

**APPENDICES 1.0 – 8.0 (PART 1 of 2)
FOR
TRANSPORT ASSESSMENT
VOLUME 2
PROPOSED McDONALD'S RESTAURANT
LAND AT PLAS COCH RETAIL PARK
WREXHAM
LL11 2BW**

APPLICATION REF: P/2019/0919

APPENDICES

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CONSULTATION CORRESPONDENCE

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MEMORANDUM



From: Chief Officer, Environment & Technical **To:** Chief Officer Planning & Regulatory
FAO: Sharon Holman

Our Ref: ET/DC/P/2019/0919 **Your Ref:** P/2019/0919

Date: 24th January 2020

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY (GENERAL DEVELOPMENT PROCEDURE) ORDER 1995

Location: O. S Grid Ref: 325 513 Land at Argos Car Park, Plas Coch Retail Park, Plas Coch, Wrexham.

Development: Erection of free standing restaurant with drive thru facility, car parking, landscaping and associated works including customer order displays.

I refer to your consultation dated 19/12/2019 in respect of the above.

Access

The proposed development site is located on the Plas Coch Retail Park off Plas Coch Road. The existing road network leading to / serving the retail park already suffers from capacity issues during weekday peak times and at the weekend when significant queuing / delays are experienced.

The existing A483 / A541 junction, Plas Coch roundabout(s) and New Road / Stansty Road junction suffer from capacity issues and would not benefit from any significant increase in vehicle movements.

I would be unable to support any proposed development that will result in any significant increase in vehicle movements at the Plas Coch Retail Park.

Parking Provision

Parking provision at the existing retail park is considered adequate to cater for the existing retail units in this location ie/ Argos, The Range (incorporating Iceland Food). The existing car park in this location appears to provide a total of 231 spaces which includes 66 spaces in the area proposed for the McDonalds Restaurant.

The proposed development would appear to displace 66 no. existing parking spaces in this area of the car park. The loss of these spaces is considered unacceptable and will leave the existing retail park in this location short of parking provision.

The submitted Transport Assessment includes Table 4A. which indicates the following:-

Land Use	Maximum Parking Standard	Development	Maximum Parking Requirement	Proposed Provision
A1Retail	1 space per 20m ² gfa	5925m ²	296	165
A3 Restaurant	1 car space per 4m ² public floor space	97m ²	24	31
Total			320	196

However, the proposed retail units appear to comprise a gross floor area of approximately 6461m², which is significantly different from the value quoted ie/ 5925m². I assume that the "Iceland" retail unit within the The Range would come under a different A1 use as it sells food. This will attract a different parking demand compared with the suggested LPGN 16 - A1 use. I would recommend that the applicant clarifies the above detail proving the gross floor area and class use of the Iceland store.

Based on a gross floor area of 6461m², even if all the existing retail units were accepted as being A1 Use – 1 car space per 20m² gfa, would equate to the maximum requirement for 323 spaces not 296 spaces as quoted. This would represent a maximum shortfall of 49% compared with LPGN 16 maximum standards.

Based on the submitted plans, the proposed two storey drive-thru McDonalds comprises a total public floor space of approximately 159m², which is significantly different from the value quoted in Table 4A ie/ 97m². Class A3 use requires a maximum of 1 car space per 4m² public floor space which would equate to the maximum requirement for 40 spaces not 24 spaces as quoted. The submitted layout plan (ref: Appendix 7.3) appears to indicate the provision of 31 spaces. However, it is not clear as to whether each 4.8m long space has a minimum clearance of 6m behind for maneuverability. Could you please ask the applicant to annotate this detail on a revised layout plan. The proposed 2 no spaces located on the island feature are not 6m in length and are poorly located. I would recommend that these spaces are deleted. Based on the provision of 29 spaces for the proposed development would represent a maximum shortfall of 28% compared with LPGN 16 maximum standards.

It is common knowledge that food outlets of this nature attract a significant volume of pedestrian and vehicular movements. A similar sized McDonalds restaurant is located off the Halton roundabout further south off the A483 comprising a public floor space of 167m². This opened in 1999. A total of 53 parking spaces were originally provided at the site.

In 2012, McDonalds applied for an extension to the car park to provide a total of 108 parking spaces (ie/ 55 additional spaces) – Planning ref: P/2012/0301 (permission granted 06/06/2012). The submitted Design and Access Statement extension was provided in order to:-

- Ensure that sufficient space is provided within the site and clear of public highways
- Accommodate all vehicles likely to be attracted to or generated by the proposed development
- Minimize dangers to public and highway safety
- Minimize the loss of amenity and convenience likely to be caused by on-street parking.

Although it is accepted that very few customers would visit the Halton site on foot, it is still conveniently located next to the A483 trunk road to attract significant volumes of traffic as will be the case at the Plas Coch Retail Park.

Parking Survey - Halton McDonalds Drive Thru Restaurant

A brief survey was carried out by WCBC staff to get an idea of parking demand at the above McDonalds Drive Thru Restaurant which has a similar public floor space to that proposed at Plas Coch. The survey only covered a number of weekdays as follows:-

Date (Weekday)	Time	Number of Spaces Occupied
15/01/2020	13:37	37
15/01/2020	14:00	44
16/01/2020	14:30	52
17/01/2020	11:35	38
17/01/2020	12:15	42
20/01/2020	14:20	29

Although not surveyed, it is likely that parking demand at the weekend will increase significantly compared with weekdays. Even during the week, the survey indicates times when the car park is occupied by 42 or more vehicles. The maximum LPGN 16 requirement for the Halton site would be 42 parking spaces.

The proposed drive thru at Plas Coch only has potentially 29 spaces compared with the maximum LPGN 16 requirement of 40 spaces. It is not considered that the proposed Plas Coch drive thru will be any less popular than the drive thru at Halton given its proximity to the A483 and the significant catchment area of Wrexham.

LPGN 16 normally requires a minimum 10% of spaces to be provided to mobility standards. Only 2 mobility standard spaces appear to have been provided.

It is therefore considered that the proposed level of parking provision for both the existing retail units and the proposed drive-thru / restaurant is inadequate.

Glare from Vehicle Headlights

The layout of the site is likely to result in customer vehicle headlights shining directly onto the adjoining highway and has the potential to cause glare to drivers on the adjoining highway. I would recommend that the applicant submits further details indicating how this potential issue will be addressed.

Car Parking Survey (Plas Coch Retail Park)

A survey of the existing car park at the site was carried out on a Friday (between 16:00 – 18:45) and on a Saturday (between 11:00 – 14:45). However, it is not clear on which dates these surveys were carried out. I would recommend that the applicant clarifies this detail.

I would have thought that any parking survey would be carried out in the first few weeks of December leading up to Christmas on a Saturday and Sunday when the car park is likely to experience peak occupation.

I would suggest that the applicant also carries out a parking survey at the McDonalds drive-thru in Chirk during the week and on a Saturday and Sunday to assess / compare parking demand with the proposed development site.

Turning Provision

I assume that large delivery vehicles (ie/16.5m HGVs) & refuse wagons will need to service the proposed development site.

The swept path details indicated on submitted plan (Appendix 8.1) indicate the movements of a 16.5m long HGV entering, turning and exiting the site. No swept path details of a refuse vehicle have been provided. I would recommend that the applicant provides this detail.

In order for a 16.5m long HGV to access the development site, I understand that modifications are required to the existing splitter island on the internal access road, widening of the site access and re-location of the internal zebra crossing. The applicant will need to enter into a s.278 agreement with the Council in order to modify the existing splitter island if the application is supported. This detail is indicated on submitted layout plan (Appendix 7.2).

Retaining Wall

Submitted layout plan (Appendix 8.1) appears to indicate a proposed new retaining wall along the eastern boundary of the site. I would recommend that further details are submitted in respect of this wall.

Service and Delivery Management Plan (SDMP)

If the application is supported, I would recommend a condition for a SDMP to ensure that delivery vehicles can only deliver outside of peak hours eg/ early morning before 8am. The submitted plans indicate that 12 parking spaces at the site will need to be coned off (taken out of use) for up to an hour, three times per week in order to accommodate such a delivery vehicle. This detail would need to be included in a suitable SDMP.

Transport Assessment

Committed Development / Traffic Analysis

The submitted TA does not appear to have taken account of any committed developments as follows:-

Planning Ref:	Development
P/2018/9671	Construction of 410 1 / 2 bed apartments, Plas Coch Road, Wrexham.
P/2018/0672	Erection of 197 Student Apartments, Crispin Lane , Wrexham.
P/2018/0357	Extension to Plas Coch Public House (24 Bed Lodge), Plas Coch Retail Park, Wrexham
P/2018/0384	Drive Thru Coffee Shop, Plas Coch Retail Park, Plas Coch, Wrexham.
-----	Proposed 450 new dwellings on Land off Mold Road, Stansty, Wrexham.

I would recommend that any revised Transport Assessment takes these developments into account. The traffic assessment only appears to concentrate on the Plas Coch Retail Park roundabout and the Plas Coch Road roundabout.

Junctions that need to be reviewed as part of this application include :-

- A483 Junction 5
- A541 B and Q Roundabout
- Plas Coch Roundabout
- Plas Coch Retail Park Roundabout
- Junction of Stansty Rd / New Road

Following on from recent capacity assessments by Capita and Mott McDonald the Welsh Government are currently undertaking their own capacity assessments to identify preferred options which will include mitigation proposals for the Stansty development site. Welsh Government are expected to provide feedback on the potential options early in the new year. This is expected to be in the form of a public / stakeholder engagement event similar to that undertaken in the summer. Given the proximity of the site and potential implications for the A483(T), we consider it appropriate for the views of the Welsh Government / NMWTRA to be sought on the proposals. It is therefore difficult to assess the impact of the proposed development until the outcome of the study is known.

Pedestrian Crossing Facilities

The proposed development is likely to attract a significant number of pedestrian movements particularly given the proximity of the Glyndwr University.

I would recommend that the applicant reviews the adequacy of the existing pedestrian crossing facilities including a Stage 1 Safety Audit in order to demonstrate the adequacy of existing facilities in this area to serve such a development.

Having spoken with our Traffic Section, I understand that previous requests for a signalized pedestrian crossing along Plas Coch Road have not been supported given the issue of vehicle queuing.

Accident Analysis

The submitted accident analysis only appears to have reviewed a small study area which includes 6 personal injury accidents occurring between 2014 – 2018. However, I would recommend that the accident analysis extends up to and including the A541 B & Q Roundabout and section of Plas Coch Road between.

Construction Traffic Management Plan

Awaiting comments from our Traffic Section.

In conclusion, I would raise significant concerns in respect of the proposed development given the existing capacity issues on the local highway network in the vicinity of the site. Any existing additional vehicle movements from the proposed development will only exacerbate the existing congestion / queuing experienced in this location.

Proposed parking provision at the development site is also a concern. Any shortfall in parking provision is likely to impact on adjoining businesses in the vicinity of the site.

Could you please ask the applicant to address the issues raised above.



Chief Officer, Environment & Technical

From: Catherine <Catherine@adltraffic.co.uk>

Sent: 13 February 2020 14:35

To: 'Sarah Carpenter' <sarah.carpenter@planware.co.uk>

Subject: FW: Proposed McDonald's Plas Coch Retail Park Wrexham (ref P/2019/0919)

Dear Sarah,

We are in receipt of the highway comments dated 24 January 2020 relating to the application for the proposed McDonald's at Plas Coch Retail Park, Wrexham. Whilst we accept that a Transport Assessment is required we are mindful that this is a minor application for a 440sqm restaurant and as such the scope of traffic work should reflect the scale of the development.

The proposal does not generate a significant increase in vehicle movements as the majority of trips would be shared with the Retail Park or existing on the network in any event.

We would be happy to submit a revised Transport Assessment but we would like to clarify and agree a way forward with the Highway Authority on a number of the matters which have been raised.

1) Parking Standards and Parking Layout

- We have checked the floor areas with the Landlord. Application P/2019/0237 restricts the level of food retail floor area within The Range to 372sqm. The revised maximum standards are set out below.
- The standards are maximums there is no minimum standard. Our parking surveys have demonstrated that there would be sufficient parking for both uses.
- There is no definition of "public floor area" in LPG Note 16. Our view was that it was reasonable to assess this as the 97sqm main dining area which customers use. We have reassessed the standards based on 118sqm to include the queue and path areas. Our view is that the toilets and stairs are clearly ancillary to the main use and should be excluded from the calculations. I have provided the Architects marked up layouts attached.
- There are 29 spaces proposed within the McDonald's car park. There would be a 6.0m aisle width behind the spaces. Please see attached drawing 4171-SK-03 with the dimensions shown. There are no parallel spaces on the island?
- McDonald's restaurants typically provide 2 disabled parking spaces which is sufficient for their operational requirements. Disabled customers also have the option to use the drive thru lane to purchase food without leaving their vehicle should they wish to do so.

Table A Assessment of Parking Standards

Land Use		Maximum Parking Standard	Floor Area	Maximum Parking Standard for Development	Proposed Provision
A1	Non Food Retail	1 space/20sqm	6033sqm	301	
A1	Food Retail	1 space/14sqm	372sqm	27	
Total Retail			6405sqm	328	165
A3 Restaurant		1 space/4sqm public floor area	118sqm	30	29
Total Development				352	194

2) Proposed Traffic Generation and McDonald's Chirk (Halton)

- McDonald's Chirk is simply not comparable to the proposed development. Chirk is a roadside restaurant which is completely isolated. The nearest restaurant is Wrexham some 11km to the north. There are currently no restaurants in Oswestry or Welshpool. There is minimal surrounding residential so walk in trade at Chirk is negligible. There is no potential for linked trips.
- The proposed development is located in a suburban area which facilitates linked trips with the Retail Park (25% on Friday and 18% on a Saturday). Customers can also walk in from the surrounding area. The proposed restaurant also shares it's catchment with the town centre McDonald's and there is also now the new Costa on the Retail Park. This therefore has an effect on the level of traffic and parking which should be taken into account.
- The proposed restaurant would not be visible or signed from the A483. McDonald's own trade assessments are based on the potential for passing traffic flows on Mold Road not the A483. They are not expecting this restaurant to attract traffic off the A483 unless it is coming into/out of Wrexham in any event. They predict the level of trade at Plas Coch will be only about 50% of that at Chirk.
- It is therefore not unreasonable that the levels of parking at Wrexham are lower than Chirk and it needs much fewer spaces.
- The three comparable restaurants we have selected in our TA are all located close to large foodstores in suburban areas with similar levels of traffic and market share. This is a reasonable basis for the assessment of the proposal.
- We would note in our review of the Costa TA, the trip generation from TRICS was based on drive thru hot food restaurants including McDonald's/KFC/Burger King. The Highway Authority accepted that this was the level of traffic which could be generated by a drive thru use in this

location. We have applied these trips to the McDonald's development in Table B below. The traffic figures are slightly lower than our TA predictions and our assessment is robust.

- In summary McDonald's Chirk is not comparable and the basis of the assessment should be the traffic generation we have proposed in our TA.

Table B TRICS Assessment

	Costa Trip Rates based on TRICS drive thru restaurants		Traffic Generation 440sqm Drive Thru Restaurant		ADL TA Assessment based on Comparable Retail Park restaurants	
	In	Out	In	Out	In	Out
Am Peak	12.6	12.0	55	53	70	70
Pm Peak	14.3	15.0	63	66	111	113
Saturday Peak	25.7	27.0	113	118	119	128

3) Glare from Headlight Vehicles/ Retaining Wall

- The retaining wall along the eastern boundary is being kept as existing. The dense hedge which surrounds the site is also being retained. There would be no headlight glare which would affect the highway. We will ask the Architects to prepare a plan to demonstrate this to include in the revised TA.

4) Car Parking Survey

- The survey dates were Friday 17th May 2019 and Saturday 18th May 2019. This was 'normal' trading conditions and accords with the DfT guidance. The Highway Authority accepted surveys undertaken in January and July to support the Costa application as representing 'normal trade conditions' so we see no reason why the McDonald's should not be assessed on the same basis.
- The parking assessment presented in Chapter 10.0 has demonstrated that on the Saturday the car park would be 85% full with 28 spaces available. Therefore there is sufficient parking to accommodate the proposed parking demand.

