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	12.3 %	1950	1950
				Arm 8 Ahead	Inf	87.7 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	19.8 %		
				Arm 6 Right	Inf	65.5 %	1956	1956
				Arm 8 Left	Inf	14.7 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	20.5 %	1916	1916
				Arm 6 Ahead	Inf	79.5 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2031 Base + Development AM Peak' (FG7: '2031 Base + Development AM Peak', Plan 1: 'Network

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Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	232	60	279	571
	B	106	0	174	791	1071
	C	48	59	0	15	122
	D	191	661	34	0	886
	Tot.	345	952	268	1085	2650

Traffic Lane Flows

Lane	Scenario 7: 2031 Base + Development AM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	292
1/2	279
2/1	965
2/2	106
3/1	122
4/1	852
4/2	34
5/1	345
6/1	952
7/1	268
8/1	1085

Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	79.5 %	1870	1870
				Arm 7 Ahead	Inf	20.5 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	18.0 %	1950	1950
				Arm 8 Ahead	Inf	82.0 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	39.3 %	1956	1956
				Arm 6 Right	Inf	48.4 %		
				Arm 8 Left	Inf	12.3 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	22.4 %	1916	1916
				Arm 6 Ahead	Inf	77.6 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2031 Base + Development PM Peak' (FG8: '2031 Base + Development PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired**Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	127	40	157	324
	B	199	0	84	601	884
	C	42	129	0	29	200
	D	256	736	13	0	1005
	Tot.	497	992	137	787	2413

Traffic Lane Flows

Lane	Scenario 8: 2031 Base + Development PM Peak
Junction: Downview Road/ Felpham Way (B2259)	
1/1	167
1/2	157
2/1	685
2/2	199
3/1	200
4/1	992
4/2	13
5/1	497
6/1	992
7/1	137
8/1	787

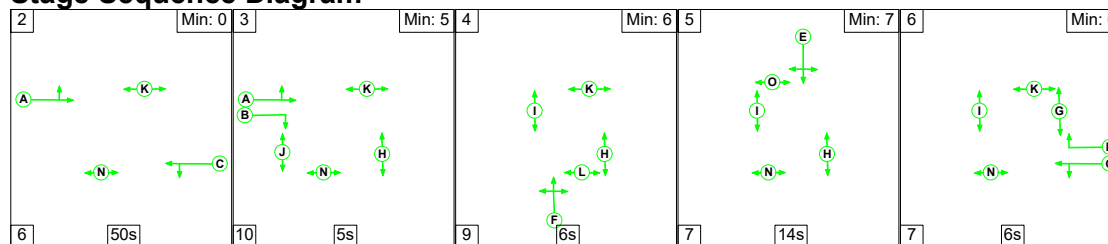
Lane Saturation Flows

Junction: Downview Road/ Felpham Way (B2259)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Downview Road)	2.55	0.00	Y	Arm 6 Left	Inf	76.0 %	1870	1870
				Arm 7 Ahead	Inf	24.0 %		
1/2 (Downview Road)	2.55	0.00	Y	Arm 8 Right	Inf	100.0 %	1870	1870
2/1 (Felpham Way (East))	3.35	0.00	Y	Arm 7 Left	Inf	12.3 %	1950	1950
				Arm 8 Ahead	Inf	87.7 %		
2/2 (Felpham Way (East))	3.35	0.00	Y	Arm 5 Right	Inf	100.0 %	1950	1950
3/1 (Felpham Road)	3.41	0.00	Y	Arm 5 Ahead	Inf	21.0 %		
				Arm 6 Right	Inf	64.5 %	1956	1956
				Arm 8 Left	Inf	14.5 %		
4/1 (Felpham Way (West))	3.01	0.00	Y	Arm 5 Left	Inf	25.8 %	1916	1916
				Arm 6 Ahead	Inf	74.2 %		
4/2 (Felpham Way (West))	3.01	0.00	Y	Arm 7 Right	Inf	100.0 %	1916	1916
5/1 (Exit)	3.25	0.00	Y				1940	1940
6/1 (Exit)	3.25	0.00	Y				1940	1940
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2021 Base AM Peak' (FG1: '2021 Base AM Peak', Plan 1: 'Network Control Plan 1')

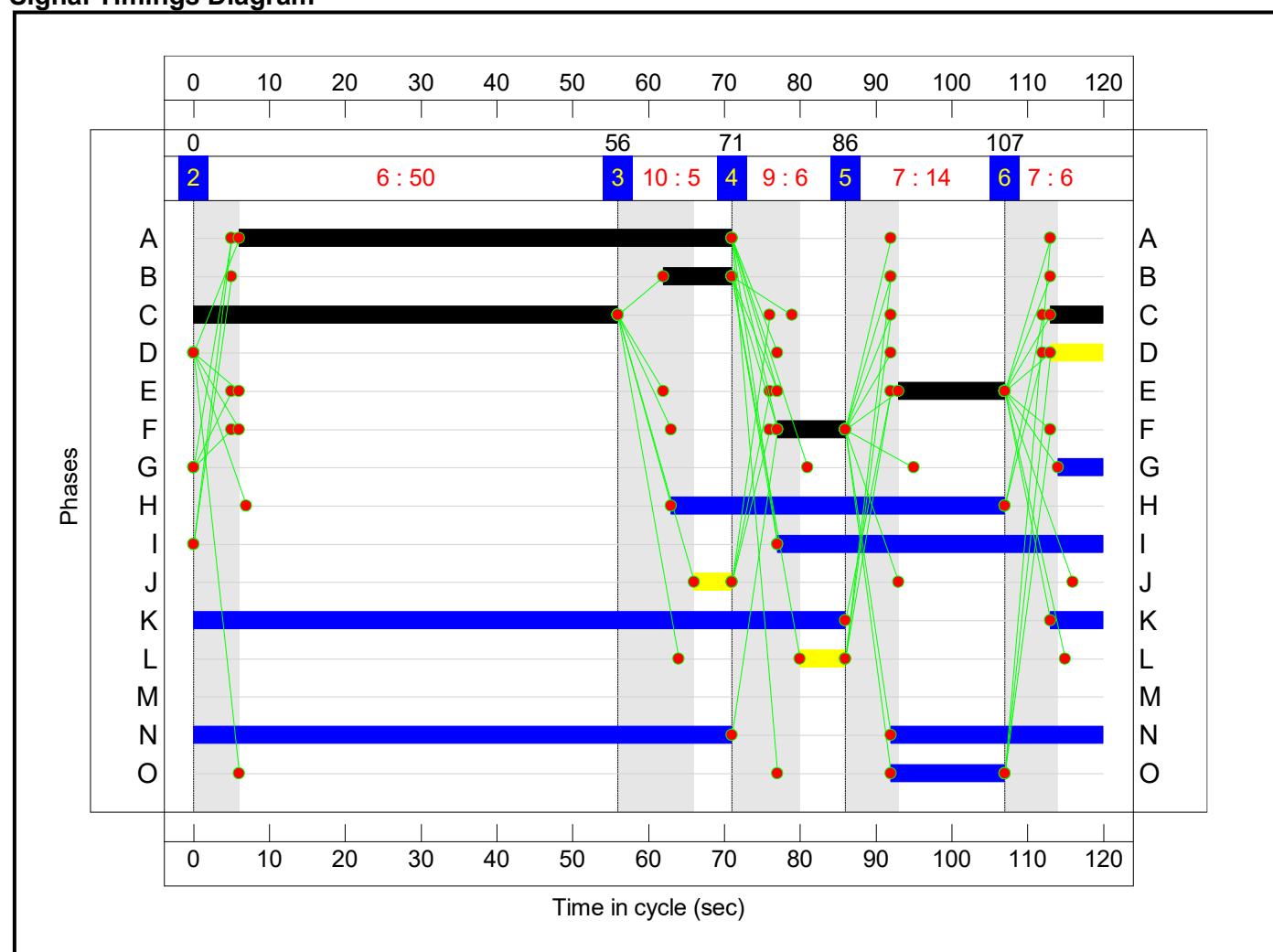
Stage Sequence Diagram



Stage Timings

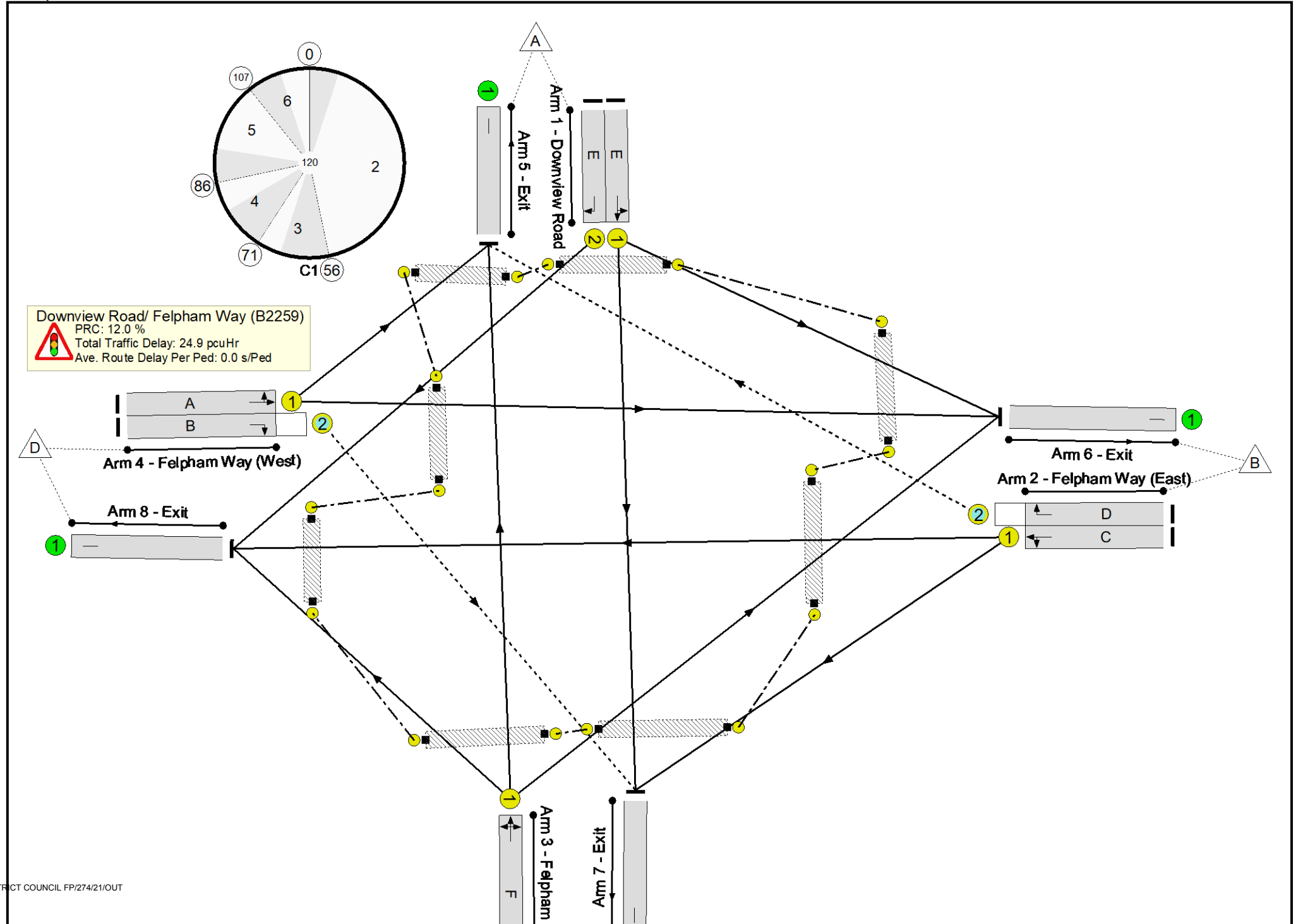
Stage	2	3	4	5	6
Duration	50	5	6	14	6
Change Point	0	56	71	86	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	80.4%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	80.4%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	14	-	167	1870	234	71.4%
1/2	Downview Road Right	U	N/A	N/A	E		1	14	-	179	1870	234	76.6%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	63	-	836	1950	1040	80.4%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	7	-	73	1950	130	56.2%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	9	-	116	1956	163	71.2%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	65	-	672	1916	1054	63.8%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	32	1916	160	20.0%
5/1	Exit	U	N/A	N/A	-		-	-	-	289	1940	1940	14.9%
6/1	Exit	U	N/A	N/A	-		-	-	-	673	1940	1940	34.7%
7/1	Exit	U	N/A	N/A	-		-	-	-	242	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	871	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	93	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	44	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

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Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	43	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	99	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	15	-	0	-	0	0.0%

