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Prepared By:	Caroline Duff (February 2024)
Checked By:	Tom Fisher (February 2024)
Approved By:	Mark Smith (February 2024)

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1. INTRODUCTION

- 1.1 This Highways Response Note (HRN) has been prepared by Paul Basham Associates on behalf of Bellway Homes in support of their revised full planning application for a development comprising of 83 dwellings at Palk Road, Havant.
- 1.2 This HRN considers comments from HCC Highways (29th November 2023) which are attached as **Appendix A**, following the submission of the Transport Assessment Addendum (TAA) which responded to previous comments raised by the Highway Authority (dated 10th May 2023).
- 1.3 In terms of HCC comments in relation to Palk Road, HCC asked to clarify the following matters to ensure a safe and suitable access of Palk Road:
 - Gates for the access abutting the site access to be set back 6.0m from Palk Road and to open inwards to not obstruct the footway and flow along Palk Road;
 - Removal of the close boarded fence and obstructions on the required footway from the property 'Wengen';
 - Provision of a footway on both sides of the carriageway to improve pedestrian permeability to and from the site;

- Visibility Splay amendments;
- Provision of parking restrictions on both sides of the carriageway to prevent parking reducing the operational width of Palk Road and for parking enforcement measures to be achievable: and
- Amendments to the crossing provision at the West Street junction.

1.4 The comments from HCC have been split out into those which involve Palk Road and those which involve the wider highways network and are detailed in the following sections of this report, along with the response.

2. HIGHWAYS COMMENTS – PALK ROAD

Comment 1

2.1 The main comment raised by HCC is that Palk Road is not currently adopted highway and therefore changes to the road cannot be made as it is not within the applicant's ownership. HCC stated:

"The Highway Authority need to ensure that access to the site is safe and suitable and can be maintained in perpetuity. Should the applicant not have the rights to be able to undertake the required works along Palk Road or the site cannot be adopted through a S228 process, the Highway Authority cannot be satisfied that a safe and suitable access into the site would be achievable. Therefore, this matter needs to be resolved before the Highway Authority can provide a positive recommendation to this planning application."

2.2 While maintaining their position that rights do exist to carry out works to Palk Road, in order to move matters forward, the applicant (Bellway Homes) are exploring the opportunity to bring Palk Road up to adoptable standards in discussion with HCC.

Comment 2

2.3 HCC raised that the footways along both sides of the carriageway along Palk Road should be continuous.

"It is set out within the TAA that provision of a continuous footway on the northern side of Palk Road is not required, and this is not agreed. Footways on both sides of the carriageway are a requirement to aid pedestrian permeability to and from the site and increase the attractiveness of travel via sustainable modes."

- 2.4 While not considered necessary to require a footway on both sides of Palk Road, in the context of bringing Palk Road to an adoptable standard, a continuous footway of c2m along both sides of the carriageway linking from the development site is now proposed and shown within **Appendix B**. In addition, this will also see the removal of the close boarded fence and obstructions on the required footway outside of the property 'Wengen'.

Comment 3

- 2.5 In addition, the highway authority stated that parking restrictions along Palk Road would be welcomed, however, ownership of Palk Road would be required in order to have these put in place.

"The applicant suggests that a parking management measure could be provided on one side of Palk Road to mitigate against the errant parking along Palk Road. Whilst provision of parking restrictions would be welcomed by the Highway Authority, Palk Road would need to be under the ownership of the applicant or the Highway Authority to ensure that this could be enforceable".

- 2.6 Parking restrictions are proposed on the southern side of the carriageway, as shown on **Appendix B** which could be enforced via a Traffic Regulation Order (TRO) or private management company. This will ensure parked cars do not block the two-way vehicle movement along the carriageway and ensures that there will be no physical obstructions to restrict the free-flow of traffic accessing and egressing the proposed development site.
- 2.7 Vehicular tracking has been provided (**Appendix C**) which shows a 'dot com' delivery van and fire tender can access the site from West Street should a queue form along Palk Road when the Bedhampton level crossing is down.

Comment 4

- 2.8 Following on from the above, HCC raised concern with the existing width of Palk Road and whether two-way vehicle movement is achievable.

"The Highway Authority still have concerns with the operational width [of Palk Road], with a useable width of 4.3m not regarded as sufficient to accommodate two-way movements. This available width has not considered poorly parked vehicles and wing mirrors when passing encouraging mounting of the footway to undertake manoeuvres which would be unacceptable. Parking restrictions should be provided on both sides of the carriageway to ensure that a two-way flow along Palk Road can be achieved especially considering the intensification of use. This matter would be a key consideration in allowing vehicles to

access and egress Palk Road in a safe and appropriate manner when the level crossing is in use.”

- 2.9 As aforementioned, Bellway are exploring bringing Palk Road to an adoptable standard and as part of the proposals will ensure a minimum road width is 5.5m to accommodate two-way vehicle movement is achievable for the entirety of Palk Road. The proposed improvements to the carriageway are shown within **Appendix B**.
- 2.10 HCC have requested that parking restrictions are present on both sides of the carriageway, however it has been successfully demonstrated that there is not a requirement to implement restrictions on both sides as the southern restrictions in isolation can maintain free flow of traffic movement into the development site.

Comment 5

- 2.11 The highway authority has raised concern over justifying the proposed development impact against previously consented uses.

“The TAA continually refers to existing/former uses at the site to justify the acceptability of the operation of Palk Road in its current form when considering the trips to be generated from the development. As referred to previously, the site is subject to a complicated planning history with temporary permissions linked to highway safety concerns of the access point in the development. The existing B2 use is personal consent to Premier Pallets which would convert back to the B8 use (APP/15/00447) which is restricted to Portsmouth Water use. As previously stated, the Highway Authority do not agree that the site can be discounted against these previous consents due to the uses being heavily restricted within the planning consents, the proposed use is substantially different and that the previous permissions did not cover the entire site that this development’s red line covers. Thus, the assessment work should not consider or justify the impact of this development against the previous consents”.

- 2.12 Contrary to HCC's comments, part of the site is subject to a later planning permission in April 2019, reference APP/19/00078 that mean once Premier Pallet Supplies no longer occupy the site/the current use ends, the permitted use reverts back to an open and unrestricted B8 use (and not restricted to Portsmouth Water use as HCC state). From discussions with HBC planning officers at a meeting on 23rd January 2024, it has been confirmed that HBC have also made this point clear to HCC that some of the site has open and unrestricted B8 use and therefore can be, and more importantly should be, considered as extant development.
- 2.13 Great weight must therefore be assigned to this position when considering the merits of the planning application, specifically in the context of highway matters and access, and the HCC comments regarding existing visibility splays from the Palk Road/West Street junction, queuing when the Bedhampton level crossing point is lowered and the effective width of Palk Road.
- 2.14 Through the nature of the previous land uses on the site and the current ongoing activities, a significant proportion of trips have and continue to be made by LGVs/HGVs. These vehicle types have been using the Palk Road/West Street junction for many years without any highway safety or operational concerns, as demonstrated through the Transport Assessment submitted in support of the application. It is therefore unreasonable to disregard the above points when reviewing the proposed development and its impact on Palk Road and the local highway network.

Comment 6

- 2.15 As part of the WCHAR updates, changing the gates and tactile paving was proposed across the existing gated access adjacent the site. HCC had the following comments.
- "The gates adjacent to the access are to be replaced to no longer open out onto Palk Road and there would not obstruct the proposed pedestrian movements across the access into the proposed development and associate footway. This matter would need to be suitably conditioned as part of any planning consent to be resolved prior to commencement. Tactile paving is proposed to be provided across this access point as shown within drawing 043.0035-0008 Rev 1."*
- 2.16 In the context of bringing Palk Road up to adoptable standards there has been a change in the design based on the suggestion of a vehicle crossover raised by HCC. Gates have already been altered so that they open inwards into the adjacent site and not out onto Palk

Road. HCC have requested that the gates be set back 6m into the site, however this is not within the control of the applicant. This is an existing situation, which has occurred for a number of years, and we are not aware of any safety issues as a result of the gates not being set back 6m.

- 2.17 It is understood that HCC would have a concern if the gates were closed and vehicles would have to wait on Palk Road and cause obstruction. Given the nature of the site, the gates likely remain open throughout the day when the site is operational, and only close when it ceases operation and therefore there is minimal opportunity for vehicles having to wait along Palk Road. Notwithstanding this, Palk Road and the proposed internal road layout are straight in nature and provide excellent forward visibility. Should any vehicle have to manoeuvre around a parked vehicle waiting for the gates to open, forward visibility is good and will ensure there is no vehicle travelling on the opposite side of the carriageway.
- 2.18 Tactile paving will not need to be provided as the access to this area is to be via a vehicle crossover and give pedestrians priority over vehicles and therefore improves the accessibility of the site. The design is shown on **Appendix B**, with the full vehicle crossover design attached as **Appendix D**, including visibility at 20mph (2.4m x 25m) and pedestrian visibility at 2m x 2m which is achievable.
- 2.19 A vehicle crossover in this location is considered appropriate and the existing land use would likely generate low amounts of traffic movements throughout the day. There are vehicle crossover access points located along West Street for a car showroom, likely to have a significant increase in vehicular trips accessing/egressing, and similar land uses which do not have any known operational or safety issues and therefore a vehicle crossover in this location is considered acceptable. HCC include standard details for vehicle crossing for commercial and industrial uses, which have been promoted by HCC specifically in consideration of other sites within Havant Borough.
- 2.20 The comments raised by Hampshire County Council regarding Palk Road, have mainly been overcome through the applicant exploring the opportunity to bring Palk Road up to adoptable standards. All amendments to Palk Road and the updated visibility and tracking are shown within the attached appendices.

