

Appendix A

SCOPING REPORTS AND EMAILS

11/5/11



Cala Homes

LAND AT WESTERGATE

Transport Assessment Scoping Note





Cala Homes

LAND AT WESTERGATE

Transport Assessment Scoping Note

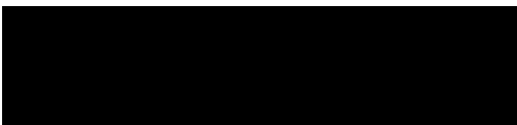
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1 INTRODUCTION

1.1 OVERVIEW

- 1.1.1. WSP has been appointed by Cala Homes to provide Transportation and Highways advice in support of a planning application for the development of land located at Westergate, West Sussex.
- 1.1.2. The site is located on land to the east of the A29 Westergate Street, accessed via a new traffic signal junction at Meadow Way / Pine Close. The proposed development will provide up to 400 dwellings with associated car parking. The site is bordered by existing residential development to the west and by agricultural land to the east and forms part of the Barnham / Eastergate / Westergate (BEW) strategic development site. Proposals for the BEW strategic development includes the realignment of the A29 to the east of the Cala Homes site to bypass the existing railway level crossing at Woodgate and provide a grade separated crossing to eliminate vehicle queues associated with the level crossing. The realignment of the A29 will run from the existing A29 to the north of Eastergate and connect to the existing alignment to the south of the railway. The realigned A29 will connect with the Cala Homes site and existing A29 alignment, via an East-West Link Road.
- 1.1.3. It is noted that a planning application (ref. BN/11/22/OUT) was validated by Arun District Council on 4th February 2022 relating the BEW Parcel SC1 (directly adjacent to the Cala Homes site that forms the scope of this report) which was outlined as follows:
- Outline application with all matters reserved (except for the A29 Realignment) for the demolition of existing structures and mixed use development to provide up to 1,250 residential dwellings (Use Class C3), Care Home/Senior Living Accommodation (Use Class C2/C3), flexible retail and community floorspace (Use Classes E/F2/Sui Generis), a Primary School plus open space, landscaping, drainage and all other associated ancillary works; and realignment of the A29 and early connection to existing A29 including construction of a new road carriageway, junctions and associated infrastructure.*
- 1.1.4. The proposals contained within this planning application have been reviewed and taken into account within this Scoping Report, which has been prepared to aid discussion and agreement between WSP and West Sussex County Council, as the local highway authority, and National Highways as the authority responsible for the strategic road network (A27). The Local Planning Authority is Arun District Council. The Report has been updated to reflect responses from West Sussex County Council and National Highways to the original Scoping Note received on 22/06/22 and 11/07/22 and a follow up meeting held with WSCC on 01/06/23.
- 1.1.5. A previous application for Cala Homes site was submitted, for a development of 350 dwellings, under the reference AL/15/17/PL. The planning application was refused by Arun District Council on 26th March 2020 for reasons relating to mineral safeguarding, impact on ecology and trees and ensuring that the development complies with the Lifetime Homes Standard. In relation to Highway matters, the District Council stated that insufficient information had been submitted to demonstrate that kerbside collection is possible for municipal vehicles, contrary to Policy WM DM1(a) of the Arun Local Plan. It is noted however that a 'no objection' response subject to securing of relevant S106 contributions was issued by WSCC and Highways England (now National Highways) as confirmed in the Planning Committee Officers Report dated 26/03/20.

2 DEVELOPMENT PROPOSALS

2.1 DEVELOPMENT DESCRIPTION

- 2.1.1. Cala Homes are proposing to develop the site for residential use to provide up to 400 dwellings, with associated car parking and a new vehicular and pedestrian site access via a four-arm signalised junction with Meadow Way and A29 Westergate Street.

2.2 SITE ACCESS

- 2.2.1. The proposed site access will be achieved via a four-arm signalised junction with Meadow Way and A29 Westergate Street as shown on Drawing 3258-GA-006 included in Appendix A. The proposed access junction is the same layout which supported the 2017 planning application, which was subject to an independent Stage 1 Road Safety Audit and Designers Response provided in Appendix B of this Scoping Report for reference. Given the proposed layout, the access junction was also subject to a Design Statement and Departures from Standards application (included in Appendix C as part of the Site Access Design Audit) related to the following aspects:
- ✦ Intervisibility between junction stop lines on A29 southern arm, Meadow Way and site access;
 - ✦ Forward visibility (SSD) on the A29 northbound approach to the traffic signals; and
 - ✦ Forward visibility (SSD) to the back of queuing traffic on the A29 northbound approach to the traffic signals.
- 2.2.2. These Departures from Standards were approved by WSCC as reflected in their 'no objection' response to planning application AL/15/17/PL. However, given that relevant aspects of the DMRB has been updated since submission of the Departures from Standards application in 2017, it has been necessary to complete a review of the design guidance to ensure that all aspects are still applicable to the proposed site access junction.
- 2.2.3. Since 2017 TD50/04 guidance document has been replaced by the CD 123 "Geometric design of at-grade priority and signal-controlled junctions" (November 2021) document, whilst the Traffic Signs Manual Chapter 6 (Traffic Control) (2019) also now provides general guidance on the layout of traffic signal junctions with a speed limit of 40mph or below. Following a review of the newly published guidance, it has been determined that the current design standards do not alter the Departure from Standards requirements related to the proposed layout. Therefore, no updated site access design is required and the proposed four-arm signalised junction with Meadow Way and A29 Westergate Street as shown on Drawing 3258-GA-006 remains the same as per the 2017 planning application.
- 2.2.4. It is recommended that the junction will operate with Microprocessor Optimised Vehicle Actuation (MOVA) to minimise vehicle delays on all approaches. The proposed junction will operate in three stages with the A29 running together in each direction before Meadow Way and the site access run independently. To aid right turning movements from the A29 ghost-island right turn lanes are provided and northbound traffic will also benefit from the extension of the green phase whilst southbound traffic is held. This will ensure any traffic turning right into the site will clear the junction if they have not found a suitable gap during the normal phase.
- 2.2.5. It is noted that, as part of the BEW strategic development site an East – West Link Road is proposed between the site and the BEW Parcel SC1 that is subject to the BN/11/22/OUT application. A connection to this East-West Link Road from the Cala Homes site will be facilitated by a bridge over the Lindsey Rife, which will operate as a bus, pedestrian and cycle route only until the full A29 realignment is complete. This approach for the East-West Link Road has been discussed and



agreed with WSCC based upon the transport modelling discussed in Section 4 and Appendix E of this Scoping Note.

2.3 SERVICING

- 2.3.1. The Transport Assessment will provide a swept path analysis to illustrate a refuse vehicle safely accessing and egressing all necessary areas within the internal site layout to undertake refuse collection. The site layout will accord with waste collection distances, by both residents and waste operatives, as outlined within Part H6 of the Building Regulations Merged Approved Documents (July 2021 update).

2.4 EMERGENCY SERVICE ACCESS

- 2.4.1. The Transport Assessment will provide a swept path analysis to illustrate an emergency service vehicle (Fire Engine) accessing and egressing all areas of the site to demonstrate safe access and manoeuvrability.

2.5 CAR AND CYCLE PARKING

- 2.5.1. Car and cycle parking will be provided in accordance with the West Sussex County Council – Guidance on Parking at New Developments (September 2020) document.
- 2.5.2. A swept path analysis will be undertaken to illustrate an estate car accessing and egressing the internal site layout to demonstrate a safe and achievable site and car parking layout in the interest of Highway safety.
- 2.5.3. The main access into the site for pedestrians and cyclists will be provided at the main development site access, as described in Section 2.2. As part of the access junction, a pedestrian footway will be provided on the southern side of the site access road to link the existing footway on A29 Westergate Street into the site. From the north, pedestrian access will be through Pine Close which will be closed to through traffic.
- 2.5.4. The internal road network for the proposed site will follow Manual for Streets principles and guidance. The street network will naturally reinforce low vehicle speeds through design and streetscape will provide an attractive environment for walking through the site and giving priority to pedestrian and cycle movements over that of vehicles.
- 2.5.5. The proposed development site masterplan will be reviewed in conjunction with the guidance outlined in LTN 1/20. This will ensure that high quality cycle infrastructure design is embedded throughout the site layout. The development site will also accord with the principles outlined in the West Sussex Cycling Design Guide (2019) to establish cycling as the mode of choice for as many journeys as possible to/from the site.

3 TRANSPORT ASSESSMENT SCOPE

3.1 INTRODUCTION

- 3.1.1. A comprehensive Transport Assessment will be prepared to support the Planning Application for the development, which will be inclusive of the following elements.

3.2 POLICY REVIEW

- 3.2.1. The Transport Assessment will provide a review of National, Regional and Local Policy documents in context of the proposed development and how it conforms with the overall spatial and planning context for the development proposal. The following national and local planning documents will be reviewed:

National Policy

- ✧ The National Planning Policy Framework (NPPF) (2021); and
- ✧ National Planning Guidance: Travel Plans, Transport Assessments and Statements (2014).

Local Policy

- ✧ West Sussex Local Transport Plan (2011-2026);
- ✧ West Sussex County Council: Guidance on Parking at New Developments (September 2020);
- ✧ West Sussex Walking and Cycling Strategy 2016 to 2026;
- ✧ Arun District Council Local Plan 2011-2031 (2018);
- ✧ Arun District Council – Parking Standards Supplementary Planning Document (January 2020);
- ✧ Barnham & Eastergate Neighbourhood Development Plan (2014-2029) and emerging Neighbourhood Plan 2019-2031; and
- ✧ Aldingbourne Neighbourhood Plan (2019-2031).

Other background transport reports

- ✧ WSCC/ADC Local Plan Transport Mitigation Apportionment Study (June 2020);
- ✧ Arun Transport Study 2016 Stage 3 report;
- ✧ The Enterprise Bognor Regis Transport Review 2017;
- ✧ WSCC Comet Corner and Oystercatcher Report December 2019; and
- ✧ West Sussex Cycling Design Guide August 2019.

3.3 BASELINE CONDITIONS

- 3.3.1. The Transport Assessment will undertake a review of the baseline highway network, public transport infrastructure and walking and cycling infrastructure in relation to the proposed development site.
- 3.3.2. The baseline conditions review will also include a detailed land use audit of the local area and demonstrate how key local facilities, such as retail / employment / and education, can be accessed from the site by walking, cycling, public transport and private car trips.
- 3.3.3. Personal Injury Collision (PIC) records for the most recently available five-year period will be obtained from the Safer Sussex Roads Partnership for the local highway network within the vicinity of the proposed development site. The PIC data will be reviewed to determine if there currently exists any trends or clusters of collisions that might indicate an operational safety issue associated with the local highway network. The extent of highway network to be considered is identified in Figure 3-1.



3.4 TRAFFIC FLOWS

3.4.1. The following baseline traffic surveys have been undertaken within the vicinity of the site access on A29 Westergate Street:

- ✧ Manual Classified Count on A29 Westergate Street / Meadow Way on Tuesday 1st March 2022;
- ✧ Manual Classified Count on A29 Westergate Street / Ivy Lane on Tuesday 1st March 2022;
- ✧ A queue and barrier closure survey at the A29 Westergate Street Level Crossing on Tuesday 1st March 2022; and
- ✧ An Automatic Traffic Count (ATC) survey on A29 Westergate Street between Pine Close and Oaks Close between 1st March and 9th March 2022.

3.4.2. These surveys have been undertaken to provide a baseline of the existing highway network, although they will not be used for future assessments within the Transport Assessment as detailed below.

3.4.3. The ATC survey data was compared against data provided by WSCC for March 2023 for the same area of highway network. The results of this comparison are summarised in Table 3-1 below.

Table 3-1 - A29 Westergate ATC Comparison

	Mar-22			Mar-23			Difference			% Difference		
	Northbound	Southbound	Two-way	Northbound	Southbound	Two-way	Northbound	Southbound	Two-way	Northbound	Southbound	Two-way
AM Peak 07:00 - 08:00	779	272	1051	738	333	1071	41	-61	-20	-5%	22%	2%
PM Peak 16:00 - 17:00	415	730	1145	471	712	1183	-56	18	-38	13%	-2%	3%
24h	6756	6693	13449	6809	6934	13744	-54	-241	-295	1%	4%	2%

3.4.4. The summary of data in Table 3-1 has identified a minor change in traffic flows on the A29 between 2022 and 2023 with traffic flows remaining broadly similar. This has represented an AM two-way decrease of 20 vehicles (representing 2% difference) and a decrease of 38 two-way vehicle flows in the PM peak (representing 3%).

3.5 HIGHWAY NETWORK IMPACT

ASSESSMENT SCENARIOS

3.5.1. It is proposed that the Transport Assessment will follow the assessment methodology utilised within the BN/11/22/OUT application, through use of the Chichester Area Transport Model (CATM) all traffic growth, development trip generation and trip distribution information. This will be derived from the BEW Parcel SC1 Transport Assessment completed by Pell Frischmann that has been submitted in support of planning application BN/11/22/OUT. The key parameters to be used within the Transport Assessment are set-out below:

TRIP GENERATION

3.5.2. An estimate of vehicle trip generation for the Cala Homes development will be calculated using residential trip rates provided shown in Table 5-1 of the Pell Frischmann TA as replicated in Table 3-2 below.



Table 3-2 – Vehicle Trip Rates

Time Period	Arrival	Departure	Two-way
AM	0.124	0.324	0.448
PM	0.312	0.161	0.473

- 3.5.3. These trip rates will be used to calculate the difference in traffic flows associated with 350 units included in the CATM SATURN model and the 400 units now proposed.
- 3.5.4. Person trip rates will be based upon the trip rates shown in Table 5-4 of the Pell Frischmann TA as calculated using 2011 Census data. These trip rates are replicated in Table 3-3 below.

Table 3-3 – Person Trip Rates

Time Period	Arrival	Departure	Two-way
AM	0.163	0.427	0.590
PM	0.411	0.212	0.523

TRIP DISTRIBUTION

- 3.5.5. Trip distribution will be calculated using CATM SATURN model junction turning count outputs included within Appendix D of the Pell Frischmann TA. The development trip distribution has been calculated within the CATM SATURN using 'donor zones' to replicate likely trip patterns between origin and destination.

TRAFFIC GROWTH AND COMMITTED DEVELOPMENT

- 3.5.6. The CATM SATURN model has been developed using the following series of inputs to account for background growth, infrastructure changes and committed development growth. This approach was agreed by West Sussex County Council as part of scoping process for the BN/11/22/OUT application and will be used to assess forecast years for the proposed development.
- ※ The background growth consists of predicted traffic growth as a result of general increase in driving over time, calculated by taking account of NTEM-adjusted TEMPRO growth, known committed developments, and the allocated sites within adopted local plans.
 - ※ The committed developments consist of other developments which have been approved, such as those not contained within the adopted local plan; and
 - ※ The wider infrastructure changes are schemes that are committed projects.

ASSESSMENT SCENARIOS

- 3.5.7. All assessments will be completed using the following peak hours:
- ※ AM Peak: 08:00-09:00; and
 - ※ PM Peak: 17:00-18:00.



- 3.5.8. The CATM SATURN model has provided a number of modelling scenarios for the Pell Frischmann TA, which will be used as a basis for assessing the proposed development. Below are the details of the proposed assessment scenarios which will be used within the Transport Assessment for the proposed development, along with how these relate those reported in the Pell Frischmann TA:
- ⌘ Scenario 1 – 2031 Do Minimum (using “2031 do minimum No Cala” scenario from Pell Frischmann TA);
 - ⌘ Scenario 2 – 2031 Do Something without BEW Parcel SC1 (using “2031 do minimum” scenario from Pell Frischmann TA)
 - ⌘ Scenario 3 – 2031 Do Something with BEW Parcel SC1 (using “2031 do something” scenario from Pell Frischmann TA but without East-West Link Road); and
 - ⌘ Scenario 4 – 2038 Do Something (using “2038 do something” scenario from Pell Frischmann TA).
- 3.5.9. Table 3-4 presents what is included within each of the assessment scenarios, breaking down each of the elements of development and infrastructure improvements likely to occur in the local area.

Table 3-4 – Breakdown of each Assessment Scenario

	Background Growth	Committed Developments	Infrastructure Improvements	Cala Development Traffic	BEW Parcel SC1 Phase 1*	East- West Link Road	BEW Parcel SC1 Phase 2**
Scenario 1	✓	✓	✓				
Scenario 2	✓	✓	✓	✓			
Scenario 3	✓	✓	✓	✓	✓		
Scenario 4	✓	✓	✓	✓	✓	✓	✓

*Parcel SC1 Phase 1: 1,200 homes, 61 C2 care home units, 3FE primary school and A29 realignment north of Chichester-Barnham railway line.

**Parcel SC2 Phase 2: Phase 1 + 2,000 homes and full realignment of A29.

- 3.5.10. Traffic flows for Scenario 3 (including BEW Parcel SC1 without East-West Link Road) will be extrapolated using the following scenarios included within the Pell Frischmann TA:
- ✎ 2031 Do Something No Cala: background growth + committed developments + wider infrastructure changes + other local plan developments and associated infrastructure + BEW development + BEW infrastructure no Cala and No East-West Link Road; and
 - ✎ 2031 Do Minimum: background growth + committed developments + wider infrastructure changes + other local plan developments and associated infrastructure.
- 3.5.11. Using a combination of these scenarios will allow an estimate to be made of development traffic flows associated with a scenario whereby the proposed development and BEW parcel SC1 phase 1 are complete but are accessed independently (i.e. without the East-West Link Road providing a connection between the two sites).
- 3.5.12. The traffic flows outputs from the SATURN model will be input into Junctions 10 / LinSig models to provide a 'Do Minimum' assessment of the junction performance. The trip generation from the proposed Cala development will then provide a 'Do Something' scenario.
- 3.5.13. Traffic flow diagrams illustrating the scenarios above on the local highway network have been presented in *Appendix D* to this Scoping Report.

Interim Assessment Scenario

- 3.5.14. Following discussions with WSCC it is understood that the first phase of the A29 realignment north of the B2233 Barnham Road (A29 Fontwell Avenue to B2233 Barnham Road) is programmed to be completed by 2026. Given the potential for construction to have commenced on the Cala Homes site ahead of this date (subject to planning permission) an additional junction capacity assessment scenario will be undertaken at the A29 Westergate Street / Nyton Road and at the A29 / B2233 War Memorial Roundabout.
- 3.5.15. The will provide an interim assessment of the previously mentioned junctions for a scenario without realignment of the A29 being completed between the A29 Fontwell Avenue and B2233 Barnham



Road. This will demonstrate the number of units that can be occupied on the Cala Homes site without there being an unacceptable impact on the local highway network.

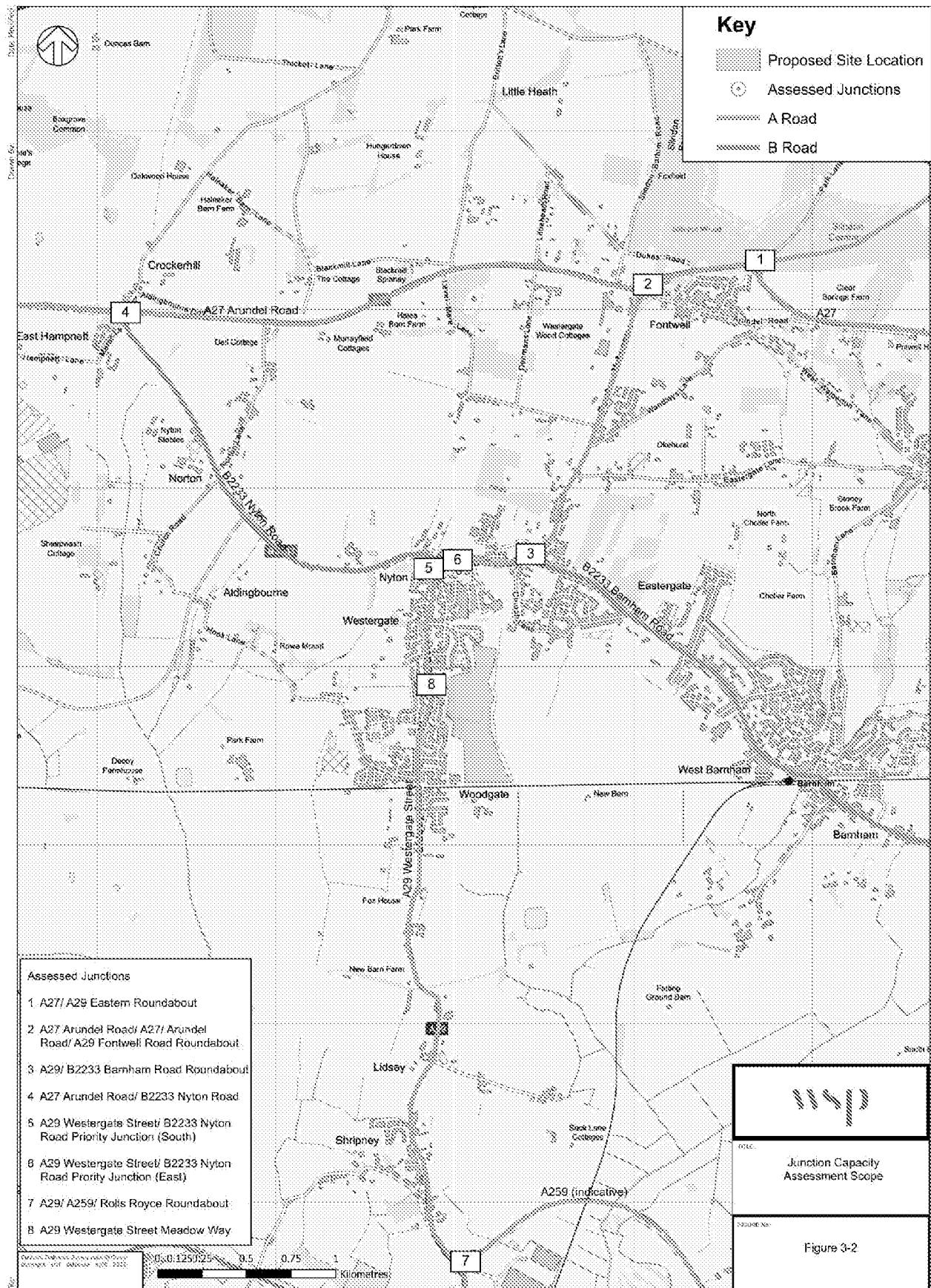
JUNCTION CAPACITY ASSESSMENTS

- 3.5.16. Figure 3-2 identifies the scope of junction capacity assessments that will be undertaken as part of the Transport Assessment.
- 3.5.17. All junction capacity and highway network assessments within the Transport Assessment will use traffic flows from the CATM SATURN model.

Junction assessments will be carried out using the computer program Junctions 10 developed by Transport Research Laboratory. Junctions 10 includes the ARCADY and PICADY computer modelling software modules which assesses the traffic capacity, queues and delays at roundabouts and priority junctions. Signalised junctions will be assessed using the program LinSig 3 by JCT Consultancy. LinSig provides an assessment of the impact of traffic signals on traffic capacity, queues and delays at a junction. Geometry measurements for the junction capacity assessments will be derived from OS mapping. The junction capacity models will be calibrated using traffic surveys undertaken as part of the previous planning application to ensure the accuracy of the junction models and results.



Figure 3-2 - Junction Capacity Assessment Scope





4 SITE ACCESS JUNCTION CAPACITY ASSESSMENT

4.1 OVERVIEW

- 4.1.1. This Chapter of the Scoping Report provides a junction capacity assessment of the proposed site access junction which will be achieved via a four-arm signalised junction with Meadow Way and A29 Westergate Street and the A29 Westergate Street level crossing.

4.2 SITE ACCESS TECHNICAL NOTE

- 4.2.1. A site access Technical Note has been prepared, appended as **Appendix E**, to provide an assessment of the proposed A29 Westergate Street / Meadow Way / Pine Close site access junction using the CARM SATURN model flows included within the Pell Frischmann TA. This has been completed with and without the BEW SC1 parcel and associated infrastructure improvements (with / without realignment of A29 and East-West Link Road). This Technical Note provided a comparison between the Parcel SC1 Transport Assessment LinSig results and the WSP approach to modelling the site access junction.
- 4.2.2. Through WSP's experience in working with WSCC it would not be acceptable for Development Access and Meadow way to operate together in one stage with the staging ultimately needing to be changed during detailed design to have Meadow Way and Development Access operating as independent stages. This is because of the skewed nature of the junction and also the limited demand from Meadow Way leading to drivers exiting the Development Access believing they had unopposed priority, thereby increasing the potential for vehicle collisions to occur and overall safety concern.
- 4.2.3. Additionally, the Parcel SC1 TA transport modelling has made no allowance for the number of right turn movements between A29 southern approach and Development Access despite the additional demand created by the provision of the East-West Link Road. This resulted in a revised traffic signal staging as shown in Figure 2 of the Technical Note.
- 4.2.4. The Technical Note concluded the following:
1. The proposed site access junction is able to accommodate the proposed Cala Homes development of 400 units as a standalone site, when assessed using both traffic flows from the Parcel SC1 TA and 2022 traffic survey data uplifted to 2031 using TEMPRO;
 2. The proposed site access junction cannot accommodate the additional traffic associated with the East-West Link Road, Cala Homes development of 400 units and phase 1 of Parcel SC1. This is because of the reassignment of traffic through the Cala Homes site as a result of new connection to the A29 formed by the East-West Link Road;
 3. The site access junction operates within capacity with the Cala Homes development of 400 units, Parcel SC1 without the East-West Link Road between the two sites; and
 4. The access junction operates within capacity with the Cala Homes development of 400 units and phase 1 and 2 of Parcel SC1, including the East-West Link Road and full realignment of the A29.
- 4.2.5. These conclusions support the access strategy whereby the East-West Link Road operates as a bus, pedestrian and cycle route only until the full A29 realignment is complete. This approach for



the East-West Link Road has been discussed and agreed with WSCC as part of the TA Scoping Process.

4.3 A29 LEVEL CROSSING ASSESSMENT

- 4.3.1. A survey was completed at the A29 level crossing on the 1st March 2022 which recorded the barrier closure time and associated queue length between 07:00-10:00 and 16:00-19:00. The operation of the barrier is a manual process and such the amount of time the barrier down is variable. Additionally, the barrier can be closed for longer periods when there are trains approaching from each direction, as the time taken to initiate the raising and lowering sequence between trains may not meet the minimum requirements for safe operation. A summary of the observed closing times is shown in Table 4-1 below along with a comparison of how this date compares to a survey completed in 2016.