5) Servicing

- Section 4.5 sets out the McDonald's delivery strategy. Deliveries would be undertaken by a 16.5m artic delivery vehicle 3 times per week and would be scheduled for quiet trading periods. Refuse is collected by a private contractor using a 9.6m refuse vehicle and would also occur off peak. I have attached a TRACK for the refuse vehicle as drawing 4171/TR/10. The vehicle stops only momentarily to load the bins and then leaves immediately.
- We would be happy to accept a Delivery Management Plan. We can submit this with the revised TA.
- We agree to enter into a S278 for the works to the splitter island.

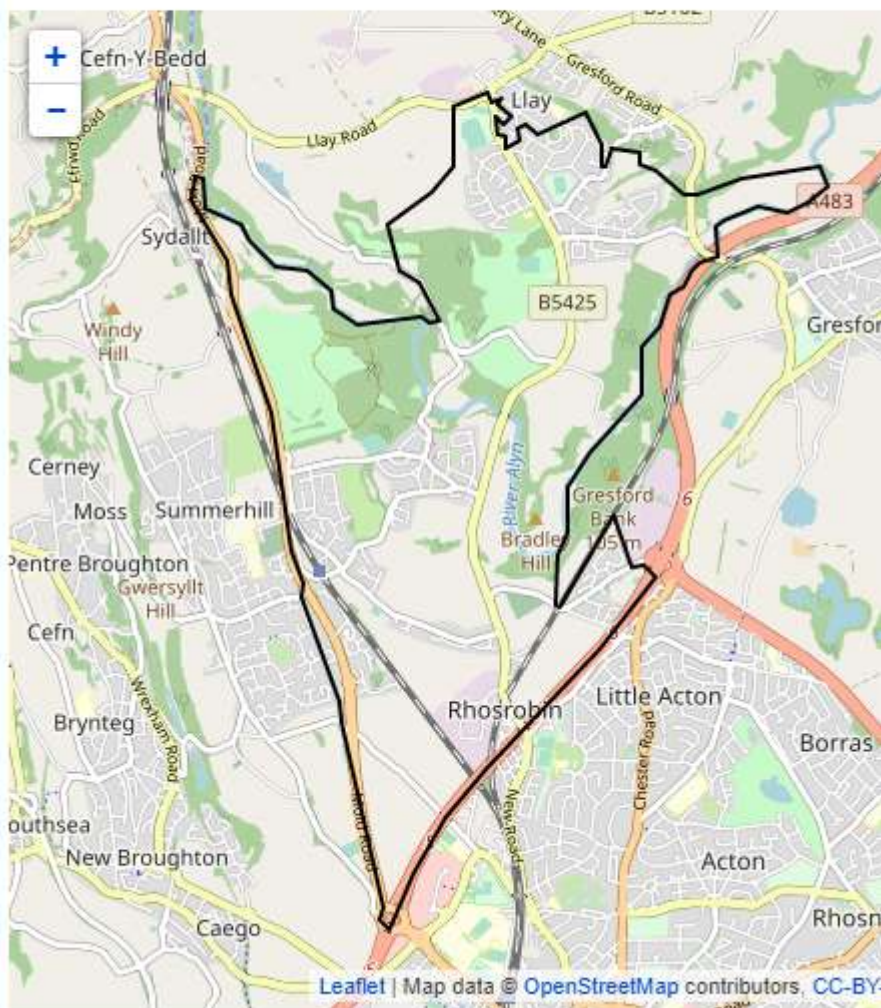
6) Committed/Parallel Developments and Off Site Junctions

- We have reviewed the committed developments cited and application P/2019/0923 for the 455 residential units off Mold Road.
- Our concern is that the approach which has been requested by the Highway Authority for the +15 year post opening assessments is leading to a significant level of double counting.
- Based on TEMPRO the assumptions for 2019-2030 +801 households and +317 jobs for the areas surrounding the site. For 2019-2036 it is +1188 households and 525 jobs. The proposed residential coming forward (410 flats + 455 houses) is 865 so traffic generated by these sites is effectively already included in the growth factor for the base traffic flows. By adding the residential development traffic again on top it is likely a significant overestimation of the actual traffic situation.
- We have reviewed the traffic flows from the Focus TA (December 2019) for the 455 Residential development for the level of traffic uplift assumed in a 2030 and 2036 scenarios. The results are summarised in Table C below.
- It is likely that the level of traffic increase which has been applied for the 2030/2036 scenarios (even including the McDonalds) is about 50% higher than it is actually likely to be and are extremely robust.
- Therefore the assessments which have been already submitted for the A483 Junction 5 and Mold Road junction in the Focus TA are effectively include an allowance for small scale developments such as McDonald's.
- The level of traffic impact of the McDonald's at the A483 Junction 5 and A541 Mold Road Junction is very low compared to the volume of existing/permitted traffic and is highly unlikely to have any material impact on these junctions.
- The Focus TA states that they are working with JCT and the Welsh Government and propose improvements to the roundabouts. Given the scale of the residential development this scope of work and mitigation would be appropriate. We do not see how a minor development such as McDonald's has any impact on this.
- It is considered that modelling of these junctions for the purposes of assessing the McDonald's is not necessary as the level of traffic is small. The junctions are also likely to be improved in the future scenario.

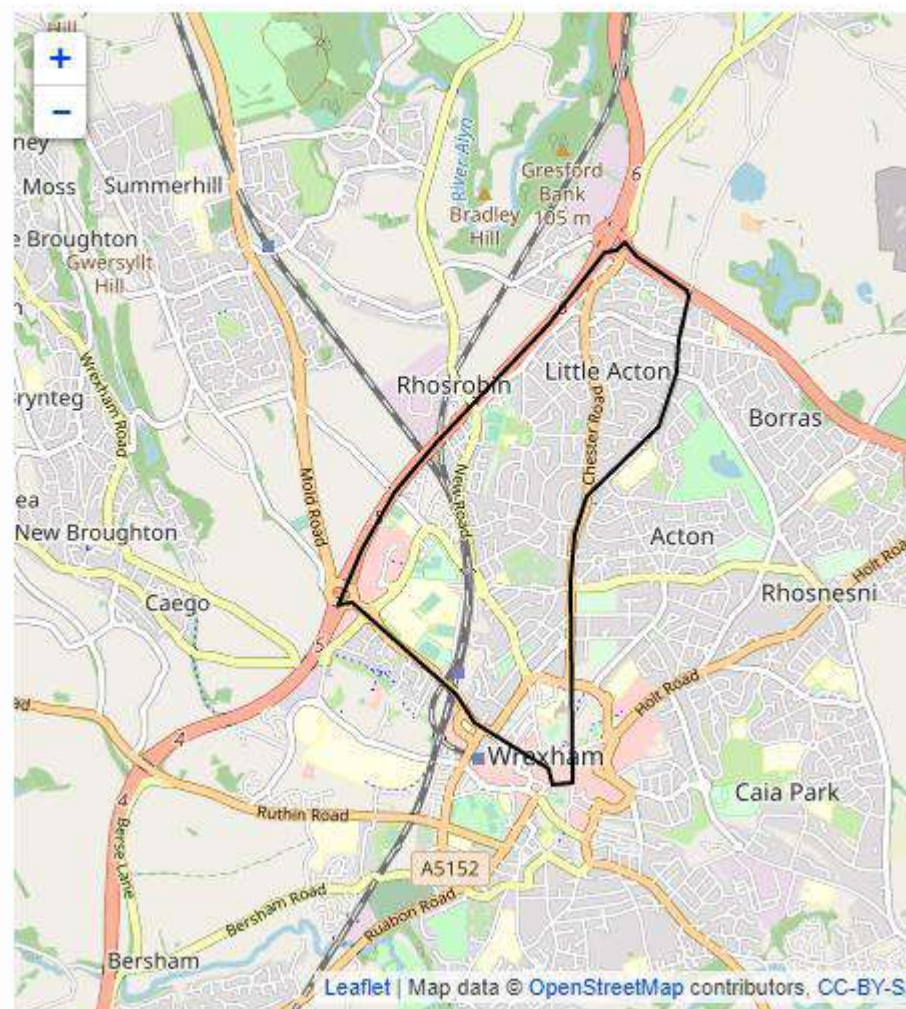
Table C Traffic Flows A483 Junction 5 and Mold Road Roundabout 2030/2036

	Juncti on	2019 Survey ed	2030 Base (+12% Temp ro growt h factor s)	Differen ce 2019- 2030	2036 Base (+ 17% growt h factor s)	Differen ce 2019- 2036	University Redevelopm ent	Cost a	Pub Extensi on	455 Resident ial Dev	Total Committ ed Dev	McDonal ds	Total All Developm ent
Am Pea k	A483 Juncti on 5	4040	4530	+490	4759	+719	+126	+25	+5	+151	+307	+3	+310
	A541 Mold Road	3576	4010	+434	4219	+643	+189	+29	+5	+42	+267	+64	+331
Pm Pea k	A483 Juncti on 5	4433	4978	+545	4759	+719	+129	+28	+4	+186	+347	+16	+363
	A541 Mold Road	4226	4744	+518	4219	+643	+191	+34	+6	+57	+288	+96	+384

Map of W02000080 : Wrexham 003



Map of W02000085 : Wrexham 008



- The McDonalds traffic impact at the Stansty Road/New Road junction would also be very low once the trips from Plas Coch Road East are distributed onto the network. This is shown in Table D below. The Focus TA reports that this junction would only be approaching capacity during the 2030 situation. Given the likely significant over estimations of the base traffic conditions noted above it is concluded that the junction very likely to still be within capacity even in 2030 and given the level of small traffic increase no further analysis is required

Table D McDonalds Traffic Impact Stansty Road/New Road Junction

	Link	Vehicles	Link	Vehicles	Link	Vehicles	Link	Vehicles	Link	Vehicles
Am Peak	Plas Coch Road East of Retail Park	10	Stansty Road North	5	Stansty Road East	5	New Road	3	Rhosddu Road	2
Pm Peak	Plas Coch Road East of Retail Park	18	Stansty Road North	9	Stansty Road East	9	New Road	5	Rhosddu Road	4

7) Revised Transport Assessment

- Based on the above we conclude that the McDonald's traffic generation does not justify further modelling of the A483 Junction 5, B5101/Mold Road Roundabout or the Stansty Road New Road junction.
- We agree that the Plas Coch Roundabout and Retail Park Roundabout should be remodelling including the committed development.
- We have re-run the PICADY for these roundabouts for 2036 as a sensitivity test and the results are presented below. The McDonald's would still have no material impact.

Table E 2036 ARCADY Results Retail Park Roundabout

Arm	AM Peak				PM Peak				Saturday Peak			
	2036 Base + Committed		2036 Total		2036 Base + Committed		2036 Total		2036 Base + Committed		2036 Total	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Access Road East	0.45	1	0.47	1	0.48	1	0.53	1	0.60	2	0.65	2
Site Access	0.15	0	0.26	0	0.30	0	0.48	1	0.57	1	0.82	4
Sainsbury's	0.38	1	0.40	1	0.60	2	0.63	2	0.79	4	0.86	5
Retail Park North	0.27	1	0.27	0	0.50	1	0.53	1	0.69	2	0.74	3

Table F 2036 ARCADY Results Plas Coch Road Roundabout

Arm	AM Peak				PM Peak				Saturday Peak			
	2036 Base + Committed		2036 Total		2036 Base + Committed		2036 Total		2036 Base + Committed		2036 Total	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
University	0.46	1	0.49	1	0.42	1	0.52	1	0.23	0	0.41	1
Plas Coch Rd South	0.70	2	0.73	3	0.81	4	0.87	6	0.85	5	0.90	8
Retail Park	0.30	1	0.33	1	0.54	1	0.58	1	0.61	2	0.65	2
Plas Coch Rd North	0.39	1	0.41	1	0.68	2	0.73	3	0.61	2	0.66	2

- Our view is that the accident assessment provided is consistent with the area scope of our TA. A wider accident assessment of the area has been provided in the ITP TA for the University Redevelopment and the Focus TA for the 455 Residential Development both concluded that the accident levels were as expected and there were no prevailing material highway safety issues.
- We are happy to engage with the Welsh Government as we have outlined above the McDonald's traffic is unlikely to have any impact.

8) Pedestrian Crossing Facilities

- We reviewed the TA for the University Redevelopment and some 410 residential flats which would be a source of considerable levels of pedestrian traffic. The TA and the Committee report specifically cites the proximity of the Retail Park as a benefit in reducing car use and encouraging walking. If the Highway/Planning Authority have deemed that the proposed flats would generate trips to the Retail Park without any impact on pedestrian safety or improvement works required. What has materially changed in the road network environment since July 2019 which warrants a change in view regarding the McDonald's development?
- Our TA predicted that the McDonalds would generate 25 pedestrians during Friday pm peak and 33 during Saturday peak. These will comprise of people who live locally and shared trips with the Retail Park so the number of 'new' pedestrian movements would likely be

relatively low. The students will walk across to the Retail Park without the McDonald's but the level of uplift as a direct result of the McDonald's would be low.

- We are happy to discuss this further but we would take the view that any potential improvements we provided to encourage walk in trips would reduce our traffic impact and therefore add weight to our comments above regarding trip generation and scope of Transport Assessment required.

9) Construction Traffic Management Plan

- This could be dealt with by condition if required.

I appreciate that this is a lot of information and it would likely be beneficial if we could meet with the Highway Authority to discuss the points and how to progress the application. Please could they advise on their availability?

Regards

Catherine Chapman

ADL Traffic and Highways Engineering

ADL House, Oaklands Business Park, Armstrong Way, Yate, Bristol, BS37 5NA

T 01454 332 100 :: M: 07545207940:: catherine@adltraffic.co.uk :: www.adltraffic.co.uk

MEMORANDUM



From: Chief Officer, Environment & Technical **To:** Chief Officer Planning & Regulatory
FAO: Sharon Holman

Our Ref: ET/DC/P/2019/0919 **Your Ref:** P/2019/0919

Date: 27th February 2020

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY (GENERAL DEVELOPMENT PROCEDURE) ORDER 1995

Location: O. S Grid Ref: 325 513 Land at Argos Car Park, Plas Coch Retail Park, Plas Coch, Wrexham.

Development: Erection of free standing restaurant with drive thru facility, car parking, landscaping and associated works including customer order displays.

I refer to your consultation / email dated 20/02/2020 and email / comments from Planware / ADL Traffic dated 13/02/2020 in respect of the above. My response to the comments from ADL are as follows:-

Parking Standards and Parking Layout

The applicant has indicated that planning application ref: P/2019/0237 restricts the level of food retail floor area within The Range store to 372m². Based on these figures the overall Range Store including Iceland Food element would require a maximum of 331 spaces. This would equate to a maximum 50% shortfall in parking provision compared with LPGN 16 requirements.

The applicant has carried out a car parking survey on Friday 17/05/2019 (between 16:00 – 18:45) and Saturday 18/05/2019 (between 11:00 – 14:45). This survey indicated that the peak occupancy was 68 vehicles on Friday (29% occupied) and 138 vehicles on a Saturday (58% occupied). The proposed development would appear to provide a total of 165 spaces. Based on this survey the proposed level of parking provision would in theory result in 84% occupancy.

I would have thought that any parking survey would be carried out in the first few weeks of December leading up to Christmas on a Saturday and Sunday when the car park is likely to experience peak occupation or even during the Easter holidays.

I would suggest that the applicant also carries out a parking survey at the McDonalds drive-thru in Chirk during the week and on a Saturday and Sunday to assess / compare parking demand with the proposed development site. It is not considered that the proposed Plas Coch drive thru will be any less popular than the drive thru at Halton given its proximity to the A483 and the significant catchment area of Wrexham.

Based on the submitted plans, the proposed two storey drive-thru McDonalds comprises a total public floor space of approximately 159m², which is significantly different from the value previously quoted in Table 4A ie/ 97m². However, the applicant has since amended the proposed public floor area to 118 m². The applicant has questioned the inclusion of the toilets and stairs area despite these facilities being for public use.