3. PALK ROAD/WEST STREET JUNCTION

Comment 7

- 3.1 HCC also raised a comment on the existing alignment of the Palk Road/West Street junction.

"It appears these [delivery vehicles turning into/out of Palk Road] awkward manoeuvres are present due to the alignment of the junction and the applicant should explore the scope to ease the alignment to accommodate these movements if there is scope to do so".

"The centreline should be shown on the drawing for both Palk Road and West Street to ensure the movements are being undertaken on the correct side of the carriageway."

- 3.2 There is no available land to alter the alignment of the Palk Road / West Street junction. This is an existing junction where movements have previously occurred regularly over a day in association with the existing land uses on the site and along Palk Road including HGVs from the site larger than a delivery vehicle, as explained above.
- 3.3 As evidenced within the submitted Transport Assessment there have been no accidents in the past 5 years at the junction, which HCC accept, therefore it is not a highway safety concern. The above point is compounded by the fact that the number of larger vehicles using the junction will reduce as a result of the proposed development (when compared to the site's existing and former uses), which as noted would be unreasonable to disregard.
- 3.4 In addition, a swept path analysis has been undertaken (**Appendix C**) to show that delivery vehicles can safely enter and exit the Palk Road/West Street junction without obstructing flow on the opposite side of the carriageway.

Comment 8

- 3.5 As previously proposed, the dropped kerbs at the junction of Palk Road/West Street will be upgraded to include tactile paving. However, HCC raised concern over the visibility achievable from this location.

"Tactile paving is to be provided at the Palk Road/West Street junction to overcome the deficits in the provision. This is shown in drawing 043.0035-0008 Rev 1 supported by visibility splays. The splays should be shown for West Street both based on recorded speeds and the achievable visibility. It is noted that the splay skims the planting of Chapel House to the north. Visibility may be able to be improved by realigning the crossing slightly from its existing position, whilst being mindful of the desire line."

- 3.6 As aforementioned, changing the alignment of the junction of Palk Road/West Street is not possible due to the highway land available. As such, there is no room to make adjustments to the proposed crossing point.
- 3.7 The existing height of the railings along the Chapel House boundary are circa 1.2m in height and therefore pedestrians will be able to see over this when they are waiting to cross. Following on from the above, HCC cannot disregard that this is an existing crossing point which has been in use for years with no recorded safety concerns.
- 3.8 Additionally, planning permission was granted for Chapel House in 2008 with no requirement to avoid obstructing the existing visibility splays from the Palk Road/West Street crossing point.
- 3.9 Visibility splays of 1.5m x 16m to the centreline is achievable and 1.5m x 10m to a 0.3m offset from the kerb. A 10m visibility splay is commensurate with 11mph design speed and at this point on the road network, vehicles will be slowing down to approach the junction and give way line and therefore it is considered that the existing crossing point does not need to be relocated. The achievable visibility splays are crossing design is shown within **Appendix D**.
- 3.10 Given that a 2m footway is proposed on both sides of Palk Road, save for a small section of 1.9m at the junction with West Street, which continues into the site and the presence of suitable crossing points internally within the proposed site, the development will not result in a material increase in pedestrians crossing at this point of the local road network.

Comment 9

- 3.11 HCC have raised questions over the visibility splays provided within Drawing 043.0035.002 Rev B are based on wet weather speeds and require confirmation before confirming the acceptability.

"Confirmation is requested as to whether these are based on dry or wet weather speeds. Should speeds be collected in dry weather an additional 2.5mph to account for wet weather should be to calculate the required visibility. This should be clarified before the Highway Authority can confirm whether the visibility shown is acceptable."

- 3.12 Using historical weather records (World Weather Online), it can be seen that there was precipitation at various times throughout the recording of the ATC on West Street in June 2023 and therefore no alterations to the vehicular speeds is required as per HCC request.
- 3.13 Visibility is shown at 2.4m x 36m in the primary direction and 2.4m x 37m in the secondary direction in line with the recorded vehicle speeds of 27.1mph eastbound and 26.5mph westbound. The updated drawing (based on an updated topographical survey) is attached as **Appendix E**.
- 3.14 HCC have stated that the visibility splays will be 'permanently obstructed' by on-street parking along West Street, suggesting that vehicles or cyclists travelling westbound along West Street will never be driving or cycling in the nearside channel line. It can therefore be considered vehicles and cyclists would be driving closer to the centreline as they have to manoeuvre around the 'permanent obstructions'. Visibility splays can be shown to the centreline without any obstruction.
- 3.15 Should vehicles not be parked in this location and vehicles were driving to the nearside channel, visibility splays can be met to the kerb as per drawing 043.0035.002.
- 3.16 Notwithstanding the above, this is an existing junction which has been operating for numerous years with no known recorded accidents at this point of the network which have attributed obstructed visibility. Crashmap shows that there have been no accidents at the Palk Road/West Street junction for the past 24 years.

Comment 10

- 3.17 HCC have raised concern over the operation of the Palk Road/West Street junction when the level crossing barriers are in operation.

"The Highway Authority previously raised that due to the proximity of Palk Road and the level crossing c. 5 queuing vehicles would impact the operation of Palk Road and therefore using this as an assessment criterion suggests that consideration needs to be given towards the queuing vehicles and the operation of the junction. A queue would still form along Palk Road even accounting for additional vehicles turning right if the level barriers are in use if vehicles are not able to Palk Road and turn right. The alignment of Palk Road prevents two vehicles to wait at the stop line to turn left or right and therefore these blocking back issues would remain".

- 3.18 The trip generation and trip distribution accepted by HCC shows that within the 2027 plus committed development plus development scenario there will be a total of 23 departures from Palk Road in the PM Peak (worse case), which equates to less than 4 vehicles every 10 minutes.
- 3.19 The existing parking restrictions extend for 25m which allows for up to 4 large cars to wait. This would therefore ensure that there would be effective carriageway width for the first 25m of Palk Road to maintain two-way flow, as shown within **Appendix C**. Parking restrictions proposed as part of the development will maintain free flow of Palk Road for those travelling into/out of the development site.
- 3.20 Moreover, this is an existing situation which occurs daily, and the development is only increasing the amount of traffic through this junction by 21 in the AM peak and 23 in the PM peak, which is around one vehicle every 3 minutes. This is not accounting for any net reduction in trips from the existing / previous uses on the site for a more than robust assessment. As demonstrated through the submitted TA, there have been no accidents in the past 5 years at this location and there is no evidence to suggest that queueing vehicles on Palk Road would cause any highway safety concerns as a result of the development.
- 3.21 Modelling has also been updated which has been purposely constrained to the lowest lane width possible (2.2m) for the minor arm to attempt to address concerns that HCC have raised. In the baseline 2027 + committed development + development AM and PM peak scenarios, it shows that the highest RFC value is 0.05 in the AM peak on the Palk Road arm and there is no queueing across the hour. The results are contained within **Appendix F**.

Comment 11

- 3.22 HCC *“noted that the applicant agrees to re-paint the ‘keep clear’ box abutting the Palk Road/West Street junction. This should be provided as part of the S278 works for the site”*. Therefore, we have produced a drawing, attached as **Appendix D** to show that the applicant will provide this to enhance the operation of the Palk Road/West Street junction and ensure vehicles do not block the access to the site when the level crossing barriers are in operation.
- 3.23 The comments raised by Hampshire County Council have been addressed through updated visibility and tracking drawings which are shown within the attached appendices.

4. HIGHWAYS COMMENTS – OFFSITE WORKS

Comment 12

- 4.1 Hampshire have accepted that *“The proposed tractile crossing point along West Street to the west of the junction is agreed to be in a more appropriate location as this does not require the removal of existing parking spaces and guard railing.”* However, there are comments regarding visibility which need to be addressed before HCC will agree the crossing location. HCC have suggested that *“A departure may be appropriate to be considered given the presence of the parking for the visibility to be measured to the centreline where needed.”*
- 4.2 A pedestrian crossing in the form of dropped kerbs and tactile paving has been designed to the east of the Palk Road/West Street junction to provide access to the northern carriageway along West Street. It has been ensured that pedestrian visibility splays of 1.5m x 36m eastbound and 1.5m x 37m westbound are achievable from the proposed crossing point based on the recorded vehicle speeds (27.1mph eastbound and 26.5mph westbound) in line with HCC TG3 guidance. The crossing point design and visibility splays are shown within **Appendix E**.
- 4.3 HCC did suggest that *“there is a stretch of West Street within the vicinity of the Meyrick Road junction where double yellow lines are present on both sides of the carriageway and therefore a tactile crossing point should be provided and shown with the achievable visibility in accordance with TG3.”* However, due to the proximity of existing access points and the existing location of parked cars, a crossing point in this location was not achievable.