Table 4-1 – Level Crossing Closures

Time Period	Average Closure Time	Maximum Closure Time	Total Time Closed During Time Period	Comparison of Total Closure Time to 2016 Survey
07:00-10:00	00:02:31	00:06:27	1:10:23	+0:17:29
08:00-09:00	00:02:53	00:06:27	0:28:54	+0:16:36
16:00-19:00	00:02:09	00:03:48	0:53:47	+0:12:31
17:00-18:00	00:02:24	00:03:48	0:19:08	+0:02:45

- 4.3.2. Table 4-1 shows that on average the level crossing is closed for between 2-3 minutes during peak periods but with a maximum closure time of six and half minutes in the morning and nearly four minutes in the evening. The surveys recorded a longer closure time than recorded in 2017 although this was a result of there being four additional barrier closures across each of the AM and PM peak periods. These barrier closures resulted in resulted in the A29 southbound queue lengths shown on Figure 4-1 and 4-2 below.



Figure 4-1 - A29 Level Crossing AM Peak Queue Lengths

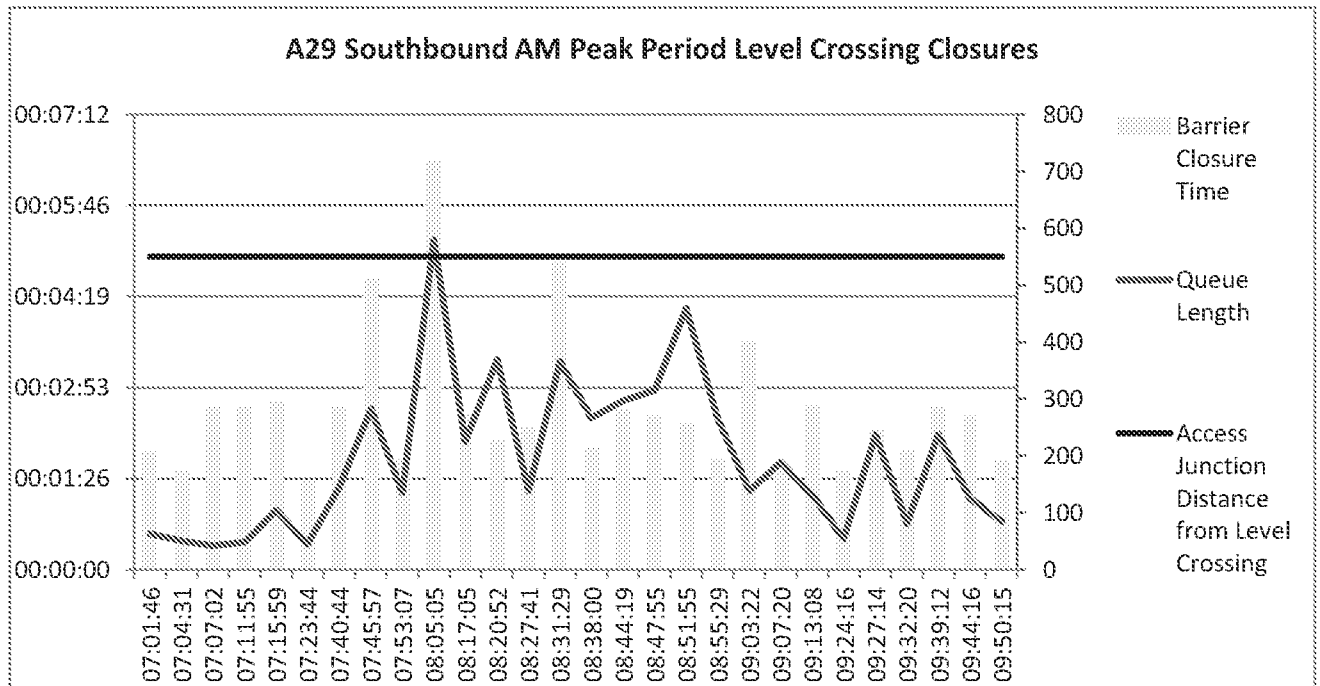
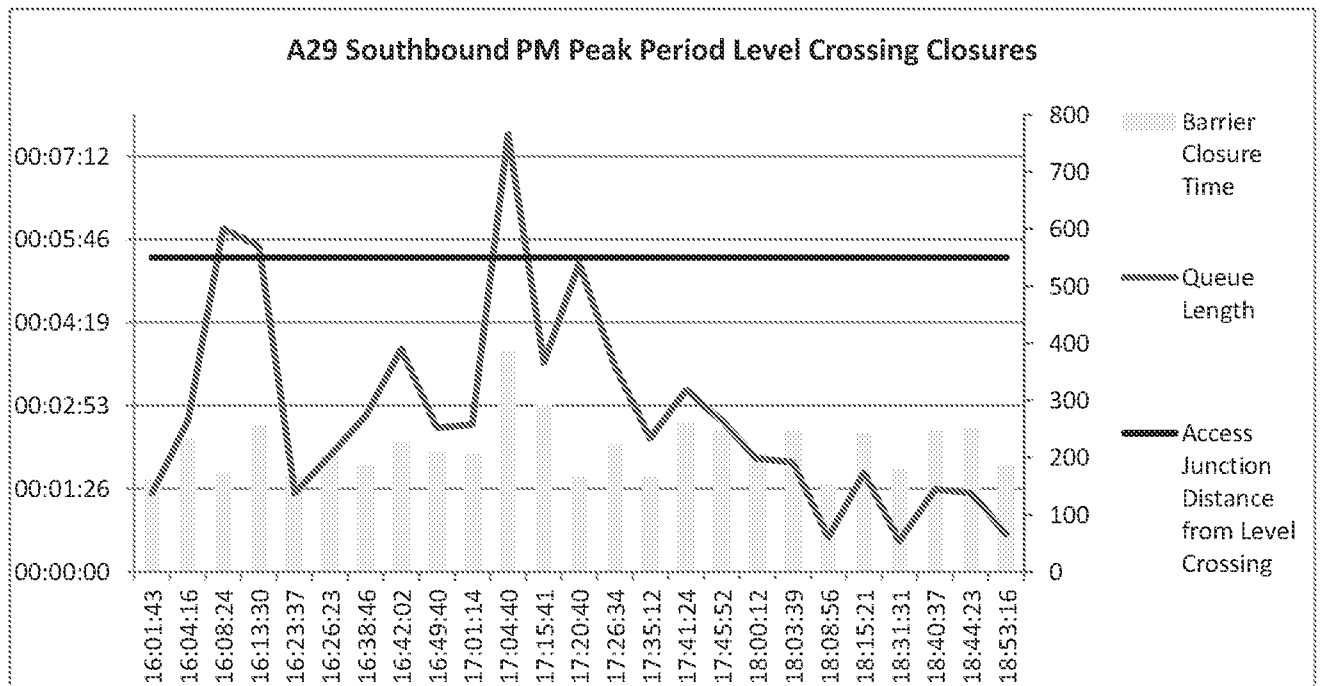


Figure 4-2 - A29 Level Crossing PM Peak Queue Lengths



- 4.3.3. Figures 4-1 and 4-2 show that recorded queue lengths vary across each peak period but generally correlate with the length of the time the level crossing barrier is closed, with longer closures resulting in longer queue lengths. In the AM peak period, the queue length reaches the location of the proposed site access once, albeit this is a result of a six and a half minute barrier closure. This is one and a half minutes longer than any other closure time recorded and nearly four minutes longer than the average for the AM peak period. In the PM peak the recorded queue length extends

beyond the proposed access junction location on two occasions as a result of multiple barrier closures over a short space of time (three times in seven minutes at worst).

4.3.4. Overall closures of the level crossing result in average of queue lengths as follows:

- ※ 07:00-10:00 – 200m;
- ※ 08:00-09:00 – 328m;
- ※ 16:00-19:00 – 287m; and
- ※ 17:00-18:00 – 388m.

IMPACT OF PROPOSED DEVELOPMENT ON LEVEL CROSSING QUEUE LENGTHS

4.3.5. Taking account of the survey described above this section provides an assessment of the impact of the proposed development in relation to queue lengths associated with the A29 level crossing. For assessment purposes it is assumed that train times remain the same and, as such, occurrences of the closure of the road will be the same in future years as the observed base year.

Development Traffic Impact

4.3.6. The proposed development will result in an increase in the arrival rate of vehicles that approach the level railway crossing per hour but the service rate of the level railway crossing (the amount of traffic that can pass through the level railway crossing in any given hour) will remain the same given the assumptions above. As such, vehicle queues associated with closure times at the level railway crossing are expected to increase as traffic volumes increase on A29 Westergate Street.

4.3.7. A traffic queue survey was undertaken of the level crossing on the 1st March 2022 to ascertain a baseline operation of the crossing. The survey identified a maximum queue of 96 PCU in the AM peak at the crossing, and a maximum queue of 127 PCU in the PM peak during the barrier closure period.

4.3.8. For the proposed development only, the increases shown in Table 4-2 would be observed at the level crossing. Note that numbers presented are in PCU.

Table 4-2 – Increase in Traffic at the Level Crossing (Development Traffic Only)

Time	Northbound Increase at level crossing	Southbound Increase at level crossing	Southbound Increase north of junction (at site access junction)
AM Peak Hour	18	45	42
PM Peak Hour	35	17	81

4.3.9. This shows that, at most, this is the equivalent to an additional 45 vehicles in the southbound direction during the AM peak.

Impact on A29 Northbound Level Crossing Queueing

4.3.10. For the northbound direction approach to the level crossing, it is noted that the street function is different to the southbound direction. The road streetscape is more rural in nature, with limited properties fronting the road. There is a lower number of junctions south of the railway line and the nearest major junction control is a considerable distance away (2.8km) at the junction of A29 and A259 relief road. As such, it is considered no assessment is required for the northbound direction (south of the level railway crossing) as there is adequate capacity for queueing vehicles.

Impact on A29 Southbound Level Crossing Queueing

- 4.3.11. In the southbound direction, existing queues created by the level crossing barrier closure that do not extend past the proposed access junction (less than 550 metres) will increase only as a result of southbound traffic leaving the site. Existing queues that extend past the access junction will increase by a larger amount as a result of the additional traffic which is accessing the development from the north as well as the traffic leaving the site heading south.
- 4.3.12. To assess the impact of the proposed development an assumption has been made that development traffic will depart or arrive on a uniform basis across the peak hour based upon the additional vehicles presented in Table 4-3.

Table 4-4 – Impact of Development Traffic on Level Crossing Queue Lengths

Time Period	Average Closure Time	Development Traffic Arrival / Departure Rate	Increase in Queue Length	Maximum Closure Time	Development Traffic Arrival / Departure Rate	Increase in Queue Length
08:00-09:00	00:02:53	0.8 per minute	+2 PCU (12m)	00:06:27	0.7 per minute	+5 PCU (30m)
17:00-18:00	00:02:24	0.3 per minute	+1 PCU (6m)	00:03:48	1.4 per minute	+5 PCU (30m)

- 4.3.13. Table 4-7 shows that during the average closure times experienced during the AM and PM peak hours, the proposed development will increase queue lengths by 6-12m. This assumes that during an 'average' barrier closure queue lengths do not extend past the site access junction as is the case the vast majority of barrier closures surveyed. For the maximum barrier closures recorded, it is predicated that the proposed development would increase queue lengths by 30m during the AM and PM peak hours. This represents a 5.2% increase in the maximum queue length recorded in the AM peak and a 3.9% increase in the PM peak.
- 4.3.14. It is therefore considered that the proposed development would not result in a severe impact upon the operation or capacity of the A29 Level Crossing as shown within the 2027 future year assessment scenario.

Impact of the A29 / Meadow Way Site Access Junction

- 4.3.15. In order to deal effectively with the potential for a large platoon of traffic approaching the junction from the upstream level crossing, a MOVA control system is proposed for the signalised site access junction. Once MOVA control has been set up successfully, the system will generate its own signal timings cycle-by-cycle, varying continuously with traffic conditions to offer full flexibility in traffic management. The timings under this system are optimised both in the short term (hour to hour, day to day for events like level crossing releases) and in the long term following annual trends and longer term traffic growth.
- 4.3.16. MOVA has two operational modes; the first deals with uncongested conditions, the second with situations when the junction becomes overloaded/congested with large queues on one or more

approaches. MOVA determines which mode is appropriate and which approach(es), if any, are overloaded. In the uncongested mode, MOVA seeks to disperse any queue which has built up on red, and then carries out a delay-and-stops minimising procedure every half second. If there would be a benefit from extending the green, then the green would continue and the calculations repeated. If no benefit were predicted, the signals would change to the next stage. In the congested mode, MOVA operates a capacity-maximising routine. This routine takes into account which approaches are overloaded, the efficiency of green use, and determines the signal timings which will maximise the junction throughput under the actual flow conditions prevailing.

- 4.3.17. Therefore, by using MOVA, a queue clearing sequence will include additional green time signal phase for A29 Westergate Street northbound traffic to reduce the instances of stopping twice at the level crossing and at the signalised access junction. In addition, the assessment of the operation of the traffic signals in future years does not predict a queue length for northbound vehicles that would extend to the level railway crossing.
- 4.3.18. MOVA control is considered the optimum control method for this site. The system will detect the surge in traffic from the level crossing and deal with throughput as efficiently as possible.
- 4.3.19. The introduction of an additional queue clearing sequence at the signalised access point will result in the skipping of the east-west phase, which will reduce the ability for traffic exiting the site to clear the junction. At worst case, queue lengths will double from the modelled results of 2.8 PCU to be approximately 5.6PCU / 35 metres in the 2021 scenario. Queues may extend past the junction of the access road with Pine Close, and it is proposed to provide line-marking Diagram 1026 'KEEP CLEAR' across this junction to assist in side road access. The first uncontrolled access point within the development site (off-road parking spaces) is located approximately 70 metres from the junction and as such the anticipated impact of the queue clearing sequence will not impact on this access point.



5 SUMMARY

5.1 OVERVIEW

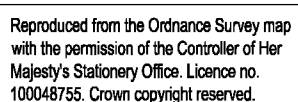
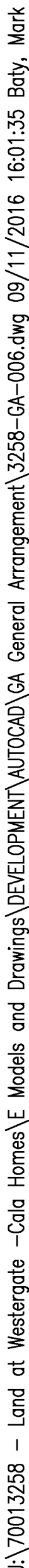
- 5.1.1. WSP has been appointed by Cala Homes to provide Transportation and Highways advice in support of a planning application for the proposed development on land located at Westergate, West Sussex. The site is located on land to the east of the A29 Westergate Street, close to the junction with Meadow Way. The proposed development will provide up to 400 dwellings with associated car parking.
- 5.1.2. The proposed site access will be achieved via a four-arm signalised junction with Meadow Way and A29 Westergate Street. The proposed access junction is the same layout which supported the 2017 planning application, which was subject to an independent Stage 1 Road Safety Audit, Designers Response and three Departures from Standards applications which were approved by WSCC. A review of the proposed site access has been undertaken against current design guidance (CD 123 and Traffic Signs Manual Chapter 6) which has shown that this does not alter the Departure from Standards requirements related to the proposed layout.
- 5.1.3. This Scoping Report has also provided a capacity assessment of the proposed site access junction and shown that it is necessary for the East-West Link to operate as a bus, pedestrian and cycle route until the full A29 realignment is complete. This allows the junction to operate within the capacity with the Cala Homes development of 400 units and phase 1 of Parcel SC1 being complete. The assessments have also demonstrated that access junction operates within capacity with the Cala Homes development of 400 units and phase 1 and 2 of Parcel SC1, including the East-West Link Road and full realignment of the A29.
- 5.1.4. The capacity assessment has shown that the queuing associated with the site access junction is unlikely to have a material impact on the operation of the A29 level crossing. Based upon the predicted arrival / departure rates of vehicles, the proposed development is also predicted to have a negligible impact on queue lengths associated with closure of the level crossing barrier.

Appendix A

SITE ACCESS DRAWING

115/1

CONFIDENTIAL



PROJECT:	LAND AT WESTERGATE
TITLE:	SITE ACCESS GENERAL ARRANGEMENT

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Appendix B

ROAD SAFETY AUDIT

115/1

CONFIDENTIAL

REPORT N° 70013258-RSA

LAND AT WESTERGATE

STAGE 1 ROAD SAFETY AUDIT DESIGNERS
RESPONSE

PUBLIC

APRIL 2017

LAND AT WESTERGATE

STAGE 1 ROAD SAFETY AUDIT DESIGNERS RESPONSE

Cala Homes

Type of document (version)
Public

Project no: 70013258
Date: April 2017

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QUALITY MANAGEMENT

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APPENDICES

A P P E N D I X A ROAD SAFETY AUDIT

1

DESIGNERS RESPONSE

1.1 INTRODUCTION

1.1.1 This document provides a designer's response to a Stage 1 Road Safety Audit carried out by Ted Smith Traffic Safety Consultants on behalf of Cala Homes in January 2017. The audit was completed on the proposed signalised site access junction at the existing A29 / Meadow Way junction, as shown on Drawing 3258/GA/004 Revision C. This junction will be used to access a development of 350 residential dwellings on land east of the A29.

1.1.2 For a full overview of the proposals, this document should be read in conjunction with the Transport Assessment completed for the site.

1.2 DESIGNERS RESPONSE

1.2.1 The table below provides extracts from the Stage 1 Road Safety Audit and a Designer's Response in italics to the right of each item raised.

Table 1.1 - RSA Issues Raised and Designer's Response

REF.	COMMENT	DESIGNERS RESPONSE
3.3.1	Location: (A) A29 Westergate Street, south of the junction with Meadow Way and the new access road. Summary: Risk of inadequate forward visibility of stop-line for waiting vehicles and/ or waiting pedestrians. Recommendation: The proposed junction design may need to be revisited with a view to investigating scope for shifting the northbound stop line and corresponding signal poles a few more metres further southwards of the currently shown position which may also provide safer scope for large vehicles turning sharp left manoeuvre from the new site access road. A high level off-side secondary signal head may also need to be included. The yellow box markings indicated for the southbound traffic flow may also need to be extended to also include the northbound through flows. It is further recommended that high friction surfacing should also be incorporated on the northbound approach for sufficient length to mitigate the potential northbound vehicle queuing and risk of failure to perceive the red lights associated with the signalised junction and pedestrian crossing facility.	<i>It has not been possible to relocate the A29 northbound stop-line further southwards due to the need to maintain junction inter-visibility between stop-lines. While full inter-visibility as measured in DMRB is not possible the current arrangement allows visibility between the A29 northbound and site access stop-line, which includes the extent of access road pedestrian crossing. Moving the A29 northbound stop-line further south would remove visibility between stop-lines.</i> <i>The ability to relocate the northbound stop-line further south is also limited by the residential property located on the south eastern corner of the junction, whereby such a modification would obstruct the visibility between the A29 northbound and site access road stop-line.</i> <i>The option of relocating the access road stop-line slightly westwards (to extend the limits of the junction inter-visibility further southwards on the A29 northbound) has been explored but this is not possible due to proximity of the pedestrian crossing on the access road to the A29 southbound lane.</i> <i>High friction surfacing will be incorporated into detailed design stages of the proposed junction.</i>

REF.	COMMENT	DESIGNERS RESPONSE
3.5.1	Location: (B) A29 Westergate Street, at the approaches to the new signalised junction. Summary: Risk of failure to perceive new junction control ahead. Recommendation: The proposed signing works should also include appropriate temporary warning signs to TSRGD Diagram 7014 for a slightly longer period of say six months to alert visiting drivers to the new signalised junction.	<i>It is agreed that temporary warning signs should be erected but timescales will need to be agreed with WSCC as part of the technical approval process.</i> <i>The junction design also includes provision of signage to Diagrams 543, 572, 584.1 of TSRGD to warn drivers on the A29 northbound of the traffic signal junction. This should help non-local drivers identify the junction ahead.</i>

Appendix A

ROAD SAFETY AUDIT

**“A29 WESTERGATE STREET/MEADOW WAY”
WESTERGATE, WEST SUSSEX**

PROPOSED S278 SIGNALISED JUNCTION

**Road Safety Audit
Stage 1 - Preliminary Design**

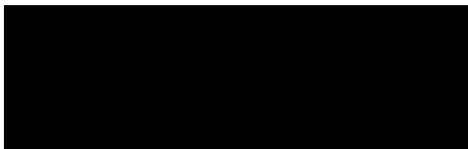
January 2017

Report Ref: 1703

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2 Items raised at the previous Stage 1 Road Safety Audit	5
3 Items raised at this Stage 1 Road Safety Audit	6
4 Audit Team Statement	8
Appendix A List of Drawings & Documents Examined	9
Appendix B Key Plan	10

TED SMITH
Traffic Safety Consultant
1a The Parade
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1 INTRODUCTION

- 1.1 This report describes the results of a Stage 1 Preliminary Design Road Safety Audit of the proposed S278 Amended Signalised Access Junction Highway Works at the A29 Westergate Street at its existing junction with Meadow Way, north of Bognor Regis, West Sussex and proposed new access road into new Residential Development at the east side of the A29. The Road Safety Audit was carried out at the request of WSP UK, Regus House, Southampton International Business Park, George Curl Way, Southampton, Hampshire, SO18 2RZ, on behalf of Cala Homes.
- 1.2 The proposed works examined within this Stage 1 Audit of the Amended Design, consist of constructing a new access junction linking the A29 with the new Development Site that will serve up to approximately 350 dwellings and control of vehicular movements to and from Meadow Way. The traffic signals would also provide new controlled pedestrian crossing facilities around the junction.
- 1.3 Initially the access will serve 350 units (Detailed planning application for 101 dwellings and outline permission will be sought for the remaining 249 dwellings). However, in the longer term the signalised junction will form part of the proposed Barnham / Eastergate / Westergate Strategic Development Site involving approximately 2000 new dwellings east of the current Development Site and re-routing the A29, including closing the A29 at the Woodgate level crossing and bypassing it through the larger site.
- 1.4 The Road Safety Audit Team membership comprised as follows:
- | | |
|--|---------------------------|
| Ted Smith, CoC | Traffic Safety Consultant |
| Martin Brownsey, BSc, DipEM, MCIHT, CoC
Director, MB Projects Ltd | Highways Consultancy |
- Each member specialises in Highway Safety and Traffic Engineering and have operated independently of the design team responsible for the scheme and have had no involvement with the design of the proposals.
- 1.5 This Audit was carried out in the offices of the Team Members during January 2017, comprising of an examination of the drawings and documents listed in Appendix A and in accordance with the Audit Brief and instructions dated 13th October 2016 and 9th and 17th January 2017 from WSP. Since an inspection of the site was jointly carried out on the morning of Monday 25th November 2013 in connection with an earlier Design, during which time light to moderate traffic flows were observed and generally considered to be travelling at speeds within the low to middle range between 30mph and 40mph, a further site inspection was considered unnecessary at present. Whereas at that time a few pedestrians were also seen using the existing footways, no cyclists were seen in the near vicinity of proposed works.

- 1.6 The terms of reference of the Road Safety Audit are as described in HD 19/15 (DMRB Volume 5: Section 2, Part 2) and the incorporated categories of checklists, as appropriate. The Road Safety Audit Team has examined and reported only on the road safety implications of this scheme as presented in the drawings and documents listed in the Appendix to this report, and has not examined or verified compliance of the design with any other criteria or standard.
- 1.7 The object of this Audit is to identify any existing road safety related problems that may be exacerbated or any new problems that may be introduced by the proposals.
- 1.8 Whereas details of any recorded injury accidents were not provided, a search of 'Crashmap' data system identified that within the five year period 1st January 2011 to 31st December 2015, one injury accident classified as 'Slight' is shown to have occurred in December 2013, some distance north of the junction with Meadow Way. A further three injury accidents were shown to have occurred south of Meadow Way, close to the junction with Elmcroft Place, in which one of those events was classified as Serious involving one vehicle during April 2015, whilst the other two were classified as Slight, one involving two vehicles during May 2011 and the other during June 2015 also with two vehicles. Consequently, there would not appear to be any existing problems that might be exacerbated by the proposals.
- 1.9 Details of predicted traffic flows were provided for this Audit, together with description of proposed traffic signal operations that were incorporated into the provided Extract of the Transport Assessment document.
- 1.10 Regarding Departures from Standards, notation on the Design Drawing indicates that "TD50/04 relating to allowance for Exceptions to Standards at traffic signalised at existing junctions within urban areas". Consequently, "Agreement from the Highway Authority would need to be sought for a Departure from Standard".
- 1.11 Any problems and recommendations identified in this report are considered of sufficient importance to warrant attention and where feasible, each are uniquely referenced on the Key Plans attached at Appendix B.

** ** *

2 ITEMS RAISED AT THE PREVIOUS STAGE 1 ROAD SAFETY AUDIT

- 2.1 A previous Road Safety Audit Report on the proposed S278 Highway Works was available for this amended Stage 1 Road Safety Audit.
- 2.2 The Road Safety related items raised at paragraphs A3.1 and A5.2 of that previous Stage 1 Report appear resolved in the Amended Design. However, items previously raised at paragraphs A3.2 and A5.1 appear to partially remain problems and are referred to again in this current Road Safety Audit Report.

** ** ** ** ** ** **

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT.

3.1 GENERAL

3.1.1 No road safety related items are identified in this category at this Stage 1.

3.2 LOCAL ALIGNMENT

3.2.1 No road safety related items are identified in this category at this Stage 1.

3.3 JUNCTIONS

3.3.1 **PROBLEM** *(Drawing ref: 3258/GA/004 Rev C & /ATR/003 Rev B)*

Location: (A) A29 Westergate Street, south of the junction with Meadow Way and the new access road.

Summary: Risk of inadequate forward visibility of stop line, waiting vehicle(s) and/or waiting pedestrians.

The proposed forward visibility distances indicated on the Design Drawings are shown as below Standard and will require a Departure to be sought. Whereas the current proposals for northbound drivers forward visibility of the offside primary signal head is shown as 59m and notation included that it accords with MfS SSD for a speed of 37mph, (which during the site inspection was generally observed as such passing speeds), the nearside primary signal head is shown to only be 37m. Whilst it appears that since the earlier Stage 1 some changes to the northbound stop line position may have been carried out, northbound drivers forward visibility of a vehicle waiting at the stop line or of any pedestrians waiting at the west side to cross the A29 carriageway or in the process stepping off the footway, may still be hidden from clear view. It also appears likely that the offside signal head may at times be hidden from view by passing southbound buses and other high sided vehicles.

It is also understood from the Designer that “the junction would serve approximately 350 dwellings and operate within capacity when assessed up to 2017. Queuing on the A29 reached 18 vehicles in the Northbound direction and 14 vehicles in the southbound direction in the AM peak and 11 vehicles in the Northbound direction and 21 vehicles in the Southbound direction in the PM peak”. Consequently, concern arises that risk of northbound tail-end shunt conflicts at this junction may be higher than other signalised junctions, especially when large numbers of vehicles previously queuing at the level crossing are released when gates are opened and also congestion may result, or danger arise if northbound vehicles unexpectedly swerve into the bellmouth of Meadow Way when passing stationary right turning traffic, as indicated on the Swept Path Analysis Drawing.