Class A3 use requires a maximum of 1 car space per 4m² public floor space which would equate to the maximum requirement for 40 spaces. The applicant has indicated the provision of 29 spaces. Based on the provision of 29 spaces for the proposed development would represent a maximum shortfall of 28% compared with LPGN 16 maximum standards.

Any proposed standard parking spaces shall be 2.4 x 4.8m in accordance with LPGN 16 requirements. Could you please ask the applicant to annotate this detail on a revised layout plan.

Proposed Traffic Generation and McDonald's Halton, Chirk.

The applicant has suggested that the existing McDonalds at Halton is simply not comparable to the proposed development in Wrexham. In our opinion, it is not considered that the proposed Plas Coch drive thru will be any less popular than the drive thru at Halton given its proximity to the A483 and the significant catchment area of Wrexham.

The applicant has indicated that the location of the proposed McDonalds will facilitate linked trips given the existing units on the Plas Coch Retail Park. The Plas Coch site will obviously result in some linked trips but it is anticipated that a significant number of trips will be non-linked trips.

The applicant has indicated that the proposed restaurant will not be visible from the A483 and the level of trade will only be about 50% of that at Chirk. The applicant suggests that they don't expect the restaurant to attract traffic off the A483 unless it is coming into / out of Wrexham in any event. Given the technology that is available to most people, it will become obvious that there is a McDonalds restaurant located just off the A483 at Plas Coch retail park. No doubt McDonalds are proposing this site given its likely customer base and accessibility.

The applicant has referred to the Costa Coffee application which used McDonalds / KFC / burger King TRICS data in their submission. They used these figures as they advised that Costa Coffee figures were not available. The Highway Authority were aware of this data but considered that a Costa Coffee would generate significantly less non-linked vehicle movements than a potential McDonalds restaurant. A condition limiting the site specifically to this class A3 use was imposed for this reason.

Glare from Headlight Vehicles / Retaining Wall

I understand that the retaining wall along the eastern boundary is being kept as existing. The dense hedge which surrounds the site is also being retained. The applicant has indicated that there would be no headlight glare which would affect the highway. The applicant will prepare a plan to demonstrate this to include in the revised TA.

Car Parking Survey

The applicant has carried out a car parking survey on Friday 17/05/2019 (between 16:00 – 18:45) and Saturday 18/05/2019 (between 11:00 – 14:45). This survey indicated that the peak occupancy was 68 vehicles on Friday (29% occupied) and 138 vehicles on a Saturday (58% occupied). The proposed development would appear to provide a total of 165 spaces. Based on this survey the proposed level of parking provision would in theory result in 84% occupancy.

I would have thought that any parking survey would be carried out in the first few weeks of December leading up to Christmas on a Saturday and Sunday when the car park is likely to experience peak occupation or even during the Easter holidays.

I would suggest that the applicant also carries out a parking survey at the McDonalds drive-thru in Chirk during the week and on a Saturday and Sunday to assess / compare parking demand with the proposed development site. It is not considered that the proposed Plas Coch drive thru will be any less popular than the drive thru at Halton given its proximity to the A483 and the significant catchment area of Wrexham.

Servicing

I understand that deliveries would be undertaken by a 16.5m artic delivery vehicle 3 times per week and would be scheduled for quiet trading periods.

I understand that refuse is collected by a private contractor using a 9.6m refuse vehicle and would also occur off peak. The submitted swept paths of such a refuse vehicle as indicated on Drg. No. 4171/TR/10 are considered acceptable.

A Service Delivery Management Plan will need to be submitted for further approval.

Committed / Parallel Developments and Off Site Junctions

The figures indicated in Table C summarize the predicted increased levels of traffic flows at Junction 5 and the A541 Mold Road roundabout. I assume that the AM and PM peak flows are incorrect as have identical values.

The cumulative impact of all committed or proposed development compared to the 2019 base flows equates to more than 8% at the A483 Junction 5 and more than 9% at the A541 Mold Road. Whilst the McDonalds itself may not equate to more than the 5% figure considered to be material by Welsh Government, the cumulative impact of all these developments causes an incremental rise in traffic generation. It is considered that the Mold Road (B & Q) roundabout is already at capacity and we are concerned that continuing to allow small percentage increases will only exacerbate existing capacity issues.

Revised Transport Assessment

The Arcady figures produced are theoretical figures based on existing traffic figures and predicted traffic generator increases. The figures do not accurately represent what is evident on site at peak hours / weekends when significant traffic queues are common place at the roundabout

I assume that the roundabouts have not been visually assessed as well as being theoretically assessed. A comparison of the traffic seen on site should be compared to the theory. I would recommend that the submitted Transport Models are validated against the observed traffic queues at these roundabouts.

Pedestrian Crossing Facilities

The proposed development is likely to attract a significant number of pedestrian movements particularly given the proximity of the Glyndwr University and existing residential estates within a reasonable walking distance from the site.

The applicant has referred to the previous application for 410 residential apartments at the campus with the committee report specifically promoting the proximity of the retail park as a benefit in reducing car use and encouraging walking. Future occupants of these flats are likely to use the existing splitter island located north east of the Plas Coch roundabout if they were walking to the retail park. Any local residents walking to the McDonalds restaurant from the Mold Road area are likely to cross Plas Coch Road at the junction with the B and Q roundabout. This pedestrian crossing only has a pedestrian crossing phase on its southern approach.

I would therefore recommend that the applicant reviews the adequacy of the existing pedestrian crossing facilities including a Stage 1 Safety Audit in order to demonstrate the adequacy of existing facilities in this area to serve such a development.

Accident Analysis

The submitted accident analysis only appears to have reviewed a small study area which includes 6 personal injury accidents occurring between 2014 – 2018. However, I would recommend that the accident analysis extends up to and including the A541 B & Q Roundabout and section of Plas Coch Road between.

Construction Traffic Management Plan

Comments from Traffic Section as follows:-

para 9.1 *"The site is accessed from the Asda Car Park"* – I assume that this is a typing error.

Please ask the applicant to amend this detail.

In conclusion, I would raise significant concerns in respect of the proposed development given the existing capacity issues on the local highway network in the vicinity of the site. Any existing additional vehicle movements from the proposed development will only exacerbate the existing congestion / queuing experienced in this location.

Proposed parking provision at the development site is also a concern. Any shortfall in parking provision is likely to impact on adjoining businesses in the vicinity of the site.

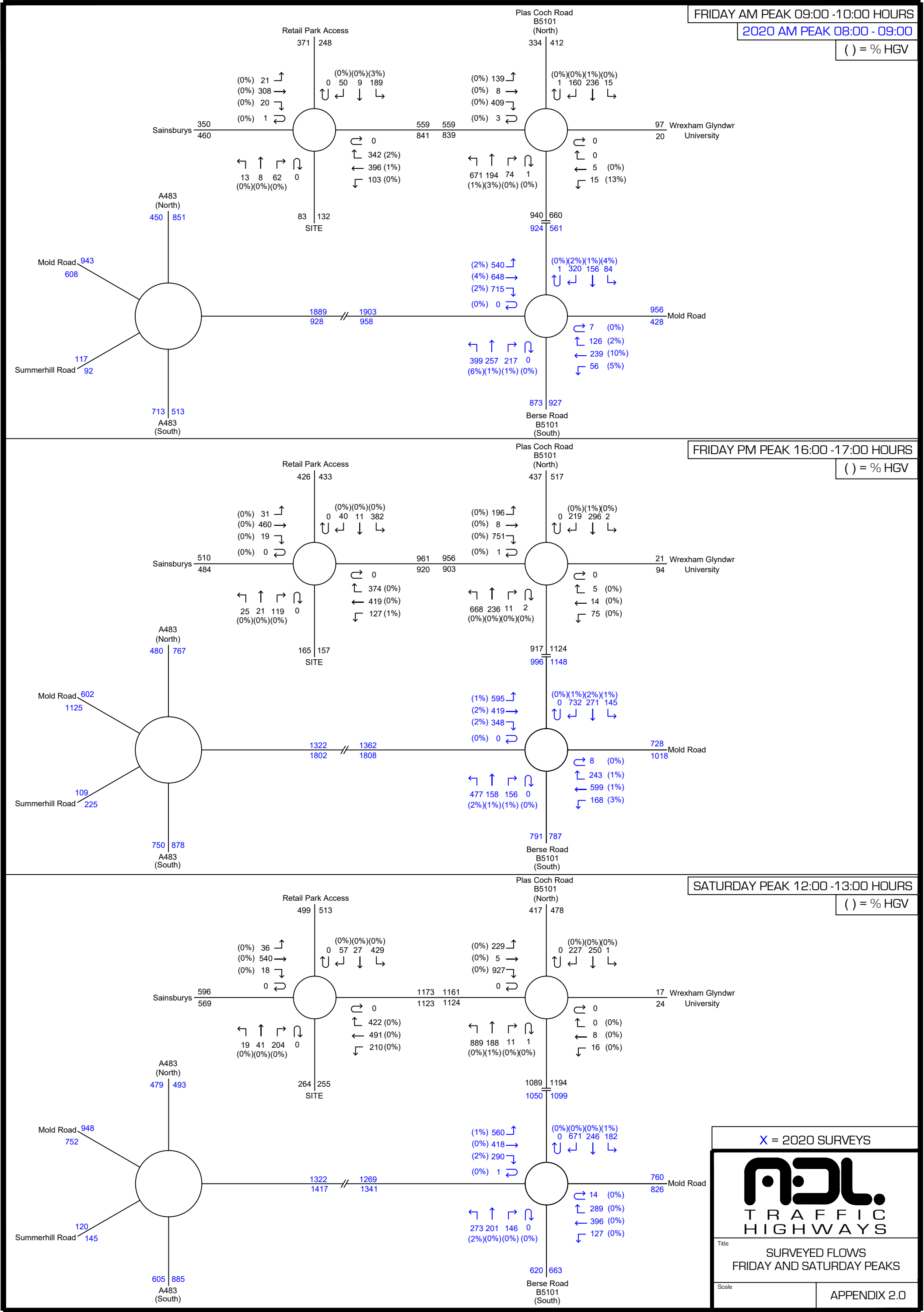
Could you please ask the applicant to address the issues raised above.