5. INTERNAL ROAD LAYOUT

- 5.1 The internal road layout has been designed using a 20mph design speed which is reinforced by vertical traffic calming features within the site. The internal road follows the existing width of Palk Road when entering the site at 6.3m, with 2m footways either side. The carriageway reduces through the site to 5.7m at the western end. At the western side of the site, the level of the roads, outside apartment blocks B and C, the carriageway will be flush with the footways and car parking spaces.
- 5.2 It is proposed that the low flow of traffic and low speed environments will be conducive to on street cycling.

- 5.3 There are 4 vehicle crossovers into parking areas for apartment blocks A to D shown to have 2m by 25m visibility splays which are shown within **Appendix G**. Visibility splays of 2.4m by 25m have been shown from the large car parking area on the northern side of the internal access road. All splays are inline with guidance set out in HCC TG3 and are unobstructed and therefore considered acceptable.
- 5.4 The car parking aisle widths are, at a minimum, 6m in width, with the large car parking area being measured at 6.2m wide. This follows Manual for Streets principles and allows a large car to access and egress the car parking spaces suitably. This is shown in **Appendix H**.
- 5.5 All internal build outs have now been removed to address HCC's comments in their first response dated 10th May 2023. Additionally, footways have been provided on both sides of the internal carriageway for the first 30m. The southern footway runs alongside the carriageway for the remainder of the site, whilst the northern footway deviates to provide pedestrian access to the apartment blocks and to the shared car park. There are crossing points either side of the car park access points, which are raised to be the same level as the footway, to provide greater pedestrian provision.
- 5.6 A Stage 1 Road Safety Audit will be provided for the internal road layout and will be submitted under separate cover.

6. CAR AND CYCLE PARKING

- 6.1 Guidance from HBC's Parking SPD (2019) has been utilised to understand the parking requirement for the development. The guidance from HBC's Parking SPD (2019) is outlined in **Table 1** along with the parking requirement for the development.

Dwelling Size	Allocated Parking per unit	Number of units	Unallocated Parking per unit	Unallocated Parking Requirement
1-bed	1 space	18	0.9 spaces	16.2 spaces
2-bed	2 spaces	65	1.3 spaces	84.5 spaces
Total	-	83	-	100.7 spaces

Table 1: Parking Requirements

- 6.2 As summarised within **Table 1**, the development would be required to provide 101 unallocated spaces. The revised internal layout provides 112 unallocated spaces which is 11 spaces over the prescribed requirement. In addition to resident parking, the guidance suggests an additional 20% of unallocated parking for visitors should be provided, which

would equate to an additional 17 spaces based on unallocated, which means the site provides an under provision of 6 spaces. However, the guidance also states ‘in larger developments with no allocation of spaces, a lower visitor space allowance may be acceptable’.

- 6.3 The Transport Assessment (043.0035TA2) which was submitted previously to support this application provided comprehensive commentary on the sustainability and accessibility of the development and parking levels within the ward area (Paragraphs 6.20 to 6.29) which should be read in conjunction with the above to support the minor under provision of parking in accordance with HBC guidance.

Electric Vehicle Parking

- 6.4 Electric vehicle charging infrastructure will be provided in accordance with Building Regulations Part S.

Cycle Parking

- 6.5 HBC’s guidance states that cycle storage should be provided at 1 space per 1-bed unit and 2 spaces per 2/3-bed unit. Therefore, the development will provide a total of 148 cycle storage spaces in line with HBC’s guidance. The cycle storage spaces will be accommodated within each of the buildings to ensure secure, covered spaces are provided to residents. In addition, a further 36 visitor cycle spaces are proposed to support sustainable travel by visitors to and from the development.

7. SUMMARY AND CONCLUSIONS

- 7.1 This Highways Response Note (HRN) has been prepared by Paul Basham Associates on behalf of Bellway Homes in support of their revised full planning application for a development comprising of 83 dwellings at Palk Road, Havant. This HRN considers comments from HCC Highways (29th November 2023).
- 7.2 The highway proposals and the updated visibility and tracking are shown within the attached appendices.

- 7.3 The development is proposing the following to address the highways comments:
- Amending Palk Road carriageway width and providing footways on either side to bring it to adoptable standard;
 - Providing parking restrictions along Palk Road;
 - Re-painting the 'Keep Clear' markings at the junction with Palk Road/West Street;
 - Providing a vehicle crossover;
 - Providing tactile paving at the existing crossing point at Palk Road;
 - Providing updating tracking;
 - Providing updated visibility splays; and
 - Providing a crossing point across West Street, east of the junction with Palk Road.
- 7.4 Therefore, we ask HCC to acknowledge the merits of the alterations in improving the development scheme and look favourably upon this development in terms of highways.

Appendix A

Havant Borough Council
Civic Offices
Civic Centre Road
Havant
PO9 2AX

Hampshire 2050
The Castle
Winchester, Hampshire SO23 8UD

Telephone: 0300 555 1375
Fax: 01962 847055

www.hants.gov.uk

Enquiries To Sophie Osborne

Direct Line 0370 779 5232

Date 29 November 2023

My reference 051225

Your reference APP/22/01231

Email havantdc@hants.gov.uk

Dear Ms Miszewska,

Land at, Palk Road, Havant

Redevelopment of a brownfield site to include the provision of 4No. Apartment blocks comprising of 90No. residential dwellings (including 27 affordable units) (Use class C3 residential), parking, public open space, landscaping and other associated works, including demolition of existing buildings on site, with access from Palk Road

Thank you for your re-consultation on the above full planning application. In response to previous comments raised by the Highway Authority (dated 10 May 2023) the applicant has submitted a Transport Assessment Addendum (hereafter, TAA) which the Highway Authority have reviewed and have the following comments to make.

It is noted that all matters relating to the internal road network are to be addressed separately and not part of this submitted TAA. Whilst the Highway Authority can provide comments based on the submitted information no final decision will be made on the planning application until all outstanding matters have been submitted for consideration and the land ownership matters have been resolved.

WCHAR Updates and Off-Site Improvements

The updated WCHAR to support this planning application has reviewed the existing footway provision along Palk Road.

The gates adjacent to the access are to be replaced to no longer open out onto Palk Road and there would not obstruct the proposed pedestrian movements across the access into the proposed development and associate footway. This matter would need to be suitably conditioned as part of any planning consent to be resolved prior to commencement. Tactile paving is proposed to be provided across this access point as

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shown within drawing 043.0035-0008 Rev 1. The visibility splays for the proposed crossings have not been provided, there is concern that these would be obstructed by boundary treatments and the proposed gates. The access to the existing use could be designed as a vehicle crossover arrangement to allow priority to pedestrians and reduce the visibility requirements with the 2m * 2m set back as set out within TG3. However, consideration on whether this is appropriate given the permitted use of the land should be set out. It is requested that the planning position for the land parcel is confirmed regarding its permitted land use.

Visibility splays have also been provided at this access within the drawing. The design speed is unclear considering the unadopted nature of Palk Road however it is agreed that splays based on a 20mph design speed are appropriate. The applicant should ensure that the secondary splay is not obstructed by any of the internal road proposals. The current splay is shown to fall within parking spaces which is unacceptable and should be revised. It also appears to be obstructed by fencing. Confirmation is requested as to whether this is proposed as part of the development or to be removed.

It is set out within the TAA that provision of a continuous footway on the northern side of Palk Road is not required, and this is not agreed. Footways on both sides of the carriageway are a requirement to aid pedestrian permeability to and from the site and increase the attractiveness of travel via sustainable modes. Palk Road is already provided with footway on both side of the road they just do not continue or are of an appropriate construction to the site boundary. The connection of these existing footways to the internal road design of the proposed development would be a requirement of this planning application should Palk Road be adopted through a S228 agreement or not. The current footway infrastructure along Palk Road is poor and should be improved as part of this planning application. The internal layout should not be redesigned in such a way to remove any footway provision.

The close boarded fence mentioned for the property 'Wengen' and the additional obstructions (bins etc.) will need to be removed to facilitate the development proposals should Palk Road be adopted or not. Removal of this fence would improve the visibility for this property and vehicular visibility splays should be provided to ensure the required splays can be achieved given the development proposal within the design of the development and can be achieved.

Tactile paving is to be provided at the Palk Road/West Street junction to overcome the deficits in the provision. This is shown in drawing 043.0035-0008 Rev 1 supported by visibility splays. The splays should be shown for West Street both based on recorded speeds and the achievable visibility. It is noted that the splay skims the planting of Chapel House to the north. Visibility may be able to be improved by realigning the crossing slightly from its existing position, whilst being mindful of the desire line.

The proposed tractile crossing point along West Street to the west of the junction is agreed to be in a more appropriate location as this does not require the removal of existing parking spaces and guard railing. This is shown within drawing 043.0035.003

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Rev A. Comments regarding the appropriateness of the visibility splays provided are discussed further within the response. The Highway Authority require these amendments to be made before the splays and crossing point location can be agreed.