RECOMMENDATION

The proposed junction design may need to be revisited with a view to investigating scope for shifting the northbound stop line and corresponding signal poles a few more metres further southwards of the currently shown position, which may also provide safer scope for large vehicles turning sharp left manoeuvre from the new site access road. A high level off-side secondary signal head may also need to be included.

The yellow box markings indicated for the southbound traffic flow may also need to be extended to also include the northbound through flows.

It is further recommended that high friction surfacing should also be incorporated on the northbound approach for sufficient length to mitigate the potential northbound vehicle queuing and risk of failure to perceive the red lights associated with the signalised junction and pedestrian crossing facility.

3.4 NON MOTOR VEHICLE PROVISIONS

3.4.1 No road safety related items are identified in this category at this Stage 1.

3.5 SIGNS, ROAD MARKINGS AND STREET LIGHTING

3.5.1 **PROBLEM** *(Drawing ref: 3258/GA/004 Rev C)*

Location: (B) A29 Westergate Street, at the approaches to the new signalised junction.

Summary: Risk of failure to perceive new junction control ahead.

The proposed new signalised junction may not be perceived by some drivers, particularly those who may be non-local or visiting tourists using this annual holiday route.

RECOMMENDATION

The proposed signing works should also include appropriate temporary warning signs to TSRGD Diagram 7014 for a slightly longer period of say six months to alert visiting drivers to the new signalised junction.

** ** No further road safety related items are identified at this Stage 1. ** **

4 AUDIT TEAM STATEMENT

- 4.1 We certify that this Road Safety Audit has been carried out in accordance with HD 19/15.

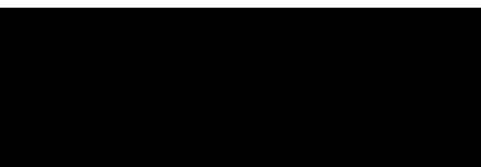
ROAD SAFETY AUDIT TEAM LEADER

Ted Smith CoC
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Signed

Date

23rd January 2017



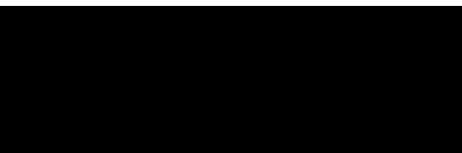
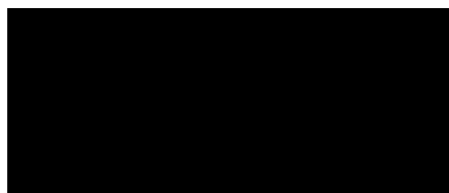
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Highways Consultancy
Farthings
Grants Lane
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Surrey
RH8 0RH

Signed

Date

23rd January 2017



APPENDIX A

LIST OF DOCUMENTS EXAMINED

Drawing No	Date	Scale	Description
3258/GA/04 Rev C	09/11/2016	1:250 @ A1	Site Access General Arrangement Option 3
3258/ATR/003 Rev B	13/01/2017	1:250 @ A1	Site Access A29 Northbound Swept Path Analysis
3258/ATR/010 Rev A	09/11/2017	1:250 @ A1	Site Access – Option 3 Swept Path Analysis for Bus, Articulated HGV, Large Refuse Truck and Car
Sketch Diagram----	--	--	AM & PM Peak Hour Traffic Flows
Report	30/11/2013	--	Stage 1 Road Safety Audit Report of a previous Design. (No Designers Response available)
Search of Crashmap	--	--	Recorded Injury Accident Plot 01/01/2011 to 31/12/2015
Report	January 2017	--	Extract of Section 4 (Development Proposal) from Transport Assessment Includes description of how the access junction and traffic signals will operate.
Email	13/10/2016, 09/01/2017 & 17/01/2017	--	Audit Brief Amended Design Drawings and Instructions (WSP)
** ** ** ** ** ** ** ** ** ** **			

APPENDIX B

KEY PLAN

Copy of Drawing numbered 3258/GA/004 Rev C



FOR DISPOSITION REFER TO AGENT

FORWARD: VICTORY (SSU) TO REARBASE: FRONTIER SIGNAL NEAR BOM (DEPENDENT ON
COMPLETION OF MILITARY BOUNDARY AT DATE OF SETTING - SEE INSIDE)

8300 RECORDS INDICATE PROPERTY BOUNDARY WITH FOOTING. IT IS ASSUMED THAT 8300 BOUNDARY
BOUNDARY IS ACTUALLY IN BACK OF FOOTING. TO BE CONFIRMED WITH 8300.

FORWARD WHEELS (FWD) TO DETECT POORLY
SOME SEAL CAN BE ADJUSTABLE

STIFF SHINY GREEN.....
 2nd FERTILE SEED.....
 WITHIN 31.5cm, 300TH 31.5cm
 AVERAGE SPEED.....
 22.5cm, 300TH 29.5cm

DESIGNING CROWN LINE DATA TO BE ADDED TO
INTERMEDIATEAL SKETCHES AHEAD OF DETAILED DESIGN

JANUARY 1960

COLE & COLE ENGINEERING, CONVEY TO-
BE EXTENDED AND REASON WHY AHEAD OF
DETAILED DESIGN

DO NOT BE REMOVED AND REPLACED
WITH ARCHIVES IN REAR YARD
PRECISE LOCATION UNRECORDED

USE PASSENGER VEHICLE (SSV) TO OFFER
PRIMARY SCHOOL TRIP. ADVISABLE. THIS ACCORDING
WITH THE BUS REGISTRATION SSV FOR A
SCHOOL TRIP OF 1000.

FORWARD VICTORY (CO) TO MARSHAL
DUNNITY FROM HEAD QUARTERS, 10m

DATE & DATE TOPOGRAPHICAL SURVEY TO BE
EXTENDED TO INCLUDE HIGHWAY BOUNDARY.
INFORMATION CURRENTLY BASED ON AERIAL
SURVEY SUBJECT TO CORRECT CO-ORDINATE

2000 SEC. DESSABLE NUMBER FORMED VASILEY
1999 TO 2000 SEC. DESSABLE NUMBER FORMED VASILEY
DUE TO PRESENCE OF EXISTING HOLDING

FORMING VISIBILITY USED TO OBSERVE
 OBJECTS FROM NEAR AIRPORT. IN-

POINTS TO BEG. 543, END. 572 AND END. 584 TO BE
FOUNDED ON APPROXIM WITH RECORDED DISCREPANCY
MINIMUM 500. EXACT LOCATIONS TO BE COMPARED



Abstract

THE UNIVERSITY OF CHICAGO PRESS

2019-2020		
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N DISTRICT

**B**

INSET A

SEN. 4



DEPT. C

153 C

CALANONES

LAND AT WESTERGATE

ORGANOSTEPTINE

SITE ACCESS
GENERAL ARRANGEMENT
CONTINUED

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Appendix C

DEPARTURES FROM STANDARDS

11/5/11

CONFIDENTIAL

REPORT N° 70013258-002

LAND AT WESTERGATE

SITE ACCESS DESIGN STATEMENT

PUBLIC

JANUARY 2017

LAND AT WESTERGATE
SITE ACCESS DESIGN STATEMENT
Cala Homes

Public

Project no: 70013258
Date: January 2017

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QUALITY MANAGEMENT

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Signature				
Checked by	Chris Williams	Chris Williams	Chris Williams	Chris Williams
Signature				
Authorised by	Rhod MacLeod	Luke Beeching	Luke Beeching	Luke Beeching
Signature				
Project number	11790134	70013258	70013258	70013258
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2	RELEVANT DESIGN STANDARDS.....	2

APPENDICES

A P P E N D I X I DEPARTURES FROM STANDARDS FORMS

A P P E N D I X I I SITE ACCESS DRAWINGS

1

INTRODUCTION

- 1.1.1 This document has been prepared to assist West Sussex County Council in the review of the proposed site access junction for the development of land at Westergate, east of the A29. The proposed access junction is shown on Drawing 3258/GA/004 and will initially serve up to 350 dwellings. In preparing the design, consideration has also been given to the potential future use of the access as a bus route for an East-West link to Barnham Station via the larger Barnham Eastergate Westergate strategic allocation. A swept path analysis for the junction is shown on Drawings 3258/ATR/003 and 3258/ATR/010. This document should be read in conjunction with the Transport Assessment completed for the site, plus the completed WSCC Departures from Standard Form included as an Appendix to this document.
- 1.1.2 The proposed access junction has been designed to a preliminary design standard only, and should be subject to detailed design and a Stage Two Road Safety Audit prior to construction.

2

RELEVANT DESIGN STANDARDS

- 2.1.1 Table 1 overleaf provides a summary of the relevant design standards which have been applied to the proposed site access junction and also identifies where a relaxation or departure from standard is required.
- 2.1.2 It is worth noting that the A29 to the south of the proposed access junction is already subject to Stopping Sight Distance (SSD) values which are two steps below the Desirable Minimum standards for an Urban Road with a 60kph (30mph speed limit) design speed (based on Table 3 of DMRB TD 9/93). The maximum achievable SSD is 50m for parts of the A29 northbound carriageway to the south of the proposed junction, due to the curvature of the road and residential properties located on the west of the A29.
- 2.1.3 The installation of traffic signals at this location will lead to stationary traffic at the junction where the existing situation seldom has waiting traffic. There will, however, be sufficient warning of this stationary traffic through warning signs and the traffic signals. The risk of conflict between vehicles on the A29 and vehicles exiting Meadow Way will be reduced.
- 2.1.4 A speed survey of the site has been carried out from which an 85%ile wet weather speed of 46.7kph has been calculated for northbound traffic. This corresponds to a Manual for Streets SSD of 40.9m. This visibility is achievable in both the existing and proposed situations.
- 2.1.5 It therefore follows that the safety of the proposed junction design is consistent with the existing situation. SSD values will be similar before and after the works. There will be stationary traffic at the junction where before there was little, but there will be sufficient warning of the junction. The proposed pedestrian crossings are signalised, further mitigating the reduced SSD.

Table 1 – Review of Relevant Design Standards

DMRB REFERENCE	TITLE	PARAGRAPH / TABLE	DESIGN STANDARDS	DESIGN OUTCOME	HOW WAS DESIGN CHECKED AGAINST STANDARD?	RELAXATION OR DEPARTURE FROM STANDARD REQUIRED?
Volume 6, Section 2, Part 3	TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts	Paragraph 2.2	Design Speed. Reference to TD 9/93 Table 2 (DMRB 6.1.1)	Design speed of 60kph selected for design based upon existing 30mph speed limit in an urban area.	N/A	No
Volume 6, Section 2, Part 3	TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts	Paragraphs 2.6 to 2.8	Visibility on the Approach to Junctions. Reference to TD 9/93 Table 3 (DMRB 6.1.1) shows that the Desirable Minimum Sight Stopping Distance (SSD) for a 60kph road is 90m, one stop below is 70m and two steps below is 50m. Visibility on the Approach to Junctions, to the back of queue	The SSD on the northbound approach to the offside primary signal head is approximately 65m. The SSD on the northbound approach to the nearside primary signal head is approximately 37m. The Desirable Minimum SSD of 90m is achieved to the back of queue on the A29 southbound, but not northbound. Minimum northbound SSD to back of queue = 50m	Geometry check	Yes
Volume 6, Section 2, Part 3	TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts	Paragraphs 2.10 to 2.18	Junction Intervisibility Zone. 2.5m behind the stop-line across the full carriageway width for each arm.	The required junction intervisibility zone is achieved between the northern and side arms, but not between the southern and side arms.	Geometry check	Yes

DMRB REFERENCE	TITLE	PARAGRAPH / TABLE	DESIGN STANDARDS	DESIGN OUTCOME	HOW WAS DESIGN CHECKED AGAINST STANDARD?	RELAXATION OR DEPARTURE FROM STANDARD REQUIRED?
Volume 6, Section 2, Part 3	TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts	Paragraphs 2.19 to 2.21	Corner Radii. Minimum radius of 6m in urban areas.	Corner radii of 8m or greater are provided on all approaches.	Geometry check.	No
Volume 6, Section 2, Part 3	TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts	Paragraphs 2.22 to 2.24	Carriageway Widths. For new junctions entry lane widths should be between 3m and 3.65m. The widths for straight ahead entry lanes may be reduced to 2.5m where an uncontrolled junction is being improved or modified.	Entry lane widths on the two A29 approaches are 3.0m, which are continued through the junction. The entry lane width on the new site access is 3.25m and on Meadow way is 2.5m.	Geometry check	No
Volume 6, Section 2, Part 3	TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts	Paragraphs 2.34 to 2.37	Swept Path Requirements. Adequate turning radii should be provided for the swept paths of all types of vehicles using the junction, including the design vehicle where provision is to be made for large goods vehicles.	The junction geometry is able to accommodate the swept path of a 10.0m long rigid HGV and bus. Refer to drawing 3258/ATR/010.	Use of 'Autotrack' computer software	No

Appendix I

DEPARTURES FROM STANDARDS FORMS

SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land at Westergate, West Sussex
Applicant Organisation	WSP Parsons Brinckerhoff
Applicant Ref	70013258
Highway Authority Ref	
Applicant Contact Details	
Date Submitted	10/11/16

1) PROJECT DETAILS

A	Description	Proposed S278 traffic signal site access junction at the existing A29 / Meadow Way junction and proposed new access road into residential development east of the A29. The junction will serve up to 350 dwellings.
B	Location	As above
C	Road Category	TA 79/99 UAP3
D	Road Type	S2
E	Design Speed	60 kph (determined by TD 9/93 Urban Road Speed Limit)
F	Speed Limit	30mph
G	Traffic Flows	AAWT 14154 two way
H	NMU Flows	-

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Intervisibility between junction stop lines
B	Relevant Standard(s)	Junction intervisibility zone, DMRB Vol 6 Section 2 Part 3 TD50/04 Para 2.10 to 2.16
	Clause	
C	Difference Between Standard(s) and proposed design	The standard requires visibility from a line 2.5m behind each stop line to a line 2.5m behind the adjacent stop lines. Between the southern A29 arm, Meadow Way and the eastern junction arm there are obstructions blocking this intervisibility.
D	Reason for Departure (overview)	Existing residential boundary fences and hedges on A29. Proposed controlled pedestrian crossings at junction require stoplines to be set back further than a standard crossroads configuration.
E	Associated Project Departures	N/A
F	Other Options Considered	Location of stop-lines located further forward to improve intervisibility. This however leads to confusing tactile paving layouts for adjacent crossings on south western site of the junction.

3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Obstructed intervisibility will mean vehicles turning cannot see some potential hazards from the stationary waiting location, such as crossing pedestrians or stopped cars. Vehicles turning south from the eastern arm will be most affected. Controlled pedestrian crossings will reduce chance of pedestrians crossing road in conflict with vehicles. Proposed signal staging configured so pedestrian stage operates following main road or Meadow Way to minimise potential conflict between site access and pedestrian crossing on southern arm.
B	Congestion/ Delay	
C	Environmental / sustainability	Provision of pedestrian crossings on all approaches encourages walking trips to / from the site.
D	Capital and whole life cost/value	Can be delivered within land owned by WSCC or developer.
E	Accessibility	
F	Integration	
G	Structural	
H	Network resilience & Maintenance	

4) COMPENSATORY MEASURES

A	Included Measures	Yellow box junction marking provided to assist with precautionary approach by west bound vehicles. All red extending detector loops to be considered during detailed design to ensure junction is clear before allowing movements with poor intervisibility. MOVA detection will facilitate precise stage change operation thereby reducing possibility of vehicles running amber lights and conflicting with pedestrian movements.
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

Given the constrained location of the junction it is considered that the benefits of providing the junction and pedestrian crossings outweigh the potential risks, especially if the compensatory measures discussed above are installed.

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	3258/GA/004 Rev C (Appendix 2 of Site Access Design Statement) 3258/ATR/010 Rev A (Appendix 2 of Site Access Design Statement)
B	Consultations	WSCC
C	Other Information	

7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	
NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED	☐	2-APPROVED WITH COMMENTS
		☐	3- REJECTED
COMMENTS			

SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land at Westergate, West Sussex
Applicant Organisation	WSP Parsons Brinckerhoff
Applicant Ref	70013258
Highway Authority Ref	
Applicant Contact Details	
Date Submitted	10/11/16

1) PROJECT DETAILS

A	Description	Proposed S278 traffic signal site access junction at the existing A29 / Meadow Way junction and proposed new access road into residential development east of the A29. The junction will serve up to 350 dwellings.
B	Location	As above
C	Road Category	TA 79/99 UAP3
D	Road Type	S2
E	Design Speed	60 kph (determined by TD 9/93 Urban Road Speed Limit)
F	Speed Limit	30mph
G	Traffic Flows	AAWT 14154 two way
H	NMU Flows	-

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Forward visibility (SSD) on northbound approach to traffic signals
B	Relevant Standard(s)	DMRB desirable minimum of 90m, DMRB Vol 6 Section 1 Part 1 TD9/93 Junction visibility, DMRB Vol 6 Section 2 Part 3 TD50/04 Para 2.8
	Clause	
C	Difference Between Standard(s) and proposed design	The forward visibility (SSD) to the back of queue is approximately 50m. Forward visibility to nearside primary signal is 37m. The DMRB desirable minimum of 90m is not achievable. One step below the desirable minimum is 70m for a road with a 30mph speed limit and two steps below the desirable minimum is 50m.
D	Reason for Departure (overview)	Existing residential boundary fences on western side of A29.
E	Associated Project Departures	N/A
F	Other Options Considered	

3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Limited visibility of queuing traffic and primary signal heads in northbound direction may lead to rear-shunt accidents. Existing safety issue associated with visibility to and from the A29 northbound carriageway at the junction with Meadow Way, although signalised junction will increase amount of stationary traffic at this location. Provision of controlled pedestrian crossings on all approaches will improve safety for pedestrians.
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B	Congestion/ Delay	
C	Environmental / sustainability	Provision of pedestrian crossings on all approaches encourages walking trips to / from the site.
D	Capital and whole life cost/value	Can be delivered within land owned by WSCC or developer.
E	Accessibility	
F	Integration	
G	Structural	
H	Network resilience & Maintenance	

4) COMPENSATORY MEASURES

A	Included Measures	Installation of signs to Diagram 543 and Diagram 584 (TSRGD) to be provided on A29 northbound approach to signals. The use of coloured high friction surfacing will be reviewed during detailed design. Offside primary signal head to be provided facilitating 65m SSD. MOVA control to affectively manage queues as efficiently as possible reducing queue length. Junction could be configured to rest on main road green to further minimise vehicle stops.
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

Given the constrained location of the junction and the existing sub-standard visibility on the A29 northbound approach, it is considered that the benefits of providing the junction outweigh the potential risks, provided that the compensatory measures discussed above are installed. The ATC undertaken on the A29 in September 2016 showed a seven-day 85th percentile speed of 31.5mph northbound, which corresponds to sight-stopping distances of 46m (based on Manual for Streets guidance), which can be achieved.

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	3258/GA/004 Rev C (Appendix 2 of Site Access Design Statement) 3258/ATR/010 Rev A (Appendix 2 of Site Access Design Statement)
B	Consultations	WSCC
C	Other Information	

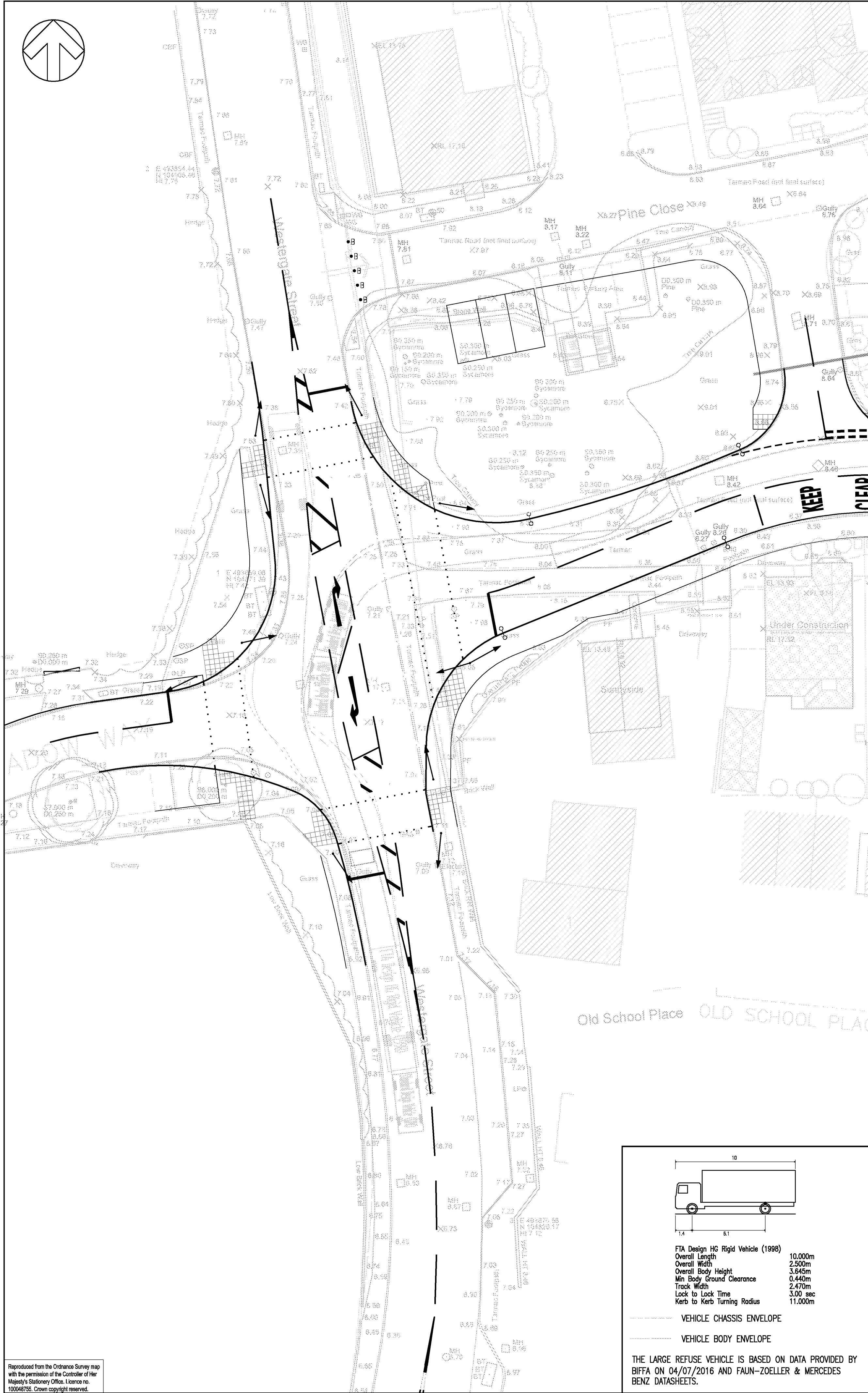
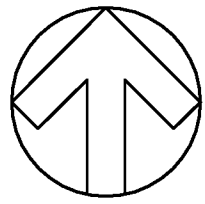
7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	

NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED ☐	2-APPROVED WITH COMMENTS ☐	3- REJECTED ☐
COMMENTS			

Appendix II

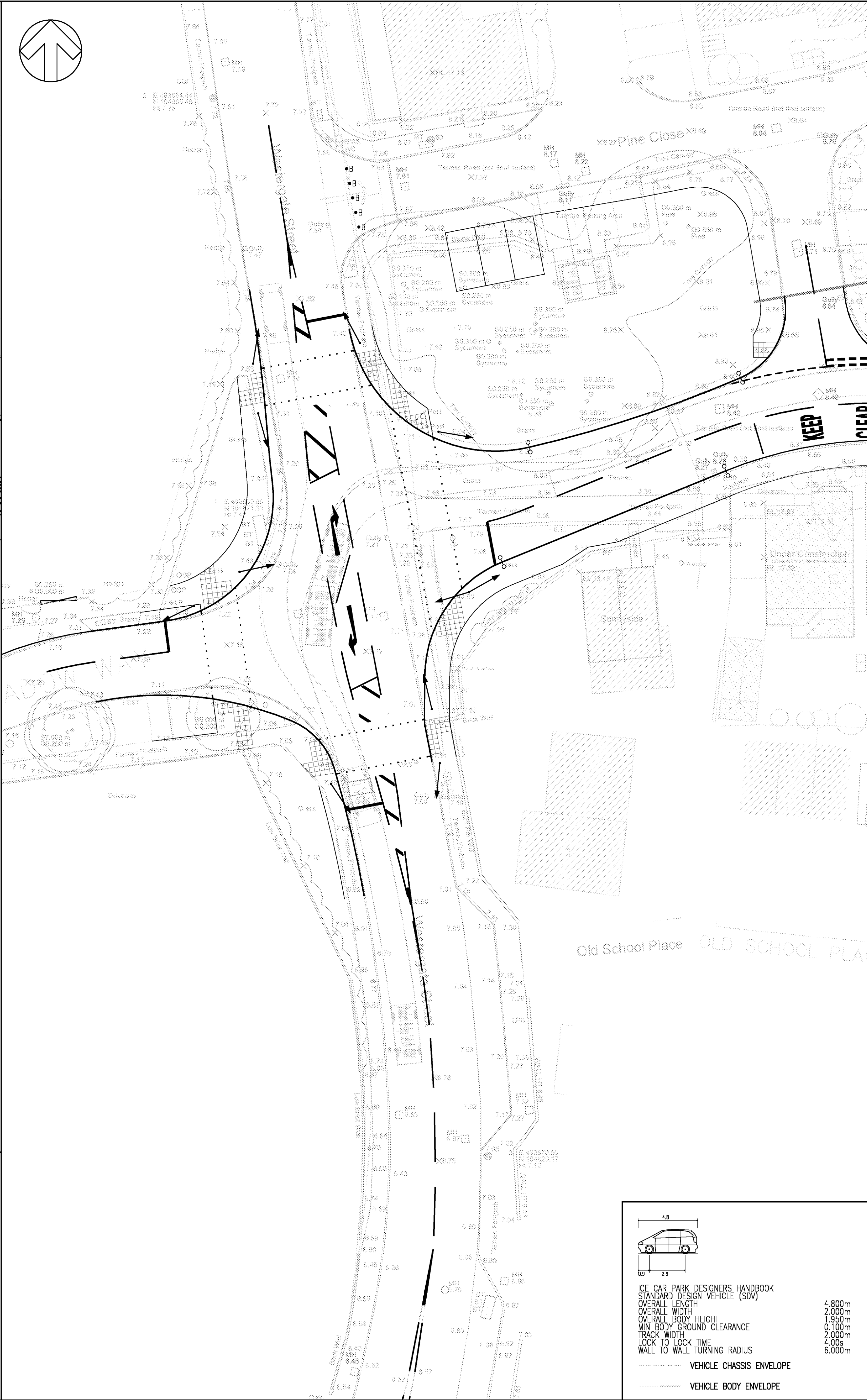
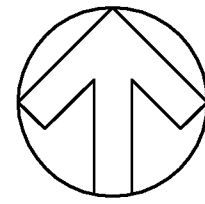
SITE ACCESS DRAWINGS



FTA Design HG Rigid Vehicle (1998)
Overall Length 10.000m
Overall Width 2.500m
Overall Body Height 3.645m
Min Body Ground Clearance 0.440m
Track Width 2.470m
Lock to Lock Time 3.00 sec
Kerb to Kerb Turning Radius 11.000m

----- VEHICLE CHASSIS ENVELOPE
----- VEHICLE BODY ENVELOPE

THE LARGE REFUSE VEHICLE IS BASED ON DATA PROVIDED BY
BIFFA ON 04/07/2016 AND FAUN-ZOELLER & MERCEDES
BENZ DATASHEETS.