Chief Officer, Environment & Technical



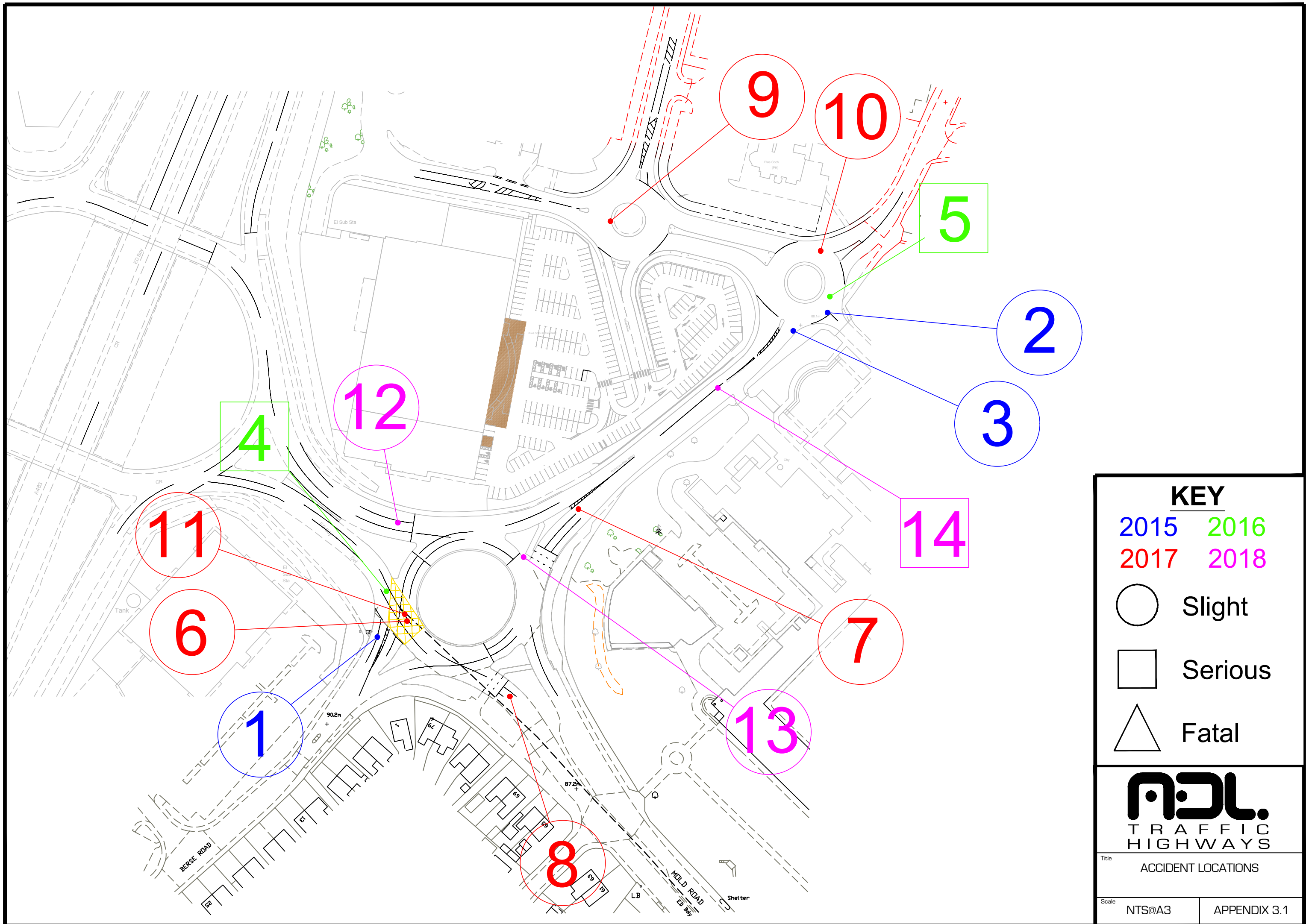
2020 SURVEYED TRAFFIC FLOWS



APPENDIX 3.0

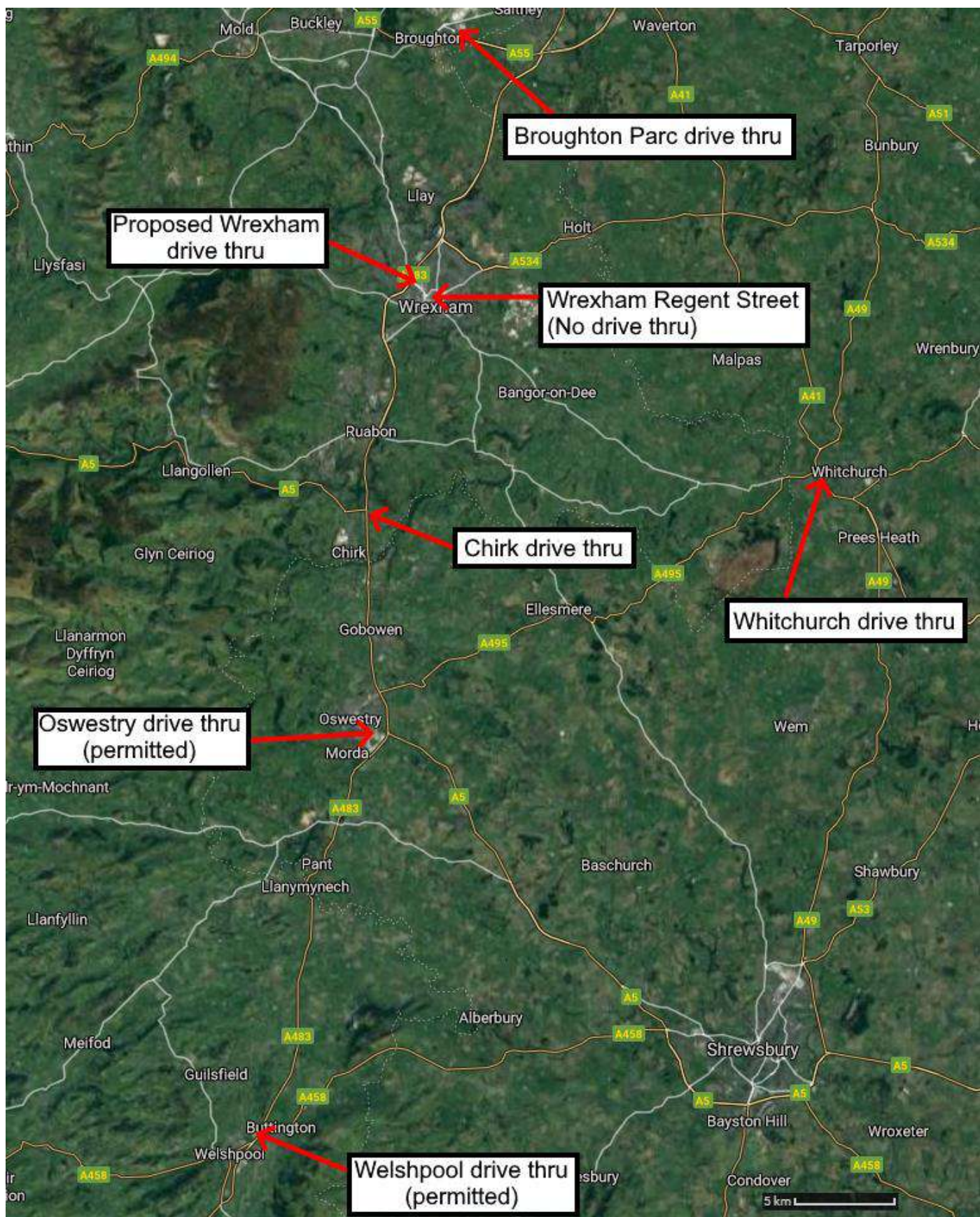
ACCIDENT DATA

3.1	Accident Locations
3.2	Accident Details



ADL Ref:	Location	Date	Time	Light Conditions	Severity	Summary of Details
1	Berse Rd Roundabout	06/03/2015	12:15	Daylight	Slight	Vehicle 1 (car) rear ended Vehicle 2 (car) which was held up at the roundabout.
2	Plas Coch Roundabout	19/06/2015	16:30	Daylight	Slight	Vehicle 2 (pedal cycle) was hit in the rear by Vehicle 1 (car) while entering the roundabout.
3	Plas Coch Roundabout	20/08/2015	20:40	Darkness: Street lights present but unlit	Slight	Vehicle 1 (car) was in the act of turning right and hit the rear of Vehicle 2 (car) which subsequently rear ended Vehicle 3 (car).
4	Berse Road Roundabout	01/08/2016	17:42	Daylight	Serious	Vehicle 2 (motorcycle) was travelling around the roundabout when Vehicle 1 (car) pulled out in front of the motorcycle causing the collision.
5	Plas Coch Road Roundabout	10/08/2016	07:41	Daylight	Serious	Vehicle 1 (car) was on the Plas Coch Roundabout travelling towards the Berse Roundabout when Vehicle 2 (car) pulled out in front of Vehicle 1.
6	Berse Road	10/04/2017	16:30	Daylight	Slight	Vehicle 2 (car) had stopped at the box junction and Vehicle 1 (motorcycle) has rear ended Vehicle 2.
7	Plas Coch Road	18/07/2017	18:40	Daylight	Slight	Vehicle 1 (car) and Vehicle 2 (car) were travelling in the same direction towards the Berse Road Roundabout. Driver of Vehicle 1 had a medical incident and rolled backwards into Vehicle 2.
8	Berse Road Roundabout	22/08/2017	18:30	Daylight	Slight	Vehicle 1 (car) was travelling along Mold Road towards Berse Roundabout and was rear ended by Vehicle 2 (motorcycle).
9	Retail Park Roundabout	28/09/2017	18:56	Daylight	Slight	Vehicle 2 (car) was entering Plas Coch Retail Park when Vehicle 2 (car) came at speed and collided with Vehicle 2 on the roundabout. Vehicle 1 failed to stop.
10	Plas Coch Road Roundabout	30/11/2017	14:20	Daylight	Slight	Vehicle 1 (car) has rear ended Vehicle 2 (car) on exit of the roundabout with enough force to Vehicle 2 to flip onto its roof.
11	Berse Road Roundabout	22/12/2017	15:00	Daylight	Slight	Vehicle 2 (motorcycle) was driving on Berse Road Roundabout. Vehicle 1 (car) exited the Berse Road arm into the path of Vehicle 2. Vehicle 1 failed to stop.
12	Berse Road Roundabout	15/03/2018	06:40	Daylight	Slight	Vehicle 2 (car) was rear struck by Vehicle 1 (car) when it was waiting to enter the Berse Roundabout.
13	Berse Road Roundabout	02/07/2018	08:07	Daylight	Slight	Vehicle 1 (car) was travelling onto the Berse Road Roundabout and has collided with the nearside curb.
14	Plas Coch Road	07/08/2018	22:01	Darkness, street lights present but unlit	Serious	A group of pedestrian were crossing Plas Coch Road and were masked by stationary vehicles and street lights were unlit, causing Vehicle 1 (car) to hit two of the pedestrians.

EXISTING AND PERMITTED McDONALD'S SURROUNDING WREXHAM



APPENDIX 4.0
EXISTING AND PERMITTED McDONALD'S
SURROUNDING WREXHAM

COMMITTED DEVELOPMENT

- 5.1 Committed Development Locations
- 5.2 Committee Report Extracts P/2018/0671
- 5.3 Proposed Highway Improvements A483 Roundabout



APPENDIX 5.1
COMMITTED DEVELOPMENT LOCATIONS

REPORT OF THE CHIEF OFFICER PLANNING AND REGULATORY – Date 1st JULY 2019

roundabout. Detail of this access is included in the Traffic Assessment (TA). In conjunction with the proposed Campus 2025 redevelopment scheme (P/2018/0666 refers), contrary to the original submission, the intention is to retain this access for university staff/student traffic as well as the proposed residential traffic. No residential traffic is intended to be permitted into the university campus itself. A parking restriction is intended to be imposed to manage the university's own car park for the purposes of serving staff and students through a car parking management plan. A condition will be imposed on any approval to ensure that this plan is prepared and implemented prior to the first use of the development. The indicative layout plan shows a secondary access which currently exists on to the Tennis Centre access. No specific detail of this access is shown in the TA, but this is likely to be utilised for the purpose of emergency access. Again, a condition will restrict its use for this purpose.

Traffic generation and parking

The applicant's submissions suggest that the proposed development will not have a significant impact upon the A541 Mold Road / Plas Coch roundabout. Highways have questioned this conclusion, questioning the appropriateness of the TRICs figures which have been utilised to inform the TA, stating that they appear low for a private residential estate. It has also questioned the survey figures for the queuing traffic at the Berse Road approach to the roundabout at peak hours.

I do not dispute the fact that the A541 Mold Road / Plas Coch roundabout becomes congested at peak hours. It is a key part of the highway network on the main route into the town centre from the A483 trunk road. That said, whilst there is no disputing the fact that the additional development will result in additional vehicle movements on to the highway network, there is no information before me to suggest that the nature of the proposed development will adversely impact upon the operational safety of the roundabout. Simply observing congestion, and concluding that a development will add to that congestion is not, in planning terms, sufficient reason to withhold a planning permission.

Highways have also raised concern that the development has under provided for car parking provision to an unacceptable level. Based on LPG 16 requirements, the proposed development would require a **maximum** of 714 parking spaces based on the indicative development mix. The applicant has shown an indicative level of 401 spaces which equates to 0.97 spaces per unit – a 44% shortfall. Members are reminded that the standards quoted in in LPG16 are maximum standards. They are not intended to be used as a starting point or a minimum level of parking provision.

The development site is located within the town centre in a highly sustainable location. It is within reasonable walking distance to the both town centre railway stations and the bus station. It is also located within reasonable walking distance of the town centre and a range of retailing options as well as access to key employment opportunities within Wrexham i.e. hospital, Wrexham Tech Park and the Wrexham Industrial Estate.

PPW notes that 'car parking provision is a major influence on how people choose to travel and the pattern of development. Where and how cars are parked can in turn be a major factor in the quality of a place. A design-led approach to the provision of car parking should be taken, which ensures an appropriate level of car parking is integrated in a way which does not dominate the development. Parking provision should be informed by the local context, including public transport accessibility, urban design principles and

REPORT OF THE CHIEF OFFICER PLANNING AND REGULATORY – Date 1st JULY 2019

the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed.'

LPG16 also recognises the spirit of the policy contained in PPW. Where developments are close to local services and facilities and/or are in areas where people are able to walk or cycle to them or travel to them easily by public transport, it may be appropriate for less on site parking to be provided than for developments in remoter areas. In areas where people can easily travel to sites by means other than by car, reducing the amount of space dedicated to car parking could allow land to be used more efficiently by enabling a higher density development or to provide landscaping to enhance the appearance of an area.

In view of the Welsh Government's desires to promote a higher standard of development and to reduce reliance upon car usage, I can see no reason why this development should represent a need to provide a high level of car parking provision. This would apply with its own transport hierarchy which seeks to promote walking and cycling over the use of the car. Members are reminded that this scheme is in outline – whilst the layout is reserved for further approval, this near one space per unit is considered perfectly adequate in a town centre location. Firstly, this would account for the likelihood that not all occupiers are likely to own a vehicle, but also that these additional unoccupied spaces would act as an offset for those householders that perhaps have more than one vehicle.

In addition to the matter of parking demand and traffic generation, the site currently has a lawful use for the purposes of student accommodation. At present, the blocks to be removed account for 267 bed spaces. Rigidly applying the council's LPG16 maximum standards would mean that 134 parking spaces would be required with associated in and out traffic movements at the Plas Coch roundabout. It is important to consider that the current planning application is not introducing a wholly new development on undeveloped land. There is a current lawful use with its own traffic generation which must be considered when making a judgement on the likely impact upon the local highway network and parking demand.

I am satisfied that the proposal can occur without causing detriment to highway safety. I have no evidence before me to suggest that the development will result in a significant level of traffic movements that would hinder the safe movement of traffic on the nearby highway network. I am also satisfied that given the sustainable location, there can be a safe assumption that not all occupiers will rely on car ownership. This will naturally result in a reduced perceived number of vehicles access or leaving the site at peak hours and will not have a significant impact upon off site on street parking congestion. There are no sound reasons in planning terms to refuse this proposal on the grounds of highways safety.

Drainage:

Foul

Welsh Water have confirmed that they are unable to assess the impact of the development upon existing foul water infrastructure without knowing the number of bedrooms in the existing student accommodation.

I have sought to clarify this matter with the applicant and will report the findings of the information and my recommendation of Welsh Water by way of the addendum report.

REPORT OF THE CHIEF OFFICER PLANNING AND REGULATORY – Date 1st JULY 2019

Surface water

The submitted Drainage Strategy gives a high level summary of what SuDS techniques may be suitable for the proposed development but does not provide any further detail. It would appear the intention is to discharge surface waters generated by the site to the public surface water sewer. The intention would always be to encourage alternative means of managing and disposing of surface waters prior to discharge to the surface water sewers to reduce pressure on the existing sewer and surface water networks. Welsh Water as sewerage undertaker would ultimately need to approve any discharge to this surface water sewer.

The council's LLFA officer has requested that a condition be included to ensure appropriate consideration is given to all sustainable drainage options prior to discharge to the public sewer. This would ultimately form part of an approval process with Welsh Water and the council's LLFA officer.

Ecology: The council's ecologist and NRW are satisfied that the surveying carried out has adequately demonstrated that the demolition of the buildings will not adversely impact upon bat populations in the locality. There are measures outlined in the submitted reports which identify measures which should be implemented during the demolition phase of the development and as part of the overall design phase of the scheme. On this basis I have no reason to believe that the proposal will be detrimental to protected species and their habitats.

The proposal will afford the opportunity to protect existing trees on the site of particular amenity merit. This would form part of the approval of layout and landscaping. Suitable conditions can be imposed to ensure trees of amenity value are protected and form part of a high quality development which accords with policies GDP1 and EC4 of the UDP.

Other matters: The developer has not provided any information to suggest that the financial viability of the site will negate the need to make the normal policy provision for affordable housing and open space provision. WCBC Education have not objected to the proposal and have confirmed that a contribution will be required to offset a shortfall in primary education infrastructure in the locality. These matters are secured through a planning obligation associated with any approval.

The development would normally require the provision of open space on the site in accordance with LPG10 requirements. Given the number of units to be provided and the scale of the site it would be inappropriate to demand a maximum on site provision of 0.4ha per 50 dwellings. This would be a significant proportion of the site and would compromise the quality and viability of the scheme. In addition, the character of the development comprising wholly of flats in an urban area, would not necessarily lend itself to a typical layout of open space provision. The likely layout of the site in blocks would lend itself better to the use of more formal separation areas providing the green spaces.

In view of this, the reserved matters application will ensure that adequate landscaping areas can be implemented as part of the overall design, including a condition requirements for an equipped play area. To offset the under provision of open space on site or play equipment, I would suggest that a financial contribution be negotiated to improve play provision elsewhere in close proximity to the site. This would form part of a planning obligation. This approach would be wholly consistent with other similar developments in the town centre.

REPORT OF THE CHIEF OFFICER PLANNING AND REGULATORY – Date 1st JULY 2019

Conclusion: The proposal represents a residential development in a sustainable location and form which would be assimilate well in a town centre location. It also forms part of a comprehensive redevelopment scheme for the university campus which would seek to secure its long term viability. The reuse of the land for this purpose would correspond with the Welsh Government's aims of redeveloping previously developed land in the most sustainable locations.

Whilst it is accepted that the increase in density of the site will inevitably result in some increase in traffic movements, I am not convinced that this will result in a detriment to highway safety, but more of an issue for minor inconvenience which will only occur in Wrexham regardless of this proposal as a result of natural population and development growth.

I therefore recommend accordingly.

RECOMMENDATION A

That the Council enters into an obligation under Section 106 of the Town and Country Planning Act requiring the following:

- The formation of a Management Company for the future maintenance by the applicant of all communal areas including driveways, parking areas, hard and soft landscaping, trees and planted features;
- A mechanism for an off site financial contribution in lieu of on site open space;
- Affordable Housing provision across the development in accordance with Local Planning Guidance No 28
- A contribution towards a shortfall in primary education infrastructure provision.