The Applicant suggests that a crossing point to the east of Palk Road along West Street cannot be provided, however the Highway Authority do not agree with this assumption, and this requires further exploration. It is unlikely that those travelling east along West Street would utilise the proposed crossing point to the west and therefore this should be provided in addition to the above crossing point to provide access to the footway provision on the north prior to the termination of the footway on the southern side of West Street. There is a stretch of West Street within the vicinity of the Meyrick Road junction where double yellow lines are present on both sides of the carriageway and therefore a tactile crossing point should be provided and shown with the achievable visibility in accordance with TG3. A departure may be appropriate to be considered given the presence of the parking for the visibility to be measured to the centreline where needed. Concerns raised previously on the proposed location were relating to the extension of the TRO for the parking restrictions and removal of the guard railing to facilitate a crossing point which are unlikely to be supported locally therefore creating an undeliverable proposal.

Matters regarding the cycle gully provision within the footbridge are for the applicant to engage in discussions with Network Rail over. This falls outside of the jurisdiction of the Highway Authority to secure such improvements however it is recommended to this deficit would be beneficial to overcome to improve cycle permeability over the level crossing when the barriers are in use. Whilst Network Rail had responded to the application no specific engagement had been sought on pedestrian and cycle accessibility and therefore their views should be sought on this.

The applicant has undertaken further assessment work for the route east along West Street towards Havant Town Centre. Due to the nature of the substandard pedestrian infrastructure and limited scope to be able to provide meaningful improvements, it is agreed that provision of crossing points to provide a safe opportunity to cross onto the opposite side of the carriageway is deemed appropriate. Agreement includes the additional crossing provision as laid out above.

The TAA identifies several improvements schemes that this development could contribute towards. However, since the previous response laid out by the Highway Authority it has been agreed with the applicant of the Kingscroft Farm site that works identified within this TAA are to be provided as part of the S278 works for the site. It is therefore considered that a proportionate contribution should be sought towards the wider improvement works that are discussed further within this response. However, should the Kingscroft Farm development not come forward, contributions from this site would be used towards some of the infrastructure to be provided as part of their S278 works particularly to aid a safer route to the primary schools.

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Comments previously raised regarding PRow connections requested that internal connections were provided up to the site boundary to allow connections onto the PRow and not a direct connection onto the PRow itself. The Highway Authority acknowledge that this relies on a third party to complete the connection however opportunities should be provided up to the site boundary should connections be pursued in the future. It is still requested that this boundary connection is provided. Public rights to pass and repass to access this link will be secured as part of any S106 obligations for this site.

There appears to be some confusion within the TAA regarding the utilisation of the proposed improvement works along the Solent Road corridor and the Brockhampton Road/Solent Road/Marples Way roundabout for future users of the site. The Highway Authority did not suggest that Brockhampton Lane and Solent Road would be utilised by residents to access Harts Farm Way. Instead, residents would benefit from these improvement works to access the Solent Road Retail Park and the Tesco Superstore, both key attractors for employment and shopping purposes. The proposed roundabout improvements would benefit the site to access a key employment facility at Harts Farm Way via sustainable modes. Both improvement schemes increase the attractiveness of walking and cycling reducing the reliance on the private car. Thus, this site would be required to pay a proportionate contribution towards these works. The Highway Authority would welcome a discussion with the applicant to agree this contribution figure.

For clarity, the Highway Authority previously agreed that no improvement works are to be sought for equestrian users.

Palk Road

Snapshot parking surveys have reviewed the number of parked vehicles along Palk Road and within the two car parks associated with the apartment blocks in response to previous comments raised by the Highway Authority regarding presence of on-carriageway parking along Palk Road.

The results of the surveys suggest that car parks associated with the apartments are underutilised with people parking along Palk Road for ease. The applicant suggests that a parking management measure could be provided on one side of Palk Road to mitigate against the errant parking along Palk Road. Whilst provision of parking restrictions would be welcomed by the Highway Authority, Palk Road would need to be under the ownership of the applicant or the Highway Authority to ensure that this could be enforceable. The existing parking restrictions are clearly already not complied with as evidenced both from site visits and street view images on google maps.

Notwithstanding the above, the Highway Authority still have concerns with the operational width, with a useable width of 4.3m not regarded as sufficient to accommodate two-way movements. This available width has not considered poorly parked vehicles and wing mirrors when passing encouraging mounting of the footway to undertake manoeuvres which would be unacceptable. Parking restrictions should be

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provided on both sides of the carriageway to ensure that a two-way flow along Palk Road can be achieved especially considering the intensification of use. This matter would be a key consideration in allowing vehicles to access and egress Palk Road in a safe and appropriate manner when the level crossing is in use.

A parking beat survey has also been undertaken over a 48-hour period covering both a weekday and weekend to assess the demand of Palk Road for parking considering the proximity to Bedhampton railway station. The survey suggests parking occurs by local residents and not those utilising the station due to the highest parking stress occurring between 00:00-18:00 and the lowest parking stress recorded between 08:30-15:00. This was not requested as a consideration from the Highway Authority although it is noted that the parking occurring on Palk Road is residential led.

Both surveys suggest that implementation of parking restrictions along Palk Road is unlikely to lead to an overspill on the wider highway network and would encourage those to park within the allocated parking courts due to the spare capacity recorded. The applicant should confirm whether the available spaces could accommodate parking should restrictions be implemented on both sides of the Palk Road. Additional parking spaces may be required within the internal road network of the development to be allocated solely to the existing dwellings along Palk Road to prevent any potential overspill along Palk Road. The utilisation of these spaces could be monitored by the applicant, and should no demand be sought from the existing residents then these could be utilised as additional visitor parking spaces for the development.

To clarify the following matters are required to ensure a safe and suitable access of Palk Road should it be confirmed that the land falls under the jurisdiction of the applicant to maintain and manage:

- Gates for the access abutting the site access to be set back 6.0m from Palk Road and to open inwards to not obstruct the footway and flow along Palk Road;
- Removal of the close boarded fence and obstructions on the required footway from the property 'Wengen';
- Provision of a footway on both sides of the carriageway to improve pedestrian permeability to and from the site; and
- Provision of parking restrictions on both sides of the carriageway to prevent parking reducing the operational width of Palk Road and for parking enforcement measures to be achievable.
- Amendments to the crossing provision at the West Street junction.

The applicant should be made aware that further comments may be raised once it is understood whether Palk Road is required to be put forward for adoption as part of a S228 process to ensure it is built to adoptable standards. This would include but not limited to, provision of street lighting, core samples to confirm the build of the

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carriageway and footway and confirmation of the drainage provision. Any amendments to bring Palk Road up to adoptable standards will be at the applicant's expense.

The Highway Authority need to ensure that access to the site is safe and suitable and can be maintained in perpetuity. Should the applicant not have the rights to be able to undertake the required works along Palk Road or the site cannot be adopted through a S228 process, the Highway Authority cannot be satisfied that a safe and suitable access into the site would be achievable. Therefore, this matter needs to be resolved before the Highway Authority can provide a positive recommendation to this planning application.

Palk Road/West Street Junction

The TAA states that visibility splays at the Palk Road/West Street junction have been reviewed in line with ATC data. 85thile recorded speeds of 27.1mph eastbound and 26.5mph westbound equates to required visibility of 36.0m and 37.0m respectively. Revised visibility splays at the junction are shown within drawing 043.0035.002 Rev B. Confirmation is requested as to whether these are based on dry or wet weather speeds. Should speeds be collected in dry weather an additional 2.5mph to account for wet weather should be to calculate the required visibility. This should be clarified before the Highway Authority can confirm whether the visibility shown is acceptable. This matter stands for the pedestrian visibility splays as previously discussed.

Notwithstanding the above, the Highway Authority have the following comments to make on the submitted visibility splays. It is noted that the reduced splays are still obstructed by 2 parked vehicles along West Street. As previously raised, the Highway Authority have concerns that the achievable visibility at the junction will be permanently obstructed by on-carriageway parking spaces that are regularly utilised as allocated parking for the dwellings that front onto West Street.

Whilst it is acknowledged that there are currently no accidents at this junction considering the achievable visibility that is present the nature of the planning consent mean that vehicles are likely to be higher than a private car and be able to see above the parked cars to establish when it was safe to manoeuvre. Therefore, this is not a material consideration given the status of that permission and the visibility achievable at the Palk Road/West Street junction should be considered in the context of this planning application and the likely vehicle users.

The general alignment comment raised by the Highway Authority related to the geometry of the junction. Tracking at 10mph was requested for a delivery vehicle passing a car at the Palk Road/West Street junction as shown within drawing 043.0035-0007. The centreline should be shown on the drawing for both Palk Road and West Street to ensure the movements are being undertaken on the correct side of the carriageway. It appears that the delivery vehicle turning right into Palk Road relies on the opposite side of the carriageway to undertake this movement and access into Palk Road may not be achievable should the car not be placed over so tight to the left.

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Furthermore, in the absence of the centre line it does not appear that the delivery vehicle turning left out of Palk Road can undertake the movement without encroaching on the opposite side of the carriageway on West Street. This is unacceptable. It appears these awkward manoeuvres are present due to the alignment of the junction and the applicant should explore the scope to ease the alignment to accommodate these movements if there is scope to do so.