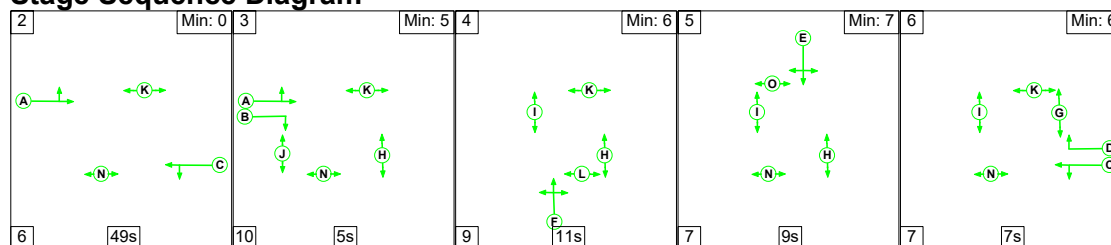
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	103	2	17.0	7.9	0.0	24.9	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	103	2	17.0	7.9	0.0	24.9	-	-	-	-
1/1	167	167	-	-	-	2.3	1.2	-	3.5	76.5	5.3	1.2	6.5
1/2	179	179	-	-	-	2.5	1.5	-	4.1	81.9	5.8	1.5	7.3
2/1	836	836	-	-	-	5.3	2.0	-	7.3	31.5	22.8	2.0	24.8
2/2	73	73	0	72	1	1.1	0.6	0.0	1.7	85.2	2.4	0.6	3.0
3/1	116	116	-	-	-	1.7	1.2	-	2.9	90.1	3.7	1.2	4.9
4/1	672	672	-	-	-	3.5	0.9	-	4.4	23.4	15.5	0.9	16.4
4/2	32	32	0	31	1	0.5	0.1	0.0	0.6	65.4	1.0	0.1	1.1
5/1	289	289	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	673	673	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/1	242	242	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	871	871	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 12.0 PRC Over All Lanes (%): 12.0 Total Delay for Signalled Lanes (pcuHr): 24.52 Total Delay Over All Lanes(pcuHr): 24.88 Cycle Time (s): 120													

Full Input Data And Results

Scenario 2: '2021 Base PM Peak' (FG2: '2021 Base PM Peak', Plan 1: 'Network Control Plan 1')

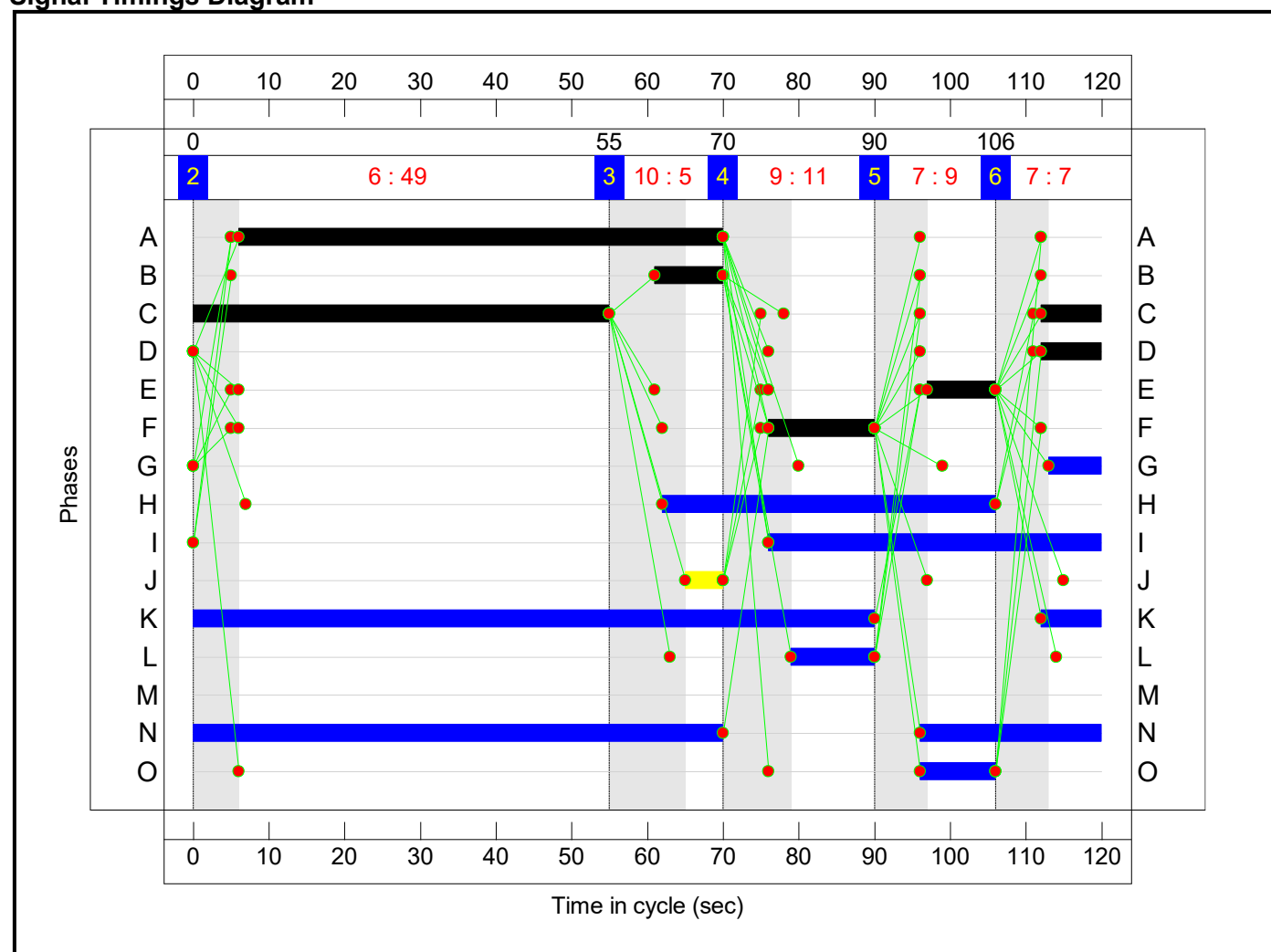
Stage Sequence Diagram



Stage Timings

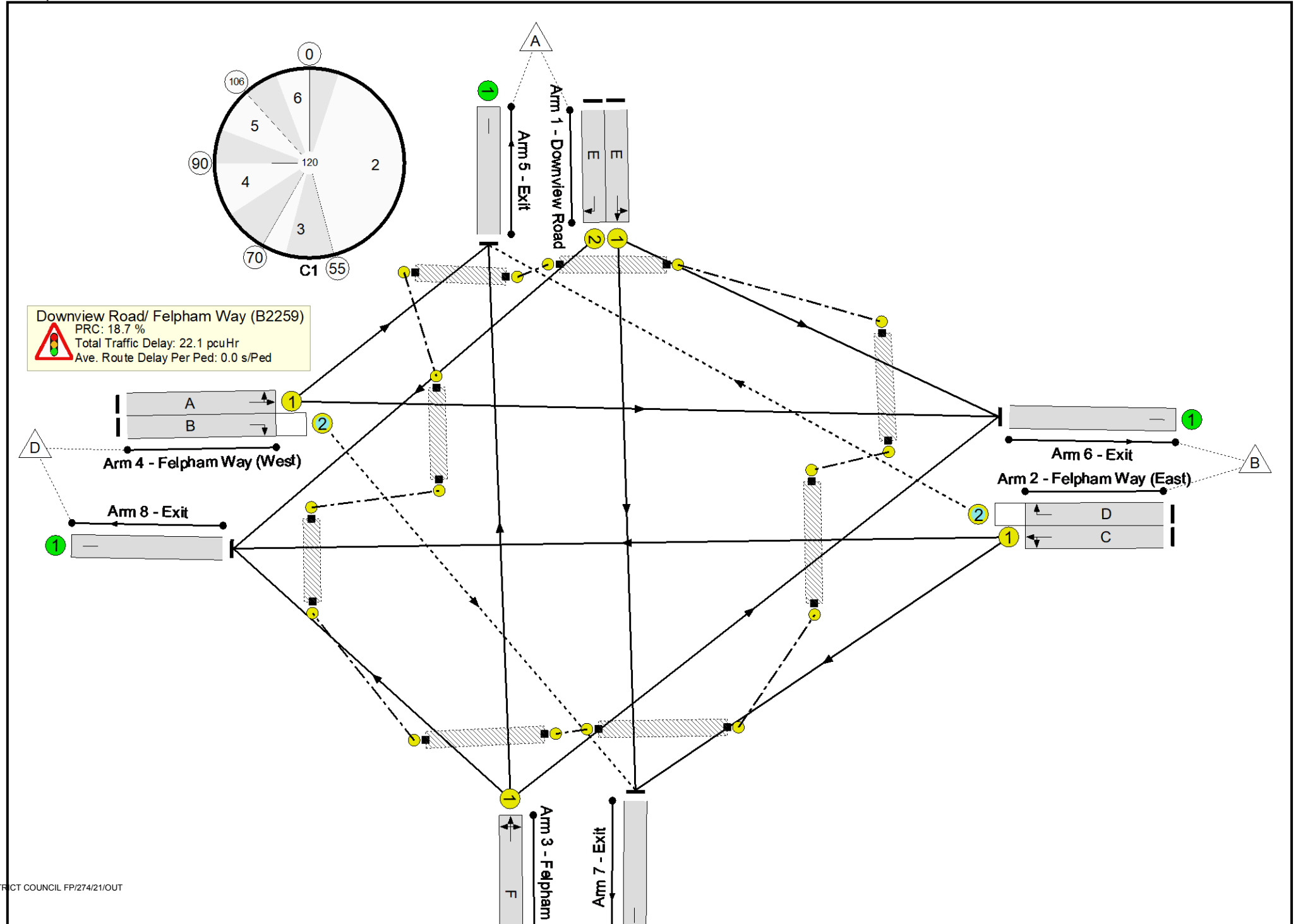
Stage	2	3	4	5	6
Duration	49	5	11	9	7
Change Point	0	55	70	90	106

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	75.8%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	75.8%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	9	-	106	1870	156	68.0%
1/2	Downview Road Right	U	N/A	N/A	E		1	9	-	112	1870	156	71.9%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	63	-	529	1950	1040	50.9%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	8	-	105	1950	146	71.8%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	14	-	179	1956	245	73.2%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	64	-	787	1916	1038	75.8%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	12	1916	160	7.5%
5/1	Exit	U	N/A	N/A	-		-	-	-	317	1940	1940	16.3%
6/1	Exit	U	N/A	N/A	-		-	-	-	795	1940	1940	41.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	126	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	592	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	98	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	44	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	11	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	44	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	94	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	10	-	0	-	0	0.0%

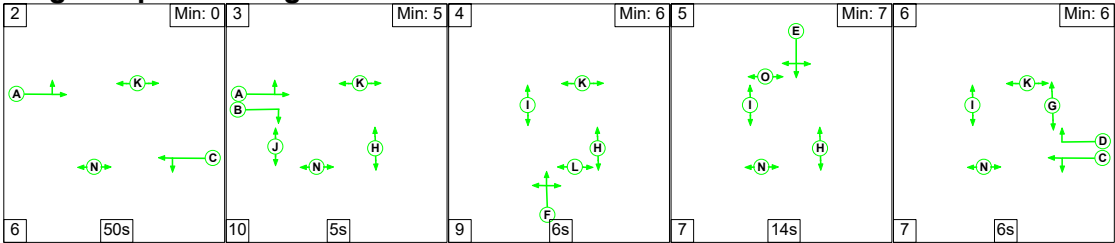
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	115	2	14.8	7.3	0.0	22.1	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	115	2	14.8	7.3	0.0	22.1	-	-	-	-
1/1	106	106	-	-	-	1.6	1.0	-	2.6	88.2	3.4	1.0	4.4
1/2	112	112	-	-	-	1.7	1.2	-	2.9	92.5	3.6	1.2	4.9
2/1	529	529	-	-	-	2.6	0.5	-	3.2	21.4	11.2	0.5	11.7
2/2	105	105	0	103	2	1.6	1.2	0.0	2.8	95.5	3.4	1.2	4.6
3/1	179	179	-	-	-	2.5	1.3	-	3.8	77.0	5.7	1.3	7.0
4/1	787	787	-	-	-	4.7	1.5	-	6.2	28.5	20.3	1.5	21.9
4/2	12	12	0	12	0	0.2	0.0	0.0	0.2	63.1	0.4	0.0	0.4
5/1	317	317	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	795	795	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
7/1	126	126	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	592	592	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 18.7 PRC Over All Lanes (%): 18.7 Total Delay for Signalled Lanes (pcuHr): 21.68 Total Delay Over All Lanes(pcuHr): 22.12 Cycle Time (s): 120													

Full Input Data And Results

Scenario 3: '2031 Base AM Peak' (FG3: '2031 Base AM Peak', Plan 1: 'Network Control Plan 1')