RECOMMENDATION B

That if the Obligation pursuant to Section 106 of the Town and Country Planning Act, as detailed above, is not completed within six months of the date of this Committee resolution, the Chief Officer Planning & Regulatory is given delegated authority to REFUSE planning permission for the following reasons:

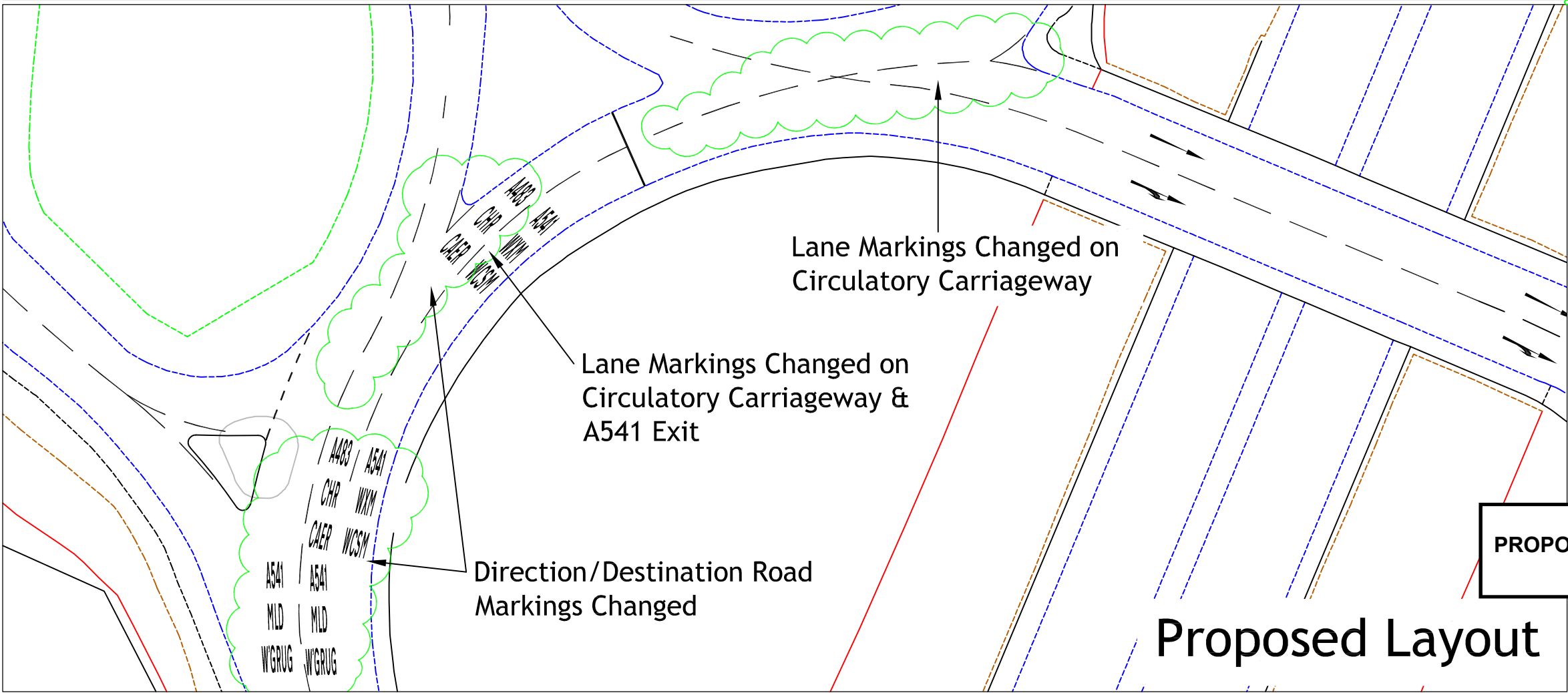
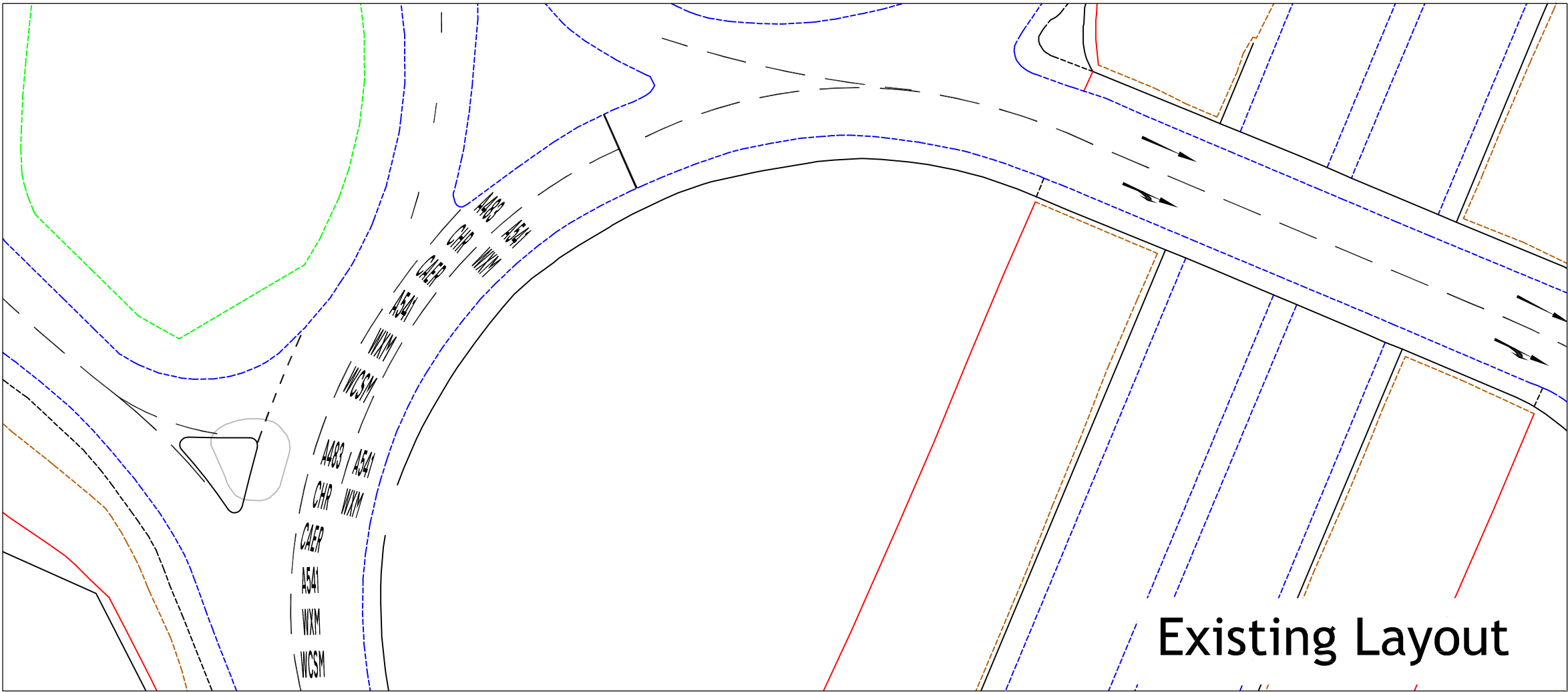
- Lack of appropriate open space provision and Management Company;
- Lack of appropriate open space provision on site and provision off site;
- Lack of Affordable Housing provision across the development in accordance Local Planning Guidance No 28.
- Lack of contribution towards a shortfall in primary education infrastructure provision.

RECOMMENDATION C

Subject to the completion of the Section 106 Obligation, planning permission be GRANTED subject to the following conditions:

CONDITION(S)

1. Approval of the following details shall be obtained from the Local Planning Authority before any part of the development is commenced:
 - a. the layout of the building(s)
 - b. the scale of the building(s)



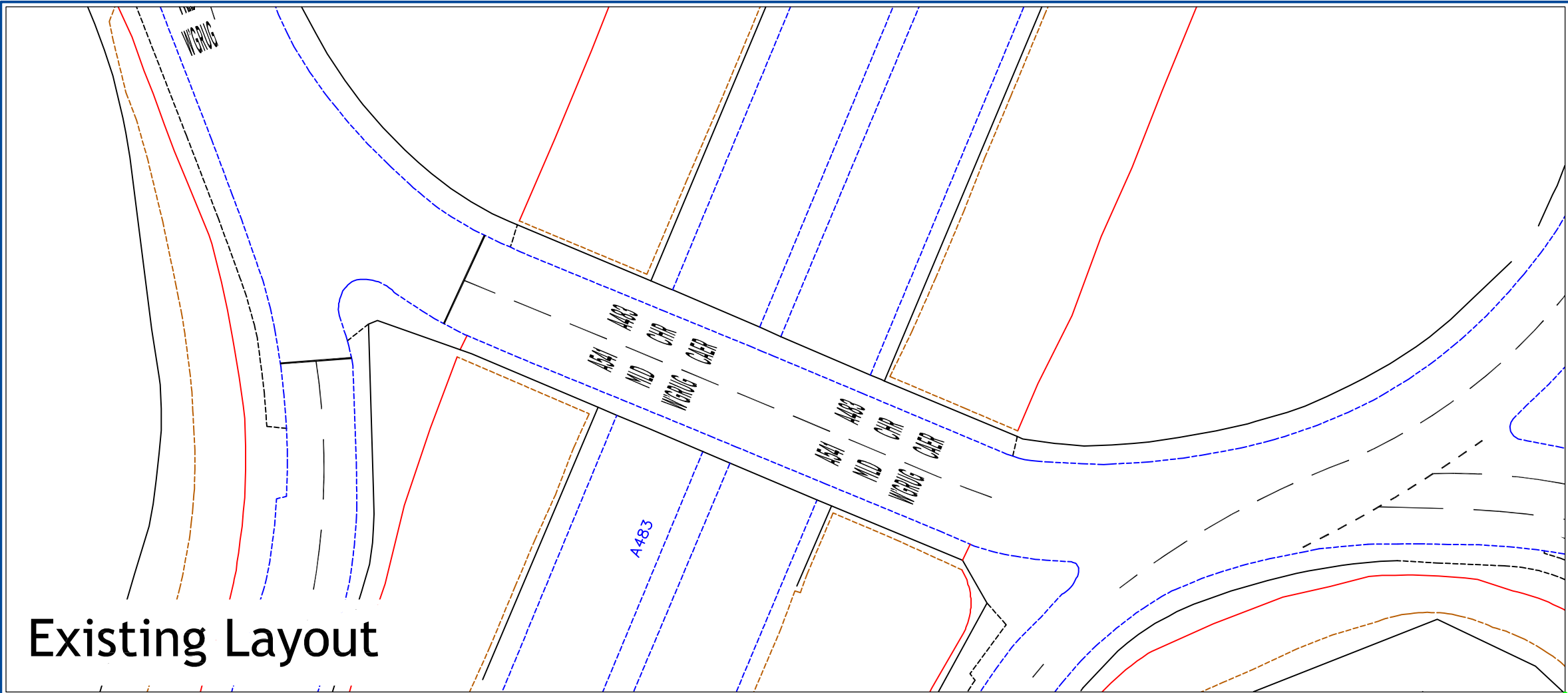
Revision:
A -

- NOTES:
- Lane markings changed as follows:
- Two exit lanes enabled from circulatory carriageway to A541 Mold Rd (N) northbound exit
 - Nearside circulating lane past A541 Mold Rd (N) changed to restrict exit to A483 northbound only, with offside lane for all other destinations
 - Carriageway directional/destination text changed to reflect above changes to lane markings

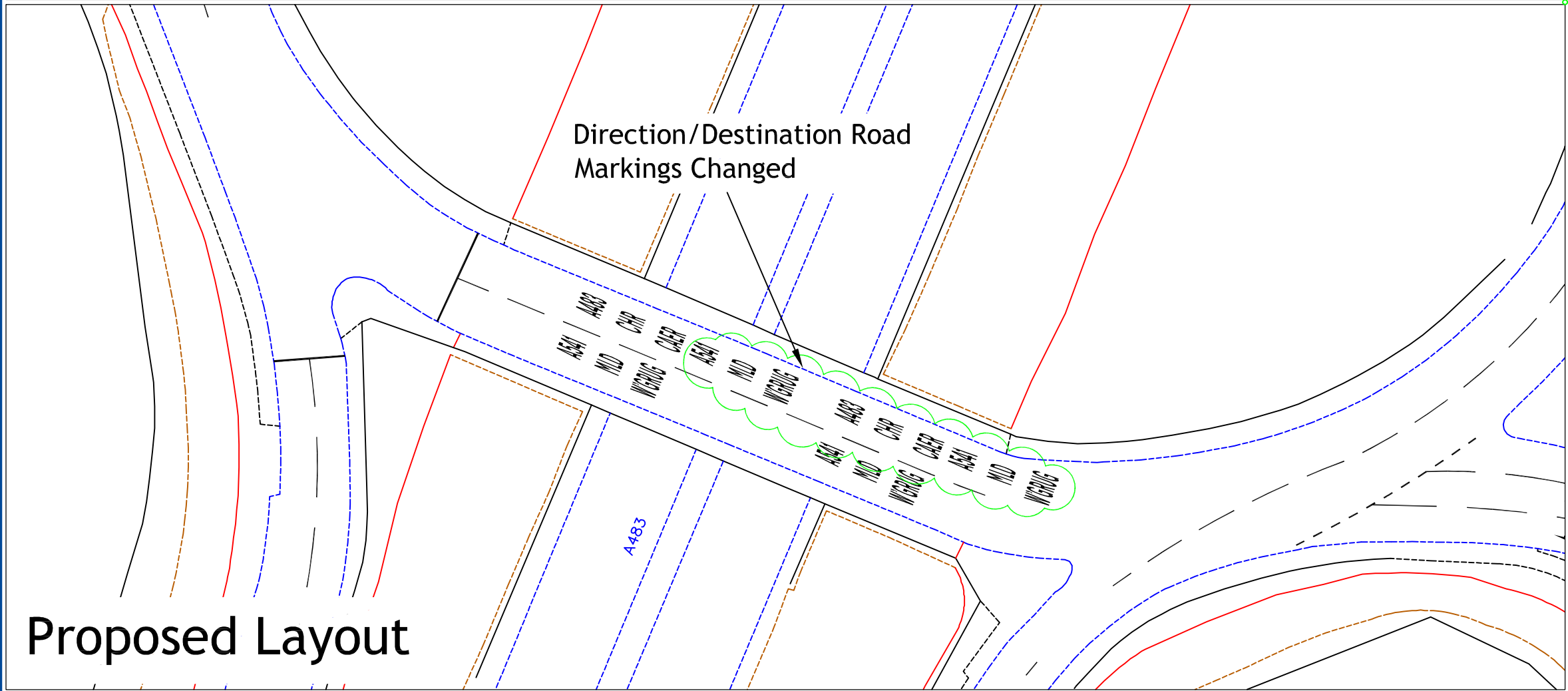
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Project:	Proposed Residential Development Mold Rd/Stansty Chain Rd, Wrexham
Drawing Title:	Proposed Stage 1 Mitigation Works at A483 J5 Comprising Changes to Carriageway Markings Sheet 1 of 2
Drawing Number:	J000069-SK006-1
Revision:	-
Date:	19.08.19
Scale:	1:500 @ A3
Drawn By:	MH
Checked By:	MH
Status:	Information

**APPENDIX 5.3
PROPOSED HIGHWAY IMPROVEMENTS
A483 ROUNDABOUT**

This drawing has been prepared for feasibility purposes and does not represent a construction plan. All design aspects to be confirmed at the appropriate detailed design stage.