ICE CAR PARK DESIGNERS HANDBOOK
STANDARD DESIGN VEHICLE (SDV)
OVERALL LENGTH 4.800m
OVERALL WIDTH 2.000m
OVERALL BODY HEIGHT 1.950m
MIN BODY GROUND CLEARANCE 0.100m
TRACK WIDTH 2.000m
LOCK TO LOCK TIME 4.00s
WALL TO WALL TURNING RADIUS 6.000m

----- VEHICLE CHASSIS ENVELOPE
----- VEHICLE BODY ENVELOPE

DO NOT SCALE

NOTES

- VEHICLES HAVE BEEN TRACKED AT 16kph, EXCEPT FOR THE 10M RIGID HGV, WHICH WAS TRACKED AT 10kph.
- THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN DATED NOVEMBER 2012.
- THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.
- REFER TO WSP | PARSONS BRINCKERHOFF DRAWING 3258/GA/006 FOR GENERAL ARRANGEMENT OF JUNCTION OPTION 3 (OR DRAWING 3268/GA/004 FOR DETAILED GENERAL ARRANGEMENT).

KEY

- SIGNAL HEAD
- PEDESTRIAN BOLLARD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)

B	13/01/2017	PM	SECOND ISSUE	CW	CW
A	19/08/2016	PM	FIRST ISSUE	CW	CW
REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS: FOR INFORMATION ONLY

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CLIENT: CALA HOMES

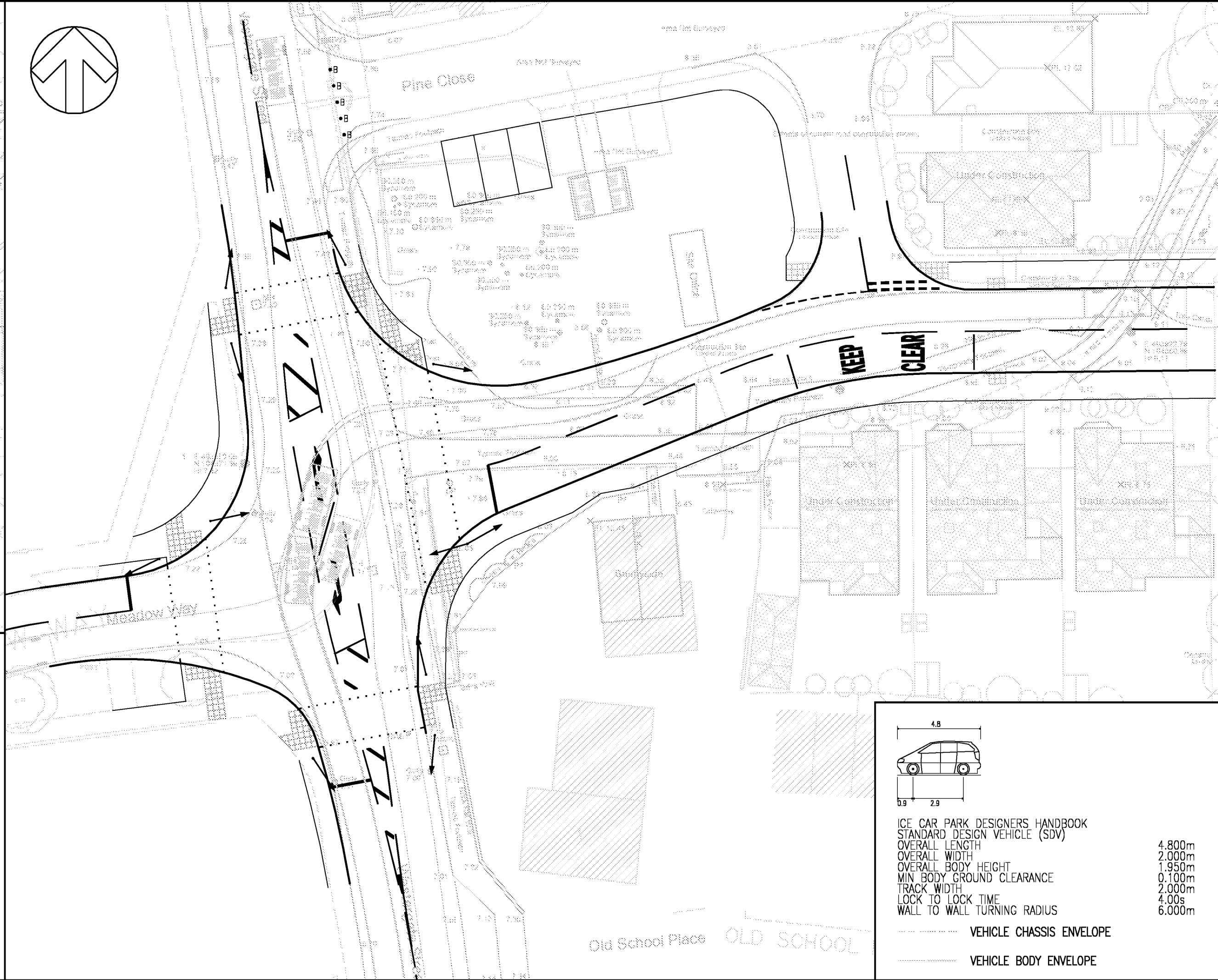
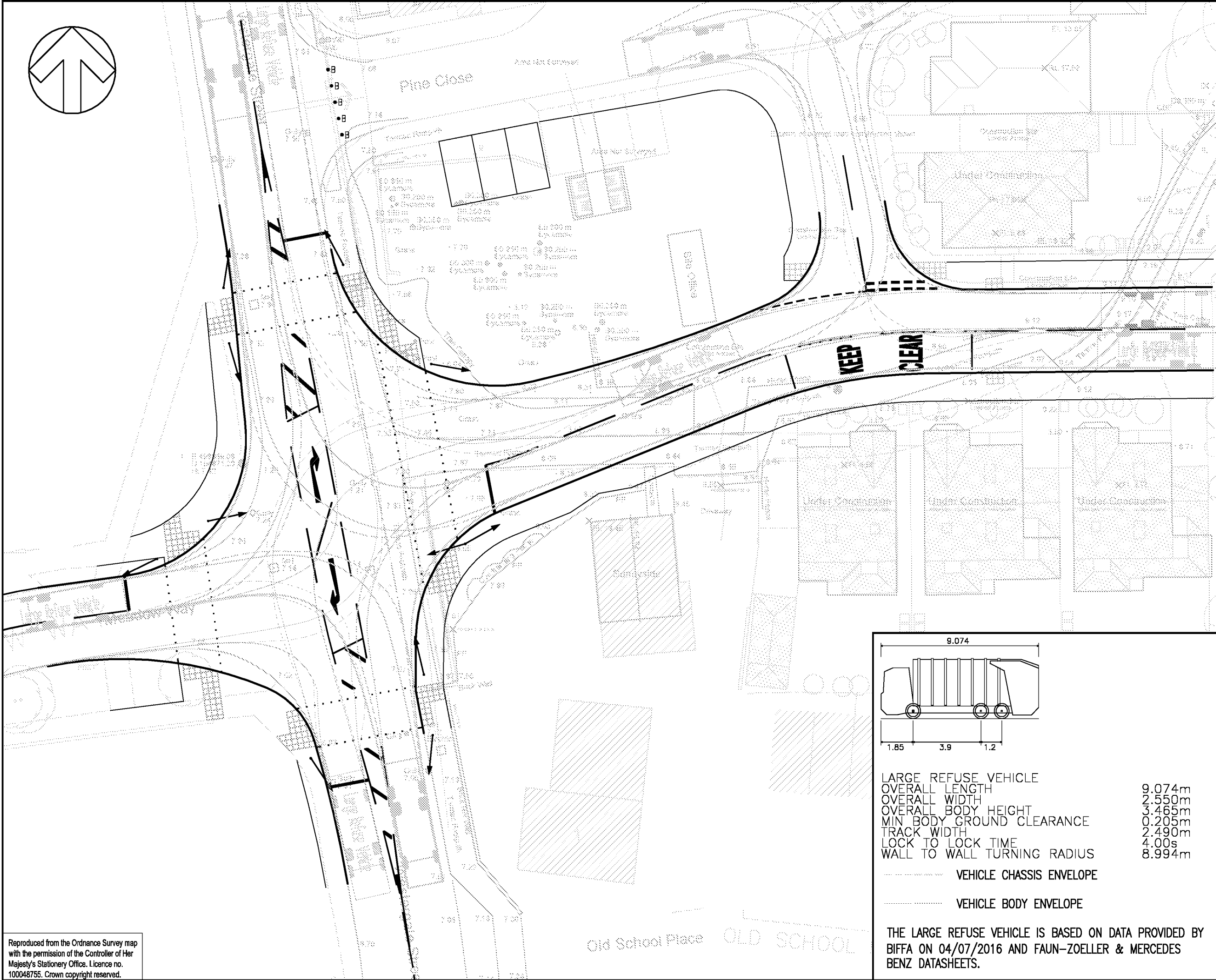
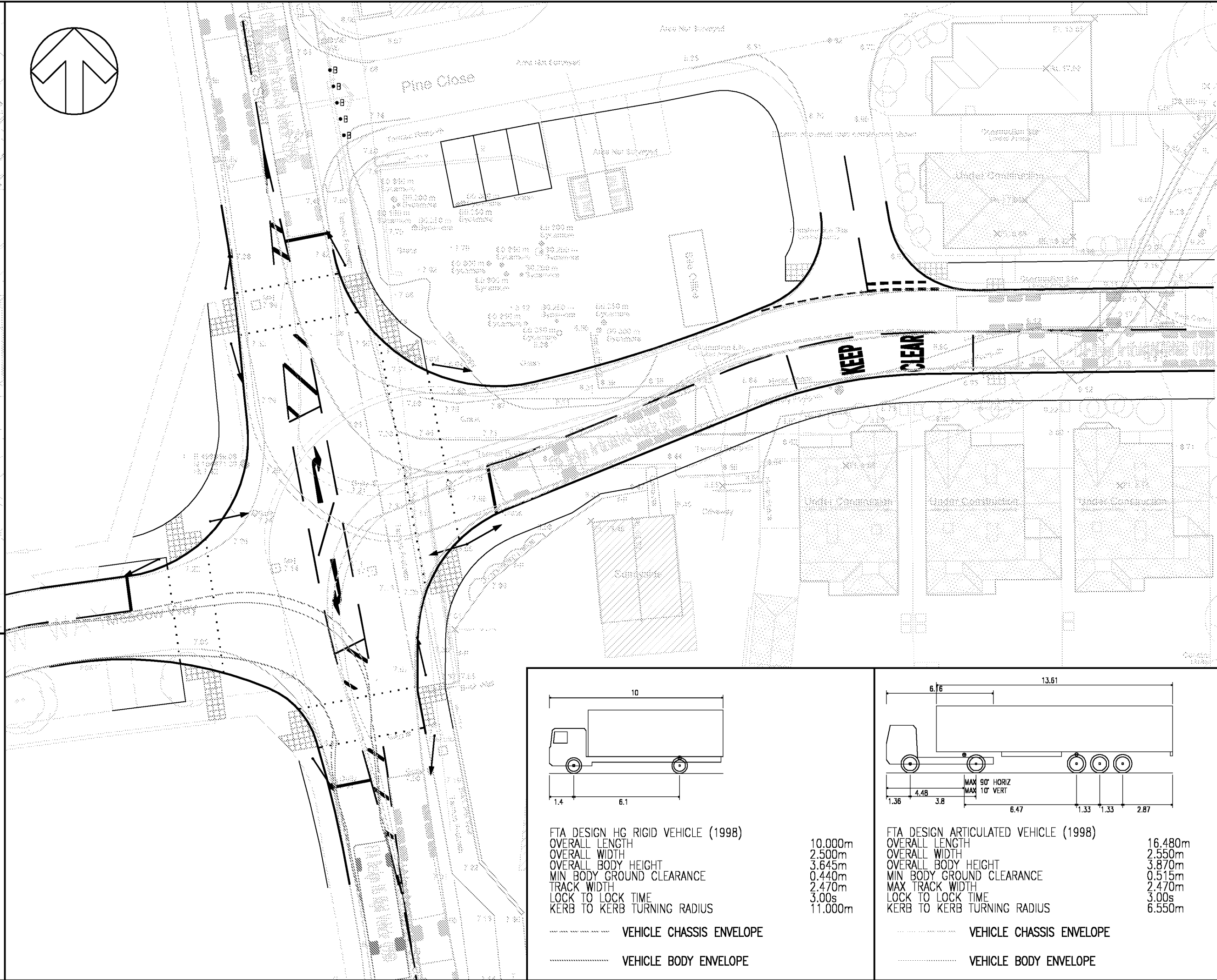
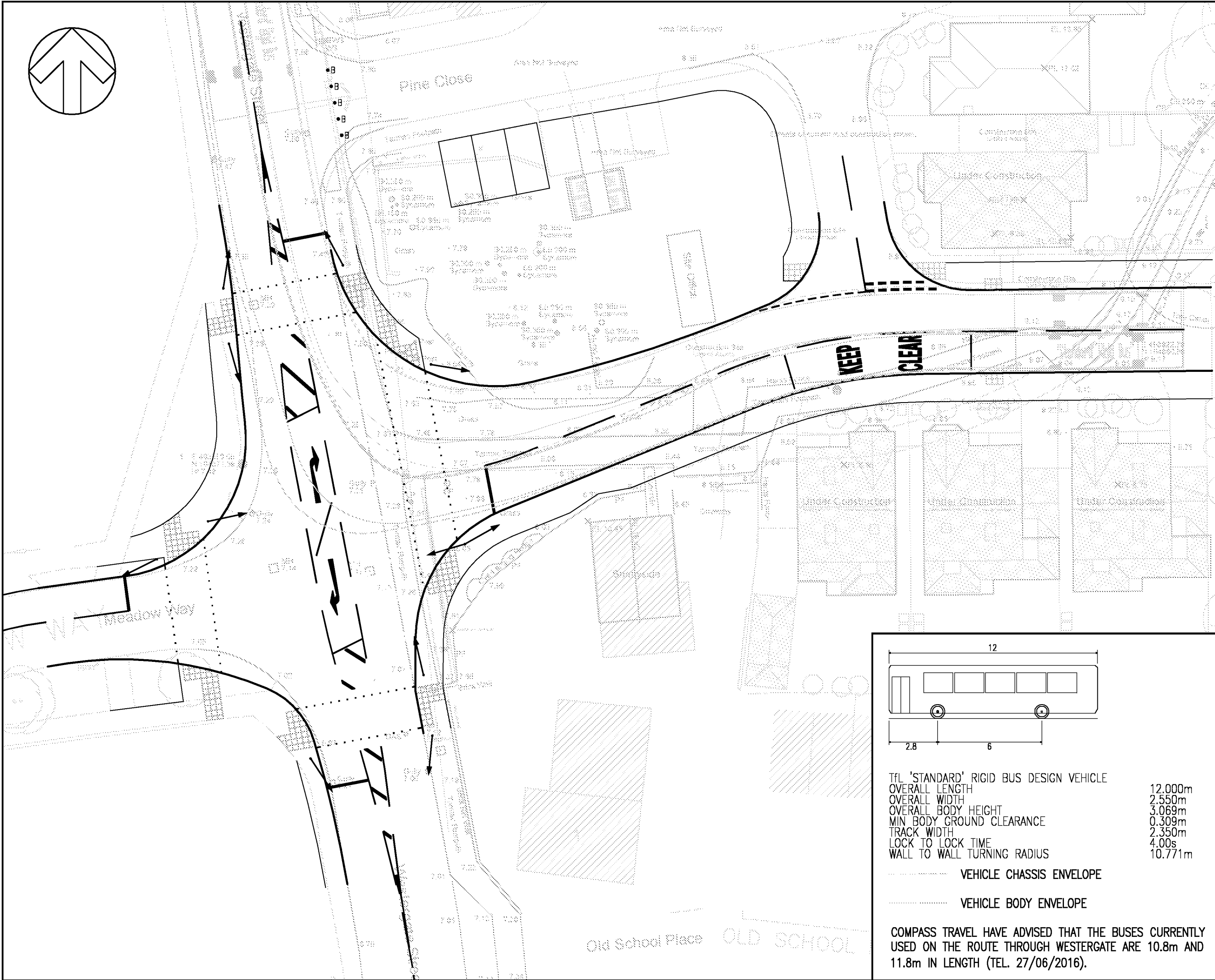
ARCHITECT: OSP

PROJECT: LAND AT WESTERGATE

TITLE: SITE ACCESS - A29 NORTHBOUND SWEPT PATH ANALYSIS

SCALE @ A1: 1:250	CHECKED: CW	APPROVED: CW
CAD FILE: 3258-ATR-003	DESIGN-DRAWN: PM	DATE: January 2017
PROJECT No: 70013258	DRAWING No: 3258/ATR/003	REV: B

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DO NOT SCALE

NOTES

- VEHICLES HAVE BEEN TRACKED AT 16kph, EXCEPT FOR THE ARTICULATED HGV, THE NORTHBOUND LARGE REFUSE VEHICLE TURNING WESTBOUND AND PARKING CAR WHICH WERE TRACKED AT 5kph.
- THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN DATED NOVEMBER 2012.
- THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.
- REFER TO WSP | PARSONS BRINCKERHOFF DRAWING 3258/GA/006 FOR GENERAL ARRANGEMENT OF JUNCTION OPTION 3.

KEY

- SIGNAL HEAD
- PEDESTRIAN BOLLARD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)

REV	DATE	BY	DESCRIPTION	CHK	APD
A	9/11/2016	MFB	FIRST ISSUE		

DRAWING STATUS:

FOR INFORMATION ONLY

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CLIENT:

CALA HOMES

ARCHITECT:

OSP ARCHITECTURE

PROJECT:

LAND AT WESTERGATE

TITLE:

**SITE ACCESS - OPTION 3 - SWEEP PATH ANALYSIS:
BUS, ARTICULATED HGV,
LARGE REFUSE TRUCK, CAR**

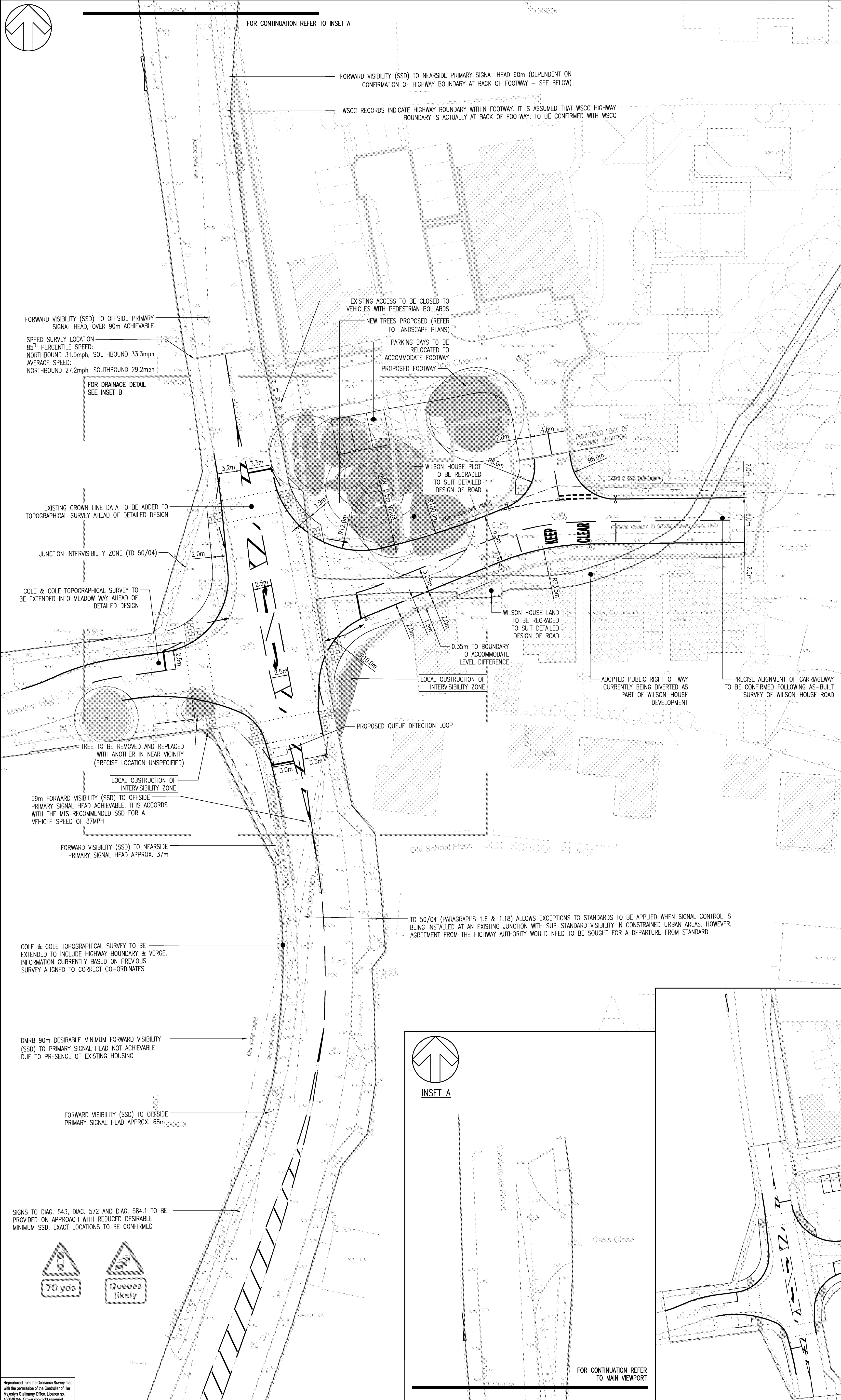
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1:250	LRB	CW