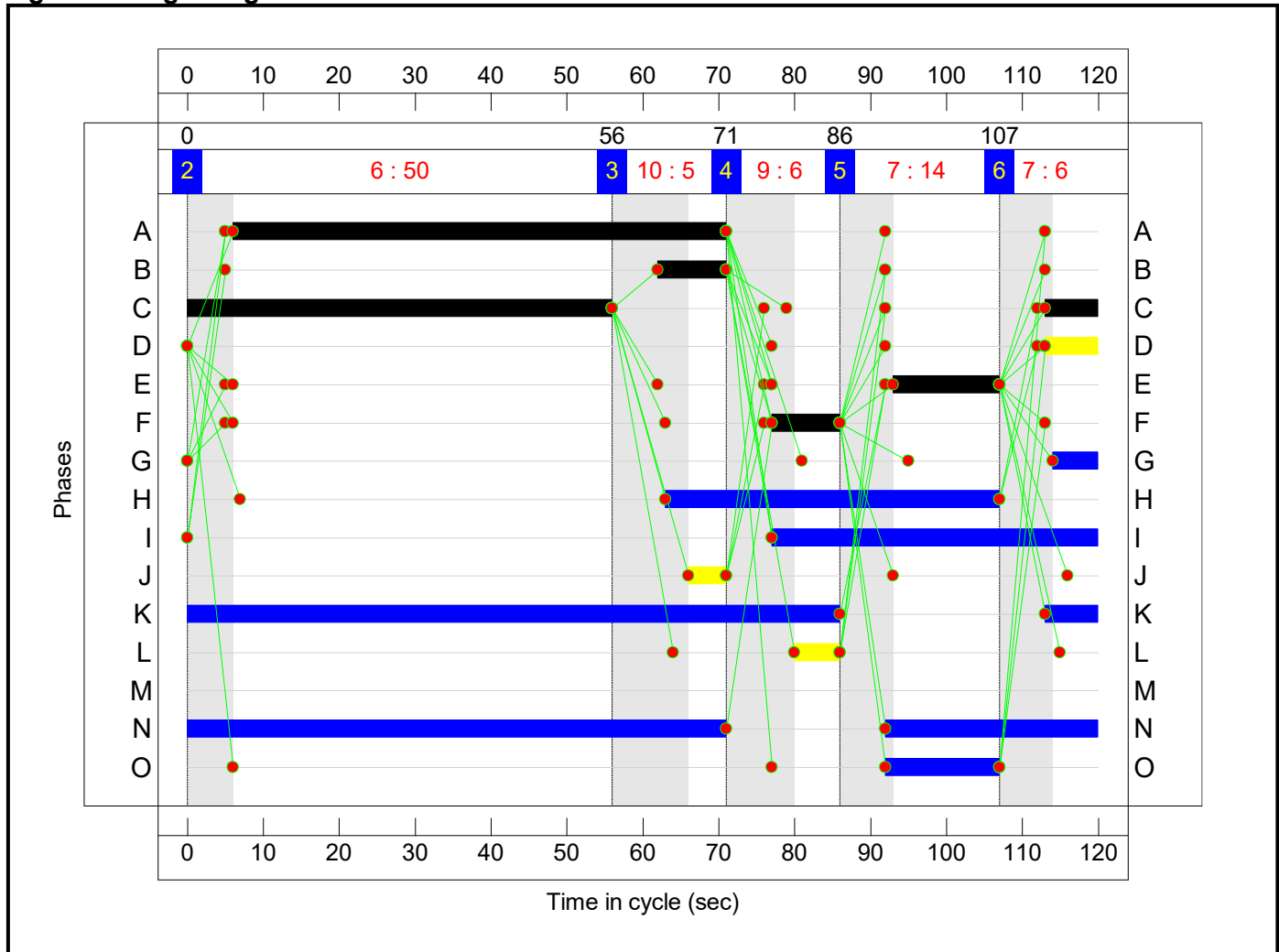
Stage Sequence Diagram



Stage Timings

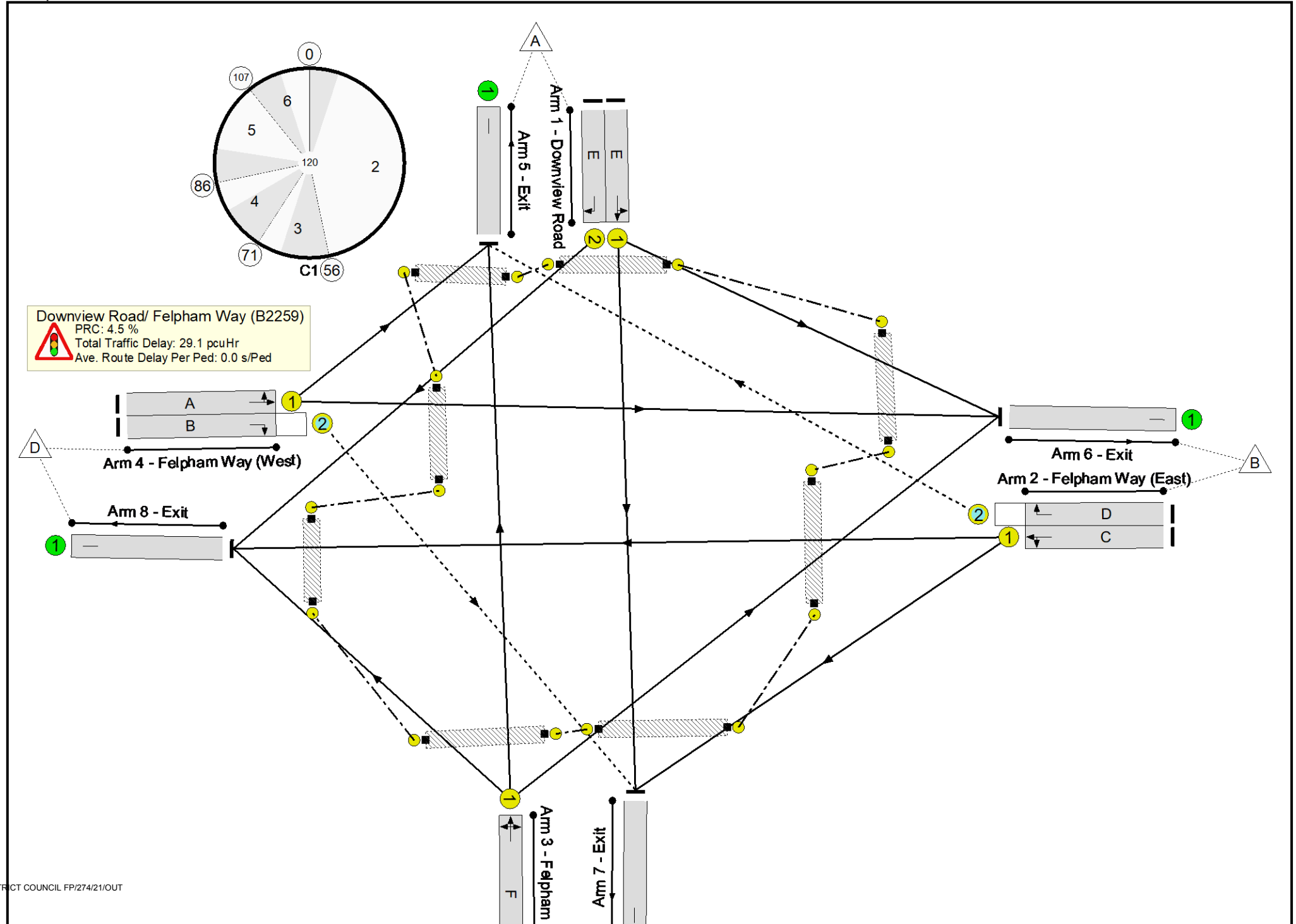
Stage	2	3	4	5	6
Duration	50	5	6	14	6
Change Point	0	56	71	86	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	86.2%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	86.2%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	14	-	179	1870	234	76.6%
1/2	Downview Road Right	U	N/A	N/A	E		1	14	-	192	1870	234	82.1%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	63	-	896	1950	1040	86.2%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	7	-	78	1950	130	60.0%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	9	-	124	1956	163	76.1%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	65	-	720	1916	1054	68.3%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	34	1916	160	21.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	309	1940	1940	15.9%
6/1	Exit	U	N/A	N/A	-		-	-	-	721	1940	1940	37.2%
7/1	Exit	U	N/A	N/A	-		-	-	-	259	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	934	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	93	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	44	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	43	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	99	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	15	-	0	-	0	0.0%

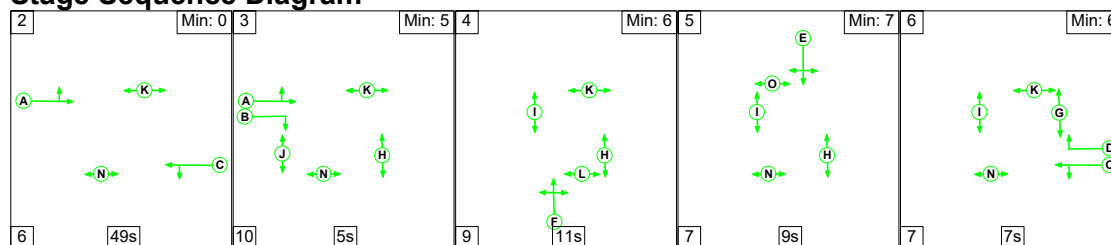
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	110	2	18.7	10.4	0.0	29.1	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	110	2	18.7	10.4	0.0	29.1	-	-	-	-
1/1	179	179	-	-	-	2.5	1.5	-	4.1	81.9	5.8	1.5	7.3
1/2	192	192	-	-	-	2.7	2.1	-	4.8	90.4	6.2	2.1	8.3
2/1	896	896	-	-	-	6.0	3.0	-	9.0	36.2	25.6	3.0	28.6
2/2	78	78	0	77	1	1.2	0.7	0.0	1.9	88.1	2.5	0.7	3.2
3/1	124	124	-	-	-	1.9	1.5	-	3.3	96.7	4.0	1.5	5.5
4/1	720	720	-	-	-	3.9	1.1	-	5.0	24.8	17.2	1.1	18.3
4/2	34	34	0	33	1	0.5	0.1	0.0	0.6	65.6	1.0	0.1	1.2
5/1	309	309	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	721	721	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/1	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	934	934	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 4.5 PRC Over All Lanes (%): 4.5 Total Delay for Signalled Lanes (pcuHr): 28.72 Total Delay Over All Lanes(pcuHr): 29.12 Cycle Time (s): 120													

Full Input Data And Results

Scenario 4: '2031 Base PM Peak' (FG4: '2031 Base PM Peak', Plan 1: 'Network Control Plan 1')