The TAA continually refers to existing/former uses at the site to justify the acceptability of the operation of Palk Road in its current form when considering the trips to be generated from the development. As referred to previously, the site is subject to a complicated planning history with temporary permissions linked to highway safety concerns of the access point in the development. The existing B2 use is personal consent to Premier Pallets which would convert back to the B8 use (APP/15/00447) which is restricted to Portsmouth Water use. As previously stated, the Highway Authority do not agree that the site can be discounted against these previous consents due to the uses being heavily restricted within the planning consents, the proposed use is substantially different and that the previous permissions did not cover the entire site that this development's red line covers. Thus, the assessment work should not consider or justify the impact of this development against the previous consents.

Concerns of the reduced visibility cannot be considered in isolation. The combination of the limited available carriageway width along Palk Road, the geometry of the junction, the proximity of the Bedhampton level crossing and the vehicles queuing back past the Palk Road junction should be considered holistically with the other concerns previously raised.

It is not agreed that amendments are not required for the model regarding carriageway widths along Palk Road at the site access. Whilst double yellow lines are present on both sides of the carriageway it is understood that these are not adhered too. This further restricts the available width at the site access preventing a two-way flow in some instances. In the absence of confirmation that Palk Road falls under the maintenance and management responsibility of the applicant or being adopted by the Highway Authority through a S228 process to be able to enforce these parking restrictions, a reduced carriageway width should be included within the modelling work.

Whilst in theory with the additional amendments to the model still appears to operate in theoretical design capacity, the model has not considered all matters comprehensively and the impact that this will have on the operation of Palk Road. It is still requested that the modelling work is re-run to reduce the achievable width of Palk Road at the site access. A limitation of Junctions 9 means it cannot predict all these matters within the model and therefore these results should be considered against other matters raised within the response.

It is noted that the applicant agrees to re-paint the 'keep clear' box abutting the Palk Road/West Street junction. This should be provided as part of the S278 works for the site. A drawing should therefore be provided to secure these works through this

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agreement. This does not however override the concerns of the operational safety of the Palk Road and Palk Road/West Street junction.

The applicant has assessed whether the model can be adjusted to account for the impact of the Bedhampton level crossing when the barriers are down for around half of the peak periods. It is understood that limitations of Junctions 9 software mean that this cannot be accounted for appropriately. LinSig would also be unable model the operation of this level crossing accurately and reflect the current situation recorded from the level crossing assessment. It is agreed that the impact of the level crossing needs to be looked at holistically and all matters raised should be assessed comprehensively and not as standalone items as raised previously within this response.

The TAA suggests assessing the impact of the level crossing based on the mean max queue recorded. Whilst this is not agreed to be an appropriate assessment framework, the assessment suggests mean queues of c. 5 vehicles and 7 vehicles queuing within the AM and PM peaks respectively. The Highway Authority previously raised that due to the proximity of Palk Road and the level crossing c. 5 queuing vehicles would impact the operation of Palk Road and therefore using this as an assessment criterion suggests that consideration needs to be given towards the queuing vehicles and the operation of the junction. The previous assessment work undertaken suggested that in the worst-case scenario the barriers were down for c. 10 minutes within the AM peak due to the stacked vehicles along Palk Road meaning vehicles will be unable to access and egress due to the geometry of the junction particularly when there are queuing vehicles present along West Street.

A queue would still form along Palk Road even accounting for additional vehicles turning right if the level barriers are in use if vehicles are not able to Palk Road and turn right. The alignment of Palk Road prevents two vehicles to wait at the stop line to turn left or right and therefore these blocking back issues would remain. The presence of parked cars and the reduced operational width in the absence of parking restrictions on both sides of the Palk Road would allow a two-way flow to occur, however this cannot be guaranteed without Palk Road falling under the jurisdiction of the applicant or the Highway Authority.

The applicant does not appear to have considered the complexity of the issues fully and the additional development traffic will only contribute to the existing queueing if not managed carefully. The Highway Authority are not satisfied that the assessment work to date has overcome the previous concerns raised.

Travel Plan

The Highway Authority have reviewed the revised travel plan and are satisfied that the required amendments have been made. This travel plan is therefore agreed and will be secured through a S106 agreement should this site receive planning consent along with approval and monitoring fee requirements.

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Recommendation

The assessment work undertaken to date has not reduced the previous concerns of the Highway Authority on the operation of the Palk Road and the Palk Road/West Street junction when considering the reduced carriageway width, geometry of the junction, obstructed visibility, and proximity of the level crossing with queuing vehicles. In the absence of resolving the land ownership issues, the Highway Authority are not satisfied that the Palk Road and the Palk Road/West Street are able to operate satisfactorily and therefore previous concerns remain.

If the Planning Authority wish to determine the application, the Highway Authority should be contacted to provide reasons for refusal.

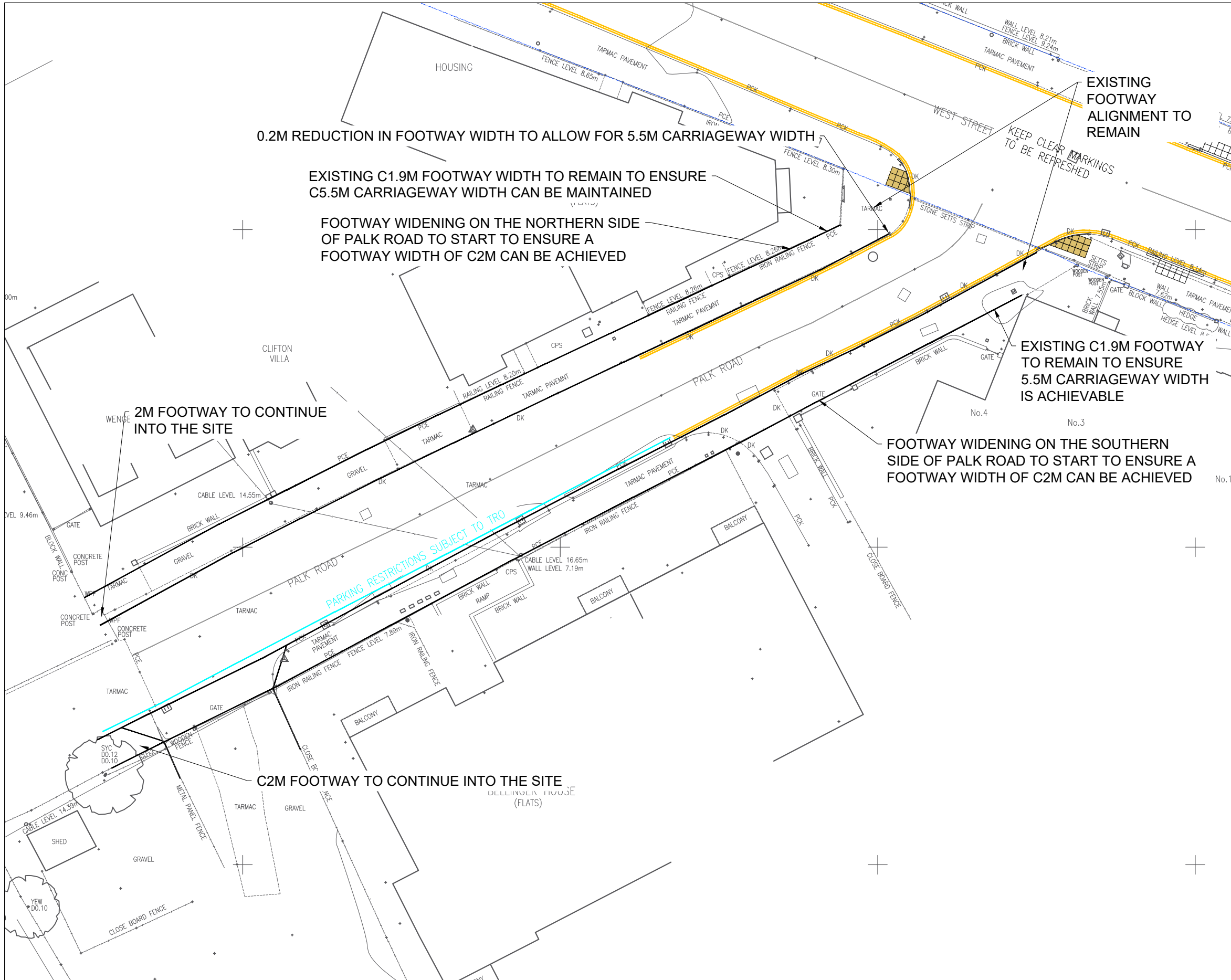
I trust that the above is clear but please do not hesitate to contact Sophie Osborne on the above contact details should you require any further information.