CAD FILE:	DESIGN DRAWN:	DATE:
3258-ATR-010	MFB	November 2016

PROJECT No:	DRAWING No:	REV:
70013258	3258/ATR/010	A

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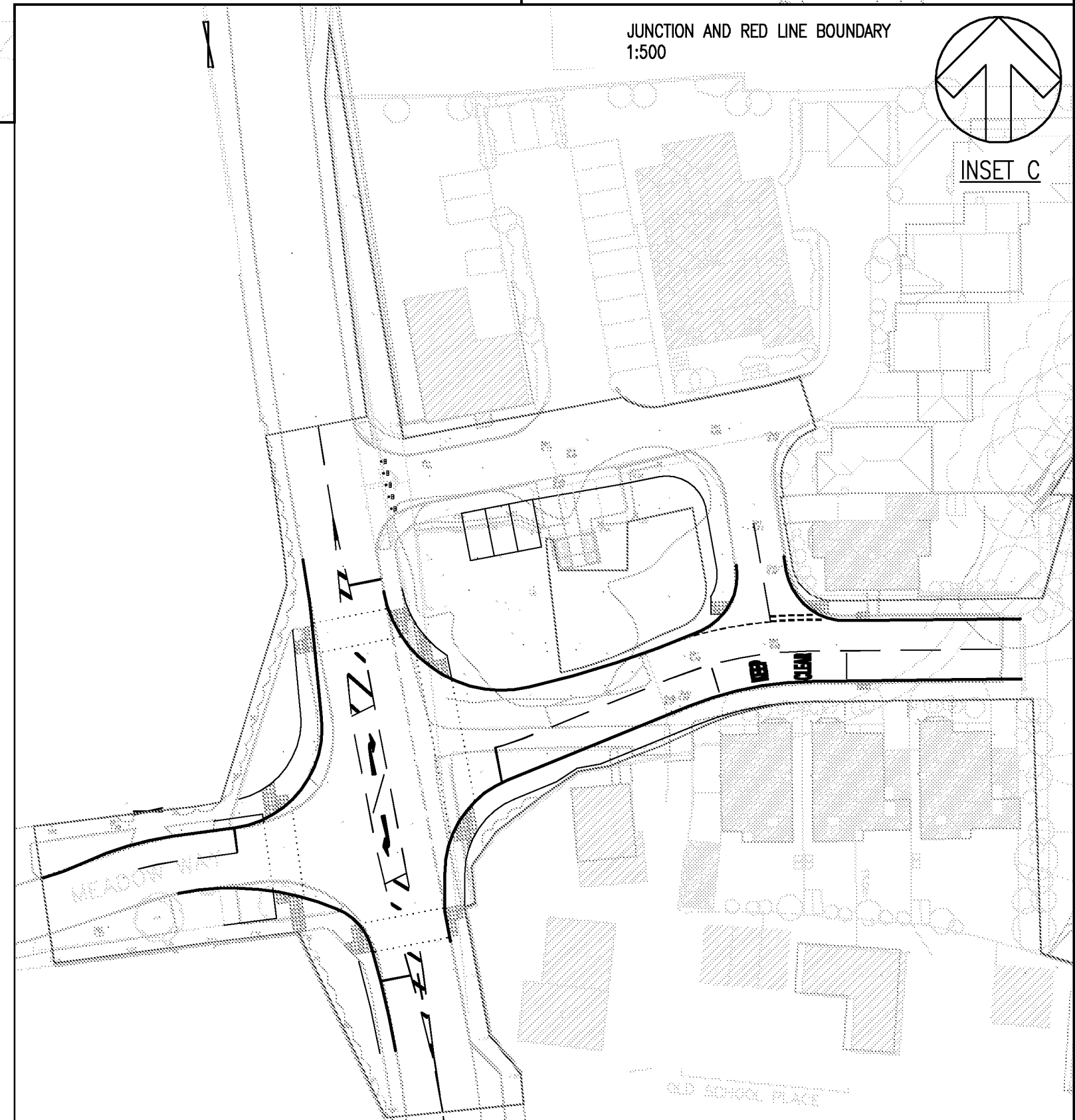
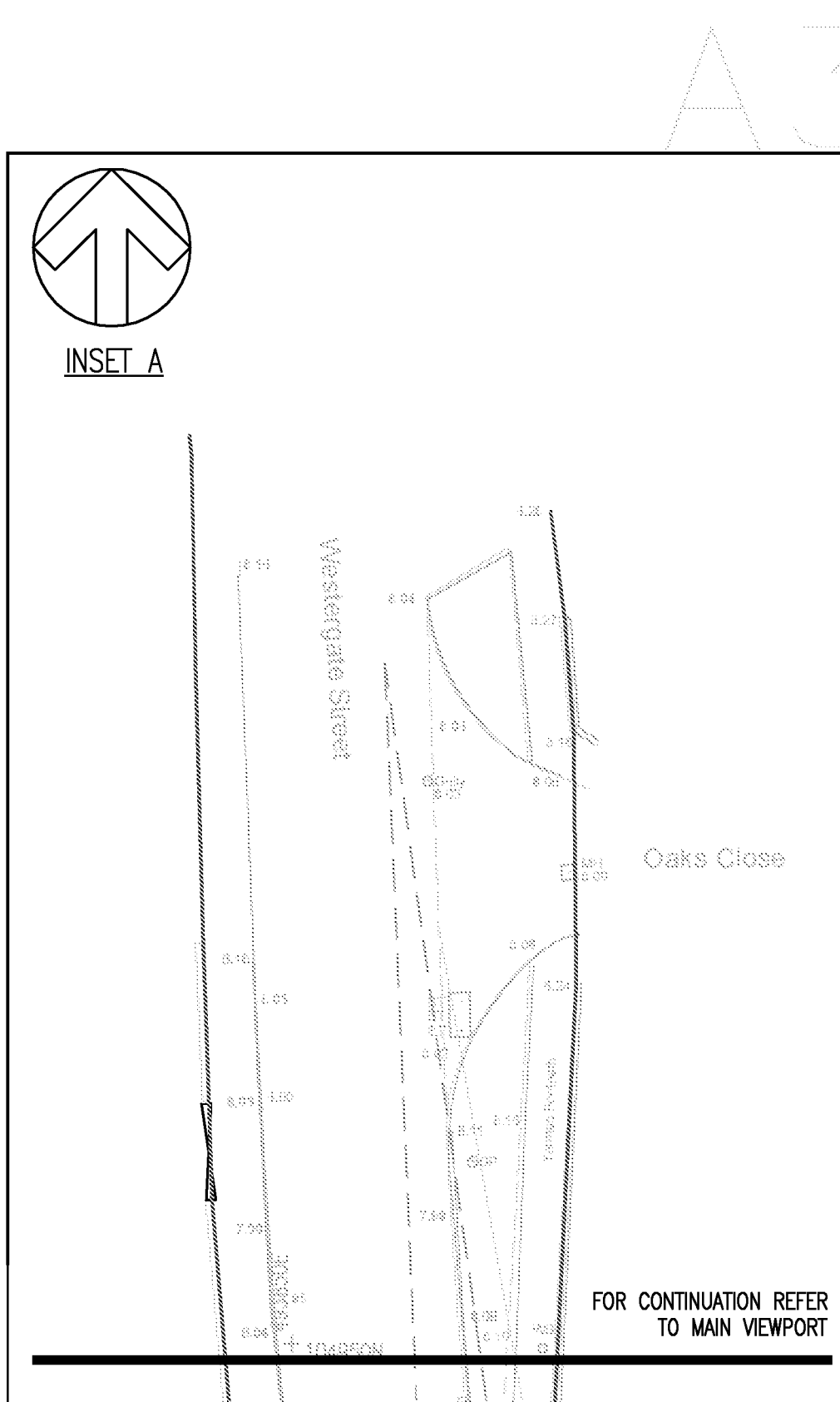
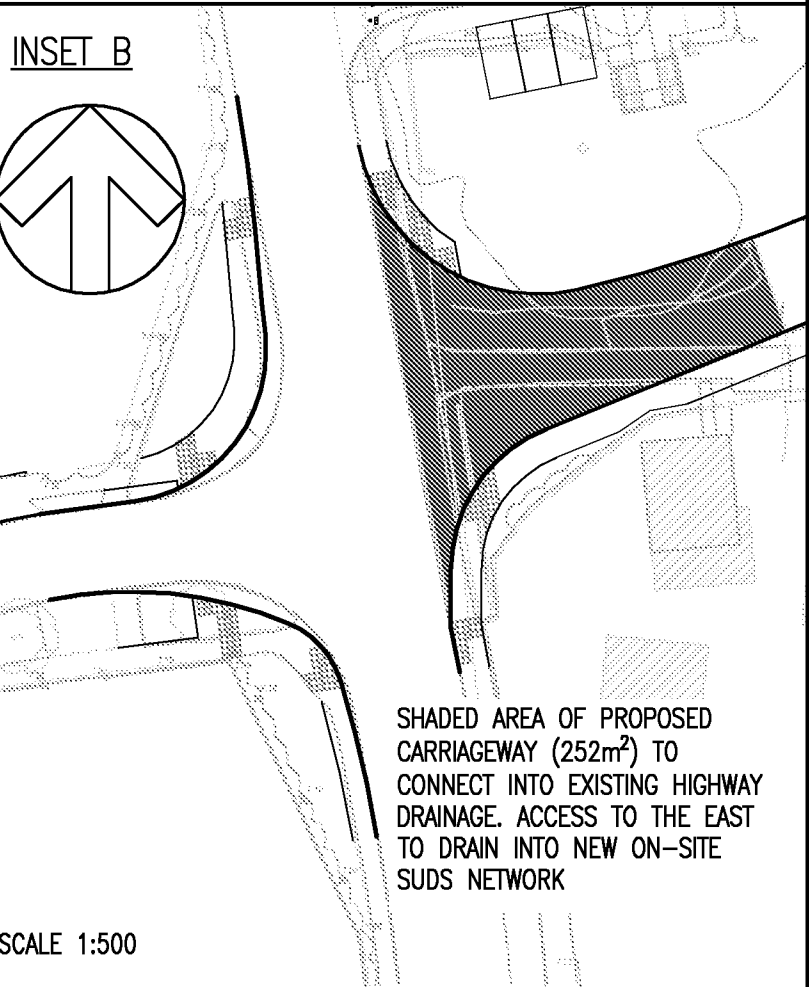
DO NOT SCALE

NOTES

- DMRB DESIRABLE MINIMUM SIGHT STOPPING DISTANCE (SSD) IS 90m FOR A ROAD WITH A 30MPH SPEED LIMIT (60KPH DESIGN SPEED). ONE STEP BELOW THE DESIRABLE MINIMUM IS 70m FOR A ROAD WITH A 30MPH SPEED LIMIT. ON THE NORTHBOUND APPROACH AGREEMENT FROM THE HIGHWAY AUTHORITY WILL THEREFORE NEED TO BE SOUGHT FOR A DEPARTURE FROM STANDARDS. MANUAL FOR STREETS GUIDANCE GIVES AN SSD OF 59m FOR A ROAD WITH A 37MPH DESIGN SPEED.
- WE HAVE NOT SOUGHT TO BECOME AWARE OF ANY INFORMATION RELATED TO HAZARDS THAT MIGHT AFFECT THE CONSTRUCTION OR MAINTENANCE OF THIS PROJECT. UNDER THE CDM REGULATIONS ANY DESIGNERS WHO PROGRESS THESE PROPOSALS FURTHER WILL NEED TO RECONSIDER THE DESIGN BASED UPON ANY INFORMATION WHICH SUBSEQUENTLY BECOMES AVAILABLE.
- THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN DATED NOVEMBER 2012.
- THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.
- ALL LAND BOUNDARY INFORMATION IS INDICATIVE AND TO BE CONFIRMED BY ALL RELEVANT PARTIES.

KEY

- HIGHWAY BOUNDARY (BASED ON TOPOGRAPHIC SURVEY (COLE & COLE, JANUARY 2016) AND WSSC HIGHWAY BOUNDARY INFORMATION (RECEIVED 29/06/2016))
- OBSTRUCTION TO VISIBILITY ALONG HIGHWAY BOUNDARY (E.G. UNTRIMMED HEDGEROWS)
- RED LINE BOUNDARY (FROM OSP SITE LAYOUT PLAN RECEIVED 02/02/2017)
- SUB-SALE BOUNDARY (BASED ON .dwg FILE OF DRAWING 'B1 SUB-SALE PLAN 1' RECEIVED FROM CALA HOMES ON 07/03/2016). BOUNDARY IS OUTSIDE EDGE OF GREEN DASHED LINE WHEN SHOWN AT 0.5m WIDTH
- LAND IN OWNERSHIP OF MR N PINE (BASED ON DRAWING SHOWING ORANGE BOUNDARY RECEIVED FROM CALA HOMES ON 23/06/2016)
- JUNCTION INTERVISIBILITY ZONE (TO TD 50/04; 2.5m OFFSET FROM STOP LINES)
- VISIBILITY SPILL (AS SHOWN)
- FORWARD VISIBILITY TO SIGNAL (TO TD 50/04 AND TD 9/93)
- SPEED SURVEY LOCATION
- SIGNAL HEAD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)
- EXISTING TREE CANOPIES (BASED ON BOSKY TREES SURVEY DATED 22/06/2016)
- TREES TO BE REMOVED
- TREES TO BE RETAINED
- ROOT PROTECTION AREAS
- PEDESTRIAN BOLLARD



REV	DATE	BY	DESCRIPTION	CHK	APD
E	02/02/2017	MPB	REDLINE UPDATED		
D	19/11/2016	FL	PROPOSED QUEUE DETECTION LOOP ADDED		
C	09/11/2016	SL	CHANGED TREES TO BE RETAINED TO REMOVE		
B	21/10/2016	MPB	NOTES AMENDED		
A	17/10/2016	MPB	FIRST ISSUE		

DRAWING STATUS: FOR INFORMATION ONLY

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CLIENT: CALA HOMES

ARCHITECT: OSP ARCHITECTURE

PROJECT: LAND AT WESTERGATE

TITLE: SITE ACCESS GENERAL ARRANGEMENT OPTION 3

SCALE @ A1: 1:250

CHECKED: LRB

APPROVED: LRB

CAO FILE: 3258-GA-004.DWG

DESIGN/DRAWN: MPB

DATE: February 17

PROJECT No: 70013258

DRAWING No: 3258/GA/004

REV: E

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SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land at Westergate, West Sussex
Applicant Organisation	WSP Parsons Brinckerhoff
Applicant Ref	70013258
Highway Authority Ref	
Applicant Contact Details	
Date Submitted	24/05/2017

1) PROJECT DETAILS

A	Description	Proposed S278 traffic signal site access junction at the existing A29 / Meadow Way junction and proposed new access road into residential development east of the A29. The junction will serve up to 350 dwellings.
B	Location	As above
C	Road Category	TA 79/99 UAP3
D	Road Type	S2
E	Design Speed	60 kph (determined by TD 9/93 Urban Road Speed Limit)
F	Speed Limit	30mph
G	Traffic Flows	AAWT 14154 two way
H	NMU Flows	-

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Forward visibility (SSD) to the back of queuing traffic on northbound approach to traffic signals
B	Relevant Standard(s)	DMRB desirable minimum of 90m, DMRB Vol 6 Section 1 Part 1 TD9/93 Table 3 and Para 1.26 Junction visibility, DMRB Vol 6 Section 2 Part 3 TD50/04 Para 2.6, 2.7 and 2.8 Manual for Streets Table 7 and Para 7.5.3
	Clause	
C	Difference Between Standard(s) and proposed design	The forward visibility (SSD) must be the TD9/93 desirable minimum in the immediate approach to the junction (1.5 x desirable minimum SSD) and to the back of queue. For this junction the immediate approach to the junction is the 135m preceeding the stop line, and the longest average mean max queue length is 207m long (36 cars in the morning, assumed to be 5.75m long each). The DMRB desirable minimum of 90m is not achievable. The achievable forward visibility is limited by the lefthand bend on the approach to the junction. This limits the visibility in the immediate approach to the junction, and to the back of queues shorter than 5 cars, to 49m. The back of any queue longer than 5 cars will be visible for 90m. An ATC undertaken on the A29 in September 2016 showed a seven-day 85th percentile speed of 31.5mph northbound, which corresponds to sight-stopping distances of 46m (based on Manual for Streets guidance). The achievable SSD of 49m is greater than this.
D	Reason for Departure (overview)	Existing residential boundary fences on western side of A29.

E	Associated Project Departures	N/A
F	Other Options Considered	

3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Limited visibility of queuing traffic and primary signal heads in northbound direction may lead to rear-shunt accidents. Existing safety issue associated with visibility to and from the A29 northbound carriageway at the junction with Meadow Way, although signalised junction will increase amount of stationary traffic at this location. Provision of controlled pedestrian crossings on all approaches will improve safety for pedestrians.
B	Congestion/ Delay	
C	Environmental / sustainability	Provision of pedestrian crossings on all approaches encourages walking trips to / from the site.
D	Capital and whole life cost/value	Can be delivered within land owned by WSCC or developer.
E	Accessibility	
F	Integration	
G	Structural	
H	Network resilience & Maintenance	

4) COMPENSATORY MEASURES

A	Included Measures	Installation of signs to Diagram 543 and Diagram 584 (TSRGD) to be provided on A29 northbound approach to signals. The use of coloured high friction surfacing will be reviewed during detailed design. Offside primary signal head to be provided facilitating 65m SSD and additional warning of queuing vehicles. MOVA control to effectively manage queues as efficiently as possible reducing queue length. Junction could be configured to rest on main road green to further minimise vehicle stops.
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

Given the constrained location of the junction and the existing sub-standard visibility on the A29 northbound approach, it is considered that the benefits of providing the junction outweigh the potential risks, provided that the compensatory measures discussed above are installed. The ATC undertaken on the A29 in September 2016 showed a seven-day 85th percentile speed of 31.5mph northbound, which corresponds to sight-stopping distances of

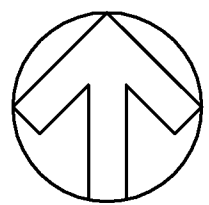
46m (based on Manual for Streets guidance), which can be achieved.

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	3258/GA/004 Rev E 3258/SK/017 Rev A
B	Consultations	WSCC
C	Other Information	

7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	
NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED ☐	2-APPROVED WITH COMMENTS ☐	3- REJECTED ☐
COMMENTS			



FOR CONTINUATION REFER TO INSET A

FORWARD VISIBILITY (SSD) TO NEARSIDE PRIMARY SIGNAL HEAD 90m (DEPENDENT ON CONFIRMATION OF HIGHWAY BOUNDARY AT BACK OF FOOTWAY - SEE BELOW)

WSSC RECORDS INDICATE HIGHWAY BOUNDARY WITHIN FOOTWAY. IT IS ASSUMED THAT WSSC HIGHWAY BOUNDARY IS ACTUALLY AT BACK OF FOOTWAY. TO BE CONFIRMED WITH WSSC

FORWARD VISIBILITY (SSD) TO OFFSIDE PRIMARY SIGNAL HEAD, OVER 90m ACHIEVABLE

SPEED SURVEY LOCATION
85TH PERCENTILE SPEED:
NORTHBOUND 31.5mph, SOUTHBOUND 33.3mph
AVERAGE SPEED:
NORTHBOUND 27.2mph, SOUTHBOUND 29.2mph

FOR DRAINAGE DETAIL
SEE INSET B

EXISTING CROWN LINE DATA TO BE ADDED TO TOPOGRAPHICAL SURVEY AHEAD OF DETAILED DESIGN

JUNCTION INTERVISIBILITY ZONE (TD 50/04)

COLE & COLE TOPOGRAPHICAL SURVEY TO BE EXTENDED INTO MEADOW WAY AHEAD OF DETAILED DESIGN

TREE TO BE REMOVED AND REPLACED WITH ANOTHER IN NEAR VICINITY (PRECISE LOCATION UNSPECIFIED)

59m FORWARD VISIBILITY (SSD) TO OFFSIDE PRIMARY SIGNAL HEAD ACHIEVABLE. THIS ACCORDS WITH THE MIS RECOMMENDED SSD FOR A VEHICLE SPEED OF 37MPH

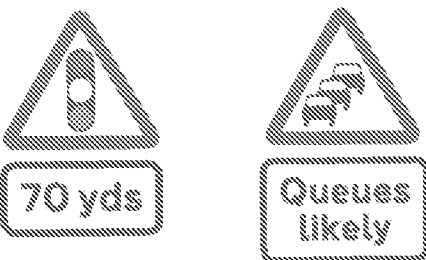
FORWARD VISIBILITY (SSD) TO NEARSIDE PRIMARY SIGNAL HEAD APPROX. 37m

COLE & COLE TOPOGRAPHICAL SURVEY TO BE EXTENDED TO INCLUDE HIGHWAY BOUNDARY & VERGE. INFORMATION CURRENTLY BASED ON PREVIOUS SURVEY ALIGNED TO CORRECT CO-ORDINATES

DMRB 90m DESIRABLE MINIMUM FORWARD VISIBILITY (SSD) TO PRIMARY SIGNAL HEAD NOT ACHIEVABLE DUE TO PRESENCE OF EXISTING HOUSING

FORWARD VISIBILITY (SSD) TO OFFSIDE PRIMARY SIGNAL HEAD APPROX. 68m

SIGNS TO DIAG. 543, DIAG. 572 AND DIAG. 584.1 TO BE PROVIDED ON APPROACH WITH REDUCED DESIRABLE MINIMUM SSD. EXACT LOCATIONS TO BE CONFIRMED



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E	02/02/2017	1	REDLINE UPDATED	DMB	DMB
D	19/11/2016	FL	PROPOSED QUEUE DETECTION LOOP ADDED	DMB	DMB
C	09/11/2016	SL	CHANGED TREES TO BE RETAINED TO REMOVE	DMB	DMB
B	21/10/2016	WFB	NOTES AMENDED	DMB	DMB
A	17/10/2016	1	FIRST ISSUE	DMB	DMB
REV	DATE	BY	DESCRIPTION	CHK	APD
DRAWING STATUS: FOR INFORMATION ONLY					

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CLIENT: CALA HOMES

PROJECT: LAND AT WESTERGATE

ARCHITECT: OSP ARCHITECTURE

TITLE: SITE ACCESS GENERAL ARRANGEMENT OPTION 3

SCALE @ A1: 1:250

CHECKED: LRB

APPROVED: LRB

CAD FILE: 3258-GA-004.DWG

DESIGN-DRAWN: MFB

DATE: February 17

PROJECT No: 70013258

DRAWING No: 3258/GA/004

REV: E

DO NOT SCALE

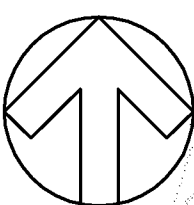
NOTES

- DMRB DESIRABLE MINIMUM SIGHT STOPPING DISTANCE (SSD) IS 90m FOR A ROAD WITH A 30MPH SPEED LIMIT (60KPH DESIGN SPEED). ONE STEP BELOW THE DESIRABLE MINIMUM IS 70m FOR A ROAD WITH A 30MPH SPEED LIMIT. ON THE NORTHBOUND APPROACH AGREEMENT FROM THE HIGHWAY AUTHORITY WILL THEREFORE NEED TO BE SOUGHT FOR A DEPARTURE FROM STANDARDS. MANUAL FOR STREETS GUIDANCE GIVES AN SSD OF 59m FOR A ROAD WITH A 37MPH DESIGN SPEED.
- WE HAVE NOT SOUGHT TO BECOME AWARE OF ANY INFORMATION RELATED TO HAZARDS THAT MIGHT AFFECT THE CONSTRUCTION OR MAINTENANCE OF THIS PROJECT. UNDER THE CDM REGULATIONS ANY DESIGNERS WHO PROGRESS THESE PROPOSALS FURTHER WILL NEED TO RECONSIDER THE DESIGN BASED UPON ANY INFORMATION WHICH SUBSEQUENTLY BECOMES AVAILABLE.
- THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN DATED NOVEMBER 2012.
- THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.
- ALL LAND BOUNDARY INFORMATION IS INDICATIVE AND TO BE CONFIRMED BY ALL RELEVANT PARTIES.

KEY

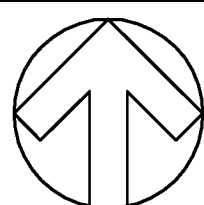
- HIGHWAY BOUNDARY (BASED ON TOPOGRAPHIC SURVEY (COLE & COLE, JANUARY 2016) AND WSSC HIGHWAY BOUNDARY INFORMATION (RECEIVED 29/06/2016))
- OBSTRUCTION TO VISIBILITY ALONG HIGHWAY BOUNDARY (E.G. UNTRIMMED HEDGEROWS)
- RED LINE BOUNDARY (FROM OSP SITE LAYOUT PLAN RECEIVED 02/02/2017)
- SUB-SALE BOUNDARY (BASED ON .dwg FILE OF DRAWING 'B1 SUB-SALE PLAN 1' RECEIVED FROM CALA HOMES ON 07/03/2016). BOUNDARY IS OUTSIDE EDGE OF GREEN DASHED LINE WHEN SHOWN AT 0.5m WIDTH
- LAND IN OWNERSHIP OF MR N PINE (BASED ON DRAWING SHOWING ORANGE BOUNDARY RECEIVED FROM CALA HOMES ON 23/06/2016)
- JUNCTION INTERVISIBILITY ZONE (TO TD 50/04; 2.5m OFFSET FROM STOP LINES)
- VISIBILITY SPILL (AS SHOWN)
- FORWARD VISIBILITY TO SIGNAL (TO TD 50/04 AND TD 9/93)
- SPEED SURVEY LOCATION
- SIGNAL HEAD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)
- EXISTING TREE CANOPIES (BASED ON BOSKY TREES SURVEY DATED 22/06/2016)
- TREES TO BE REMOVED
- TREES TO BE RETAINED
- ROOT PROTECTION AREAS
- PEDESTRIAN BOLLARD

INSET B

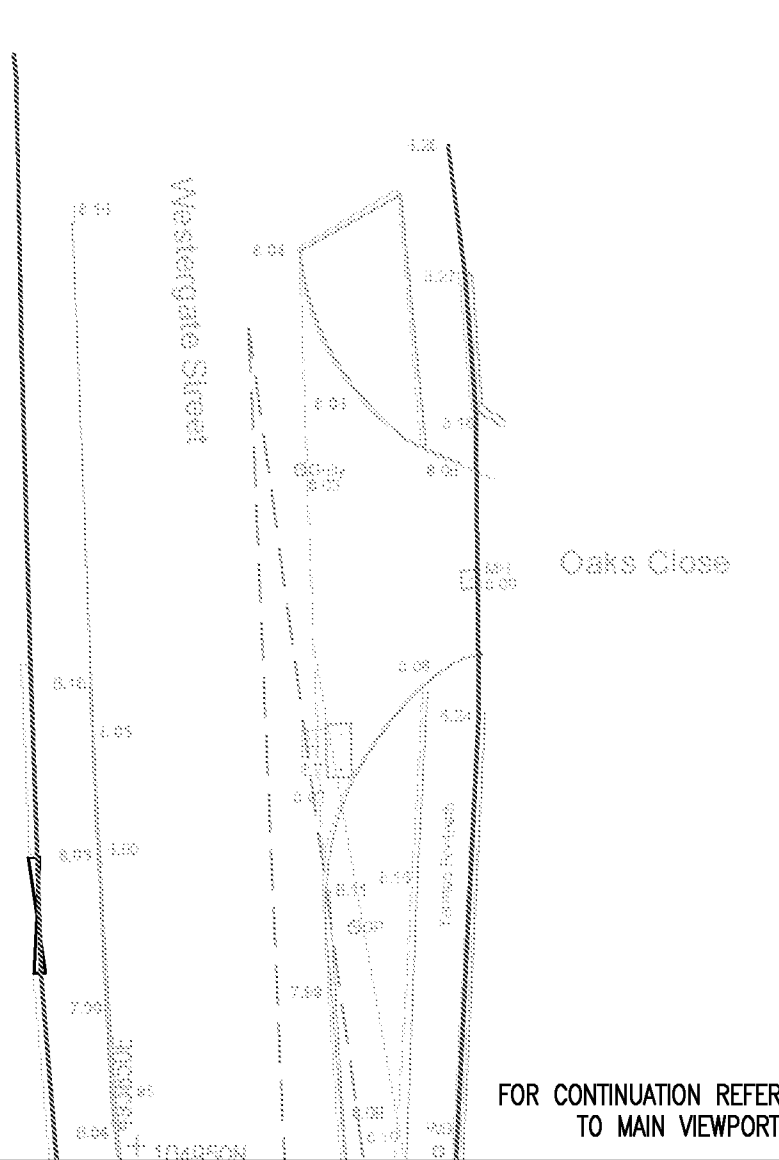


SHADED AREA OF PROPOSED CARRIAGEWAY (252m²) TO CONNECT INTO EXISTING HIGHWAY DRAINAGE. ACCESS TO THE EAST TO DRAIN INTO NEW ON-SITE SUDS NETWORK

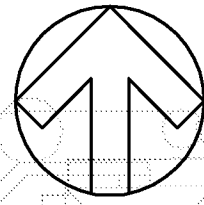
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INSET A



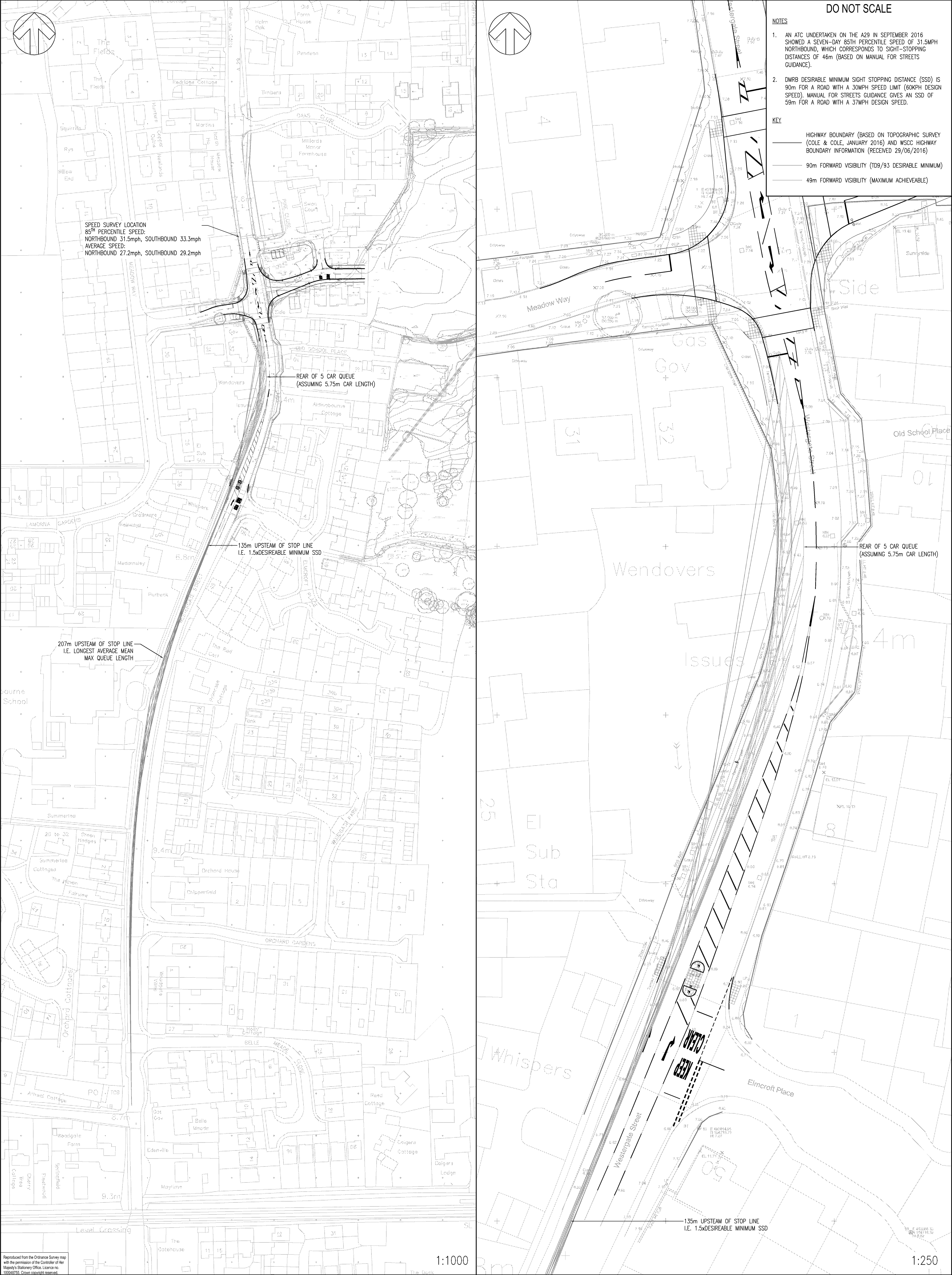
FOR CONTINUATION REFER TO MAIN VIEWPORT



INSET C



JUNCTION AND RED LINE BOUNDARY
1:500



DO NOT SCALE

NOTES

1. AN ATC UNDERTAKEN ON THE A29 IN SEPTEMBER 2016 SHOWED A SEVEN-DAY 85TH PERCENTILE SPEED OF 31.5MPH NORTHBOUND, WHICH CORRESPONDS TO SIGHT-STOPPING DISTANCES OF 46m (BASED ON MANUAL FOR STREETS GUIDANCE).
2. DMRB DESIRABLE MINIMUM SIGHT STOPPING DISTANCE (SSD) IS 90m FOR A ROAD WITH A 30MPH SPEED LIMIT (60KPH DESIGN SPEED). MANUAL FOR STREETS GUIDANCE GIVES AN SSD OF 59m FOR A ROAD WITH A 37MPH DESIGN SPEED.