Existing Layout



Proposed Layout

Revision:	
A -	

- NOTES:
- Lane markings changed as follows:
- Two exit lanes enabled from circulatory carriageway to A541 Mold Rd (N) northbound exit
 - Nearside circulating lane past A541 Mold Rd (N) changed to restrict exit to A483 northbound only, with offside lane for all other destinations
 - Carriageway directional/destination text changed to reflect above changes to lane markings

Client:	Russell Homes Ltd.		
Project:	Proposed Residential Development Mold Rd/Stansty Chain Rd, Wrexham		
Drawing Title:	Proposed Stage 1 Mitigation Works at A483 J5 Comprising Changes to Carriageway Markings Sheet 2 of 2		
Drawing Number:	J000069-SK006-2	Revision:	-
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Status:	Information		

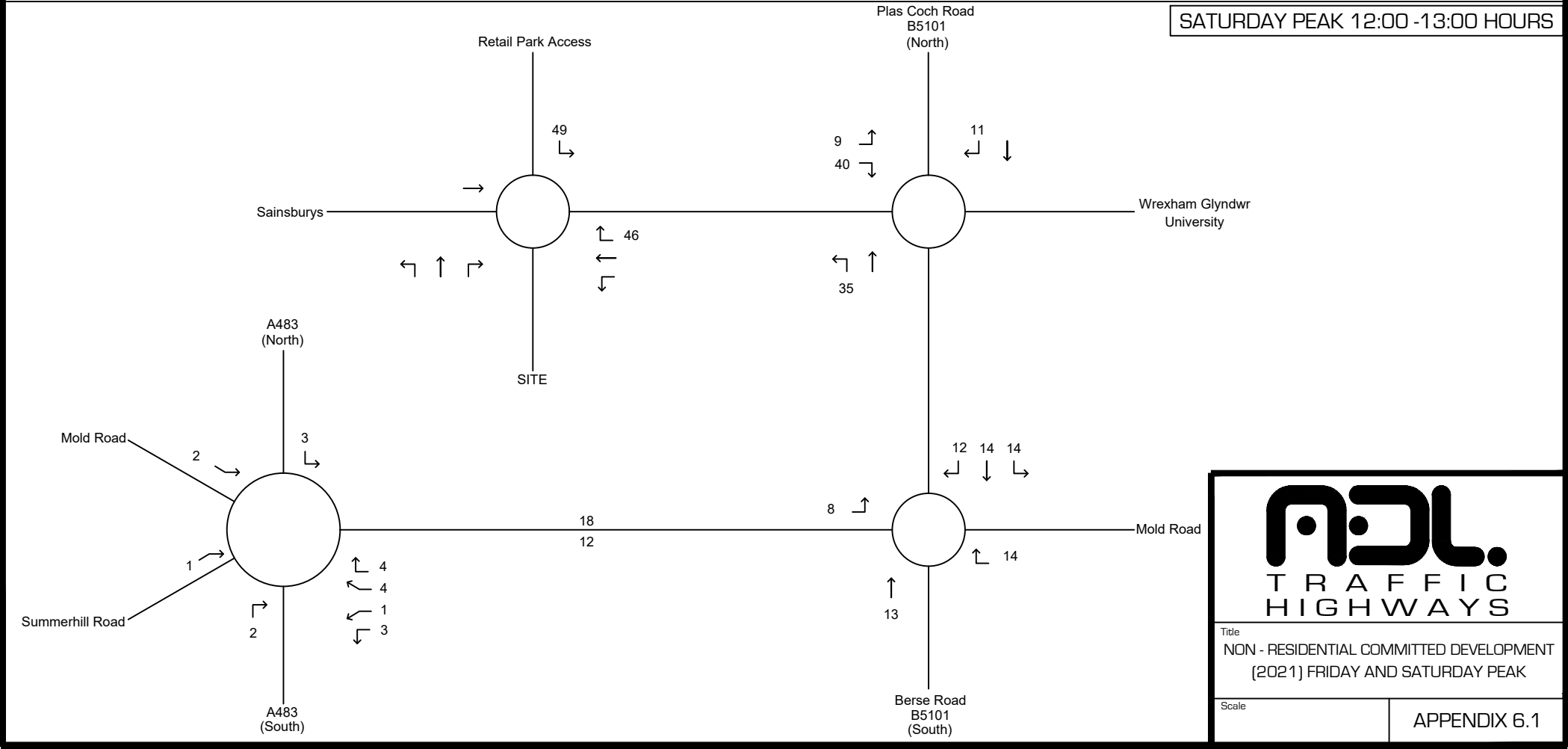
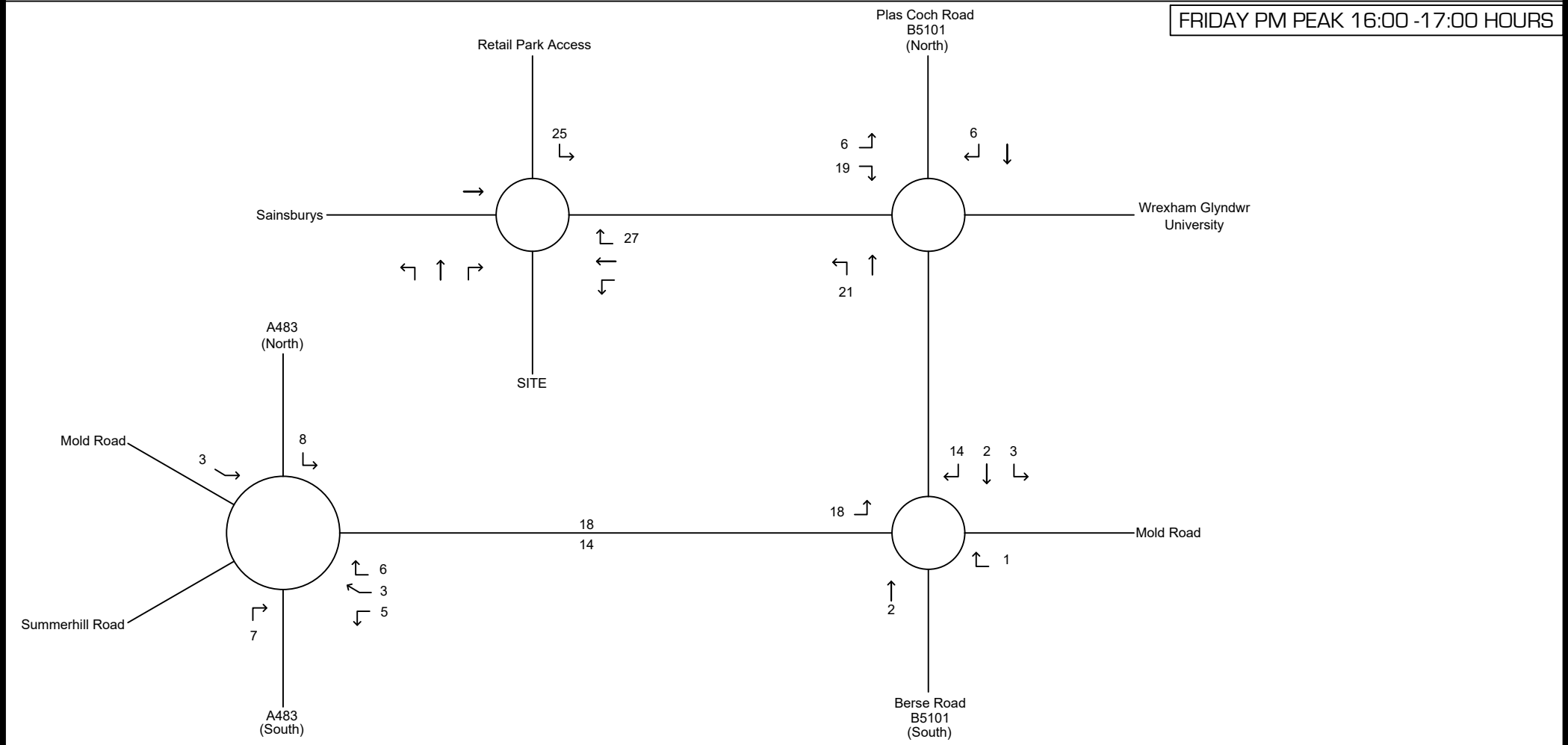
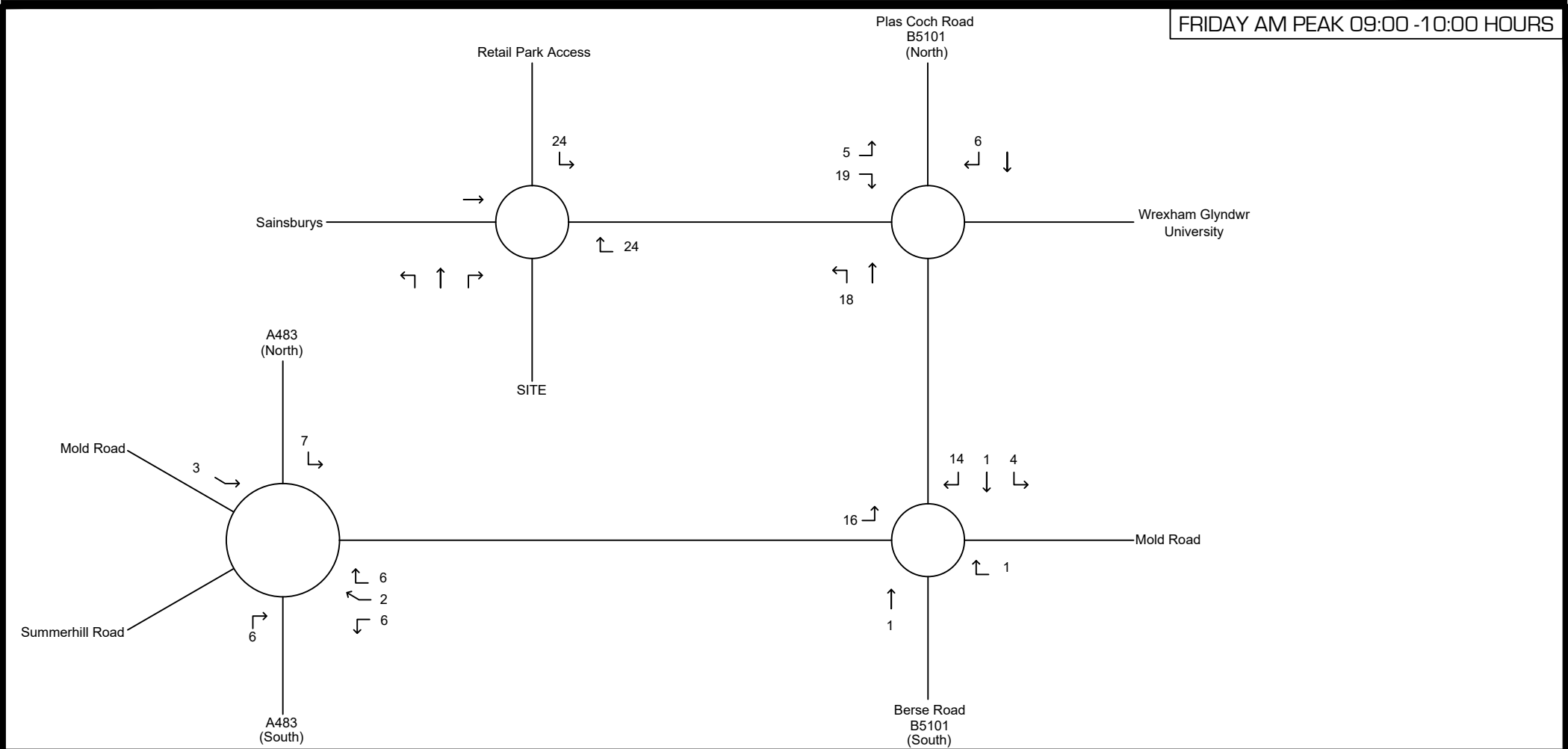
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DO NOT SCALE - Follow any figured dimensions.

This drawing has been prepared for feasibility purposes and does not represent a construction plan. All design aspects to be confirmed at the appropriate detailed design stage.

COMMITTED DEVELOPMENT FLOWS

- 6.1 Non-Residential Committed Development (2021)
- 6.2 All Committed Development (2036)