Yours sincerely,

Gemma McCart
Team Leader – Highways Development Planning
Hampshire 2050

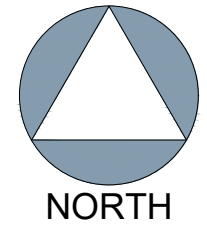
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Appendix B



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PALK ROAD AMENDMENTS TO BRING THE ROAD TO ADOPTABLE STANDARDS

Project Name LAND AT PALK ROAD, HAVANT		Title PALK ROAD FOOTWAY AND ROAD ALIGNMENT AMMENDMENTS		Client  Paul Basham Associates Ltd The Bothy, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com				Date Created 24.01.24	Drawn By CID	Approved By TAF	Suitability Code -
Project Phase PRELIMINARY								PBA Project Number 043.0035		Scale 1:250	(AT A3)
								PBA Drawing No: 043.0035-0014		Revision P03	

Appendix C

FIRE TENDER TURNING LEFT INTO PALK ROAD

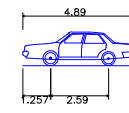
FIRE TENDER TURNING RIGHT INTO PALK ROAD

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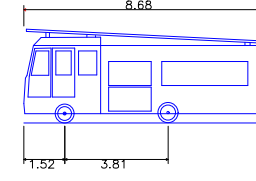
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- VEHICLES ARE TRACKED AT 10MPH.