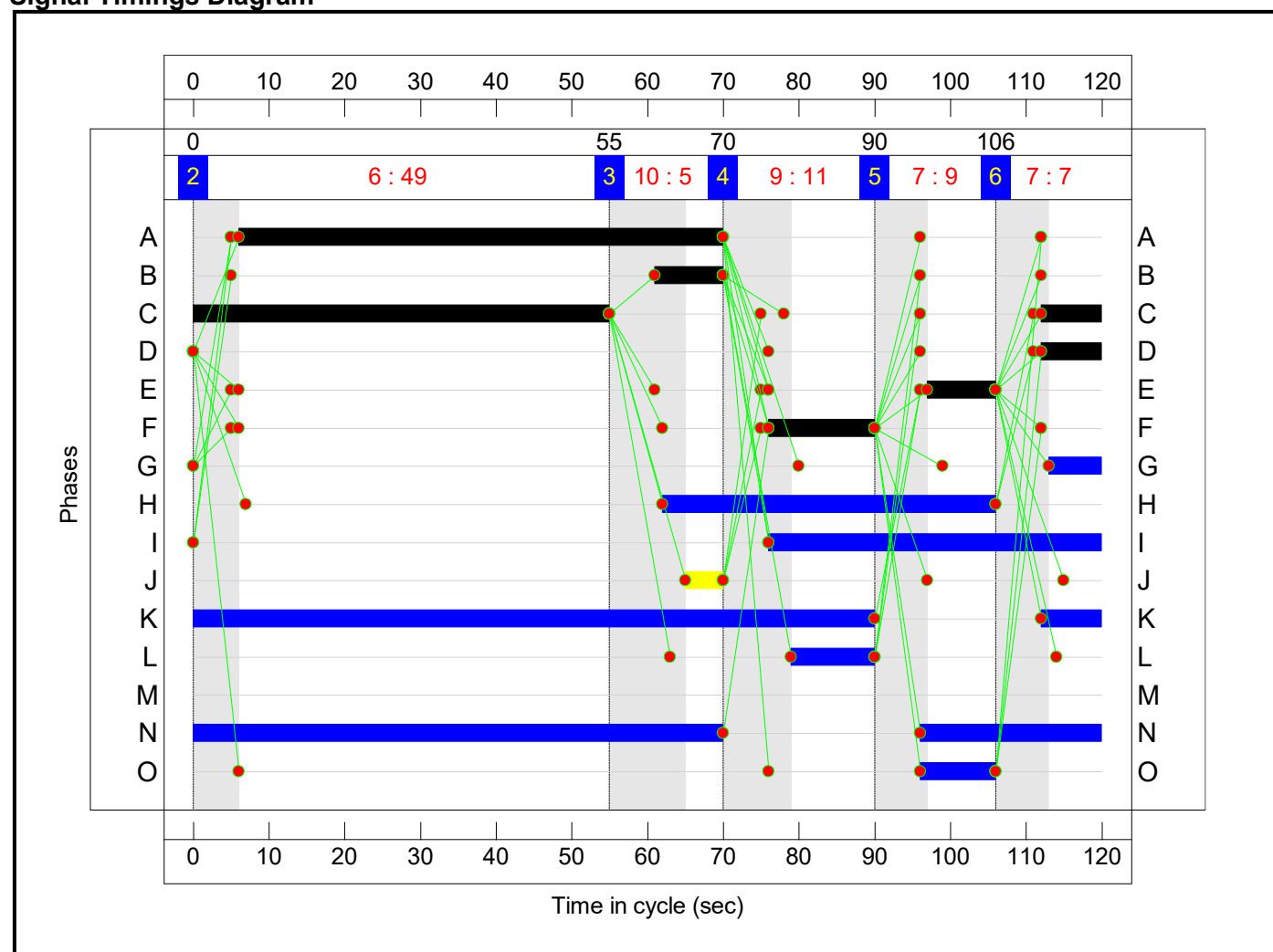
Stage Sequence Diagram



Stage Timings

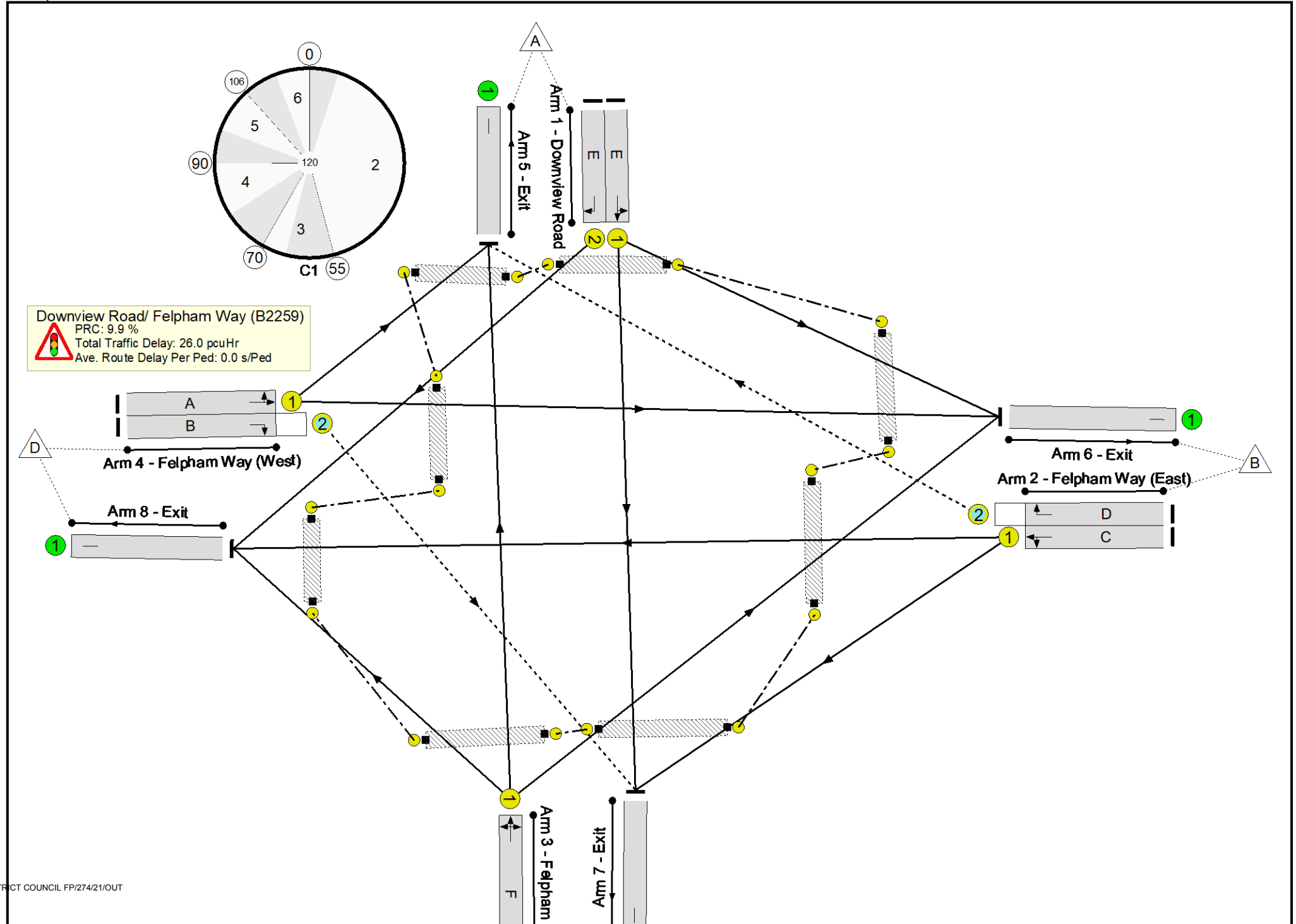
Stage	2	3	4	5	6
Duration	49	5	11	9	7
Change Point	0	55	70	90	106

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	81.9%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	81.9%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	9	-	114	1870	156	73.2%
1/2	Downview Road Right	U	N/A	N/A	E		1	9	-	121	1870	156	77.6%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	63	-	571	1950	1040	54.9%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	8	-	113	1950	146	77.3%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	14	-	193	1956	245	78.9%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	64	-	850	1916	1038	81.9%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	13	1916	160	8.1%
5/1	Exit	U	N/A	N/A	-		-	-	-	342	1940	1940	17.6%
6/1	Exit	U	N/A	N/A	-		-	-	-	858	1940	1940	44.2%
7/1	Exit	U	N/A	N/A	-		-	-	-	136	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	639	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	98	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	44	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	11	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	44	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	94	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	10	-	0	-	0	0.0%

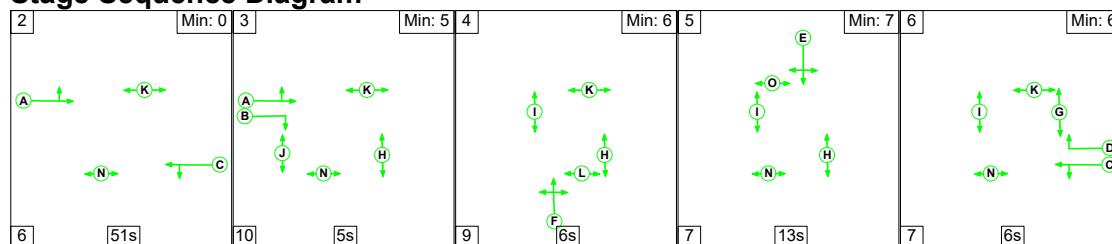
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	124	2	16.4	9.5	0.0	26.0	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	124	2	16.4	9.5	0.0	26.0	-	-	-	-
1/1	114	114	-	-	-	1.7	1.3	-	3.0	94.2	3.7	1.3	5.0
1/2	121	121	-	-	-	1.8	1.6	-	3.4	101.3	3.9	1.6	5.5
2/1	571	571	-	-	-	2.9	0.6	-	3.5	22.3	12.5	0.6	13.1
2/2	113	113	0	111	2	1.7	1.6	0.0	3.3	104.0	3.7	1.6	5.2
3/1	193	193	-	-	-	2.7	1.8	-	4.5	83.7	6.2	1.8	8.0
4/1	850	850	-	-	-	5.3	2.2	-	7.6	32.0	23.1	2.2	25.3
4/2	13	13	0	13	0	0.2	0.0	0.0	0.2	63.1	0.4	0.0	0.4
5/1	342	342	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	858	858	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
7/1	136	136	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	639	639	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 9.9 Total Delay for Signalled Lanes (pcuHr): 25.47 PRC Over All Lanes (%): 9.9 Total Delay Over All Lanes(pcuHr): 25.97 Cycle Time (s): 120													

Full Input Data And Results

Scenario 5: '2031 Base + Committed AM Peak' (FG5: '2031 Base + Committed AM Peak', Plan 1: 'Network Control Plan 1')

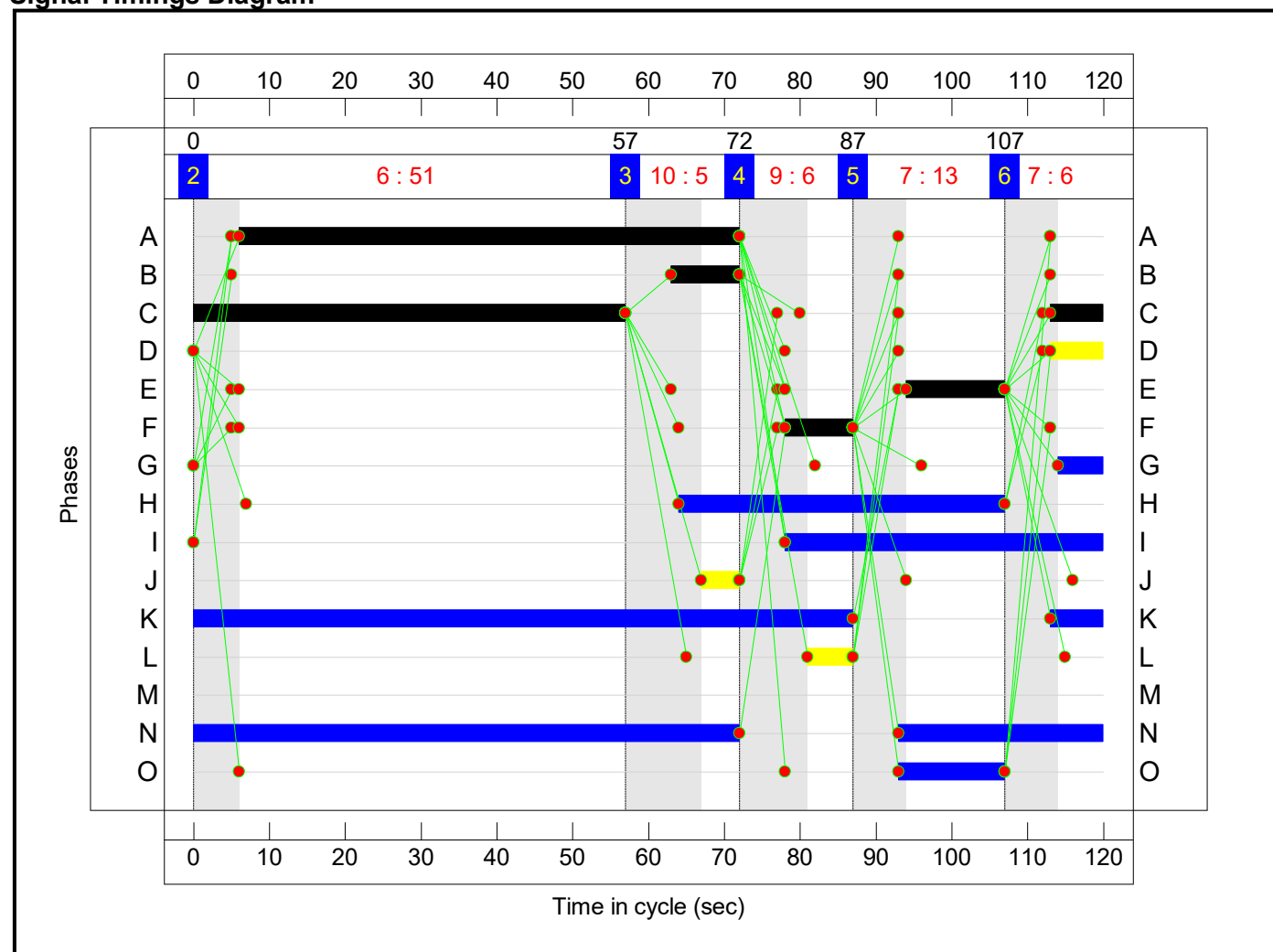
Stage Sequence Diagram



Stage Timings

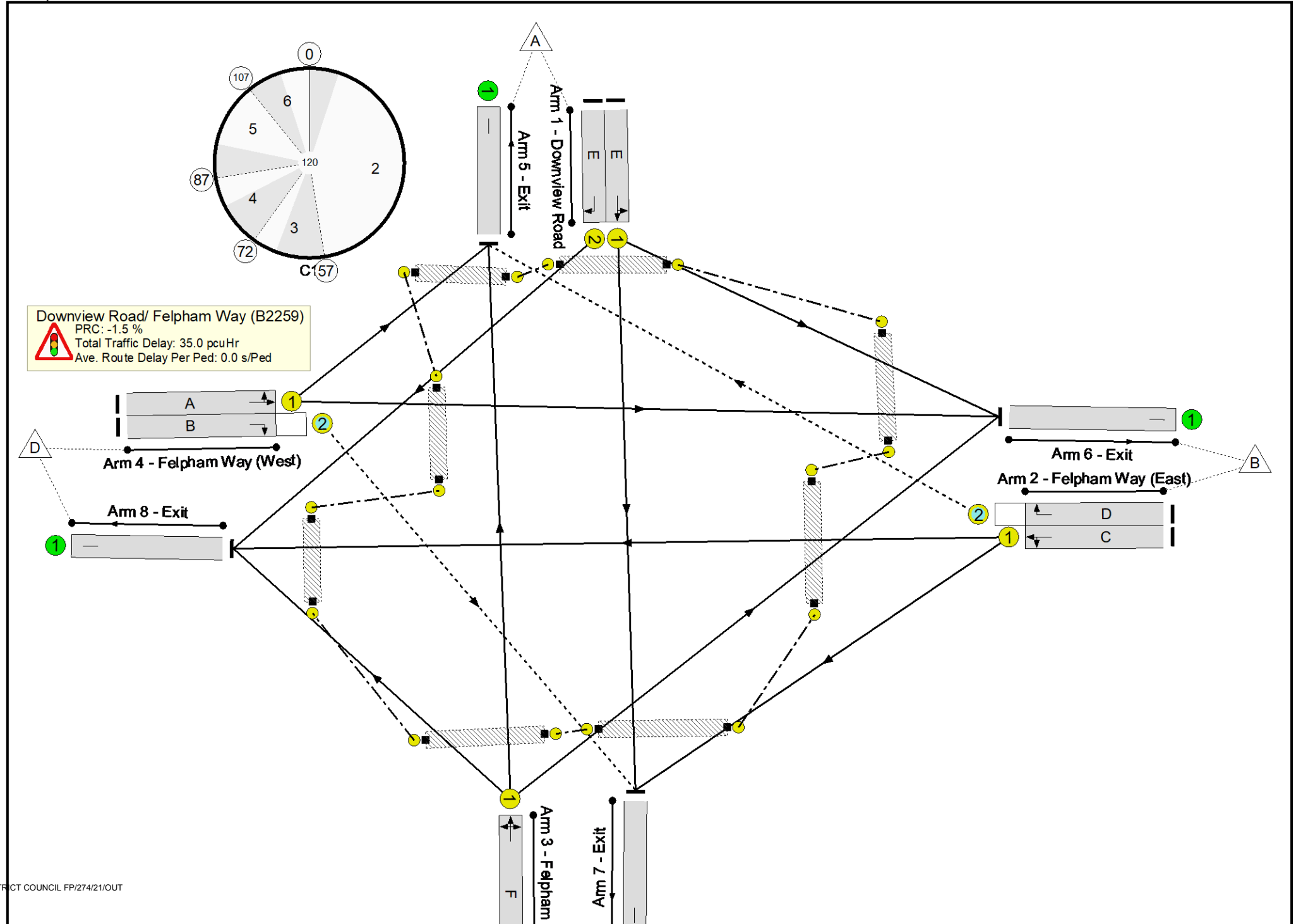
Stage	2	3	4	5	6
Duration	51	5	6	13	6
Change Point	0	57	72	87	107