KEY

- HIGHWAY BOUNDARY (BASED ON TOPOGRAPHIC SURVEY (COLE & COLE, JANUARY 2016) AND WSCC HIGHWAY BOUNDARY INFORMATION (RECEIVED 29/06/2016))
- 90m FORWARD VISIBILITY (TD9/93 DESIRABLE MINIMUM)
- 49m FORWARD VISIBILITY (MAXIMUM ACHIEVEABLE)

SPEED SURVEY LOCATION
85TH PERCENTILE SPEED:
NORTHBOUND 31.5mph, SOUTHBOUND 33.3mph
AVERAGE SPEED:
NORTHBOUND 27.2mph, SOUTHBOUND 29.2mph

REAR OF 5 CAR QUEUE
(ASSUMING 5.75m CAR LENGTH)

135m UPSTREAM OF STOP LINE
I.E. 1.5xDESIRABLE MINIMUM SSD

207m UPSTREAM OF STOP LINE
I.E. LONGEST AVERAGE MEAN
MAX QUEUE LENGTH

REAR OF 5 CAR QUEUE
(ASSUMING 5.75m CAR LENGTH)

135m UPSTREAM OF STOP LINE
I.E. 1.5xDESIRABLE MINIMUM SSD

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DRAWING STATUS:				
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CLIENT:

CALA HOMES

ARCHITECT:

OSP ARCHITECTURE

PROJECT:

LAND AT WESTERGATE

TITLE:

SITE ACCESS
FORWARD VISIBILITY
ON NORTHBOUND APPROACH TO SIGNALS

SCALE @ A1:	CHECKED:	APPROVED:
AS SHOWN	LRB	CW
PROJECT NO:	DESIGNED:	DATE:
70013258	MFB	May 17
DRAWING NO:	REV:	
3258/SK/017	A	
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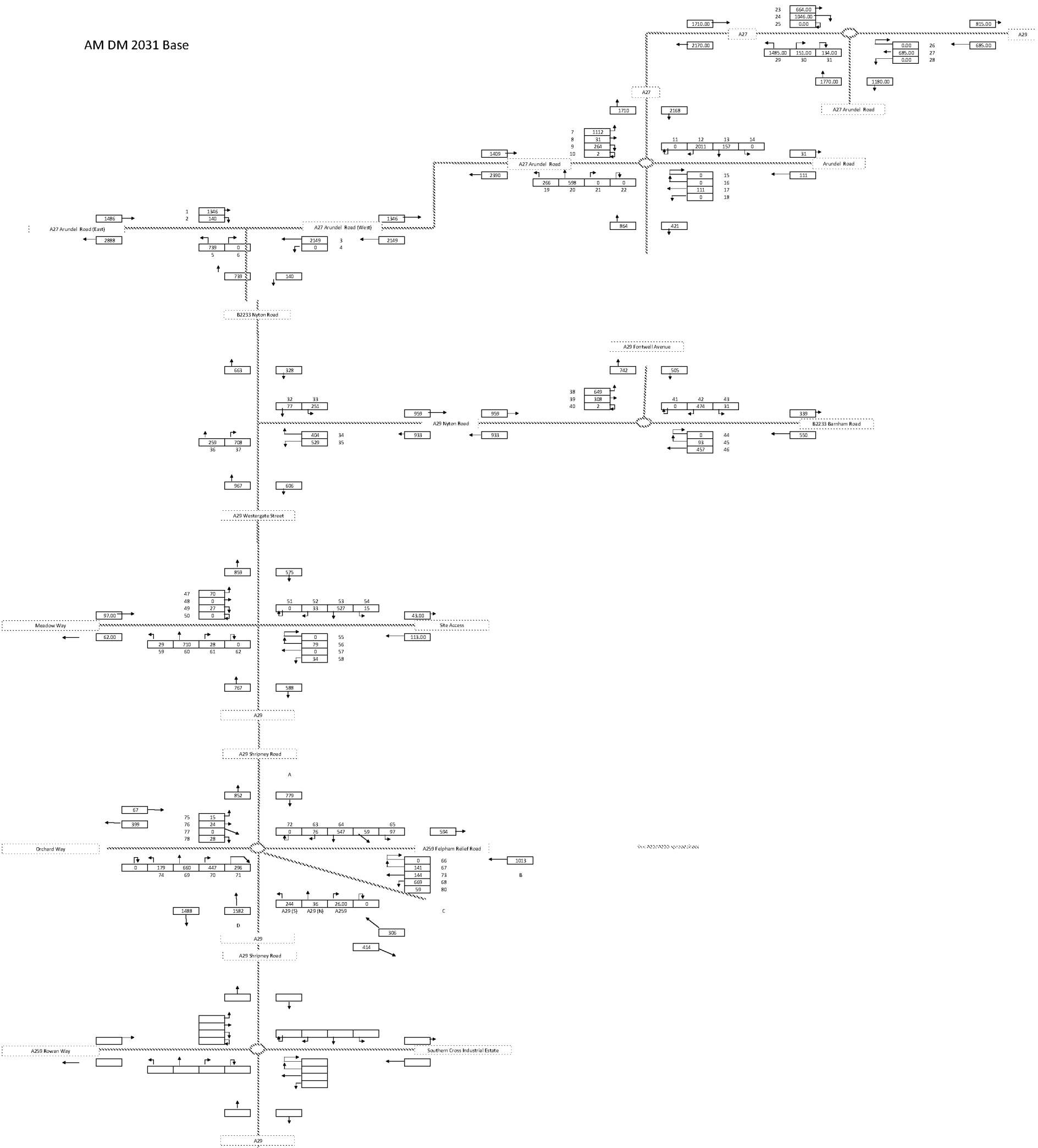
Appendix D