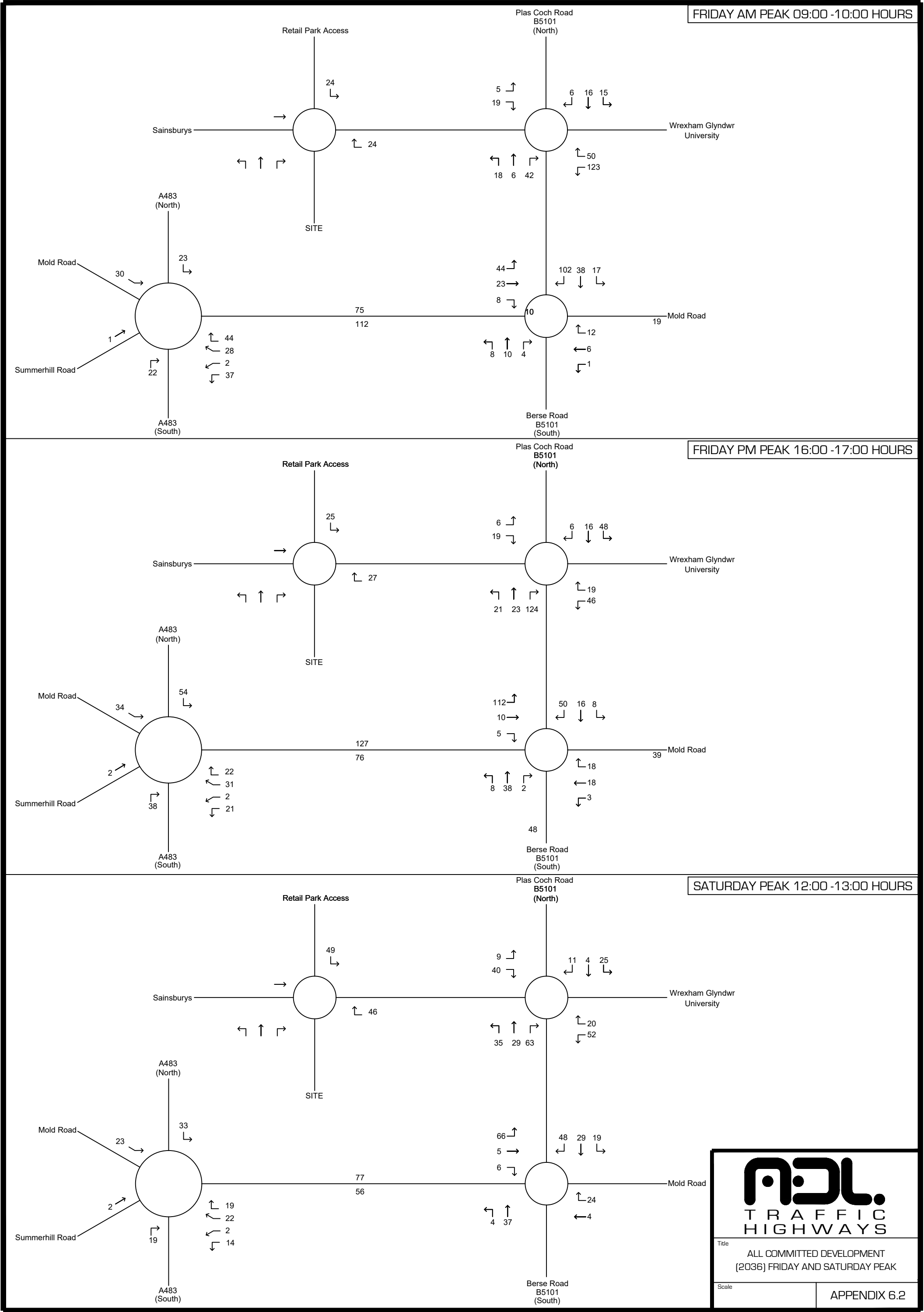
NBL.
TRAFFIC
HIGHWAYS

Title

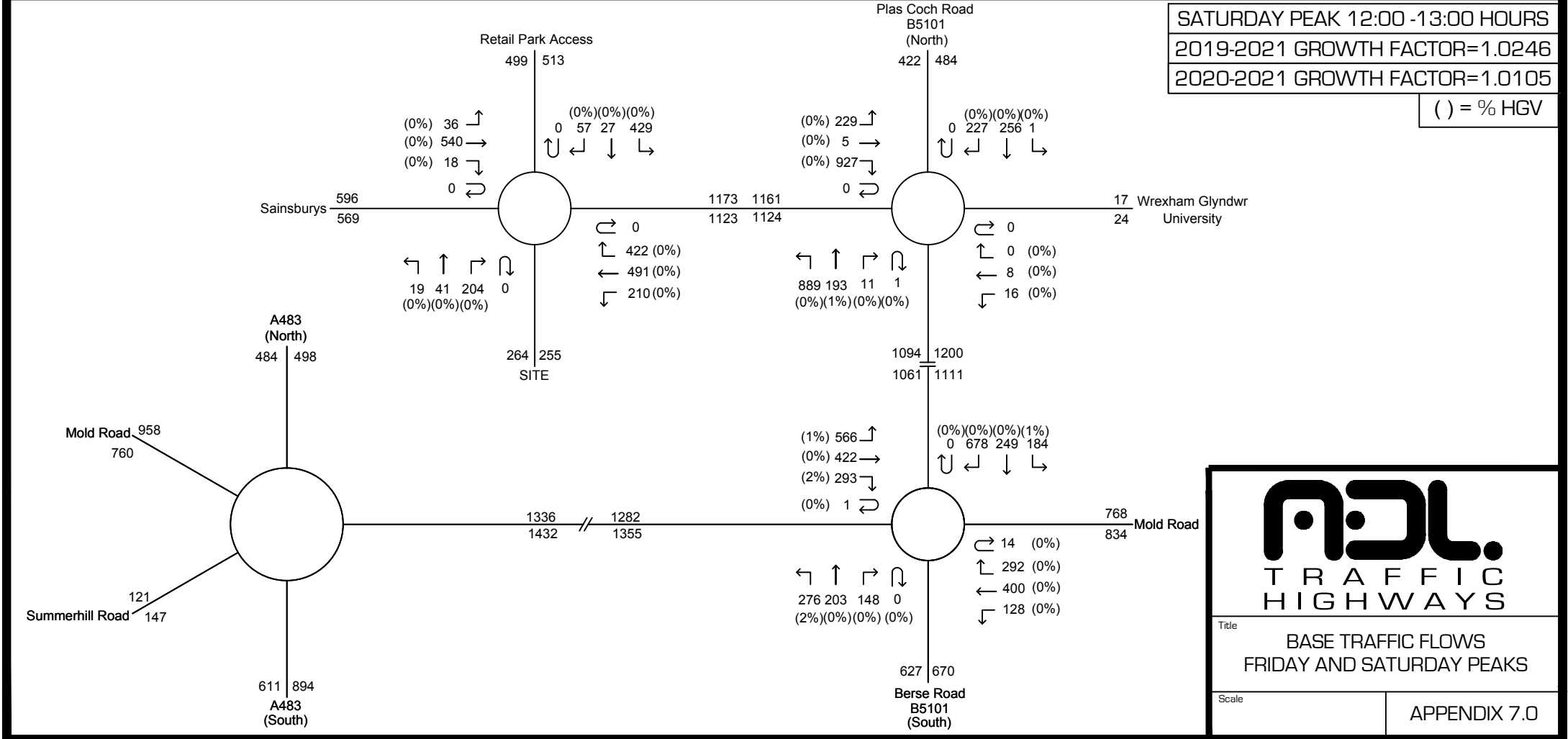
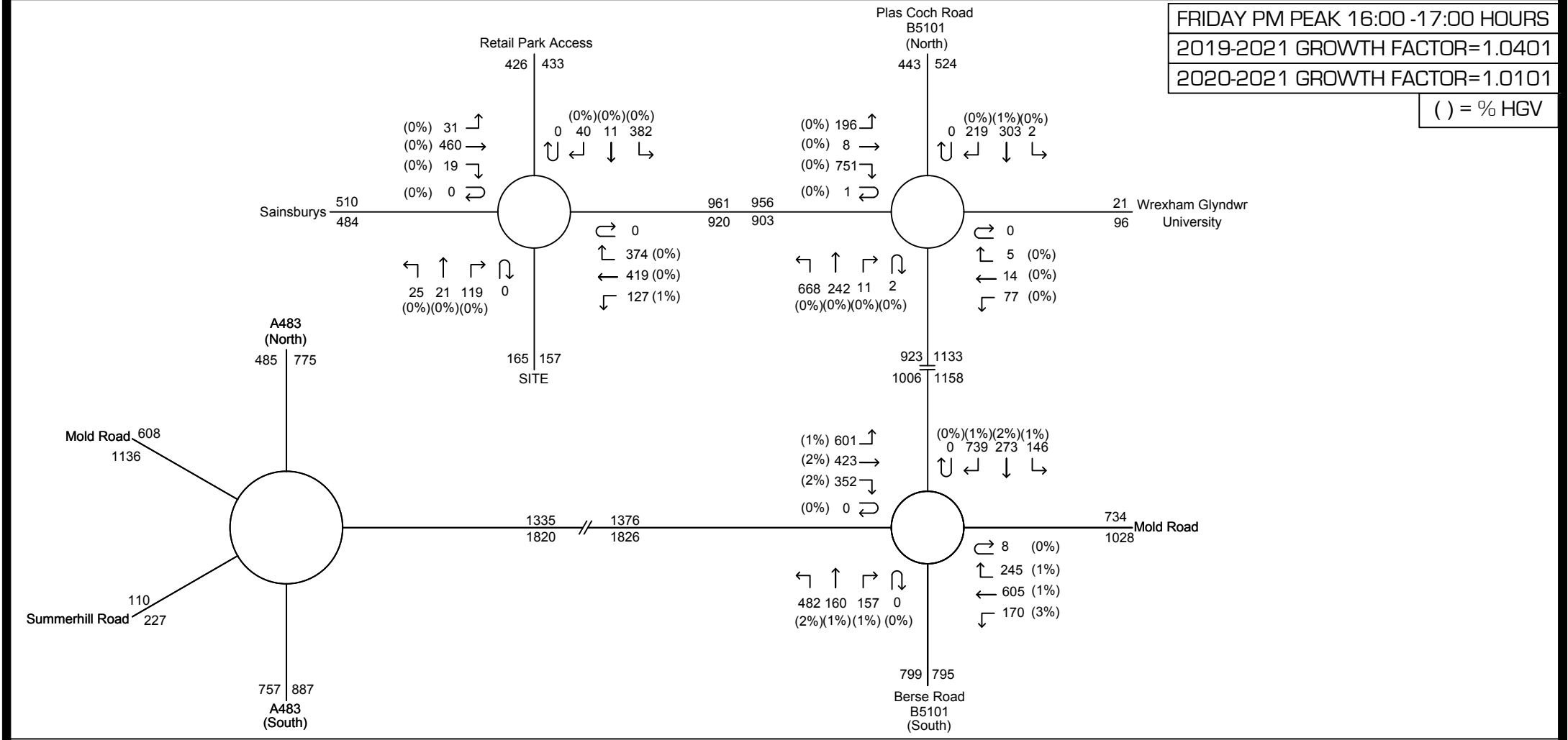
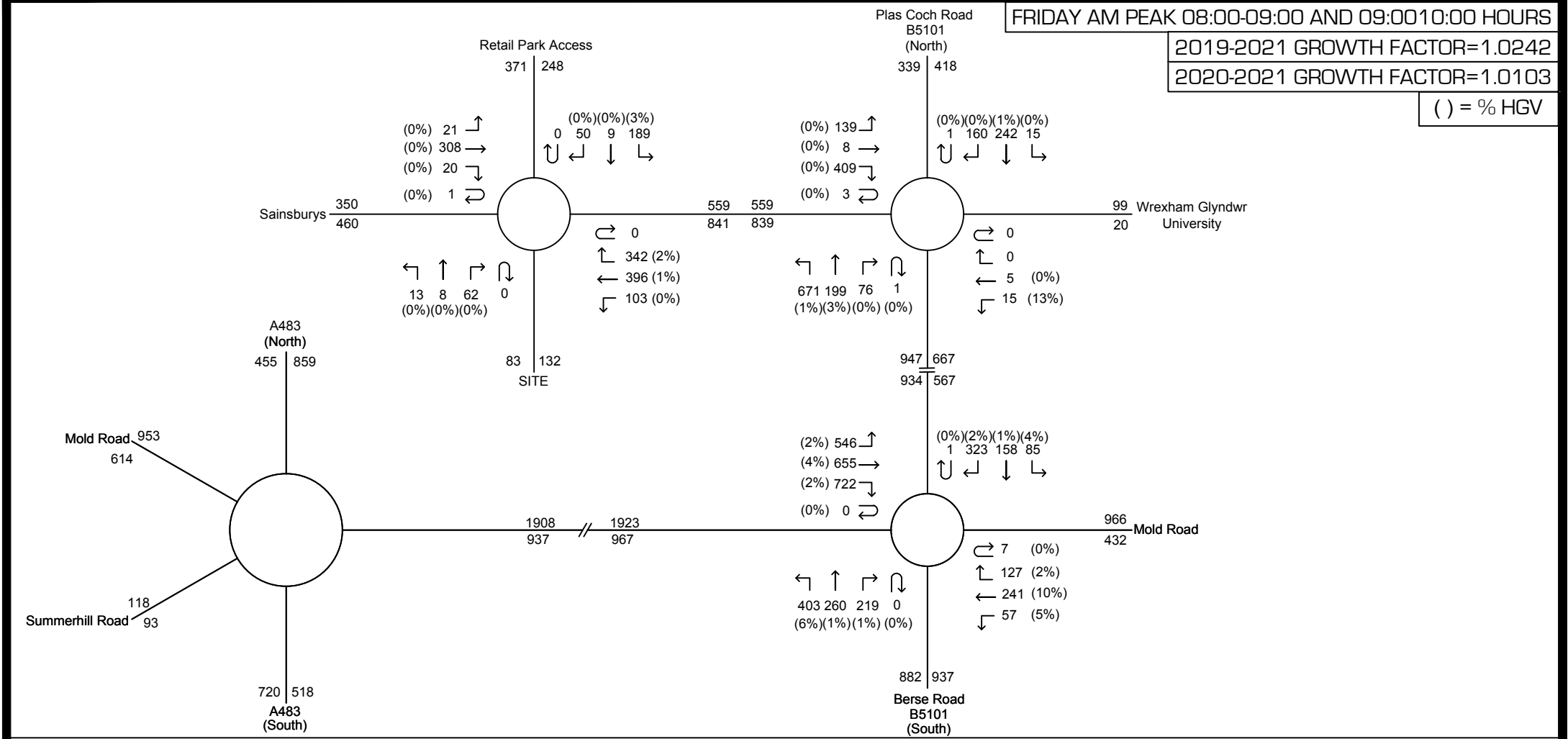
NON - RESIDENTIAL COMMITTED DEVELOPMENT
(2021) FRIDAY AND SATURDAY PEAK

Scale

APPENDIX 6.1



BASE TRAFFIC FLOWS



Title

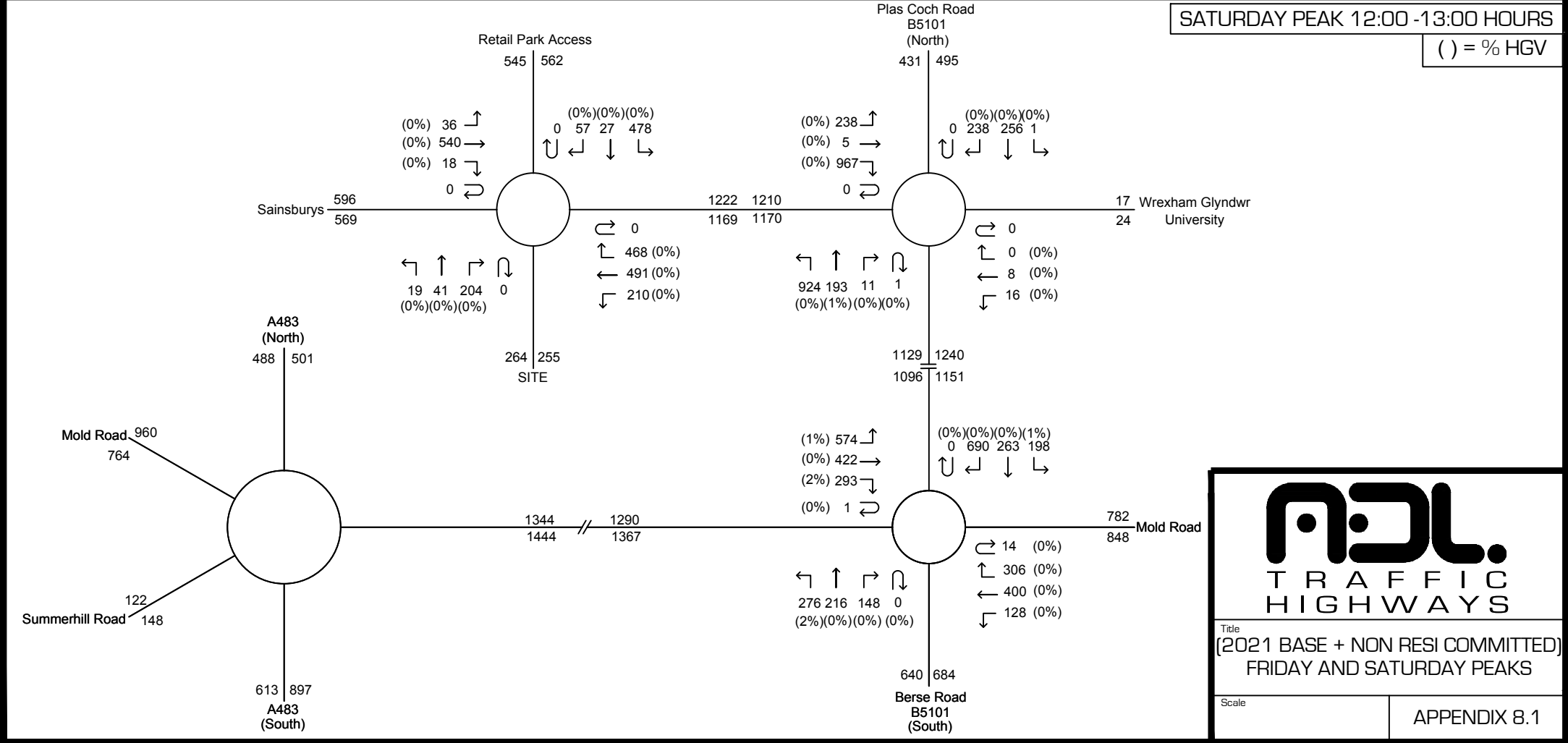
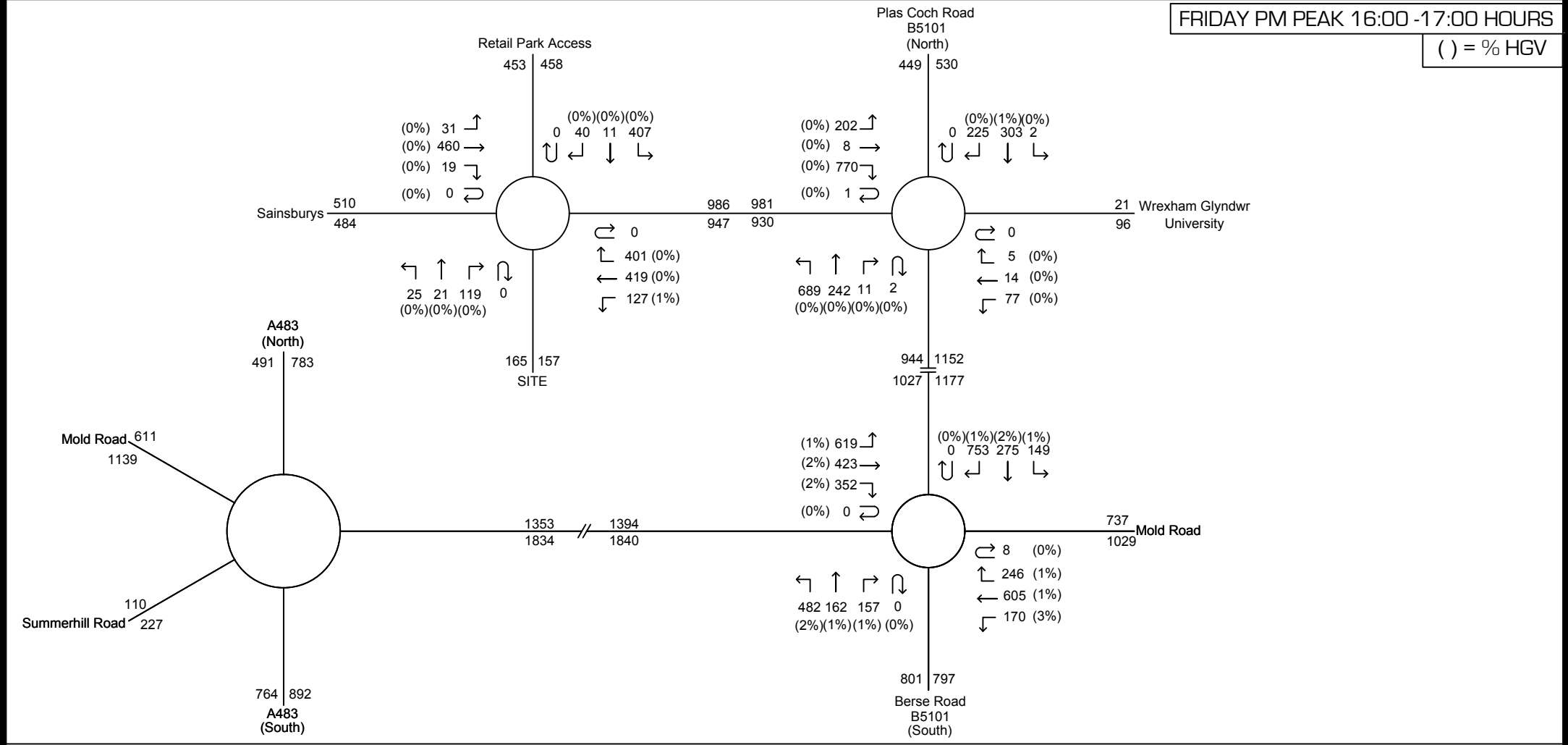
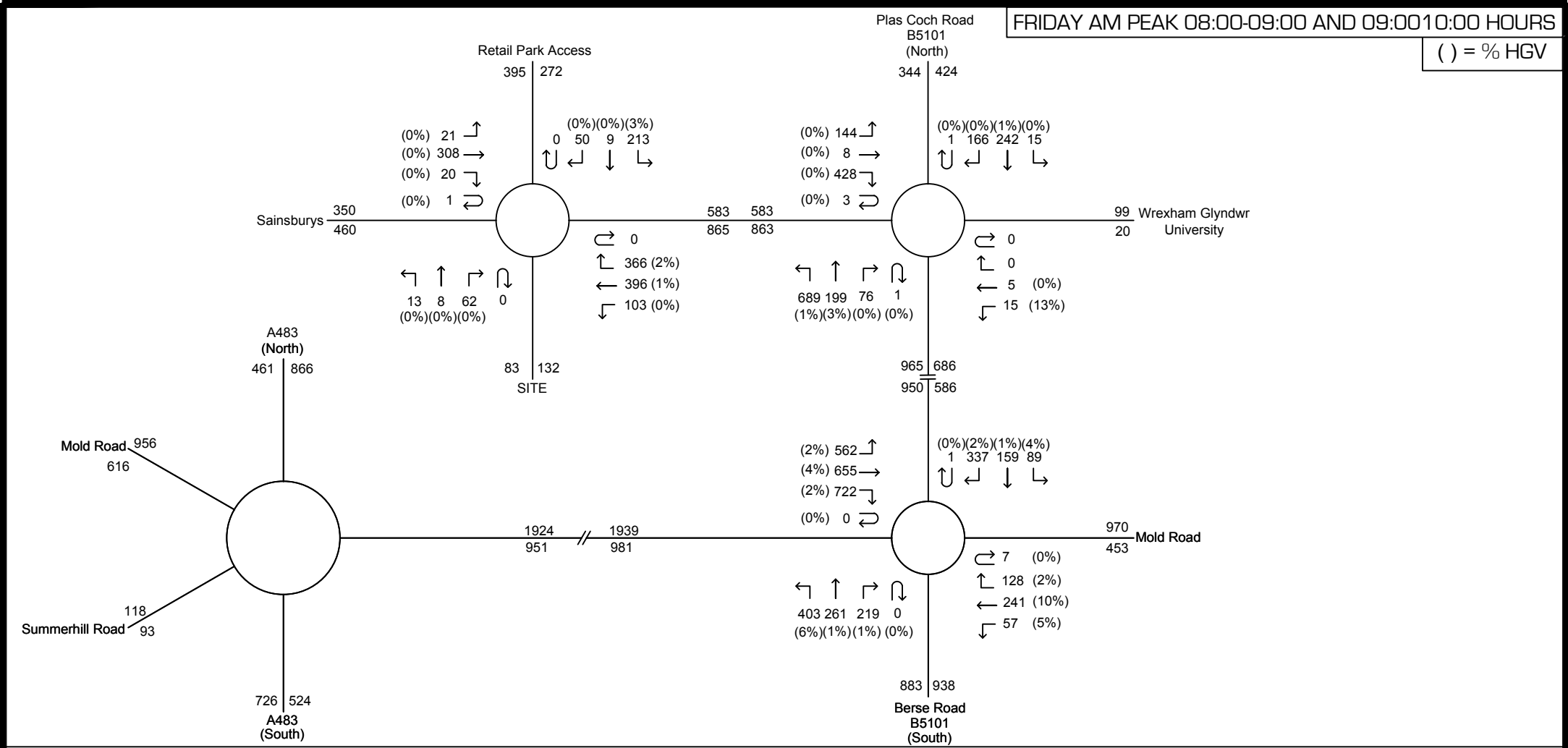
BASE TRAFFIC FLOWS
FRIDAY AND SATURDAY PEAKS