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	91.4%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	91.4%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	13	-	181	1870	218	83.0%
1/2	Downview Road Right	U	N/A	N/A	E		1	13	-	192	1870	218	88.0%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	64	-	965	1950	1056	91.4%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	7	-	80	1950	130	61.5%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	9	-	124	1956	163	76.1%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	66	-	833	1916	1070	77.9%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	34	1916	160	21.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	311	1940	1940	16.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	836	1940	1940	43.1%
7/1	Exit	U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	998	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	94	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	43	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	42	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	99	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	14	-	0	-	0	0.0%

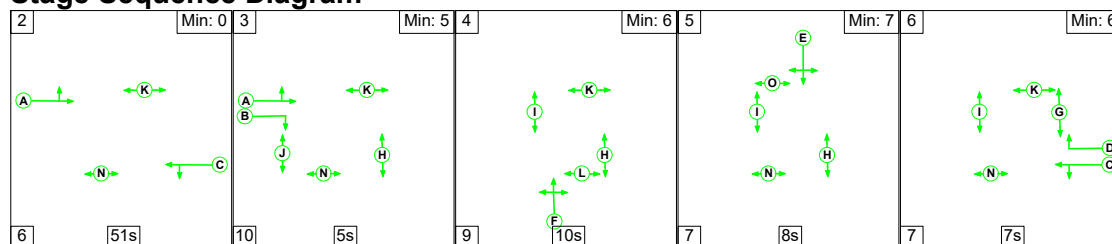
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	112	2	20.4	14.5	0.0	35.0	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	112	2	20.4	14.5	0.0	35.0	-	-	-	-
1/1	181	181	-	-	-	2.6	2.2	-	4.8	95.2	5.9	2.2	8.1
1/2	192	192	-	-	-	2.8	3.0	-	5.8	108.2	6.3	3.0	9.3
2/1	965	965	-	-	-	6.7	4.8	-	11.5	42.8	29.0	4.8	33.7
2/2	80	80	0	79	1	1.2	0.8	0.0	2.0	89.4	2.6	0.8	3.4
3/1	124	124	-	-	-	1.9	1.5	-	3.3	96.7	4.0	1.5	5.5
4/1	833	833	-	-	-	4.8	1.7	-	6.5	28.2	21.5	1.7	23.3
4/2	34	34	0	33	1	0.5	0.1	0.0	0.6	65.6	1.0	0.1	1.2
5/1	311	311	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	836	836	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
7/1	264	264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	998	998	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -1.5 PRC Over All Lanes (%): -1.5 Total Delay for Signalled Lanes (pcuHr): 34.49 Total Delay Over All Lanes(pcuHr): 34.97 Cycle Time (s): 120													

Full Input Data And Results

Scenario 6: '2031 Base + Committed PM Peak' (FG6: '2031 Base + Committed PM Peak', Plan 1: 'Network Control Plan 1')

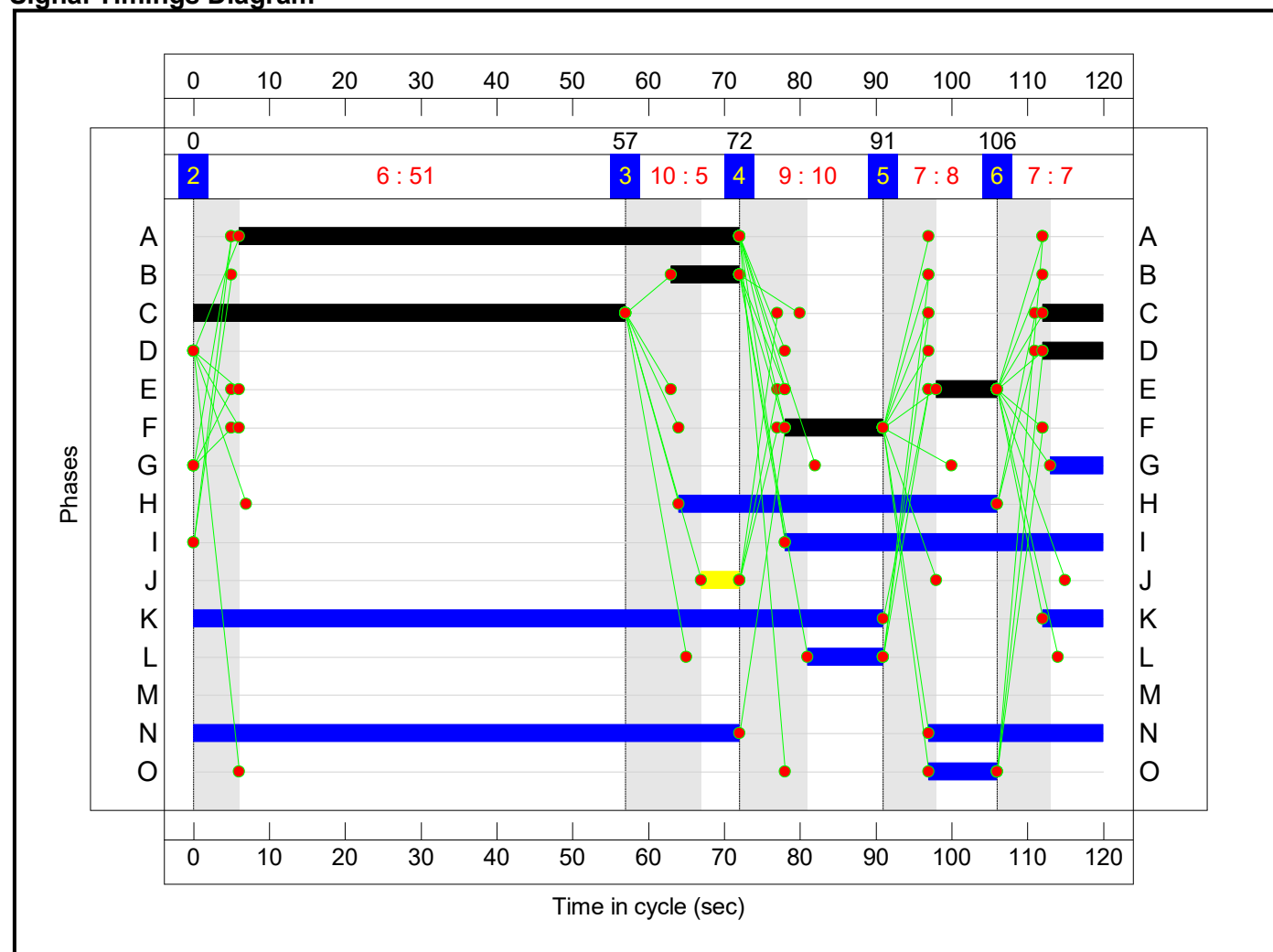
Stage Sequence Diagram



Stage Timings

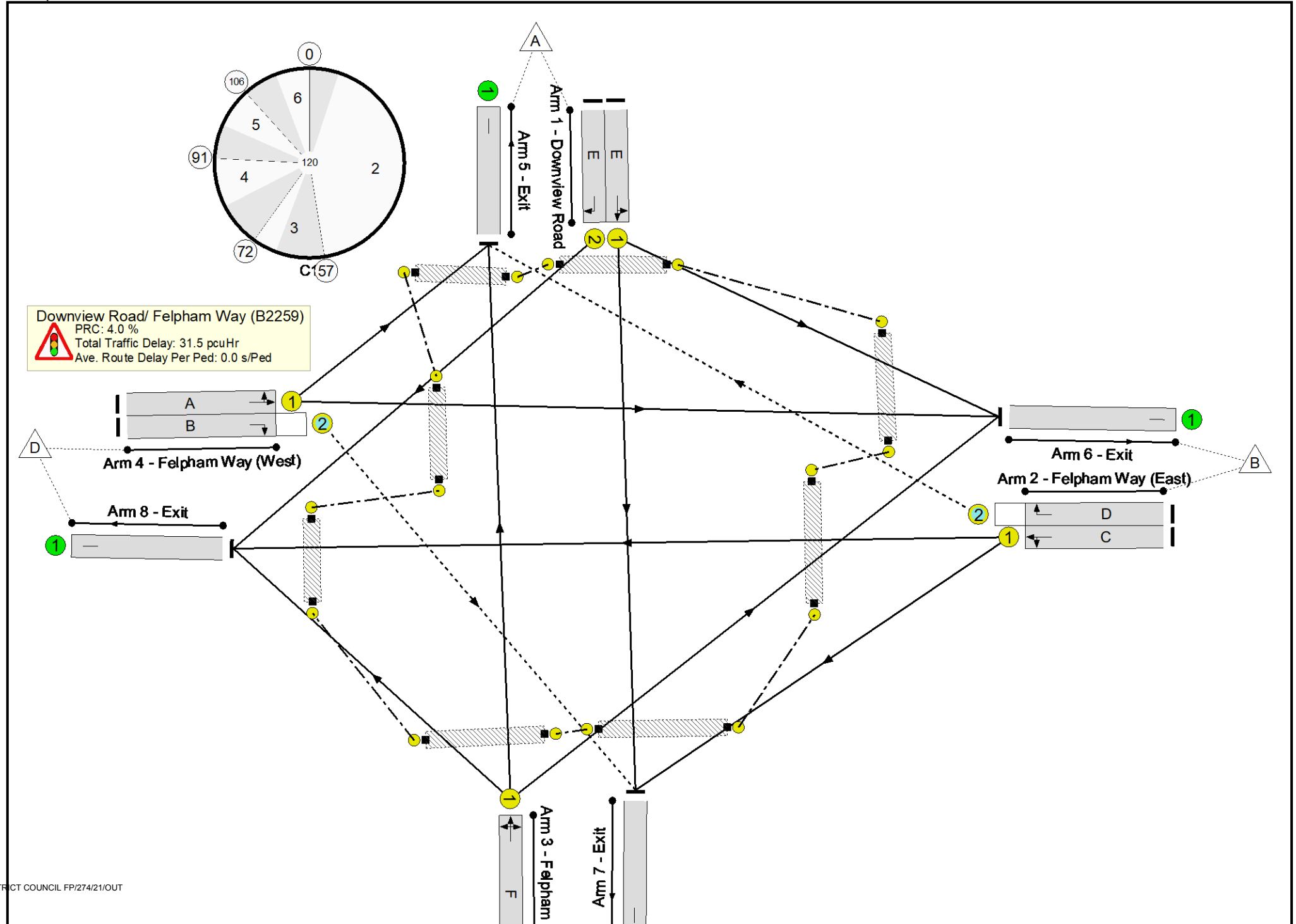
Stage	2	3	4	5	6
Duration	51	5	10	8	7
Change Point	0	57	72	91	106

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	86.6%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	86.6%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	8	-	119	1870	140	84.8%
1/2	Downview Road Right	U	N/A	N/A	E		1	8	-	121	1870	140	86.3%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	65	-	681	1950	1073	63.5%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	8	-	115	1950	146	78.6%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	13	-	197	1956	228	86.3%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	66	-	926	1916	1070	86.6%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	13	1916	160	8.1%
5/1	Exit	U	N/A	N/A	-		-	-	-	344	1940	1940	17.7%
6/1	Exit	U	N/A	N/A	-		-	-	-	943	1940	1940	48.6%
7/1	Exit	U	N/A	N/A	-		-	-	-	138	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	747	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	99	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	42	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	10	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	42	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	95	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	9	-	0	-	0	0.0%