TRAFFIC FLOW DIAGRAMS

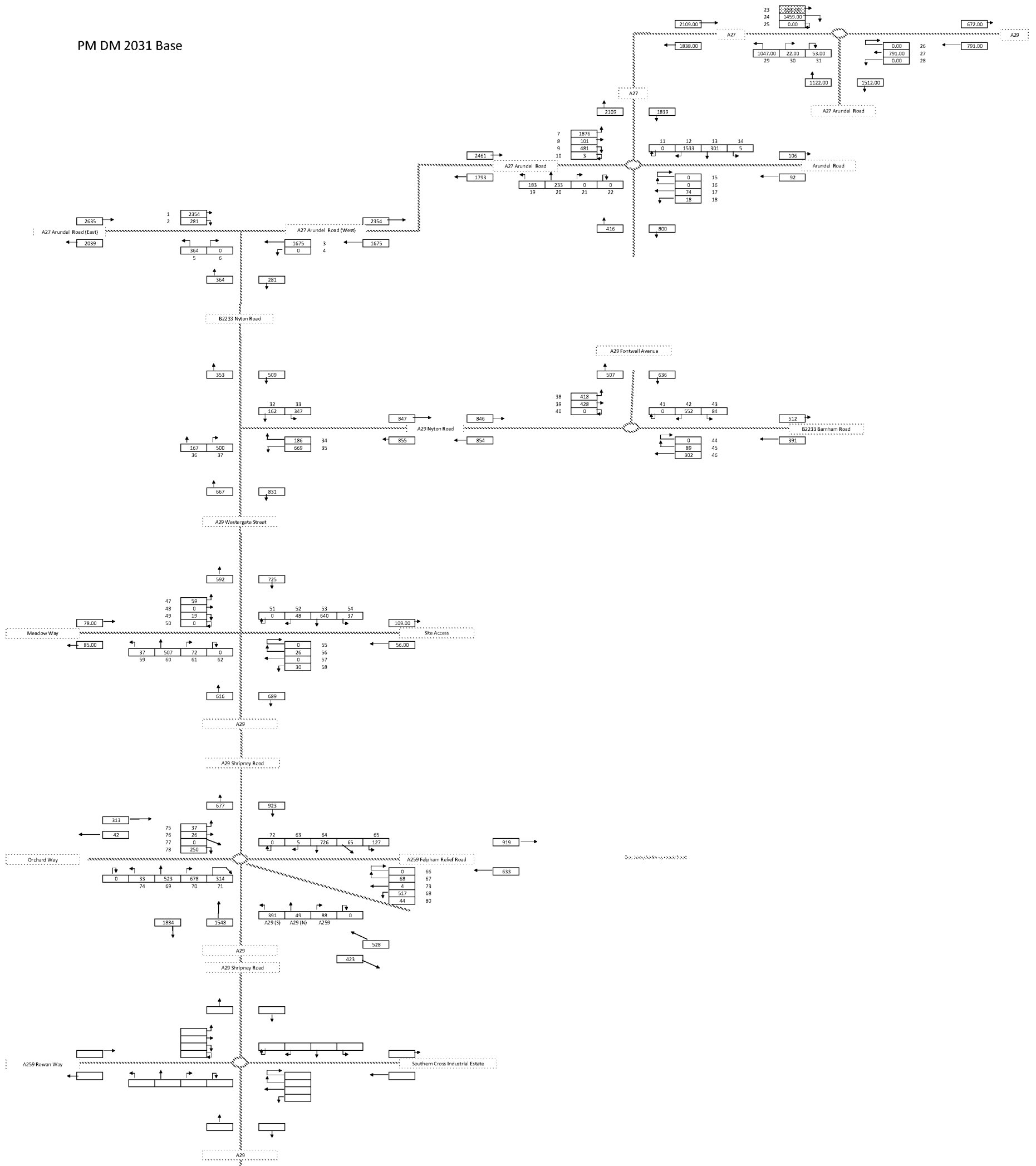
115/1

CONFIDENTIAL

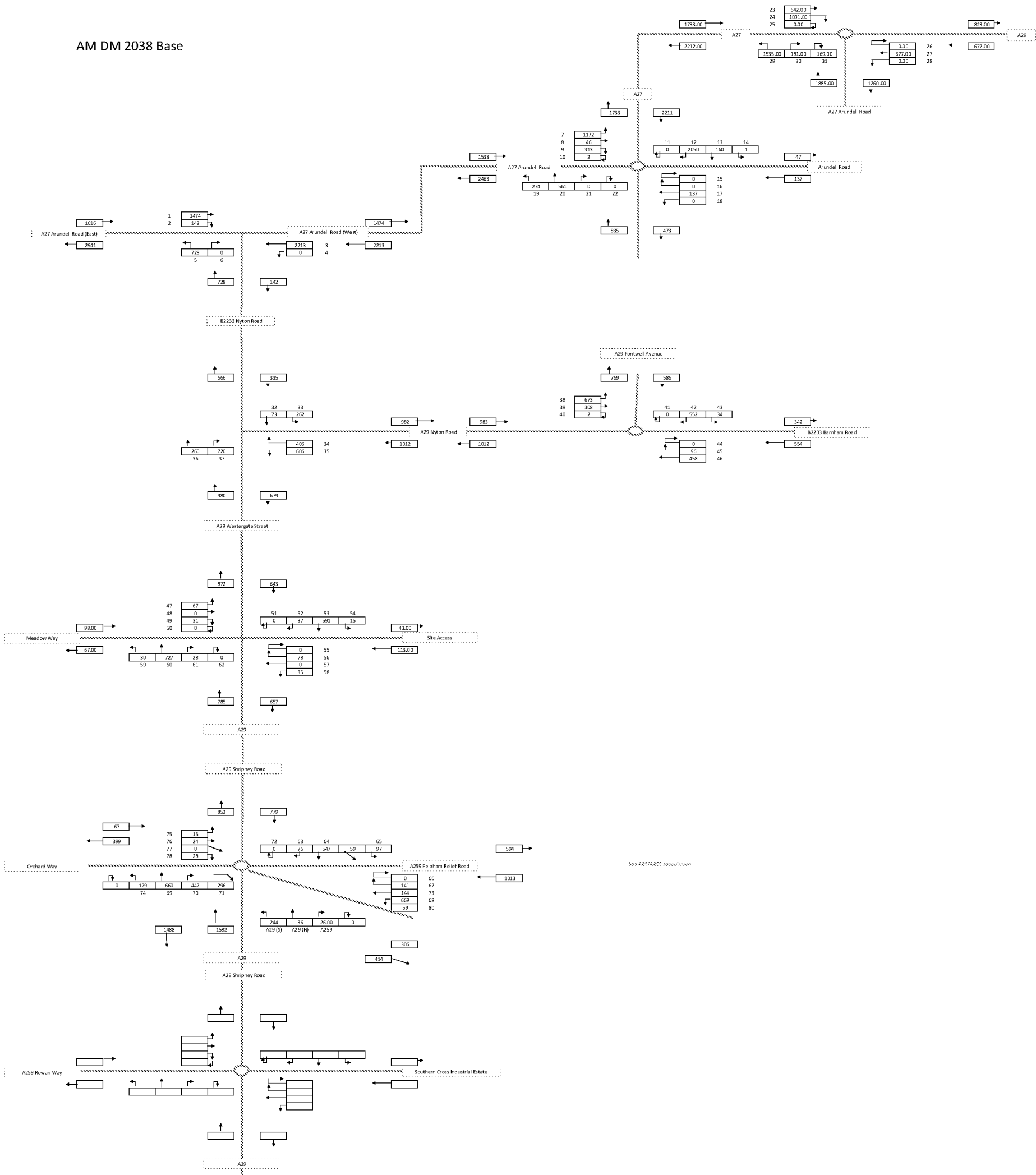
AM DM 2031 Base



PM DM 2031 Base

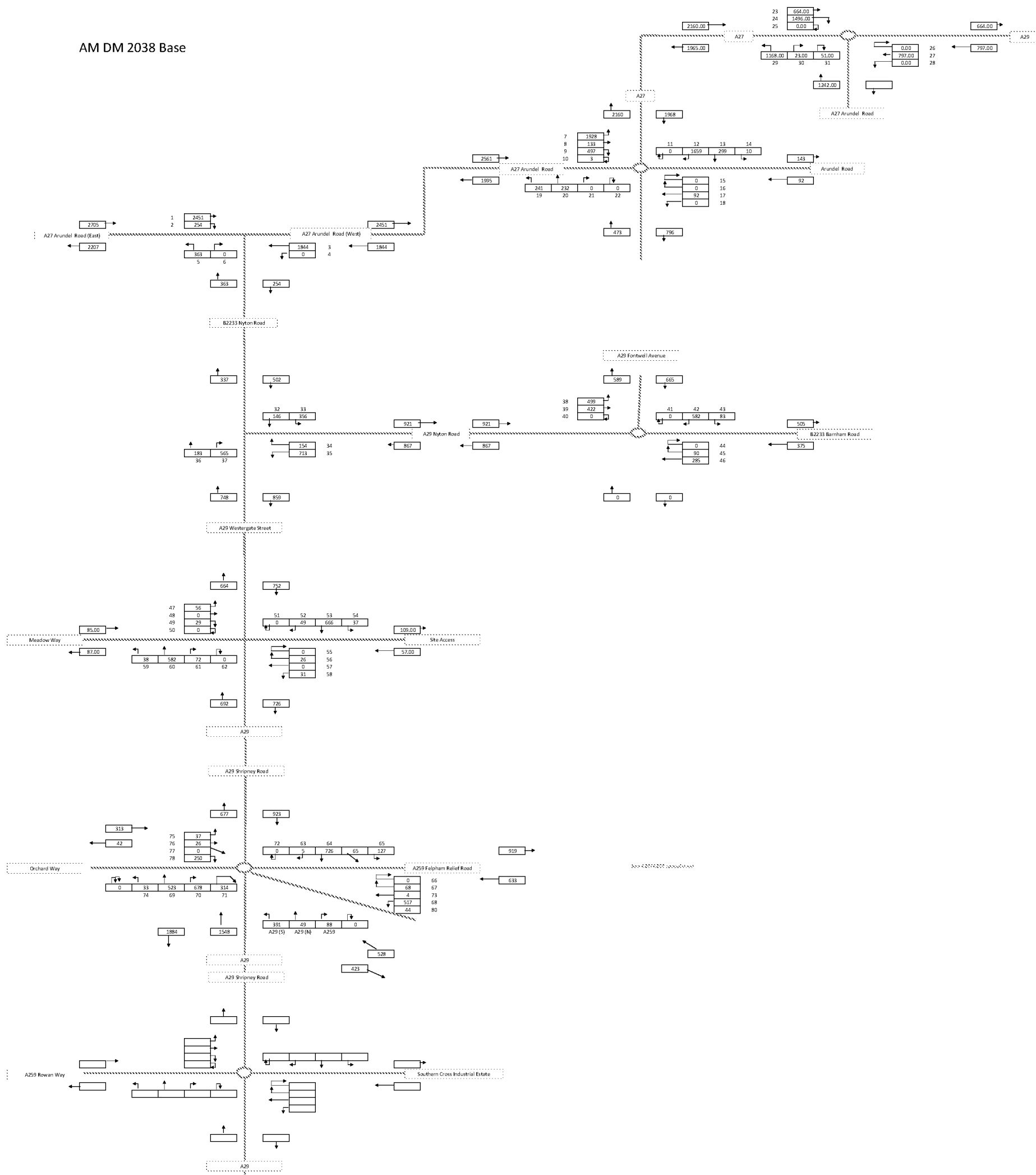


AM DM 2038 Base

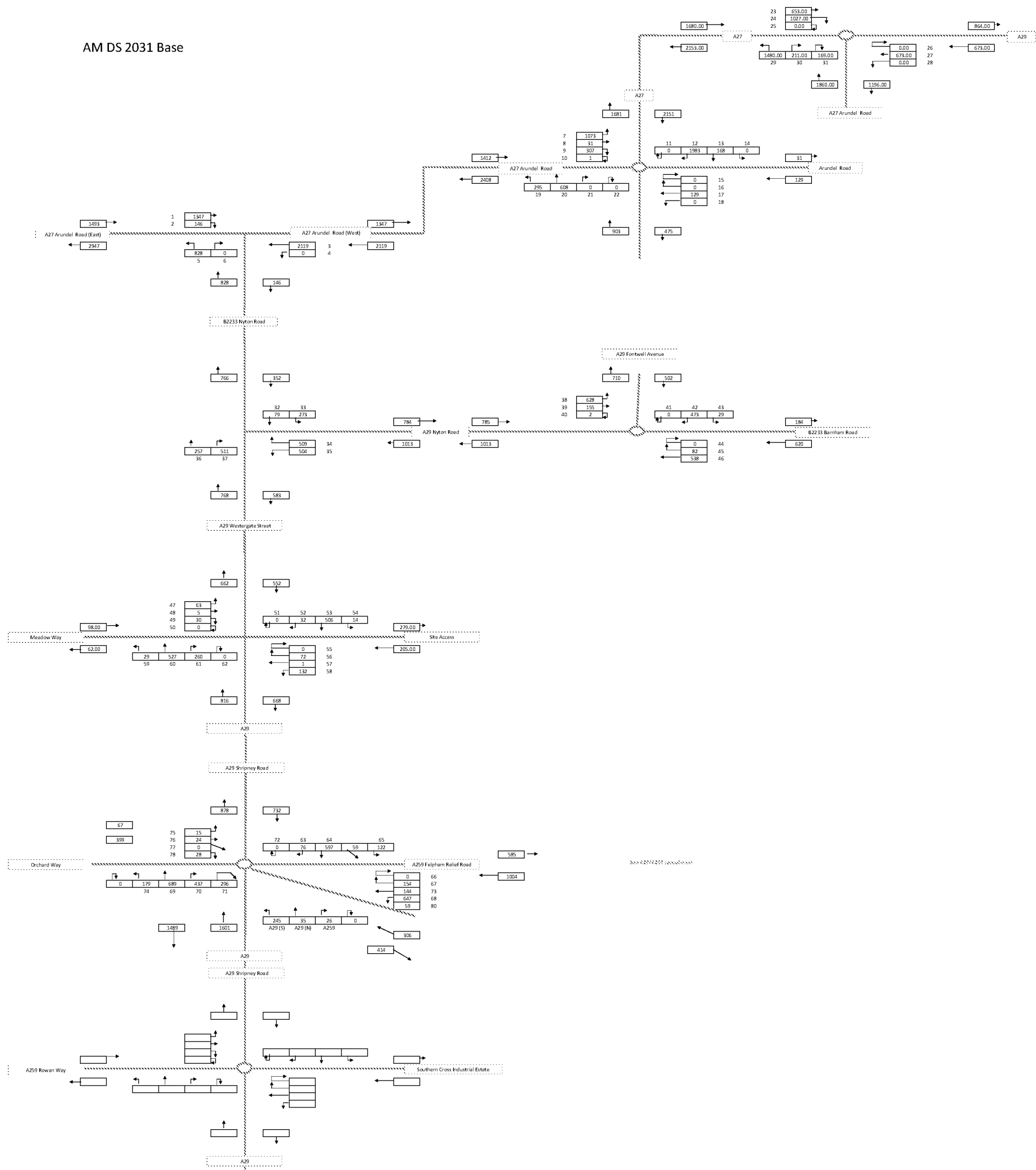


See 4.2014-2027 roadworks

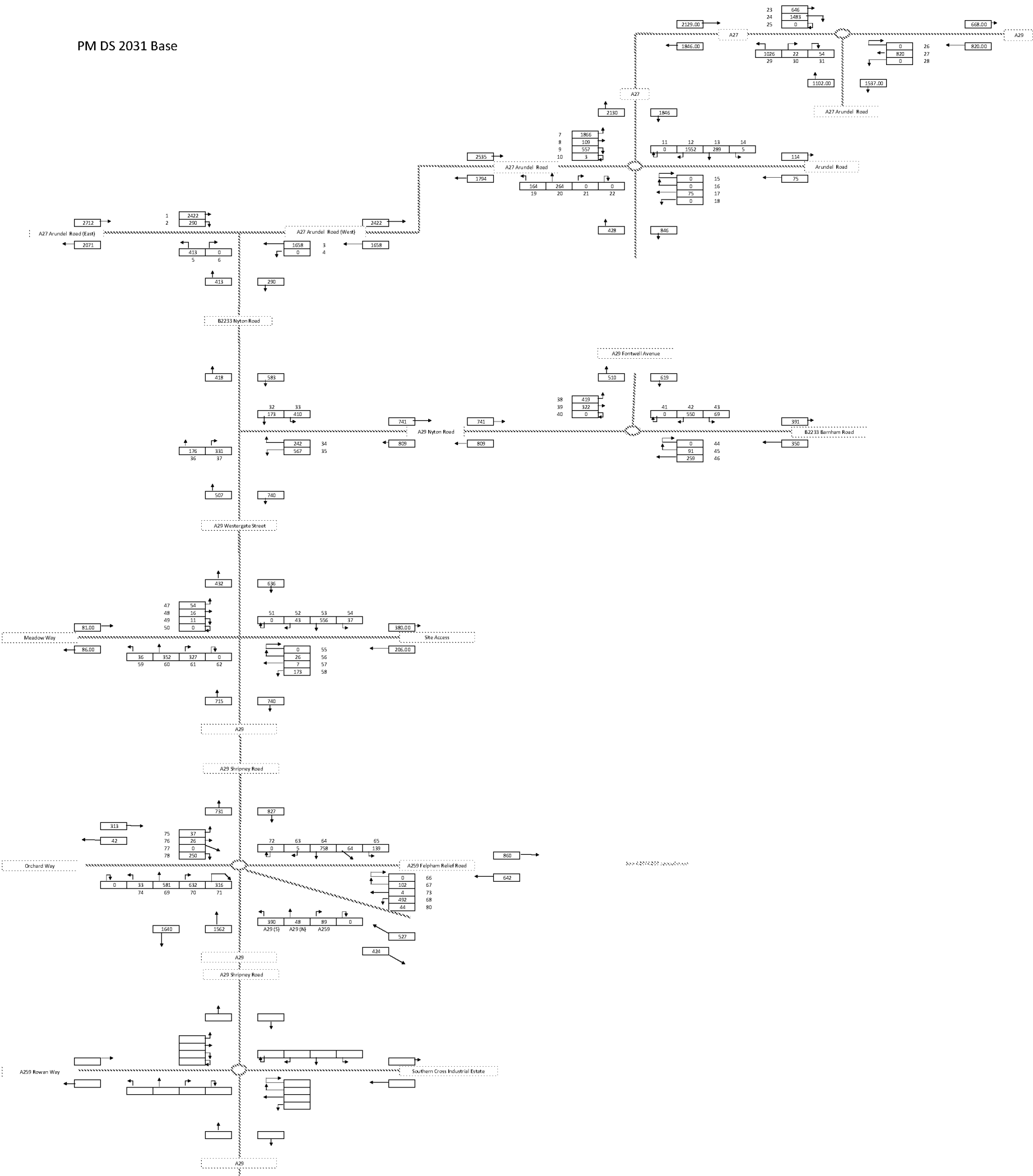
AM DM 2038 Base



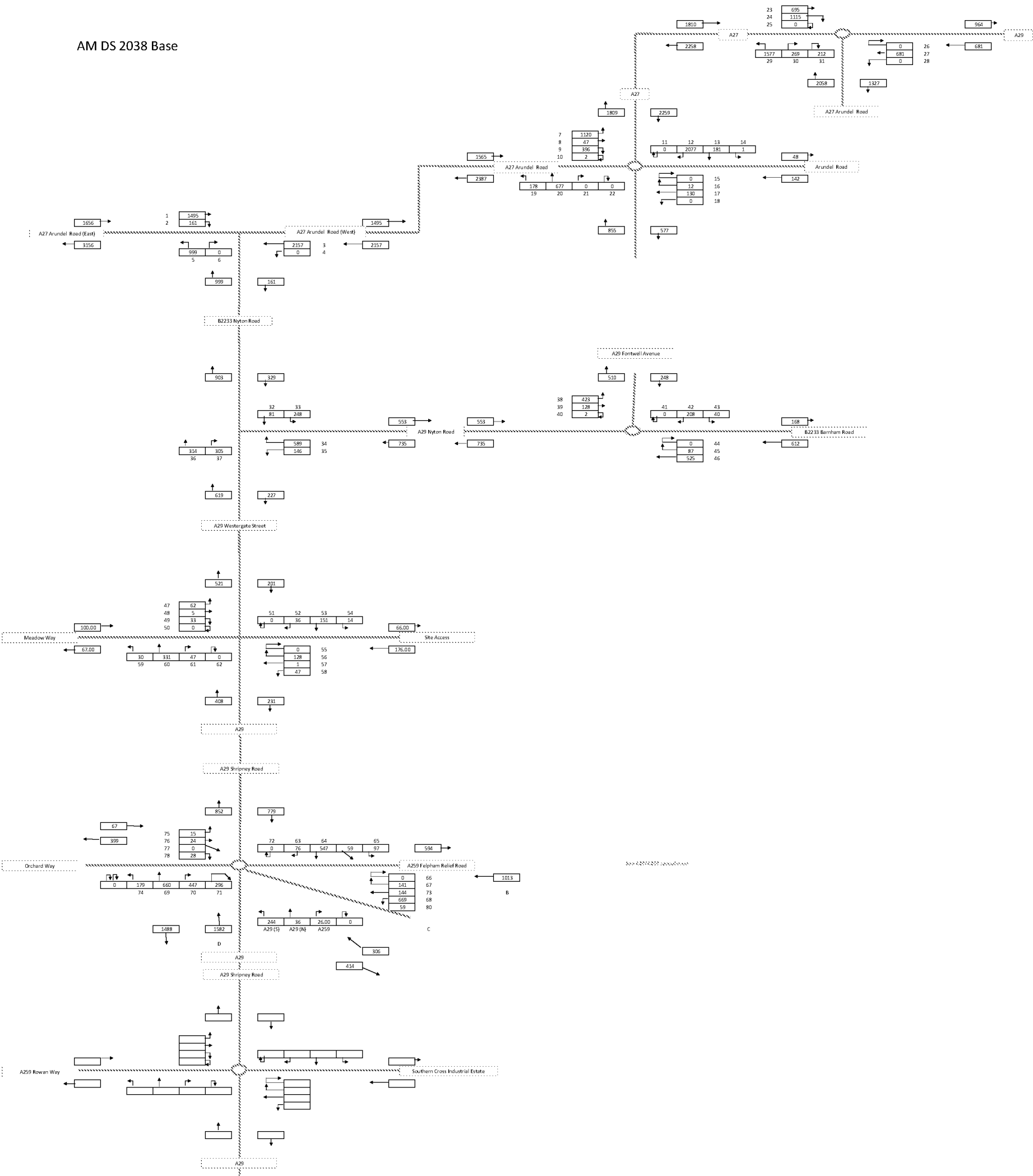
AM DS 2031 Base



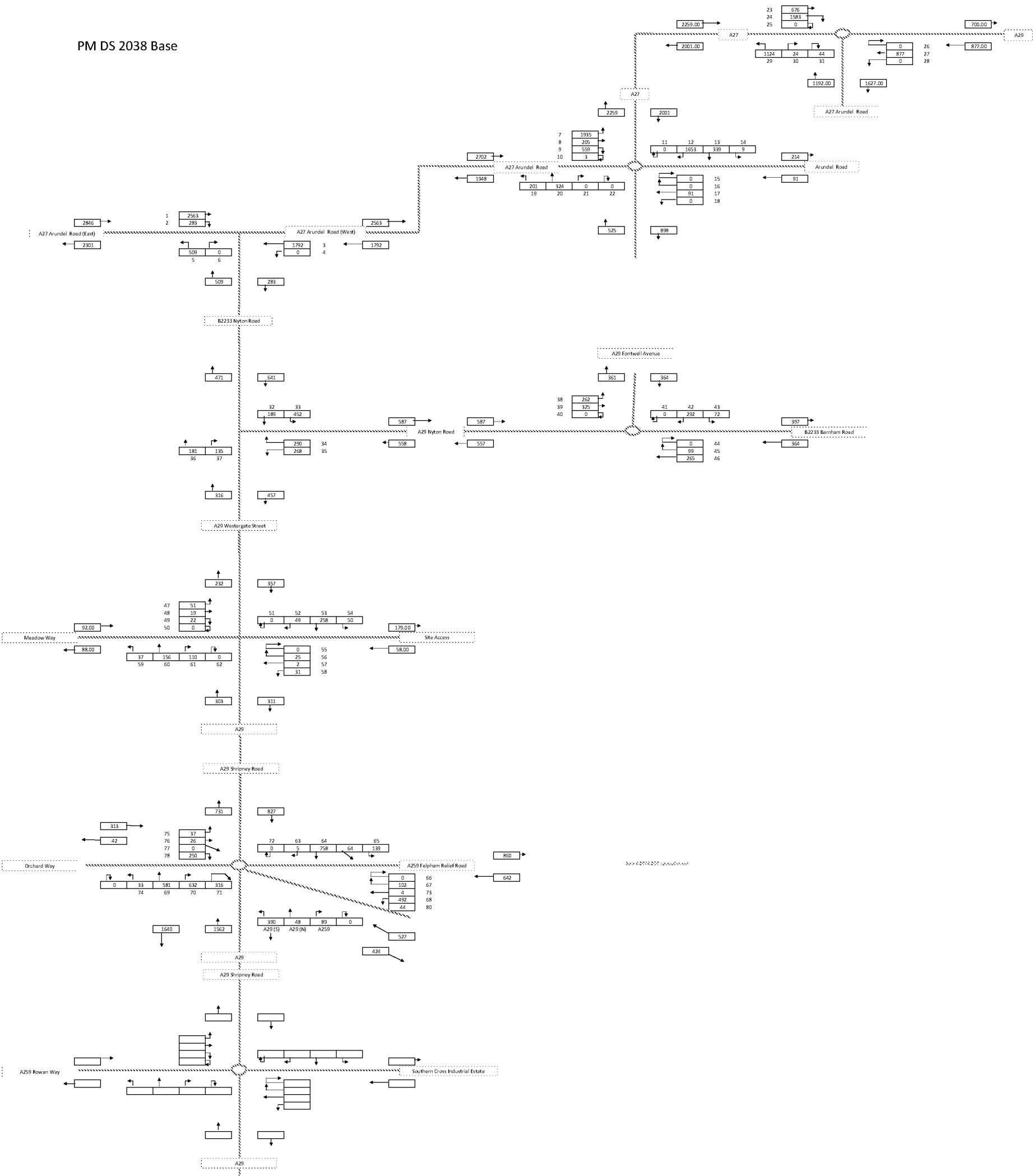
PM DS 2031 Base



AM DS 2038 Base



PM DS 2038 Base



Appendix E

SITE ACCESS TECHNICAL NOTE

11/5/11

CONFIDENTIAL



TECHNICAL NOTE 1 – Site Access Assessment

DATE:	07 December 2022	CONFIDENTIALITY:	Public
SUBJECT:	Westergate Site Access Assessment		
PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

INTRODUCTION

WSP has been appointed by Cala Homes to provide Transportation and Highways advice in support of a planning application for the development of land located at Westergate, West Sussex.

The site is located on land to the east of the A29 Westergate Street, accessed via a new traffic signal junction at Meadow Way / Pine Close. The proposed development will provide up to a total of 400 dwellings with associated car parking. The site is bordered by existing residential development to the west and by agricultural land to the east and forms part of the Barnham / Eastergate / Westergate (BEW) strategic development site.

Proposals for the wider BEW strategic development include the realignment of the A29 to the east of the Cala Homes site to bypass the existing railway level crossing at Woodgate and provide a grade separated crossing to eliminate vehicle queues associated with the level crossing. The realignment of the A29 will run from the existing A29 to the north of Eastergate and connect to the existing alignment to the south of the railway. The realigned A29 will connect with the Cala Homes site and existing A29 alignment, via an East-West Link Road.

A planning application for BEW Parcel SC1 (BN/11/22/OUT) located to the east of the Cala Homes site is currently being determined and includes the following phasing:

- ✧ Phase 1: 1,200 homes, 61 C2 care home units, 2FE primary schools, A29 realignment north of the Chichester to Barnham railway line; and
- ✧ Phase 2: Phase 1 + 2,000 homes and full realignment of the A29.

As part of the Cala site, it is proposed that a bridge will be constructed over the Lindsey Rife to connect the A29 Westergate Street, Cala site and BEW parcel SC1 via the East-West Link Road.

Following on from a review of the Transport Assessment (TA) submitted in the support of the planning application for BEW Parcel SC1, This Technical Note provides as an assessment of the proposed A29 Westergate Street / Meadow Way / Pine Close site access junction. This has been completed with and without the BEW SC1 parcel and associated infrastructure improvements (with / without realignment of A29 and East-West Link Road).

SITE ACCESS DESIGN

The proposed site access will be achieved via a four-arm signalised junction with Meadow Way and A29 Westergate Street as shown on Drawing 3258-GA-006 included in **Appendix A**. The proposed access junction is the same layout which supported the 2017 planning application.

It is recommended that the junction will operate with Microprocessor Optimised Vehicle Actuation (MOVA) to minimise vehicle delays on all approaches. The proposed junction will generally operate in three stages with the A29 running together in each direction, before Meadow Way and the site access run independently. To aid right turning movements from the A29, ghost-island right turn lanes are provided.



TECHNICAL NOTE 1 – Site Access Assessment

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CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Finally, northbound traffic will also benefit from the extension of the green phase whilst southbound traffic is held. This will ensure any traffic turning right into the site will clear the junction if they have not found a suitable gap during the green phase.

SITE ACCESS CAPACITY ASSESSMENT

This Section of the Technical Note provides a junction capacity assessment of the proposed A29 Westergate Street / Meadow Way / Pine Close site access junction. The junction has been assessed using the LinSig 3 software by JCT Consultancy. LinSig provides an assessment of the impact of traffic signals on traffic capacity, queues and delays at a junction. Geometry measurements for the junction capacity assessments has been derived from a Topographical survey mapping.

LinSig models provide an indication of Degree of Saturation as a percentage and the Mean Maximum Queue in Passenger Carrying Units (PCUs) for each junction approach, the average delay per vehicle on each approach, recorded in seconds and the Practical Reserve Capacity (PRC), which is a measure of the junction's total capacity (as a percentage). When reviewing the PRC of a junction the following should be considered:

- ✧ A positive figure indicates the junction operates with reserve capacity;
- ✧ A negative figure less than -10% shows that a junction would be broadly at capacity; and
- ✧ A negative figure more than 10% indicates that the junction cannot accommodate the demand.

For Degree of Saturation, the thresholds can be categorised as follows:

- ✧ Less than 90%: Any queues that have built up will be able to disperse during the relevant stage in each cycle;
- ✧ 90-100%: Indicates that an approach is close to its theoretical capacity and any queue that has built up does not fully clear within each cycle; and
- ✧ More than 100%: Indicates that an approach is over its theoretical capacity and significant queues are likely as a result.

Assessment Scenarios

A number of scenarios have been assessed as shown in Table 1 to reflect various stages of BEW build-out and traffic modelling completed to-date within the Parcel SC1 TA. For reference, all transport modelling contained within the Parcel SC1 TA was based upon traffic flow outputs from the WSCC Strategic Transport Model.



TECHNICAL NOTE 1 – Site Access Assessment

DATE:	07 December 2022	CONFIDENTIALITY:	Public
SUBJECT:	Westergate Site Access Assessment		
PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

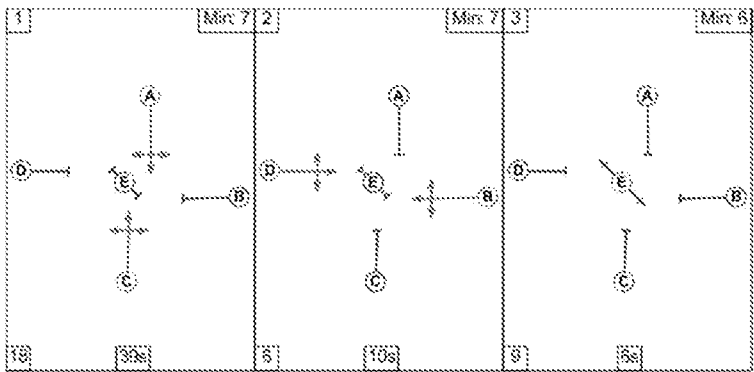
Table 1 – Assessment Scenarios

Scenario	Name	Corresponding Parcel SC1 TA Scenario	Reason for Assessment
1	2031 Cala Homes site without Parcel SC1	2031 Do-Minimum	Assessment of revised signal staging and increase in Cala development to 400 units
2	2031 Cala Homes site with TEMPRO growth	N/A	Assessment of 400 unit Cala site interpedently from Parcel SC1 traffic modelling
3	2031 Cala Homes site with Parcel SC1 Phase 1	2031 Do-Something	Assessment of revised signal staging and increase in Cal a development to 400 units
4	2031 Cala Homes site with Parcel SC1 excluding East-West Link Road	N/A	Assessment of alternative access strategy without provision of East West Link
5	2038 Cala Home site with Parcel SC1 Phase 1 and 2	2038 Do-Something	Assessment of revised signal staging and increase in Cal a development to 400 units

Traffic Signal Staging

For all assessments completed within this Technical Note, the junction capacity assessments have used revised traffic signal staging in comparison with the Parcel SC1 TA. The Parcel S1C TA reported results with the pedestrian crossing stage being called every cycle and every other cycle, as shown in Figure 1.

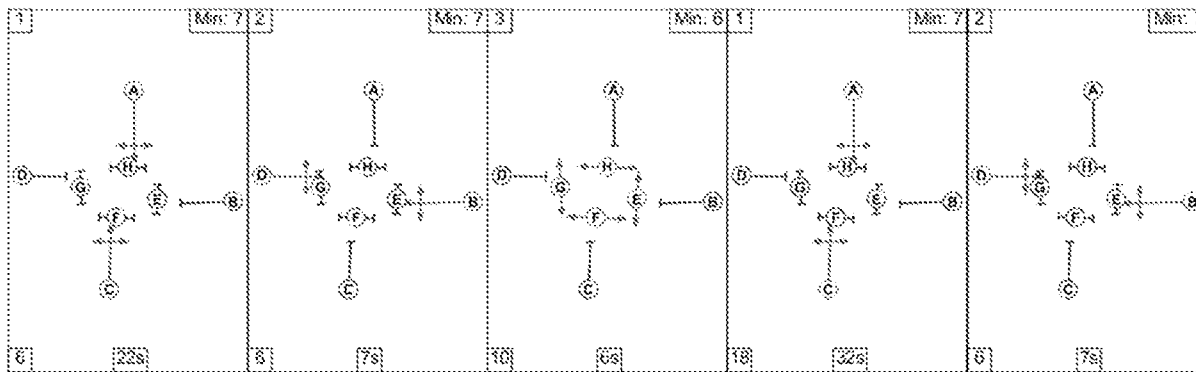
Figure 1 – Parcel SC1 TA LinSig staging for A29 Westergate Street / Meadow Way / Development Access Junction





TECHNICAL NOTE 1 – Site Access Assessment

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CHECKED:	Chris Williams	APPROVED:	Andrew Blacker



This Technical Note includes capacity assessments with revised traffic signal staging for the following reasons:

- Through WSP's experience in working with WSCC it would not be acceptable for Development Access and Meadow way to operate together in one stage with the staging ultimately needing to be changed during detailed design to have Meadow Way and Development Access operating as independent stages. This is because of the skewed nature of the junction and also the limited demand from Meadow Way leading to drivers exiting the Development Access believing they had unopposed priority, thereby increasing the potential for vehicle collisions to occur and overall safety concern.
- The Parcel SC1 TA transport modelling has made no allowance for the number of right turn movements between A29 southern approach and Development Access despite the additional demand created by the provision of the East-West Link Road. For example, in the 2031 Do-Something scenario there are 260 vehicles in the AM peak and 327 vehicles in the PM peak that make this movement, which is an average of 4-5 vehicles per minute in the AM peak and 5-6 vehicles per minute in the PM peak. This level of demand cannot be accommodated within the ghost island right turn lane and will block the A29 northbound traffic flow. Whilst this can be mitigated through the implementation of a queue detector on the A29 and early cut-off of the southbound A29 signal stage (as proposed in paragraph 4.3.2 of the Transport Assessment completed in support of AL/15/17/PL) this has not been modelled within the Parcel SC1 TA.

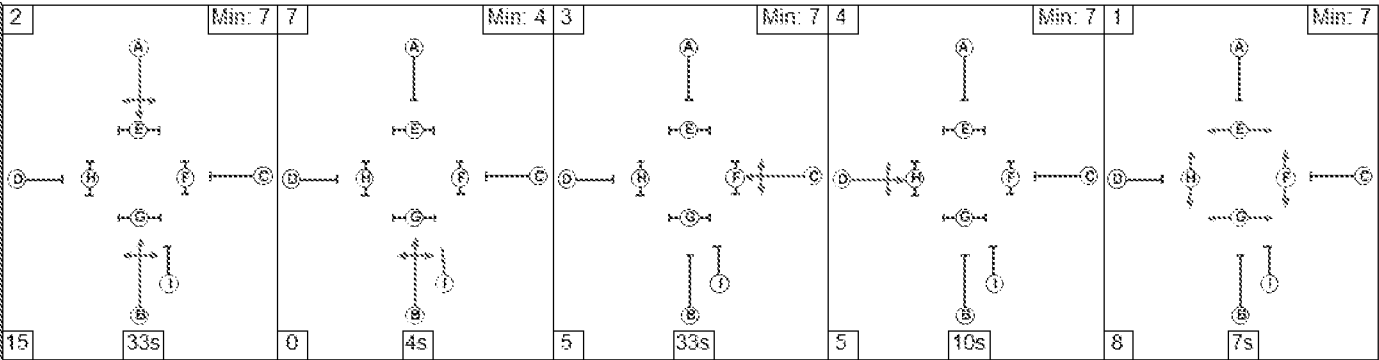
In combination these factors mean that the transport modelling presented in the SC1 Parcel TA is incorrect and the junction likely to operate significantly differently in reality in comparison with that reported. Taking this into account, the following traffic signal staging shown in Figure 2 has been used within this Technical Note to provide a robust assessment of the future operation of the junction.



TECHNICAL NOTE 1 – Site Access Assessment

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PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Figure 2 – Revised Traffic Signal Staging



Proposed Development Trip Rate

The assessment of the Cala Homes site within this Technical Note has also been updated to reflect that the proposed increase from 350 dwellings to 400 dwellings. The trip rate for the proposed development has been calculated through traffic surveys of Meadow Way and Ivy Lane undertaken on 1st March 2022. This uses the same methodology as the Transport Assessment, produced in support of planning application AL/15/17/PL. The total vehicles accessing and egressing each of the cul-de-sacs was divided by the number of dwellings served by each of them to calculate a trip rate per dwelling. The AM and PM arrival and departure trip rates have been averaged between Meadow Way and Ivy and are presented in Table 1. The trip rates outlined in Table 2 were then multiplied by the proposed 400 dwellings to provide the following trip generation

Table 2 – Proposed Development Trip Rates

Time Period	Arrival	Departure	Two-way
AM	0.151	0.382	0.533
PM	0.290	0.142	0.432



TECHNICAL NOTE 1 – Site Access Assessment

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PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Table 3 – Proposed Development Trip Generation

Time Period	Arrival	Departure	Two-way
AM	60	153	213
PM	116	57	173

For all assessments the trip generation shown in Table 3 has been used to replace that included within the Parcel SC1 TA assessments given this assumed a development quantum of 350 units.

Scenario 1 Junction Capacity Assessment – 2031 Cala Homes Site without Parcel SC1

Table 4 below summarises how the junction is forecast to operate in 2031 with only the Cala Homes site coming forward, using traffic model data taken from Parcel SC1 TA and revised trip generation shown in Table 3 to account for the increase from 350 units to 400 units. The results show that the junction operates well within capacity during each of the AM and PM peaks.

Table 4 – Scenario 1 – 2031 Cala Homes site without Parcel SC1

Arm	Approach	Scenario 1 - AM			Scenario 1 - PM		
		Degree of Sat (%)	Average Delay (S)	Mean Max Queue	Degree of Sat (%)	Average Delay (S)	Mean Max Queue
A	A29 North	78.3	36.8	17	78.5	32.0	23
B	Site Access	75.7	86.2	6	49.7	84.7	2
C	A29 South	79.8	34.3	23	55.1	21.7	13
D	Meadow Way	78.8	115.8	5	71.4	108.6	4
Overall Junction		PRC: 12.8% Cycle Time: 120s			PRC: 14.7% Cycle Time: 120s		



TECHNICAL NOTE 1 – Site Access Assessment

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CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Scenario 2 Junction Capacity Assessment – 2031 Cala Homes site with TEMPRO growth

Table 5 below summarises how the junction is forecast to operate in 2031 with only the Cala Homes site coming forward, using TEMPRO traffic growth rates from baseline 2022 traffic surveys. These growth rates assumed an 8.0% and 8.3% uplift in baseline traffic flows in the AM and PM peaks, respectively. This provides an independent assessment of the junction operation without use of traffic flows from the Parcel SC1 TA. The results show that the junction operates within capacity during each of the AM and PM peaks.

Table 5 – Scenario 2 – 2031 TEMPRO Test – Cala Homes site without BEW Parcel SC1

Arm	Approach	Scenario 2 - AM			Scenario 2- PM		
		Degree of Sat (%)	Average Delay (S)	Mean Max Queue	Degree of Sat (%)	Average Delay (S)	Mean Max Queue
A	A29 North	65.6	30.1	16	89.5	41.5	31
B	Site Access	75.7	86.2	6	49.7	84.7	2
C	A29 South	78.6	32.8	23	50.9	21.5	11
D	Meadow Way	26.5	75.5	1	19.4	73.6	1
Overall Junction		PRC: 14.6% Cycle Time: 120s			PRC: 0.5% Cycle Time: 120s		



TECHNICAL NOTE 1 – Site Access Assessment

DATE:	07 December 2022	CONFIDENTIALITY:	Public
SUBJECT:	Westergate Site Access Assessment		
PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Scenario 3 Junction Capacity Assessment – 2031 Cala Homes site with Parcel SC1 Phase 1

Table 6 provide a summary of the junction capacity assessments where the 400 unit Cala Homes site and Phase 1 of Parcel SC1 are complete, including the East-West Link Road and A29 realignment north of the Barnham to Chichester railway line. The results in Table 6 show that the junction is forecast to operate significantly over capacity both the AM and PM peaks. The A29 South and Site Access are forecast to operate over capacity, with queue lengths on the A29 southern approach extending through the A29 level crossing south of the site access junction.

Table 6 – Scenario 3 – Cala Homes site with BEW Parcel SC1 Phase 1 Junction Modelling Results

Arm	Approach	Scenario 3 - AM			Scenario 3- PM		
		Degree of Sat (%)	Average Delay (S)	Mean Max Queue	Degree of Sat (%)	Average Delay (S)	Mean Max Queue
A	A29 North	63.9	29.3	15	71.7	30.1	19
B	Site Access	121.2	431.7	33	130.2	544.7	35
C	A29 South	124.6	438.4	114	127.8	481.4	104
D	Meadow Way	88.8	156.5	6	72.4	109.0	4
Overall Junction		PRC: -38.4% Cycle Time: 120s			PRC: -44.6% Cycle Time: 120s		



TECHNICAL NOTE 1 – Site Access Assessment

DATE:	07 December 2022	CONFIDENTIALITY:	Public
SUBJECT:	Westergate Site Access Assessment		
PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Scenario 4 Junction Capacity Assessment – 2031 Cala Homes site with Parcel SC1 Phase 1 excluding East-West Link Road

As a comparison of the results for Scenario 3, Table 7 provides a summary of junction capacity assessments where the 400 unit Cala Homes site and Phase 1 of Parcel SC1 are complete but without the East-West Link Road. Within this scenario the turning movements to / from the Development Access have been reduced to match Scenario 1, with additional movements from Scenario 3 assumed to be re-assigned to travel through the junction to access Parcel SC1 via one of the alternative access points further north. Despite these additional northbound and southbound movements on the A29 the junction is forecast to operate within capacity in both the AM and PM peaks.

Table 7 – Scenario 4 – Cala Homes site with BEW Parcel SC1 excluding East-West Link Road Junction Modelling ResultsArm	Approach	Scenario 4 - AM			Scenario 4- PM		
		Degree of Sat (%)	Average Delay (S)	Mean Max Queue	Degree of Sat (%)	Average Delay (S)	Mean Max Queue
A	A29 North	86.2	42.5	22	84.5	36.5	26
B	Site Access	81.5	99.2	7	49.7	84.7	2
C	A29 South	83.5	36.4	25	64.5	23.9	16
D	Meadow Way	79.5	117.4	5	74.5	114.3	4
Overall Junction		PRC: 4.5% Cycle Time: 120s			PRC: 6.5% Cycle Time: 120s		



TECHNICAL NOTE 1 – Site Access Assessment

DATE:	07 December 2022	CONFIDENTIALITY:	Public
SUBJECT:	Westergate Site Access Assessment		
PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

Scenario 5 Junction Capacity Assessment – 2038 Cala Homes site with Parcel SC1 Phase 1 and 2

Table 8 provides a summary of junction capacity assessments where the 400 unit Cala Homes site and phase 1 and 2 of Parcel SC1 are complete, including the East-West Link Road and full A29 realignment. Given the anticipated reduction in traffic flows along the existing A29 in this scenario, the junction is forecast to operate well within capacity.