VEHICLE PROFILE



Large Family Car 1	
Overall Length	4.890m
Overall Width	1.940m
Overall Body Height	1.512m
Min Body Ground Clearance	0.273m
Max Track Width	1.890m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.100m



DB32 Fire Appliance	
Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

KEY

- INDICATIVE DOUBLE YELLOW LINES
- EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED

P01	FIRST ISSUE	16.02.24	CID	TAF
Rev	Description	Date	By	App'd
Date Created	Drawn By	Approved By	Suitability Code	
16.02.24	CID	TAF	-	
PBA Project Number		Scale	(AT A3)	
043.0035		1:500		
PBA Drawing No:			Revision	
043.0035-0015			P01	

Project Name

LAND AT PALK ROAD, HAVANT

Project Phase

PRELIMINARY

Title

FIRE TENDER ENTERING PALK ROAD WHILE VEHICLES ARE QUEUING DUE TO LEVEL CROSSING

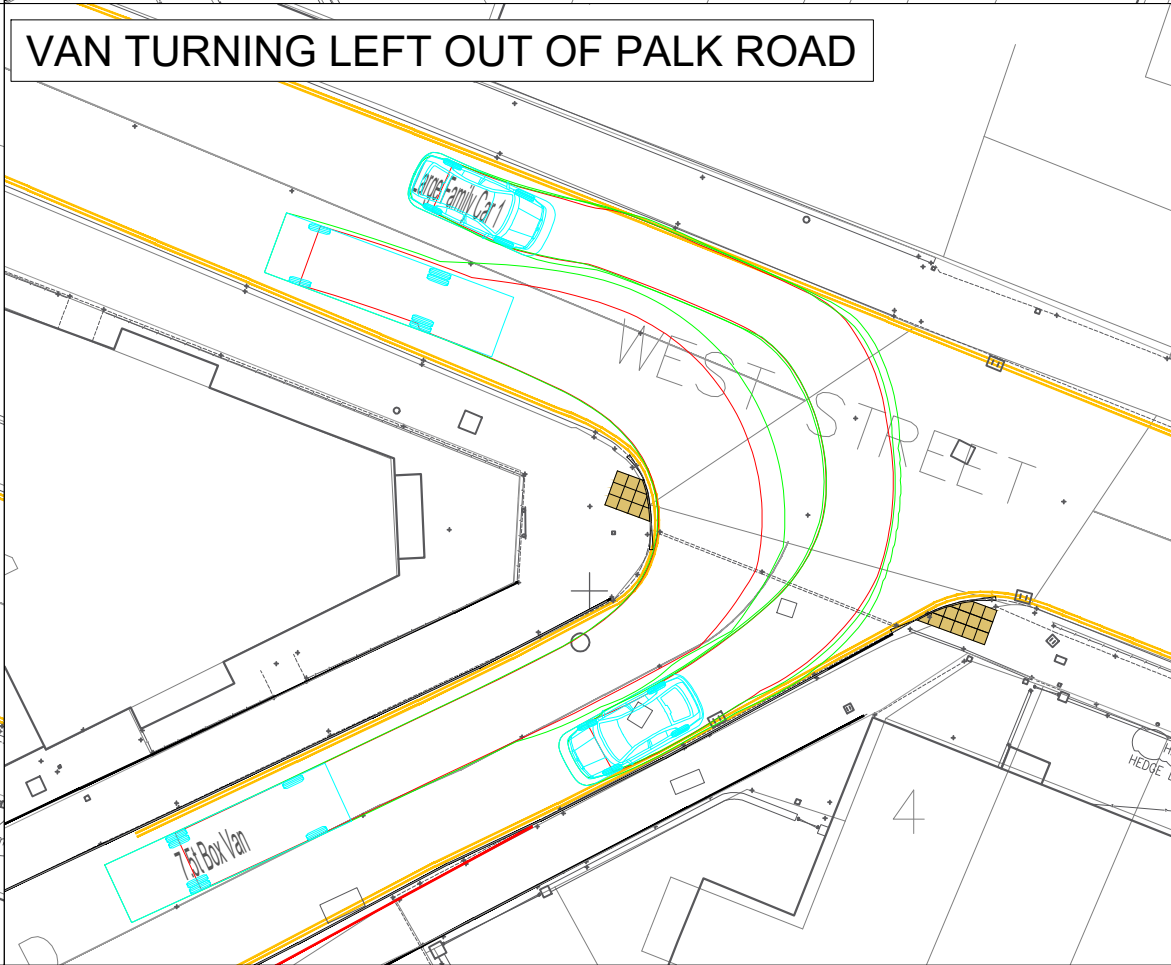
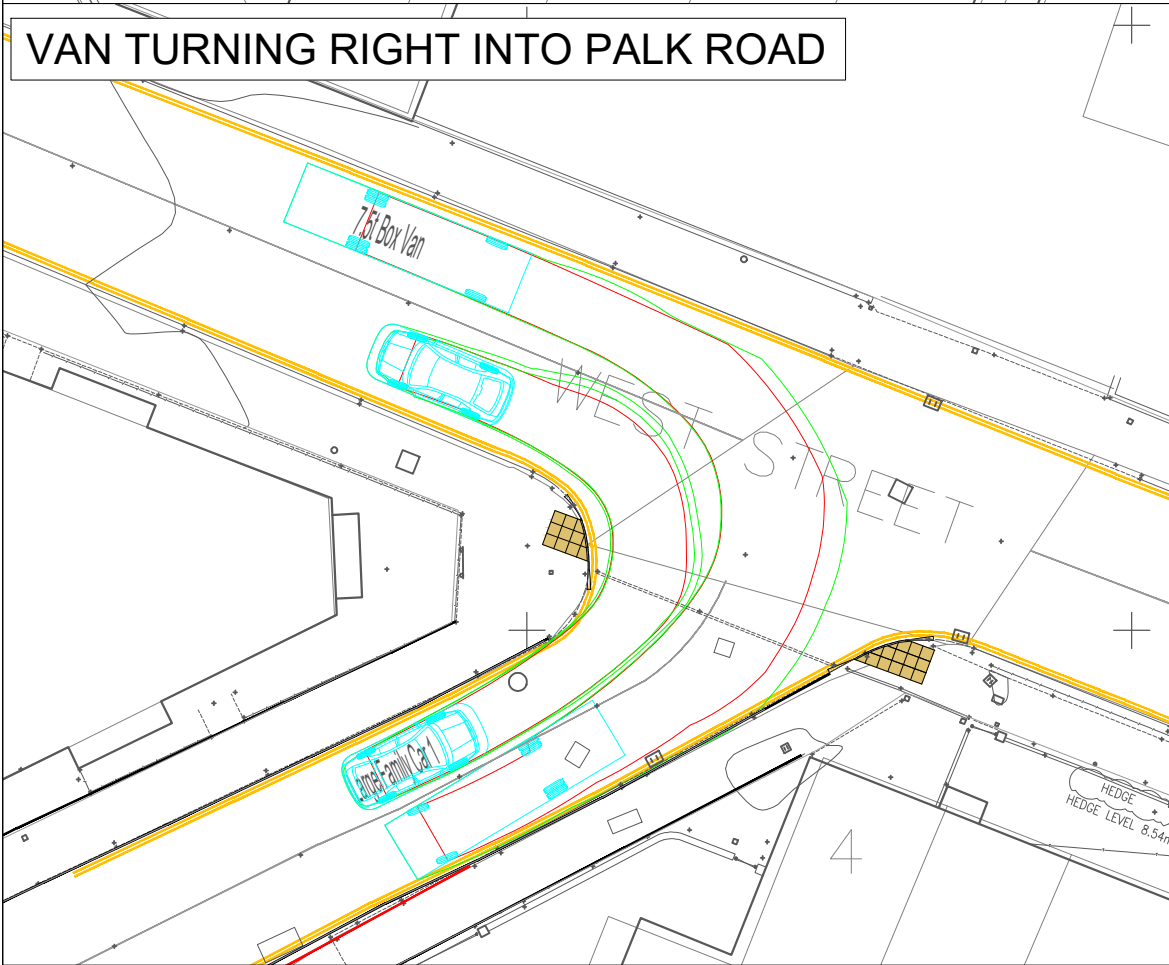
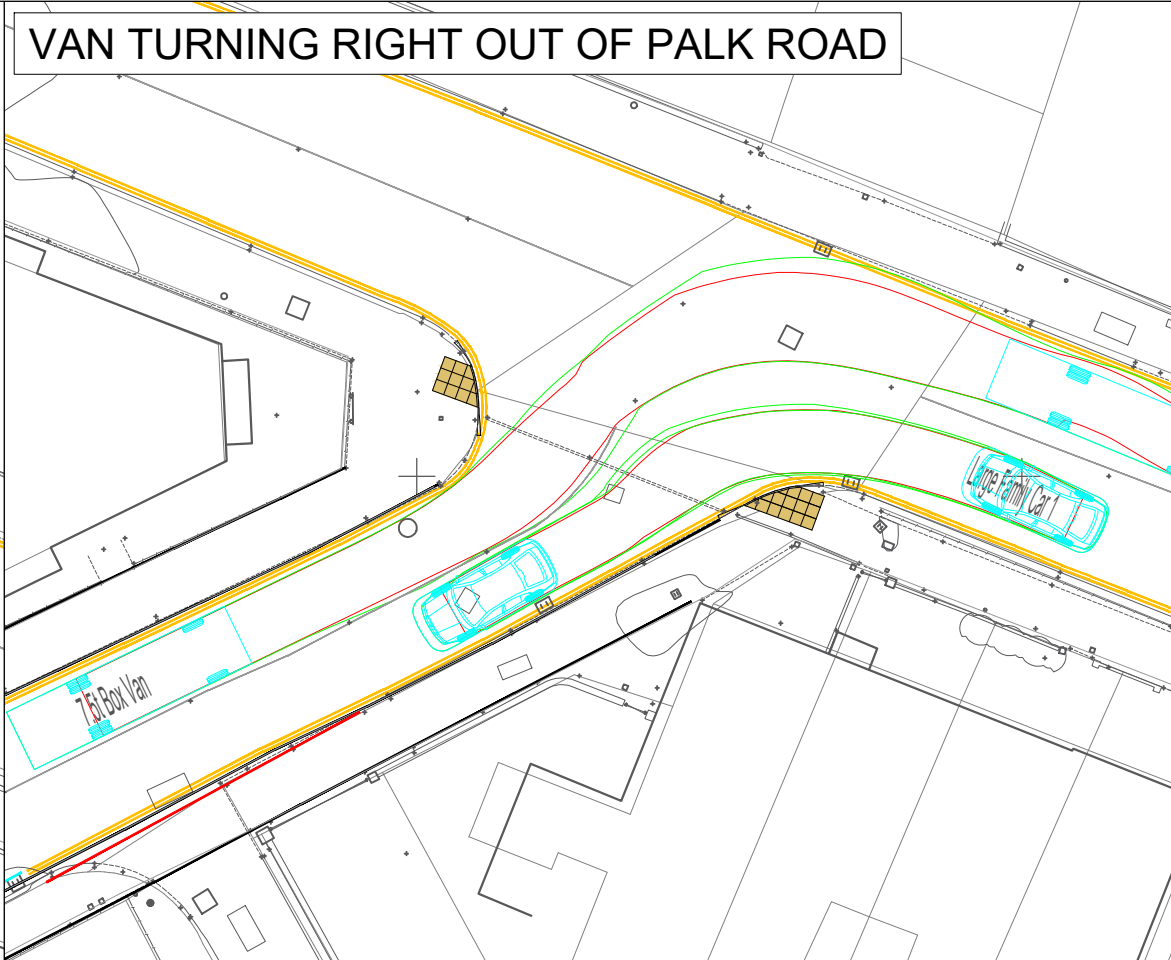
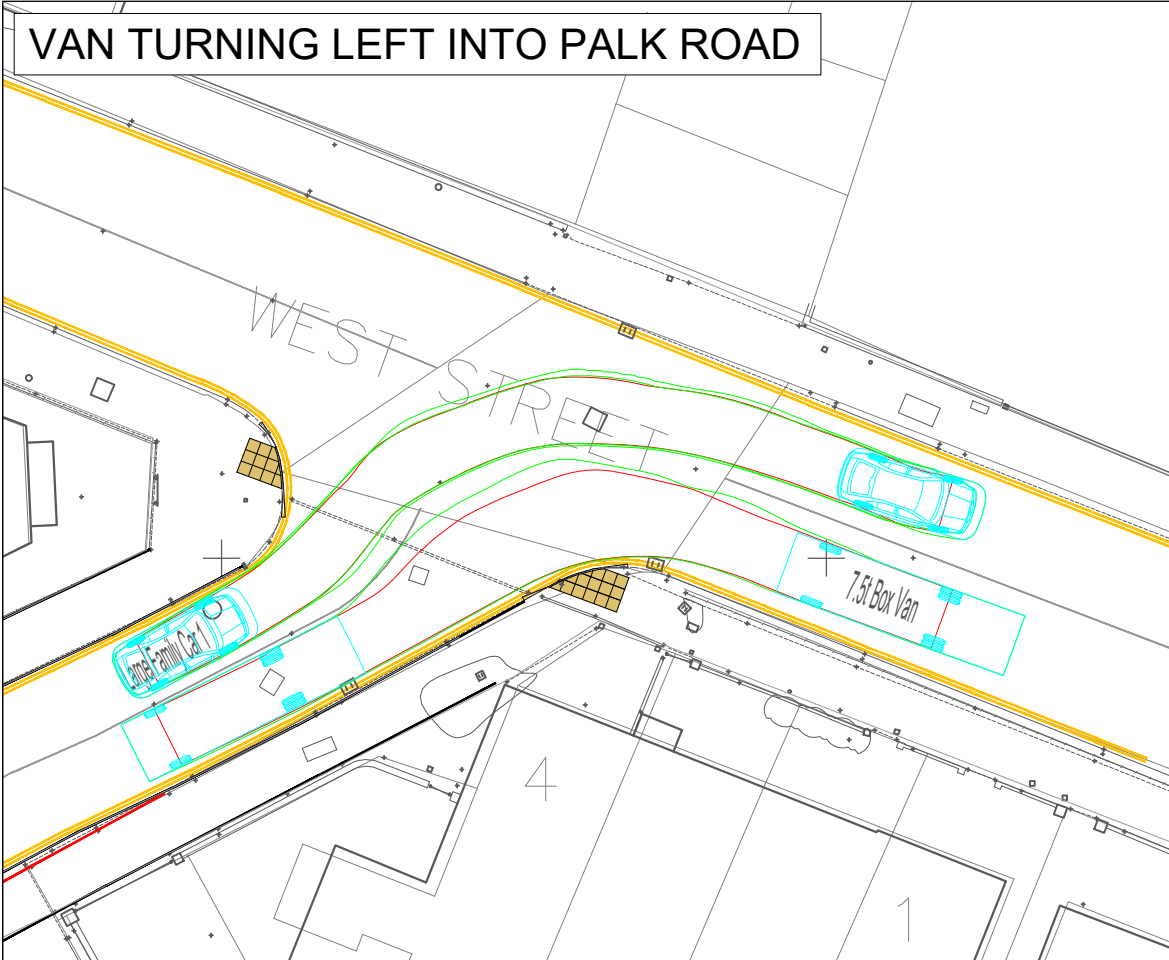