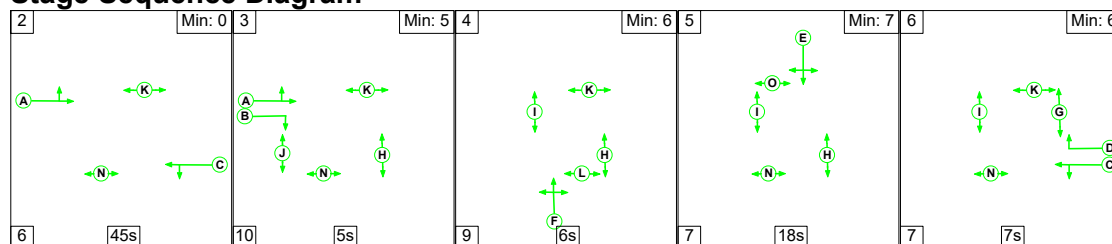
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	126	2	17.8	13.7	0.0	31.5	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	126	2	17.8	13.7	0.0	31.5	-	-	-	-
1/1	119	119	-	-	-	1.8	2.3	-	4.1	124.5	3.9	2.3	6.2
1/2	121	121	-	-	-	1.8	2.5	-	4.3	129.2	4.0	2.5	6.5
2/1	681	681	-	-	-	3.5	0.9	-	4.4	23.2	15.5	0.9	16.4
2/2	115	115	0	113	2	1.7	1.7	0.0	3.4	106.6	3.7	1.7	5.4
3/1	197	197	-	-	-	2.8	2.7	-	5.5	101.3	6.4	2.7	9.1
4/1	926	926	-	-	-	5.8	3.1	-	8.9	34.7	26.2	3.1	29.3
4/2	13	13	0	13	0	0.2	0.0	0.0	0.2	63.1	0.4	0.0	0.4
5/1	344	344	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	943	943	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
7/1	138	138	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	747	747	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 4.0 PRC Over All Lanes (%): 4.0 Total Delay for Signalled Lanes (pcuHr): 30.94 Total Delay Over All Lanes(pcuHr): 31.52 Cycle Time (s): 120													

Full Input Data And Results

Scenario 7: '2031 Base + Development AM Peak' (FG7: '2031 Base + Development AM Peak', Plan 1: 'Network Control Plan 1')

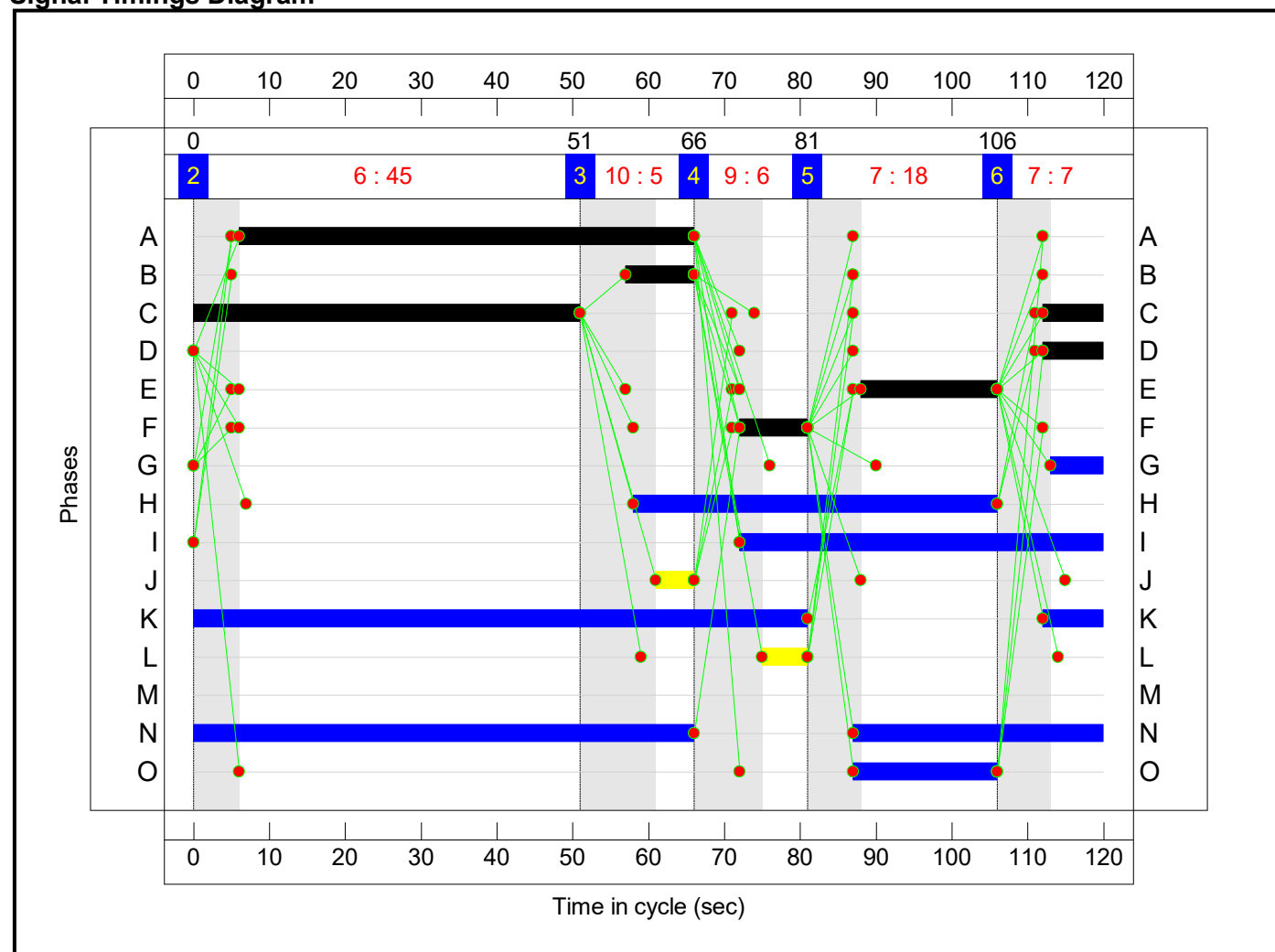
Stage Sequence Diagram



Stage Timings

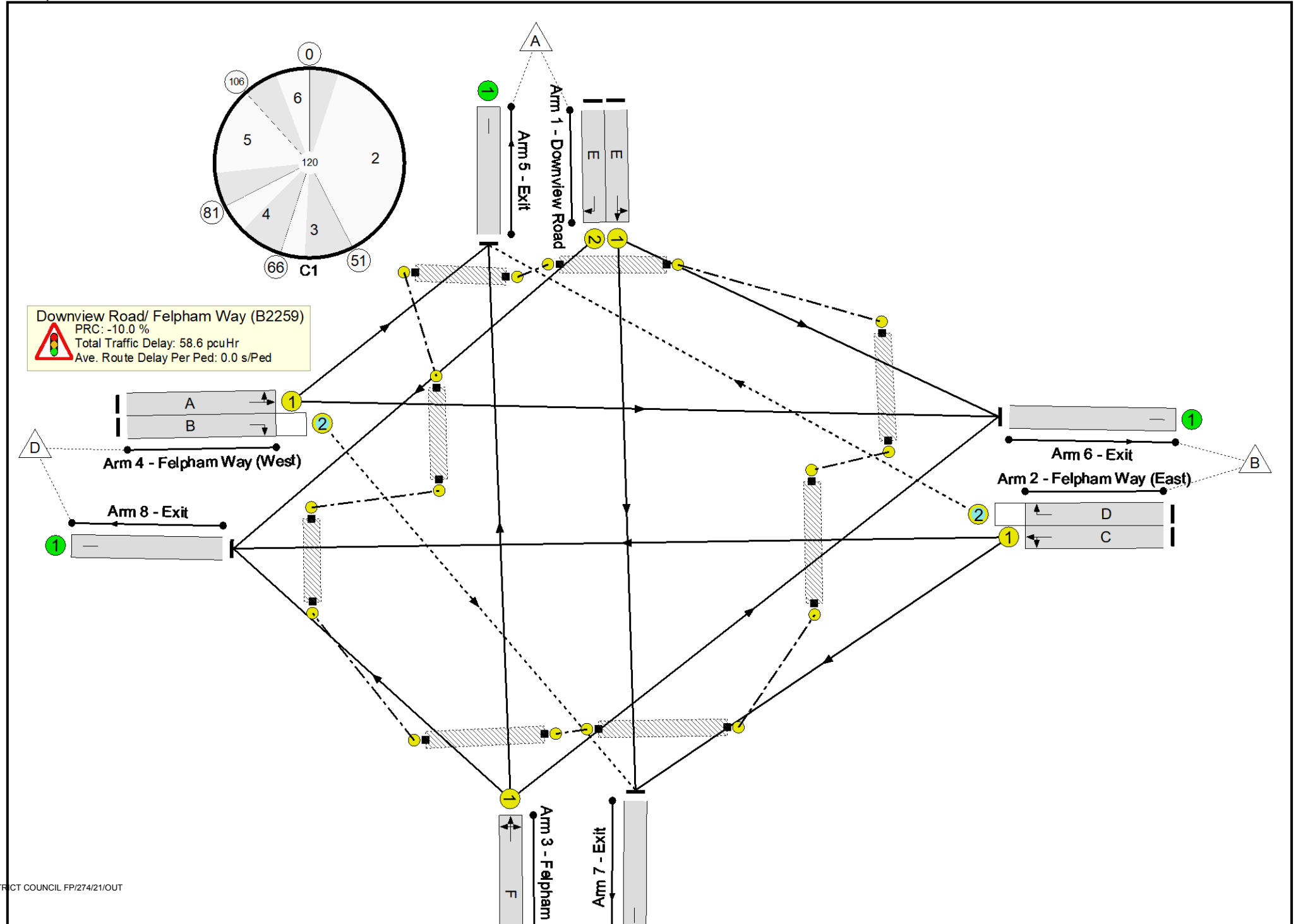
Stage	2	3	4	5	6
Duration	45	5	6	18	7
Change Point	0	51	66	81	106

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	99.0%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	99.0%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	18	-	292	1870	296	98.6%
1/2	Downview Road Right	U	N/A	N/A	E		1	18	-	279	1870	296	94.2%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	59	-	965	1950	975	99.0%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	8	-	106	1950	146	72.5%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	9	-	122	1956	163	74.8%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	60	-	852	1916	974	87.5%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	34	1916	160	21.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	345	1940	1940	17.8%
6/1	Exit	U	N/A	N/A	-		-	-	-	952	1940	1940	49.1%
7/1	Exit	U	N/A	N/A	-		-	-	-	268	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	1085	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	89	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	48	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	48	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	99	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	19	-	0	-	0	0.0%

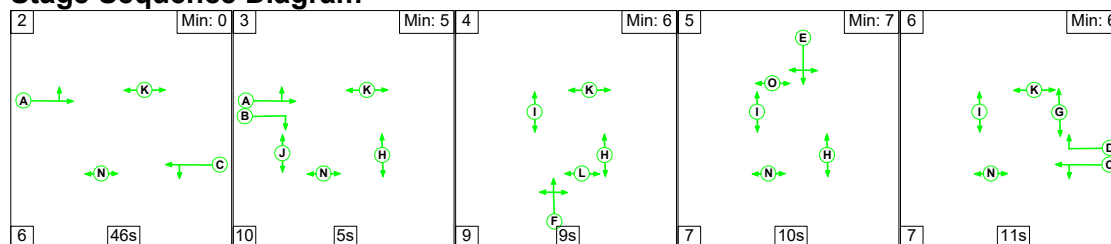
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	138	2	26.0	32.6	0.0	58.6	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	138	2	26.0	32.6	0.0	58.6	-	-	-	-
1/1	292	292	-	-	-	4.1	7.6	-	11.7	143.9	9.7	7.6	17.2
1/2	279	279	-	-	-	3.9	5.1	-	9.0	115.9	9.1	5.1	14.3
2/1	965	965	-	-	-	8.0	13.2	-	21.2	79.1	31.6	13.2	44.9
2/2	106	106	0	104	2	1.6	1.2	0.0	2.8	96.4	3.4	1.2	4.7
3/1	122	122	-	-	-	1.8	1.4	-	3.2	94.9	4.0	1.4	5.4
4/1	852	852	-	-	-	6.2	3.3	-	9.5	40.1	25.1	3.3	28.4
4/2	34	34	0	33	1	0.5	0.1	0.0	0.6	65.6	1.0	0.1	1.2
5/1	345	345	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	952	952	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
7/1	268	268	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1085	1085	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -10.0 PRC Over All Lanes (%): -10.0 Total Delay for Signalled Lanes (pcuHr): 58.01 Total Delay Over All Lanes(pcuHr): 58.60 Cycle Time (s): 120													

Full Input Data And Results

Scenario 8: '2031 Base + Development PM Peak' (FG8: '2031 Base + Development PM Peak', Plan 1: 'Network Control Plan 1')