Table 8 – Scenario 5 – Cala Home site with BEW Parcel SC1 Phase 1 and 2

Arm	Approach	Scenario 5 - AM			Scenario 5- PM		
		Degree of Sat (%)	Average Delay (S)	Mean Max Queue	Degree of Sat (%)	Average Delay (S)	Mean Max Queue
A	A29 North	66.3	52.9	7	46.4	26.0	10
B	Site Access	66.1	48.7	10	45.5	78.4	2
C	A29 South	67.2	45.1	13	33.4	23.4	5
D	Meadow Way	65.8	86.2	4	46.7	66.5	3
Overall Junction		PRC: 33.9% Cycle Time: 120s			PRC: 92.7% Cycle Time: 120s		

CONCLUSION

This Technical Note has provided an overview of capacity assessments for the proposed site access for a development of 400 dwellings on land east of the A29 in Westergate, West Sussex. The proposed site access will be achieved via a four-arm signalised junction with Meadow Way and A29 Westergate Street.

The capacity assessments summarised within this Technical Note have been based on a revised traffic signal staging, which robustly assess the safe operation of the junction at various stages of the BEW build-out. These capacity assessment have highlighted the following key points:

1. The proposed site access junction is able to accommodate the proposed Cala Homes development of 400 units as a standalone site, when assessed using both traffic flows from the Parcel SC1 TA and 2022 traffic survey data uplifted to 2031 using TEMPRO;



TECHNICAL NOTE 1 – Site Access Assessment

DATE:	07 December 2022	CONFIDENTIALITY:	Public
SUBJECT:	Westergate Site Access Assessment		
PROJECT:	Land at Westergate - 70013258	AUTHOR:	Ollie Thompson / Phil Moss
CHECKED:	Chris Williams	APPROVED:	Andrew Blacker

- 2. The proposed site access junction cannot accommodate the additional traffic associated with the East-West Link Road, Cala Homes development of 400 units and phase 1 of Parcel SC1. This is because of the reassignment of traffic through the Cala Homes site as a result of new connection to the A29 formed by the East-West Link Road;
- 3. The site access junction operates within capacity with Parcel SC1 without the East-West Link Road when assuming traffic has to divert through the junction and along the existing A29; and
- 4. The access junction operates within capacity with the Cala Homes development of 400 units and phase 1 and 2 of Parcel SC1, including the East-West Link Road and full realignment of the A29.

WSP therefore recommend that until the full realignment of the A29 is complete, the East-West Link Road is developed as a bus and active modes link between the Cala Homes Site and Parcel SC1. This will allow the development of both sites to come forward without leading to capacity and safety issues at the A29 / Meadow Way / Development Access junction.



APPENDIX A



DO NOT SCALE

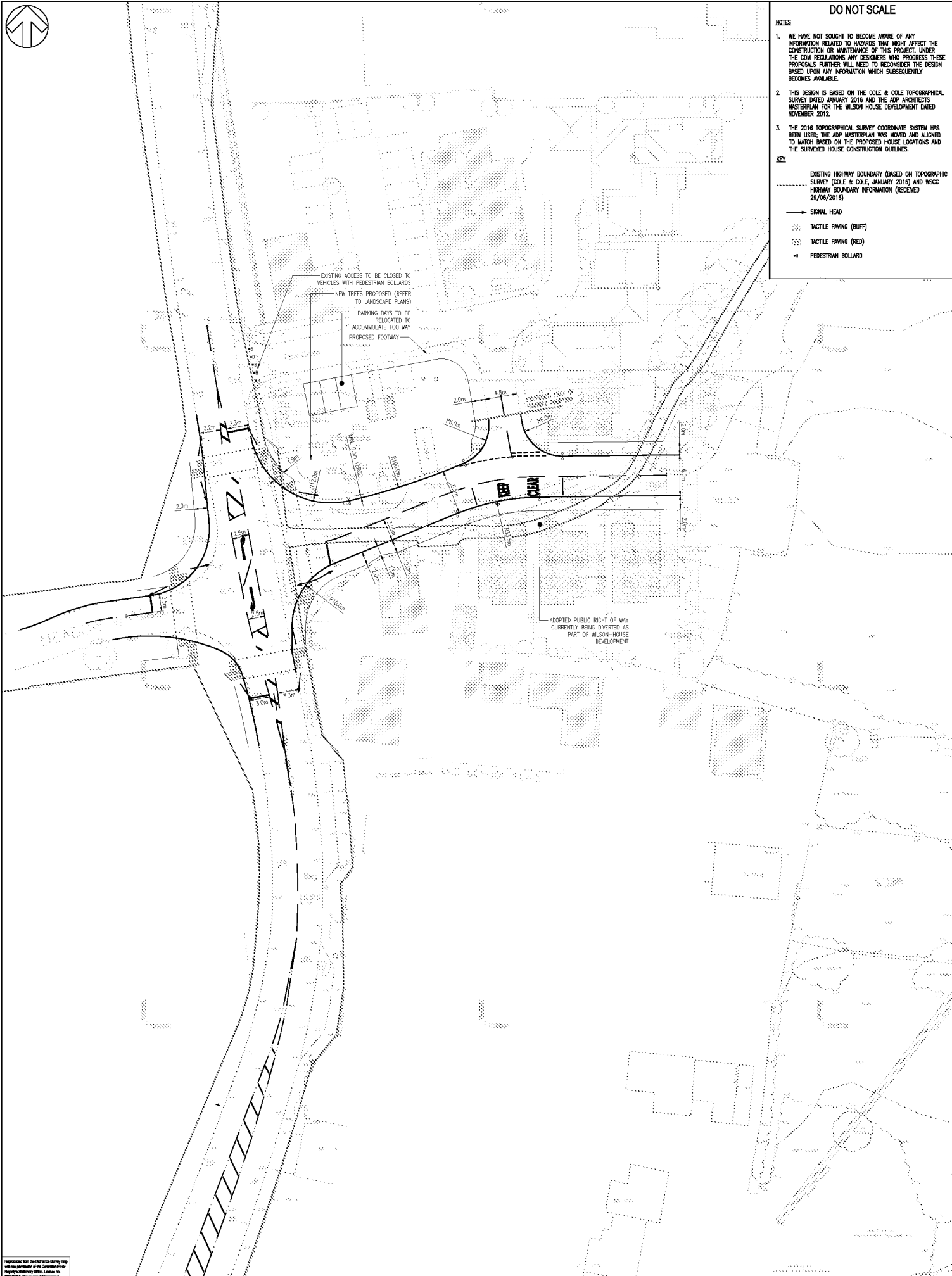
NOTES

1. WE HAVE NOT SOUGHT TO BECOME AWARE OF ANY INFORMATION RELATED TO HAZARDS THAT MIGHT AFFECT THE CONSTRUCTION OR MAINTENANCE OF THIS PROJECT. UNDER THE CDM REGULATIONS ANY DESIGNERS WHO PROGRESS THESE PROPOSALS FURTHER WILL NEED TO RECONSIDER THE DESIGN BASED UPON ANY INFORMATION WHICH SUBSEQUENTLY BECOMES AVAILABLE.
2. THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN FOR THE WILSON HOUSE DEVELOPMENT DATED NOVEMBER 2012.
3. THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.

KEY

EXISTING HIGHWAY BOUNDARY (BASED ON TOPOGRAPHIC SURVEY (COLE & COLE, JANUARY 2016) AND WSCC HIGHWAY BOUNDARY INFORMATION (RECEIVED 29/05/2016))

- SIGNAL HEAD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)
- PEDESTRIAN BOLLARD





Grosvenor House
2 Grosvenor Square
Southampton, Hampshire
SO15 2BE

wsp.com

CONFIDENTIAL

Williams, Chris

From: Bowie, David <[REDACTED]>
Sent: 11 July 2022 22:47
To: Williams, Chris
Cc: Planning SE; Bown, Kevin; Ngobi, Diana; Cleaver, Elizabeth; SouthEast_HESPA@systra.com; Spatial Planning
Subject: 400 dwellings with associated car parking - Land East of the A29 in Westergate

For the Attention of:	Chris Williams
Site:	Land East of the A29 in Westergate
Development:	400 dwellings with associated car parking.
National Highways Ref No:	7487 #17118 (SB485)

Dear Chris,

Thank you for consulting National Highways (formerly Highways England) regarding an expected forthcoming planning application for a development comprising 400 residential dwellings at land east of the A29 in Westergate.

We have been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the strategic road network (SRN). We are therefore concerned with proposals that have the potential to impact on the safe and efficient operation of the SRN, in this case the A27.

We have undertaken a review of the Transport Assessment Scoping Note we received from you on 20 June 2022 and offer the following comment and advice on the information contained therein.

It is observed that the assessment methodology you propose is similar to that previously accepted by the former Highways England for an earlier refused application at the same site, and for the live BEW Parcel SC1 site, to which we have provided an NHPR, requesting supporting information to be provided to us for review. However please note our observations on your scoping note below.

Policy Review

Unfortunately the scoping note does not refer to all of the appropriate policy documents. Whilst there is reference to National Planning Policy Framework (NPPF) 2021, the impact of the proposed development also needs to be assessed based on the following regional and national policy with regards to the SRN:

- DfT Circular 02/2013 'The strategic road network and the delivery of sustainable development'
- The DfT document 'Road Investment Strategy 2: 2020-2025'
- National Highways' guidance document 'The Strategic Road Network: Planning for The Future'

ACTION: The policy review must refer to the above-mentioned documents and demonstrate that the proposals are compliant with the relevant policies contained within them.

Traffic Growth and Committed Development

We will need the opportunity to review the TEMPRo growth factors used, as well as the committed developments and wider infrastructure changes included within the assessment scenarios.

ACTION: TEMPRo growth factors, committed development information and details of wider infrastructure changes need to be provided to us for review.

Assessment Scenarios

Whilst the future year scenarios are acceptable, development opening year scenario(s) in accordance with DfT Circular 02/2013 are also required.

ACTION: Development opening year scenario(s) in accordance with DfT Circular 02/2013 are required.

Junction Modelling

We note that you have identified the following SRN junctions for capacity assessment:

- A27/ A29 Eastern Roundabout
- A27 Arundel Road/ A27/ Arundel Road/ A29 Fontwell Road Roundabout
- A27 Arundel Road/ B2233 Nyton Road

However the assessment of BN/11/22/OUT also includes the assessment of:

- A27 / B2145 (Whyke Roundabout)
- A27 / A259 (Bognor Road Roundabout)
- A27 / The Causeway (Arundel)

The above junctions also need to be included.

ACTION: In addition to the SRN junctions identified in the submitted scoping note for capacity assessment, the following junctions also need capacity assessment analysis:

- **A27 / B2145 (Whyke Roundabout)**
- **A27 / A259 (Bognor Road Roundabout)**
- **A27 / The Causeway (Arundel)**

Other Matters

A Construction Management Plan will be required for the development; this can either be provided at planning application stage, or the provision of a document can be applied as a pre-commencement condition on any permission granted. The CMP will need to be reviewed and approved prior to commencement of any works associated with the development.

ACTION: A Construction Management Plan is required.

Conclusion

We are broadly content with the methodology presented; however our comments noted above will need to be taken into account when preparing the forthcoming TA.

Thank you again for consulting at the pre-application stage with us. We look forward to continuous engagement with the project and being consulted as the proposals develop.

Please continue to contact us at [REDACTED]

Kind regards

David

David Bowie

Area 4 Spatial Planning Manager (Acting)

[REDACTED]

National Highways | Bridge House | 1 Walnut Tree Close | Guildford | Surrey | GU1 4LZ

Web: <http://www.highwaysengland.co.uk>

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National Highways Limited | General enquiries: 0300 123 5000 | National Traffic Operations Centre, 3 Ridgeway, Quinton Business Park, Birmingham B32 1AF | <https://nationalhighways.co.uk> |

[REDACTED]

Registered in England and Wales no 9346363 | Registered Office: Bridge House, 1 Walnut Tree Close, Guildford, Surrey GU1 4LZ

Consider the environment. Please don't print this e-mail unless you really need to.

**WEST SUSSEX COUNTY COUNCIL
PRE-APPLICATION CONSULTATION**

TO:	Organisation: WSP FAO: Chris Williams
FROM:	WSCC - Highway Authority
DATE:	22nd June 2022
LOCATION:	Land East of Westergate Street, Westergate, PO20 3XL
SUBJECT:	Internal Reference: PRE-51-22 400 units with access provided via a new traffic signal junction on the A29 Westergate Street. £5,808 (Inc. VAT) Fee based on request for minimum of 2 meetings - See emails from Steve Shaw & Agent in SharePoint.
DATE OF SITE VISIT:	20 th June 2022
RECOMMENDATION:	Advice
S106 CONTRIBUTION TOTAL:	TBA

The Highway Authority has been consulted for pre-application advice for the following:

**Proposed development of 400 residential units via new
traffic signal-controlled junction,
Land East of Westergate Street,
Westergate, PO20 3XL.**

The advice provided below has been prepared by means of a desktop study and site visit using the information and plans submitted with this request, in conjunction with other available WSCC map information.

I refer to your request for pre-application advice and provide the following comments.

Site Specific Comments.

Comments below respond to Transport Assessment Scoping Note produced by WSP, Project No. 70013258 – May 2022. When compiling the new TA for the development, the following should be included:

1. *Paragraph 2.2 (page 3)* – Given that the Road Safety Audit for the previous proposal was undertaken in 2017, a new Audit should be submitted. In addition, a WORD format Audit Decision Log should be provided too.
2. *Paragraphs 2.2.2 and 2.2.3 (page 3)* – Please submit updated Departure from Standard application forms with latest DMRB Standards included on them.
3. *Paragraph 2.2.4 (page 3)* – Method of signals operation to be confirmed.
4. *Paragraph 2.2.5 (page 3)* – The strategy, design, method for controlling vehicle types using the road, timing for delivery and how it will be secured should all be set-out in the TA. Further clarification about how the route will operate until the full A29 is in place should also be included.
5. *Paragraph 3.3.3 (page 5)* – While five-years of records may suit WSCC as Highway Authority, please note that National Highways may require ten-years of records.
6. *Paragraph 3.4.1 (page 7)* – The TA will need to demonstrate that baseline traffic surveys properly reflect likely levels of traffic pre-COVID.
7. *Paragraph 3.3.2 (page 7)* – Please provide a selection of TRICS data in support of any trip rates used in the TA.
8. *Paragraph 3.5.8 (page 8)* – The assessment scenarios should also include opening year and any interim years and specify what infrastructure is proposed to be in-place on the local transport network at these times. The TA should also state whether the number of dwellings proposed includes any housing that is in addition to the 3000 homes set-out in the Arun Local Plan. If so, the impact of this will need to be accurately modelled across a specific geographic area (final details to be discussed and agreed with the Highway Authority prior to the TA being prepared).
9. *Paragraph 3.5.10 (page 9)* – Please ensure that in addition to any opening and interim year assessments that all recent committed developments are included in the data used. Arun District Council will be able to advise what the latest developments are (and where they are).
10. *Figure 3-2* – The assessed junctions may need to be expanded given additional homes proposed and given mention of 4300 homes for the overall allocation.
11. *General (about modelling)* – You will need to factor-in 4300 homes as this is referred to in Arun Planning policy (albeit not yet tested in detailed transportation terms for the BEW Strategic Allocation).
12. *Table 4-7 (page 17)* – The TA will need to set-out northbound queue lengths as a result of being held at the proposed signals (in order to demonstrate how far any queue extend southwards back toward the railway crossing). Likewise, queues extending back from the railway crossing will need to be shown as it is likely that some queues will extend back across the new signal junction serving the site.

- 13.** *Public Transport Strategy for the site* – This should be set-out in the TA, including evidence of joint working and discussions with neighbouring developers and public transport providers in order to demonstrate how the site will be contributing to an overall strategy for the BEW Strategic Development Location.

Standard information required to be submitted as part of any planning application.

The Highway Authority require that the following documents to be submitted as part of any future application:

- A site location plan scale (1:1250) with site boundary indicated.
- Schedule of existing uses including planning history with reference numbers.
- Description, including site layout plans, of the proposed development and schedule of uses.
- Summary of reasons supporting the site access/highways works proposals, including plan (scale 1:250 or similar) with achievable visibility splays indicated.
- Design Audit of any proposed highway works, including identification of any departures from standards.
- Final Stage 1 Road Safety Audit (RSA) of the site access and any other proposed highway works, with the Road Safety Audit Response Report (RSARR) in Microsoft WORD format for the LHA to edit as Overseeing Organisation, including any amended plans.
- A Transport Assessment, including location plan of key services, availability of sustainable modes of transport and existing/future vehicular generation.
- Consideration of – and links to – Public Rights of Way (PRoW).
- Reference to supporting national, regional, and local planning documents and policies.
- Parking strategy, including provision of parking for all modes of transport.
- Relevant data collected to date.
- Proposed trip rates supported with TRICS outputs and site selection methodology.
- Junction capacity assessment in accordance with WSCC advice (details to be discussed and agreed prior to work commencing on the TA). For sites having an impact on the Trunk Road network, National Highways should be consulted separately to establish their specific requirements.

Also provided below is some standard guidance relating to road design and current standards.

There are two sets of guidance which govern road design: Manual for Streets (MfS) for lightly trafficked residential streets; and Design Manual for Roads and Bridges (DMRB) for all other roads, including rural roads. I have included links to both below.

Manual for Streets:

<http://www2.dft.gov.uk/pgr/sustainable/manforstreets/pdfmanforstreets.pdf>

DMRB supplementary documents CD 109 (Search for "CD 109"):

<https://standardsforhighways.co.uk/dmrb/>

WSCC supports the approach set out in MFS, which has been adopted guidance for residential street design since its introduction in 2007. Within this document there are some very useful references to visibility splays, turning circles and car parking layouts. The document does not however provide specific measurements for visibility splays, so:

"X "Distances from the (kerb back) are typically:

- 2.4 metres - for domestic single access points and shared or busy crossovers (this may be reduced to 2.0 metres in certain circumstances in consultation with the Local Highways Authority and subject to local context)
- 4.5 metres - for busy junctions
- 9.0 metres -major junctions

"Y "Distances are based on vehicle speed, and for lightly trafficked residential streets MFS would be applied:

- 20 mph - 25 metres
- 25 mph - 33 metres
- 30 mph - 43 metres

For a road where the 85th percentile speed is in excess of 39 mph and for roads where MFS does not apply, CD 109 distances from DMRB would be applied:

- 40 mph -120 metres
- 50 mph -160 metres
- 60 mph -215 metres

I have attached a link to our Local Design Guide which provides further advice on how MfS is to be interpreted and applied within West Sussex.

The 'Additional Information' section of the WSCC Pre-application advice for roads and transport webpage provides a range of additional advice and guidance which you may find useful in preparing your application. Please click the link below and navigate to the 'Additional Information' section.

<https://www.westsussex.gov.uk/roads-and-travel/information-for-developers/pre-application-advice-for-roads-and-transport>

Here you will be able to access our Local Design Guide which provides further advice on how MfS is to be interpreted and applied within West Sussex.

Parking

For applications within Arun, Crawley and South Downs National Park any parking provision should be provided in line with the Planning Authorities adopted Supplementary Planning Guidance (SPG) which will set out parking standards for development in these areas. Within you will find recommended levels for cycle parking and also guidance on levels of Electric Vehicle charging points for new developments (although please note that as from 15th June 2022, EV provision falls under Building Regulations. However, both the LPA and County Council may still wish to respond to this additionally to anything Building Control say).

Arun

<https://www.arun.gov.uk/supplementary-planning-documents-spds/>

Crawley

<https://crawley.gov.uk/planning/planning-policy/local-plan/supplementary-planning-documents/urban-design-spd>

South Downs National Park

<https://www.southdowns.gov.uk/planning-policy/supplementary-planning-documents/>

For all other areas West Sussex County Councils latest parking standards which we adopted in August 2019 as Supplementary Planning Guidance (SPG) should be used. This can be found at the link below under the 'Additional Information' section.

<https://www.westsussex.gov.uk/roads-and-travel/information-for-developers/pre-application-advice-for-roads-and-transport>

Please note that any advice given by council officers for pre-application enquiries does not constitute a formal response or decision of the council with regard to the granting of planning permission in the future. Any views, opinions and comments expressed should not be considered exhaustive, are given in good faith and to the best of ability, without prejudice to the formal consideration of any application, which will be the subject of public consultation and ultimately decided by the Local Planning Authority.

Tim Townsend

County Highways Team – Highways, Transport and Planning

Williams, Chris

From: Steven Shaw <Steven.Shaw@westsussex.gov.uk>
Sent: 03 July 2023 14:21
To: Williams, Chris
Cc: Blacker, Andrew; Tim Townsend
Subject: RE: Westergate - meeting minutes and site access technical note

Afternoon Chris,

Sorry for the delay in coming back to you on this. As you know Tim is currently away from work and it has meant reassigning his workload whilst continuing to deliver on our own current work streams, hence the delay in being able to resource this.

Please find below the information that I believe is outstanding from WSCC.

Anticipated Completion Date for A29 Phase 1 (north of Barham Road)

In relation to the anticipated completion date for the A29 Phase 1 colleagues have advised the following:

"The A29 realignment scheme is planned but not fully funded and the timing of this scheme is uncertain; for the purposes of the assessment, the site promoter should assume that Phase 1 of the A29 Realignment (Fontwell Ave to Barnham Road) opens to traffic in 2026 and Phase 2 of the scheme (Barnham Road to Lidsey Road) opens in 2034."

A29/Pine Close Modelling and approach

Officers have reviewed the modelling and the Traffic Signals team have had an initial high level review of the proposals. In terms of the traffic signal staging our signals team agree with the approach that you have set out for the signalised junction on the A29.

With regards to the capacity of the A29/Pine Close junction, my understanding is that your work demonstrates that this junction is forecast to operate over capacity with the inclusion of the Cala Homes site, Parcel SC1 and the EW link road in place until the full A29 is complete. You have also undertaken an alternative modelling scenario where it is assumed that the EW link road will be a pedestrian, cycle and bus only link until the A29 realignment is complete. In this scenario the junction is forecast to operate within capacity in a 2031 future year scenario. On this basis the Highway Authority would request that there is a requirement of any permission granted, for either the Cala or the Church Commissioners site, that states the EW link must be a ped, cycle and bus link until the A29 realignment is complete. We will need to discuss this in more detail with Arun District Council but it could be that the link is a ped, cycle and bus link only and only opened to traffic if considered necessary once the A29 realignment is complete.

Cycle Infrastructure on East West Link Road

As stated during your recent meeting the cycle infrastructure on the EW link road, that forms part of the Church Commissioners site, has not yet been agreed. WSCC is of the view that any cycle infrastructure should accord with the guidance within LTN1/20. Therefore WSCC would recommend that it is assumed that a segregated cycle route provision is required along the EW link road and bridge. The applicant should however provide justification for the proposed level of infrastructure with a review against the latest guidance within LTN1/20.

If you need anything else from me or if I have missed anything, that you are still awaiting for, just ask.

Regards

Steven Shaw BA (Hons) MSc MCIHT

County Highways (Development Management) Team Manager
County Highways Team, Planning Services
West Sussex County Council, Ground Floor, Northleigh, County Hall, Chichester PO19 1RH
Phone: 0330 222 4674
Email: steven.shaw@westsussex.gov.uk | Web: www.westsussex.gov.uk

From: Williams, Chris <Chris.Williams@wsp.com>
Sent: 03 July 2023 10:33
To: Steven Shaw <Steven.Shaw@westsussex.gov.uk>
Cc: Blacker, Andrew <Andrew.Blacker@wsp.com>; Tim Townsend <tim.townsend@westsussex.gov.uk>
Subject: RE: Westergate - meeting minutes and site access technical note

****EXTERNAL****

Hi Steven,

I'm just following up on my email below – can you please let me know when we're likely to receive some feedback?

Thanks,
Chris



Chris Williams
Associate Director
BSc (Hons) MSc CMILT MCiHT



Please note I am on annual leave 24th-28th July.

From: Williams, Chris
Sent: Tuesday, June 27, 2023 7:41 AM
To: Steven.shaw@westsussex.gov.uk
Cc: Blacker, Andrew <[REDACTED]>; Tim Townsend <tim.townsend@westsussex.gov.uk>
Subject: RE: Westergate - meeting minutes and site access technical note

Hi Steven,

I'm just following up on Tim's email below – can you please let me know timeframes for your review of our Tech Note for Westergate? If there are any questions on its contents please let me know. I am happy to discuss on a short call if helpful.

Thanks,
Chris



Chris Williams
Associate Director
BSc (Hons) MSc CMILT MCiHT



Please note I am on annual leave 24th-28th July.

From: Tim Townsend <tim.townsend@westsussex.gov.uk>
Sent: Thursday, June 8, 2023 10:21 AM
To: Williams, Chris <[REDACTED]>
Cc: Blacker, Andrew <[REDACTED]>; Jessica Sparkes <[REDACTED]>
Subject: RE: Westergate - meeting minutes and site access technical note

Dear Chris,

Thanks for your email of 6 June found below.

Due to unforeseen circumstances I will be away from the office for the next few weeks. In my absence, my team manager Steven Shaw will be looking at, and replying to, your technical note. Steve's email address is as follows:

Steven.shaw@westsussex.gov.uk

Regards,

Tim

Tim Townsend, MCiHT

Principal Transport Planner, County Highways Team -- Highways, Transport and Planning
West Sussex County Council, Ground Floor Northleigh, County Hall, Chichester PO19 1RQ
Phone: (External) 03302 225726 (Internal) 25726
Email: tim.townsend@westsussex.gov.uk
Web: www.westsussex.gov.uk

From: Williams, Chris <[REDACTED]>
Sent: 06 June 2023 13:09
To: Tim Townsend <tim.townsend@westsussex.gov.uk>
Cc: Blacker, Andrew <[REDACTED]>; 'Ian Johnson' ([REDACTED])
<[REDACTED]>; Jessica Sparkes <[REDACTED]>
Subject: Westergate - meeting minutes and site access technical note

****EXTERNAL****

Hi Tim,

Following on from our meeting last Thursday please find attached our draft minutes for comment. If any updates are required please let me know and I will amend and reshare.

Also attached is the A29 Site Access Technical Note which we discussed during the meeting. This provides details of the LinSig assessments completed for the A29 / Meadow Way / site access junction for a number of different scenarios using our revised traffic signal staging. Given the conclusions of the Note, we would welcome WSCC's view of what constitutes an acceptable approach to the traffic signal operation and associated capacity assessments.

I will also separately send through details of anticipated pedestrian / cycle desire lines and forecast flows as soon as possible.

Thanks,
Chris



Chris Williams
Associate Director
BSc (Hons) MSc CMILT MCiHT



WSP UK Limited
Grosvenor House, 2 Grosvenor Square
Southampton
SO15 2BE

wsp.com

Please note I am on annual leave 19th-23rd June.

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