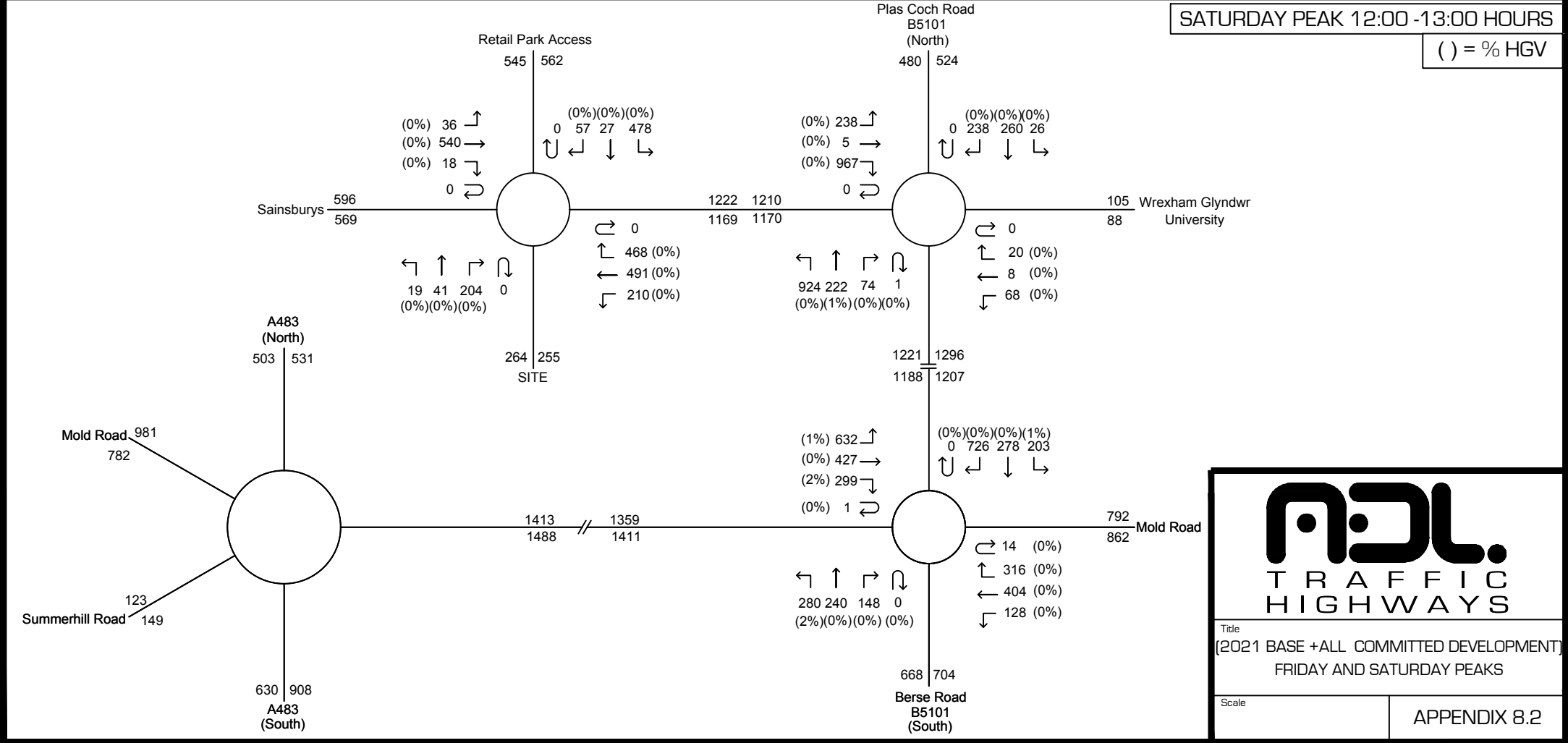
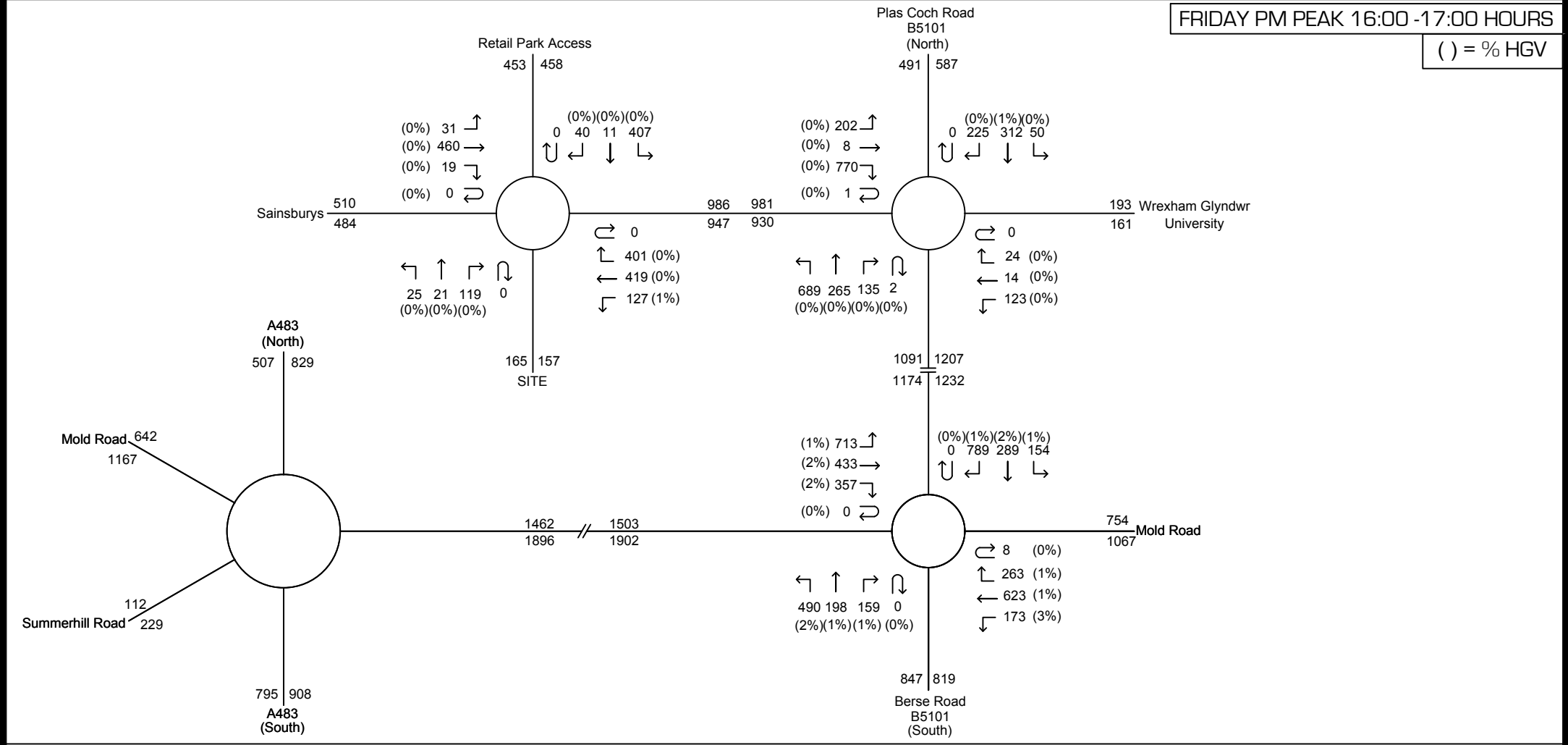
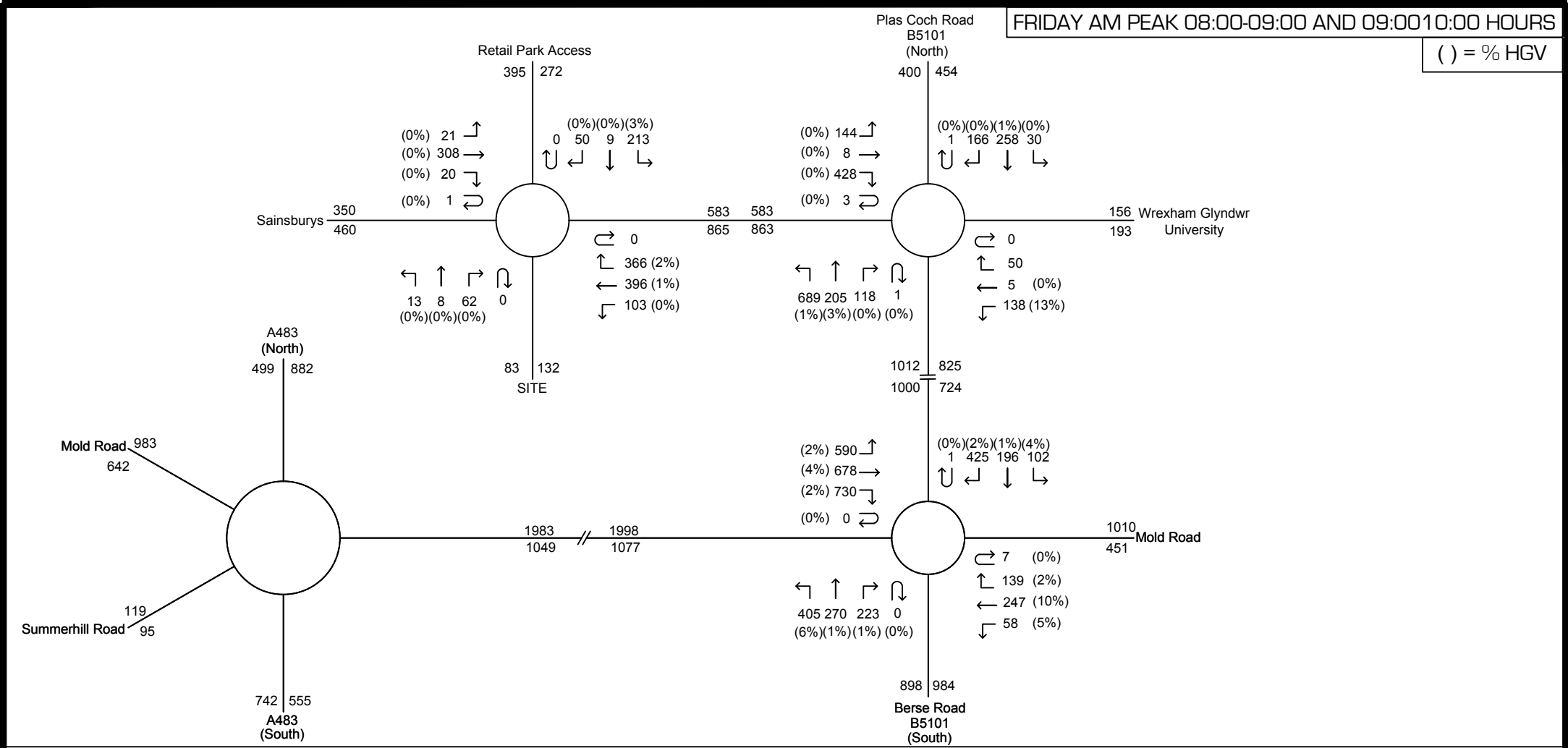
Scale

APPENDIX 7.0

BASE + COMMITTED FLOWS

8.1	2021 (2021 Base + Non Resi Committed)
8.2	2036 (2021 Base + All Committed Dev)





ADL
TRAFFIC
HIGHWAYS

Title
(2021 BASE +ALL COMMITTED DEVELOPMENT)
FRIDAY AND SATURDAY PEAKS

Scale

APPENDIX 8.2