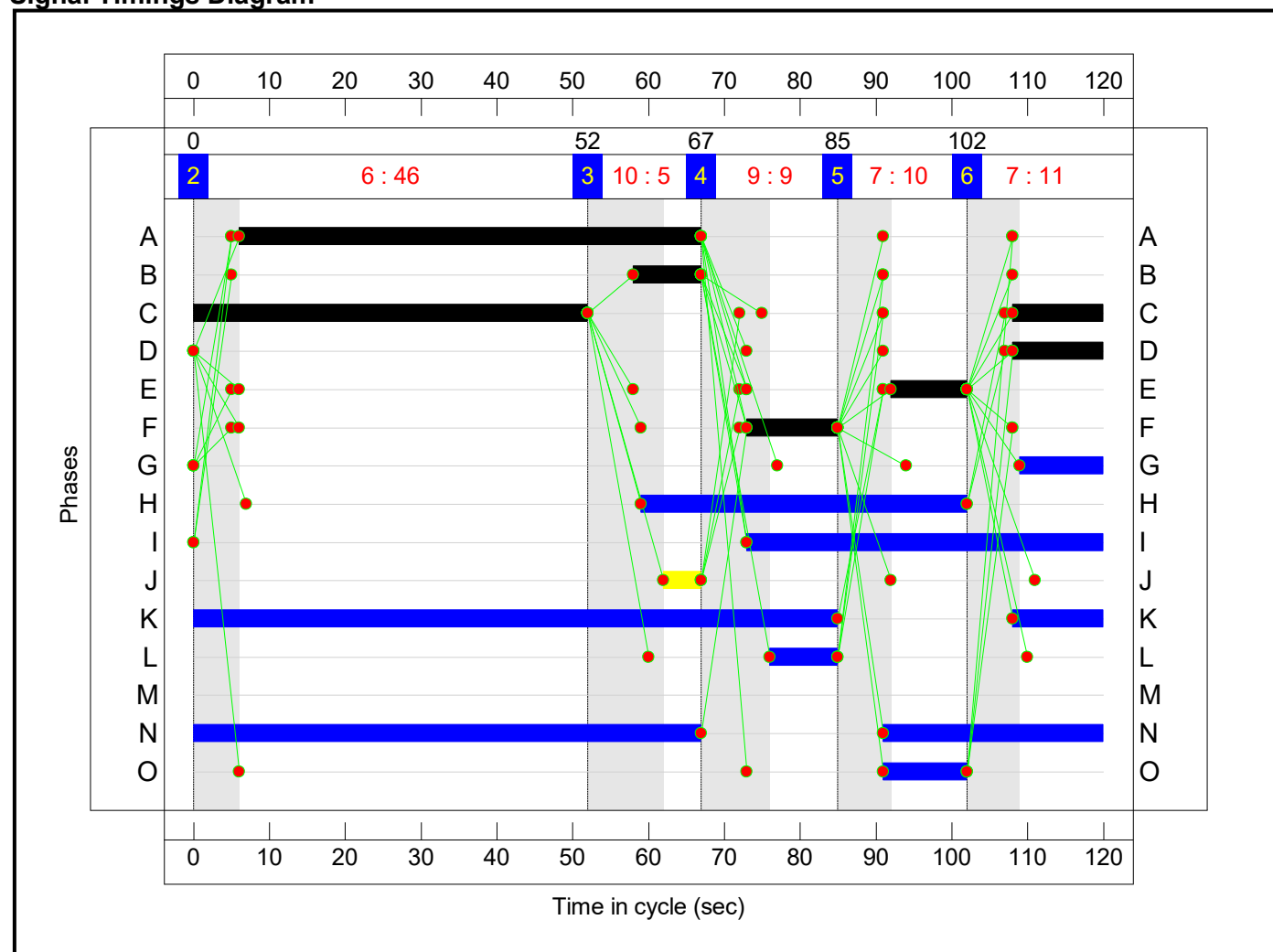
Stage Sequence Diagram



Stage Timings

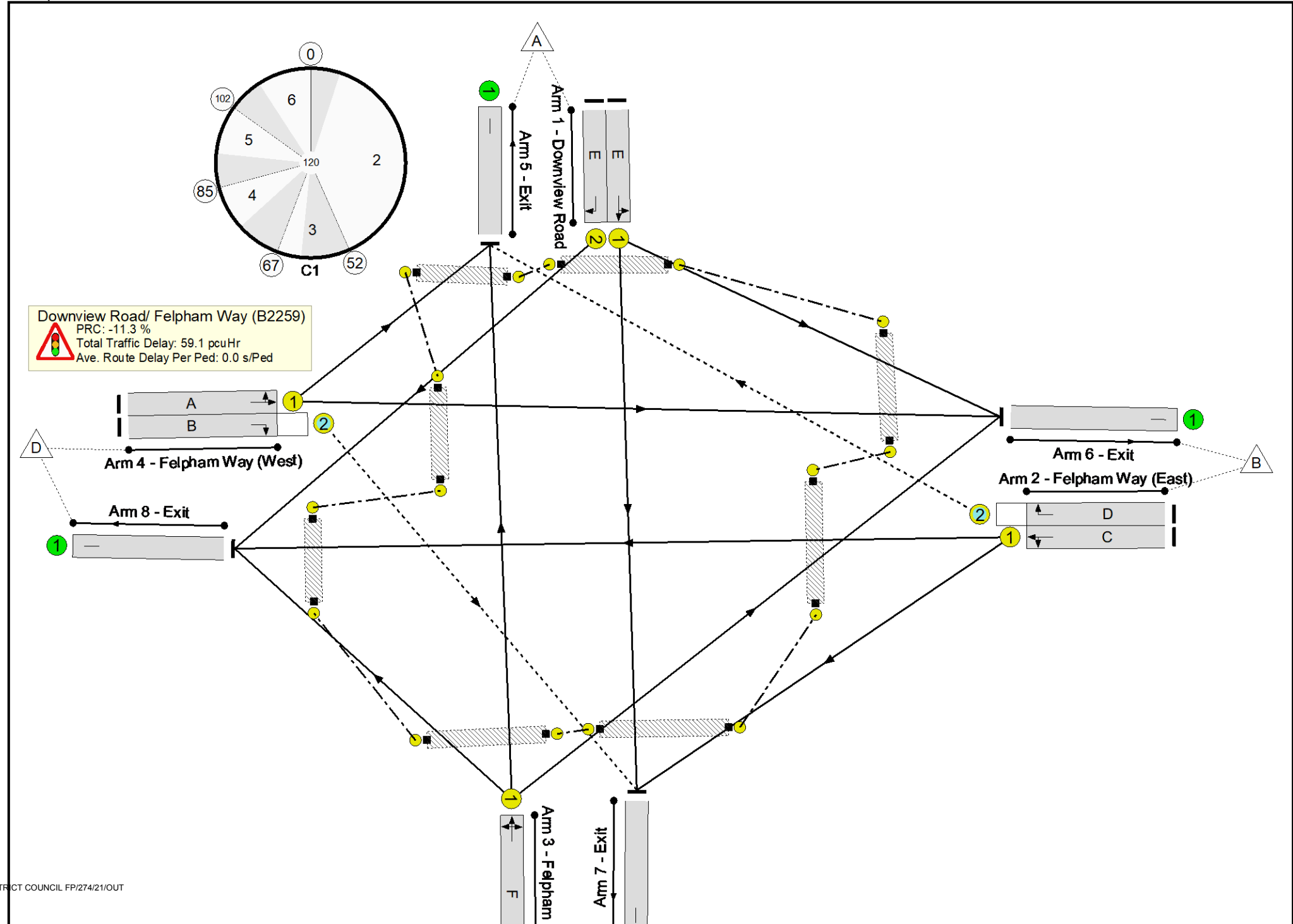
Stage	2	3	4	5	6
Duration	46	5	9	10	11
Change Point	0	52	67	85	102

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	N/A	-	-		-	-	-	-	-	-	100.2%
Downview Road/ Felpham Way (B2259)	-	-	N/A	-	-		-	-	-	-	-	-	100.2%
1/1	Downview Road Left Ahead	U	N/A	N/A	E		1	10	-	167	1870	171	97.4%
1/2	Downview Road Right	U	N/A	N/A	E		1	10	-	157	1870	171	91.6%
2/1	Felpham Way (East) Left Ahead	U	N/A	N/A	C		1	64	-	685	1950	1056	64.9%
2/2	Felpham Way (East) Right	O	N/A	N/A	D		1	12	-	199	1950	211	94.2%
3/1	Felpham Road Ahead Right Left	U	N/A	N/A	F		1	12	-	200	1956	212	94.4%
4/1	Felpham Way (West) Left Ahead	U	N/A	N/A	A		1	61	-	992	1916	990	100.2%
4/2	Felpham Way (West) Right	O	N/A	N/A	B		1	9	-	13	1916	160	8.1%
5/1	Exit	U	N/A	N/A	-		-	-	-	497	1940	1940	25.6%
6/1	Exit	U	N/A	N/A	-		-	-	-	992	1940	1940	51.1%
7/1	Exit	U	N/A	N/A	-		-	-	-	137	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	787	Inf	Inf	0.0%
Ped Link: P1	Downview Road	-	N/A	-	K		1	97	-	0	-	0	0.0%
Ped Link: P2	Felpham Way (East)	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Felpham Way (East)	-	N/A	-	H		1	43	-	0	-	0	0.0%
Ped Link: P4	Felpham Road	-	N/A	-	L		1	9	-	0	-	0	0.0%

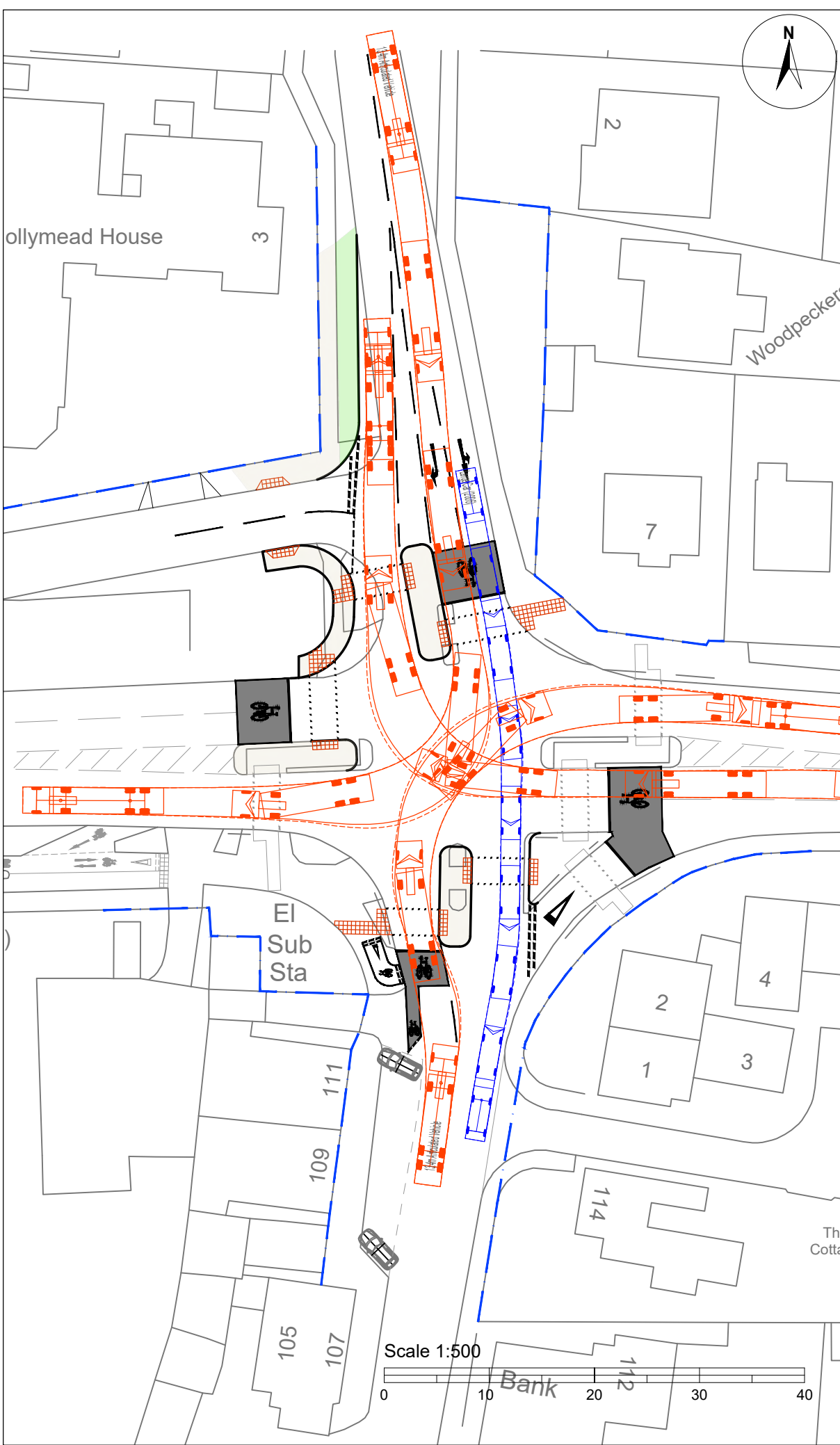
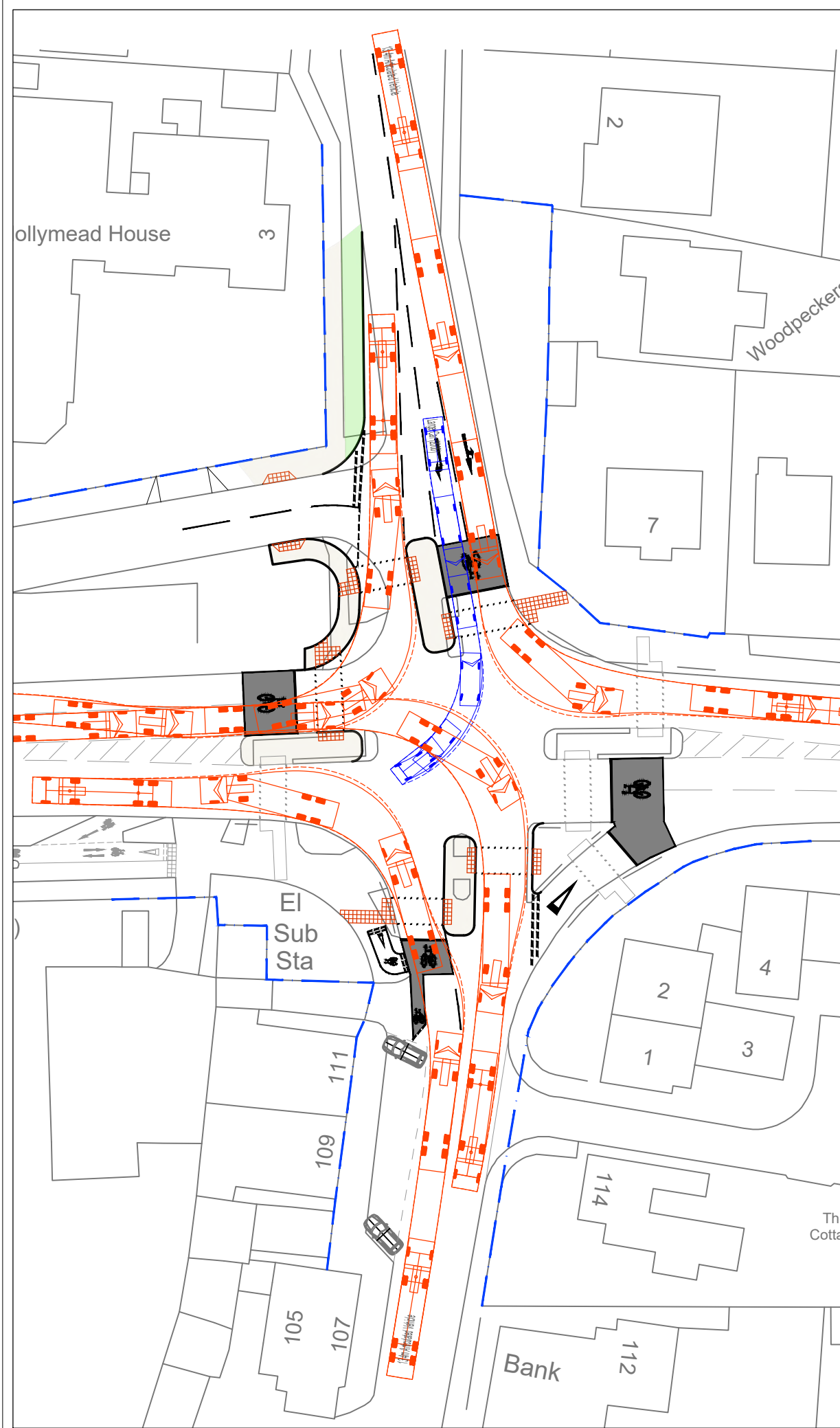
Full Input Data And Results

Ped Link: P5	Felpham Way (West)	-	N/A	-	J		1	5	-	0	-	0	0.0%
Ped Link: P6	Felpham Way (West)	-	N/A	-	I		1	47	-	0	-	0	0.0%
Ped Link: P7	Felpham Road	-	N/A	-	N		1	96	-	0	-	0	0.0%
Ped Link: P8	Downview Road	-	N/A	-	O		1	11	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Downview Road/ Felpham Way (B2259) Junction	-	-	0	192	20	22.8	36.3	0.0	59.1	-	-	-	-
Downview Road/ Felpham Way (B2259)	-	-	0	192	20	22.8	36.3	0.0	59.1	-	-	-	-
1/1	167	167	-	-	-	2.5	5.5	-	8.0	171.9	5.5	5.5	11.0
1/2	157	157	-	-	-	2.4	3.6	-	6.0	137.1	5.1	3.6	8.8
2/1	685	685	-	-	-	3.7	0.9	-	4.6	24.3	16.0	0.9	16.9
2/2	199	199	0	179	20	2.9	4.6	0.0	7.6	136.8	6.6	4.6	11.2
3/1	200	200	-	-	-	3.0	4.7	-	7.6	137.7	6.6	4.7	11.3
4/1	992	990	-	-	-	8.1	16.3	-	24.4	88.5	33.1	16.3	49.4
4/2	13	13	0	13	0	0.2	0.0	0.0	0.2	63.1	0.4	0.0	0.4
5/1	496	496	-	-	-	0.0	0.2	-	0.2	1.2	1.6	0.2	1.8
6/1	990	990	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
7/1	137	137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): -11.3 PRC Over All Lanes (%): -11.3 Total Delay for Signalled Lanes (pcuHr): 58.39 Total Delay Over All Lanes(pcuHr): 59.08 Cycle Time (s): 120													

Appendix 8 – B2259/Downview Road Swept Path Analysis



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NOTES

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2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
3. This drawing is to be read in conjunction with all relevant scheme drawings.

Vehicle Profile

13.4m Articulated Vehicle
Overall Length 13.400m
Overall Width 2.500m
Overall Body Height 3.695m
Min Body Ground Clearance 0.428m
Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.750m

Based on drawing JNY10830-05A layout

Rev	Description	By	CB	Date

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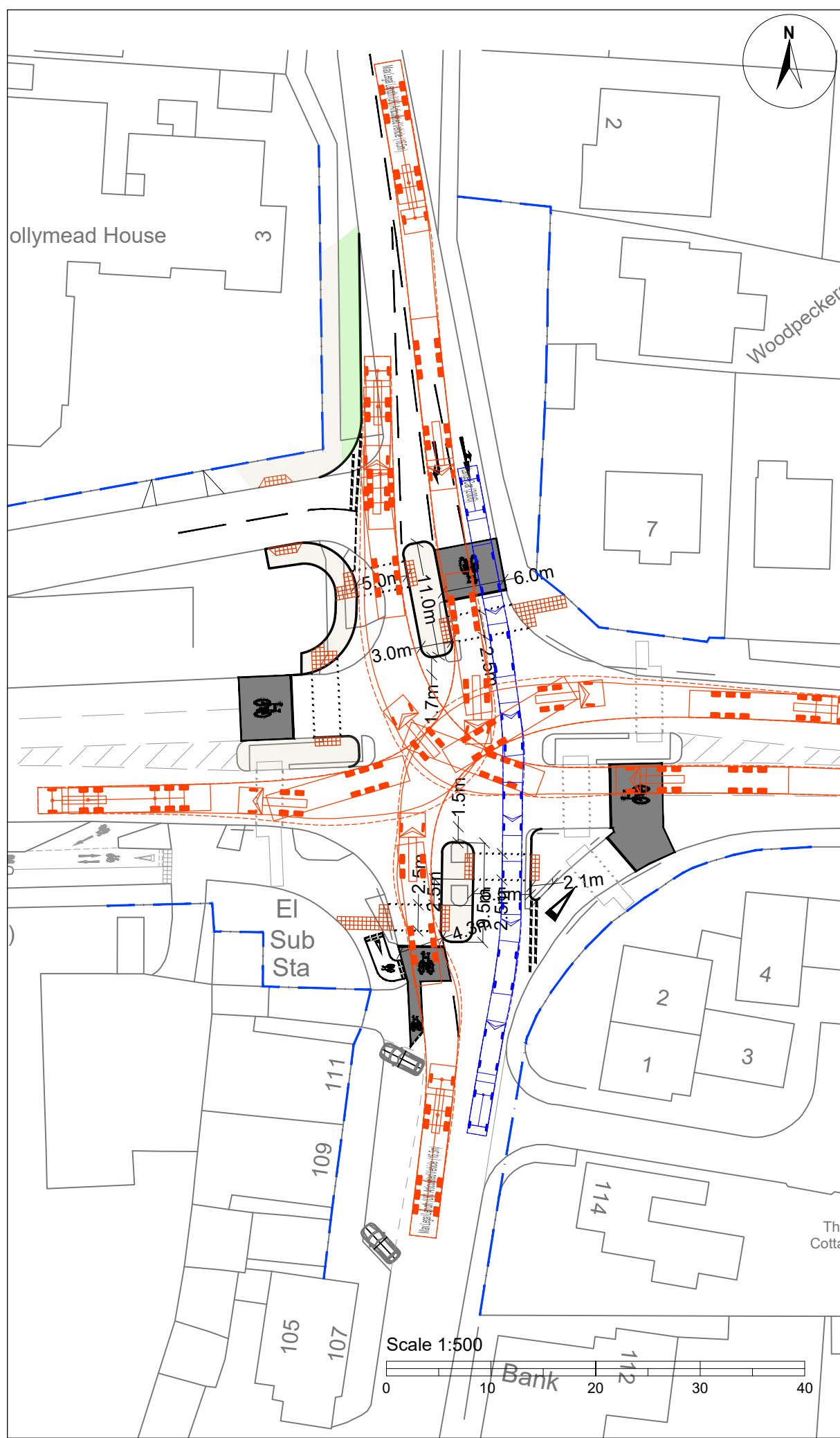
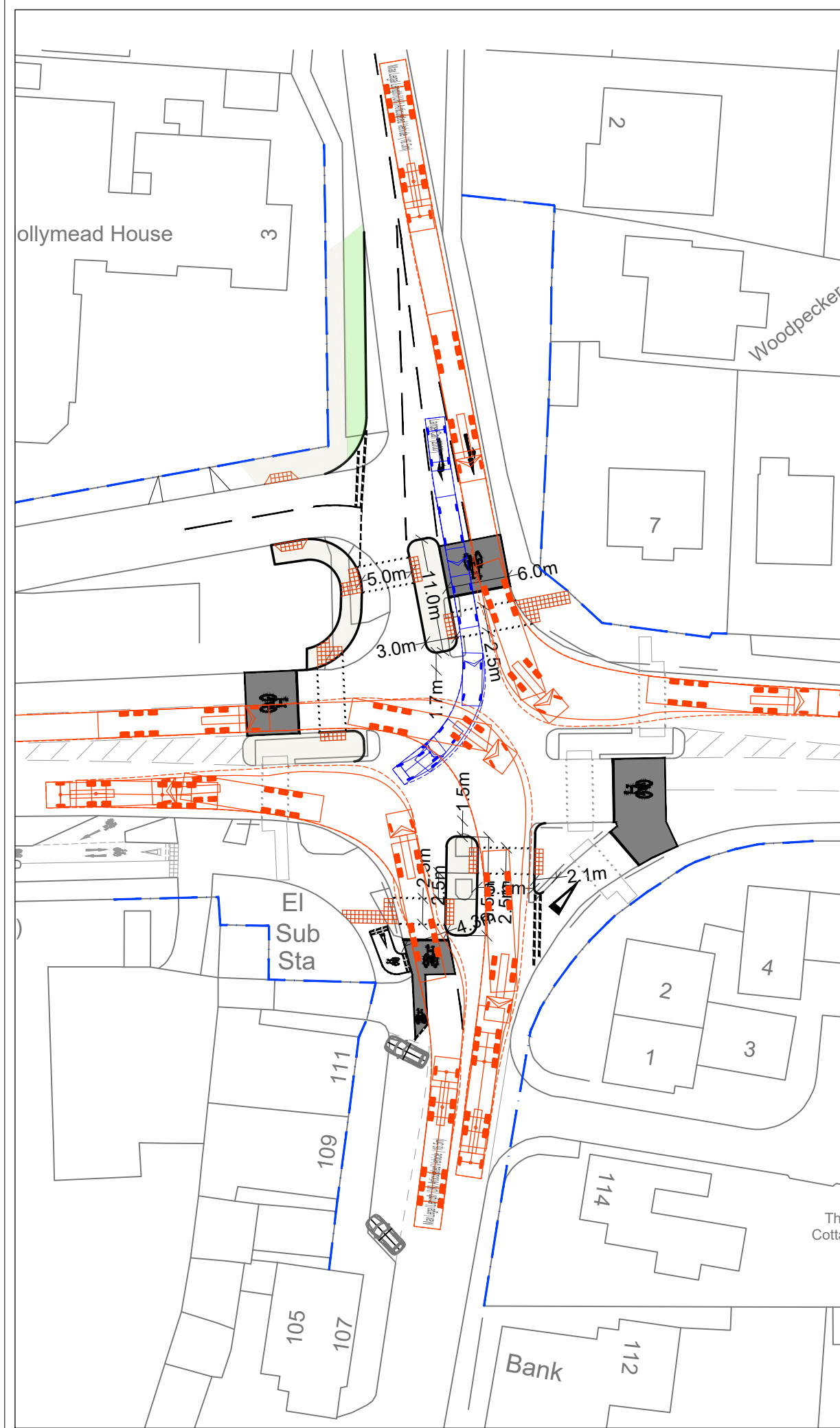
Client Hallam Land Management

Project Bognor Regis

Title Proposed Felpham Way / Downview Road Junction Improvements
13.4m Artic Swept Path Analysis

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	Scale @ A3	Date Created
JNY10830	1:500	25/04/22
RPS Drawing/Figure Number		Rev
JNY10830-22		

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3. This drawing is to be read in conjunction with all relevant scheme drawings.

Vehicle Profile

Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

Based on drawing JNY10830-05A layout

Rev	Description	By	CB	Date

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Client Hallam Land Management

Project Bognor Regis

Title Proposed Felpham Way / Downview Road Junction Improvements
16.5m Artic Swept Path Analysis

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA

Project Number	Scale @ A3	Date Created
JNY10830	1:500	25/04/22

RPS Drawing/Figure Number JNY10830-21

Rev

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