Paul Basham Associates Ltd
The Bothy, Cams Hall Estate, Fareham, PO16 8UT
01329 711 000
info@paulbashamassociates.com www.paulbashamassociates.com

Client



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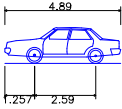


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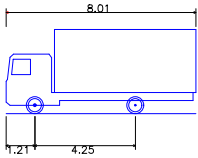
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- VEHICLES ARE TRACKED AT 10MPH.

VEHICLE PROFILE



Large Family Car 1
Overall Length 4.890m
Overall Width 1.940m
Overall Body Height 1.512m
Min Body Ground Clearance 0.273m
Max Track Width 1.890m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.100m



7.5t Box Van
Overall Length 8.010m
Overall Width 2.100m
Overall Body Height 3.556m
Min Body Ground Clearance 0.351m
Track Width 2.064m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.400m

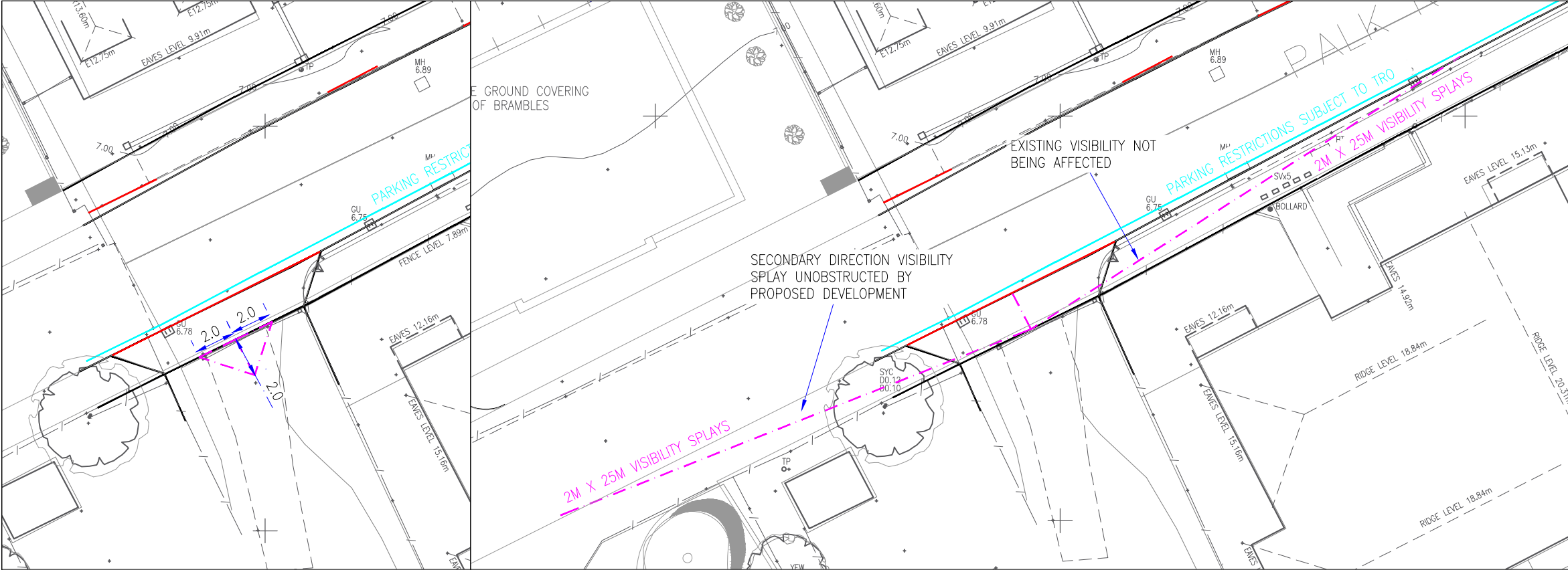
KEY

— EXISTING ACCESS POINTS ALONG PALK ROAD

— INDICATIVE DOUBLE YELLOW LINES

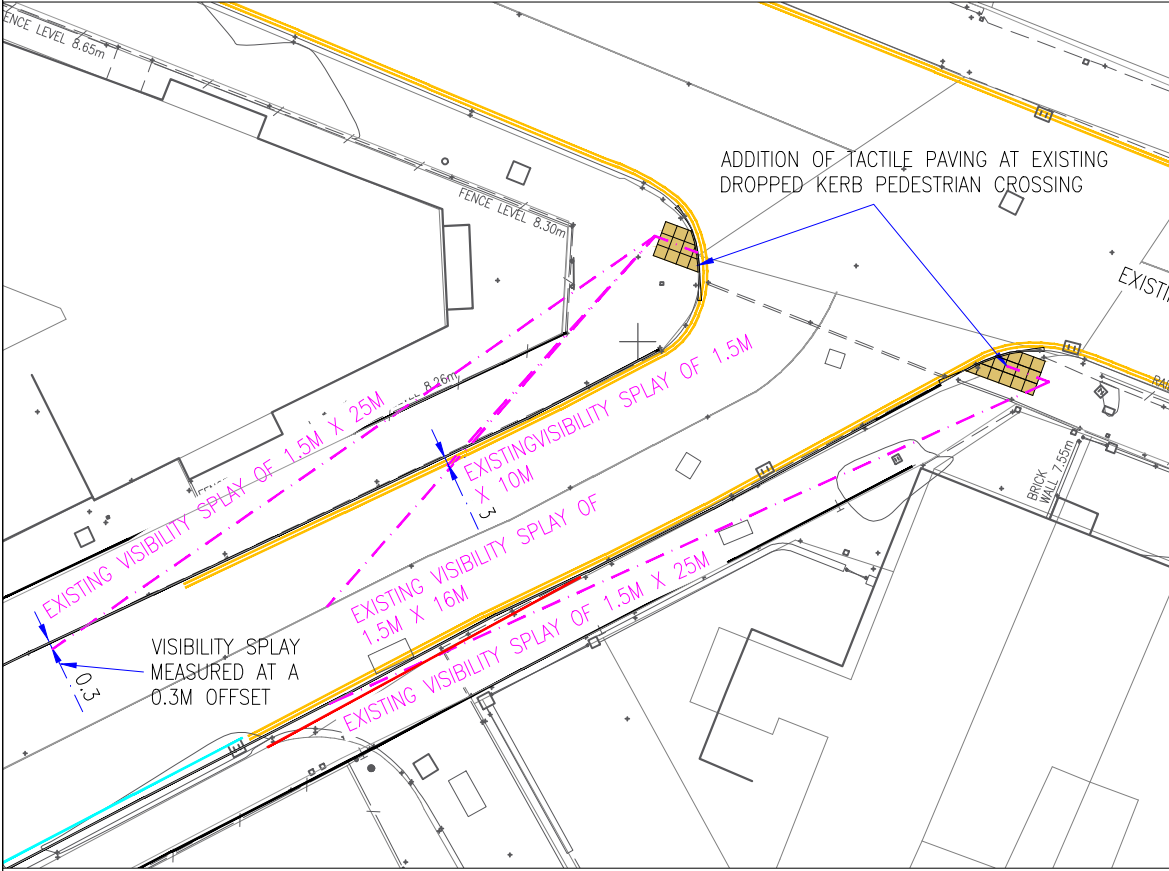
P02	UPDATED TRACKING	16.02.24	CID	TAF
P01	FIRST ISSUE	11.07.23	CID	JAM
Rev	Description	Date	By	App'd
Date Created	Drawn By	Approved By	Suitability Code	
10.07.23	CID	JAM	-	
PBA Project Number		Scale	(AT A3)	
043.0035		1:250		
PBA Drawing No:			Revision	
043.0035-0007			P02	

Appendix D

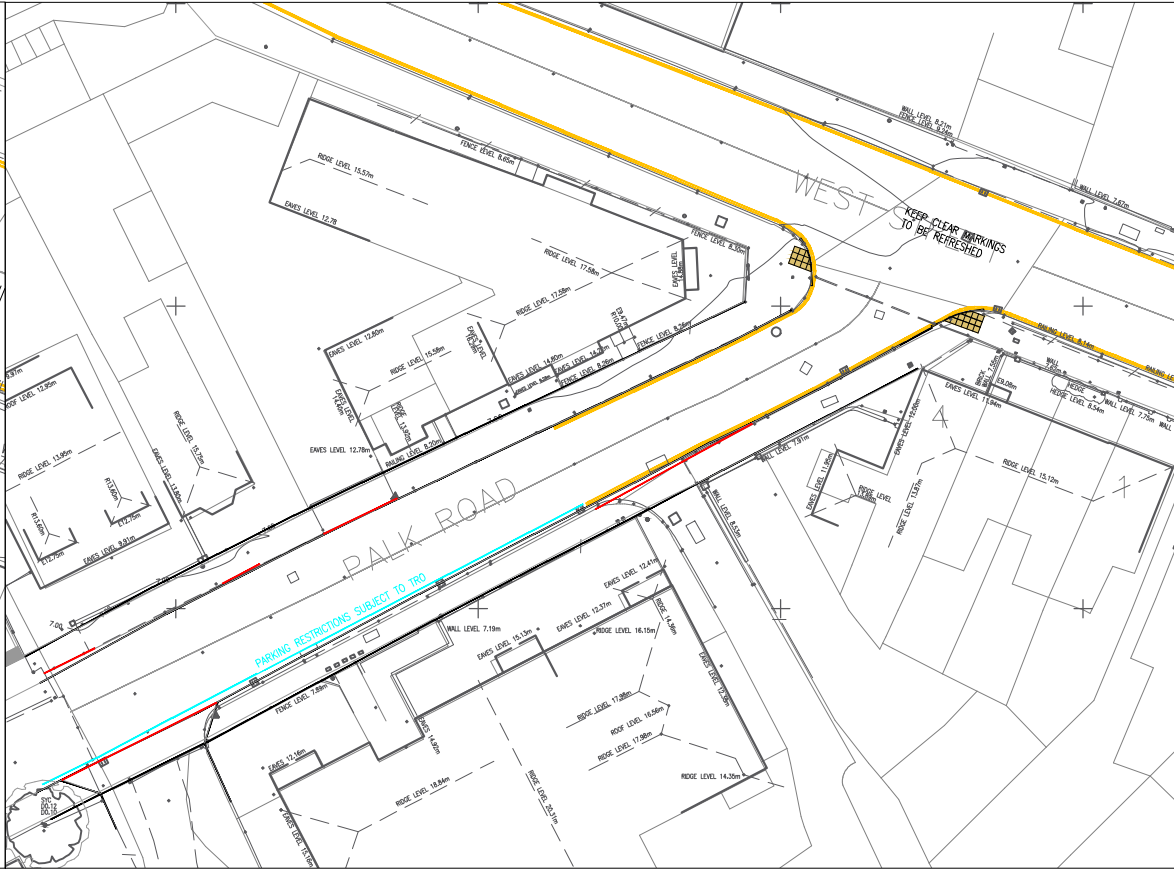


VEHICLE CROSSOVER DESIGN FOR RETAINED ACCESS TO WEST OF PALK ROAD WITH EXISTING PEDESTRIAN VISIBILITY SPLAY – SCALE 1:250

VISIBILITY SPLAY FROM ADJACENT ACCESS, TO 20MPH – SCALE 1:250



ADDITION OF TACTILE PAVING AT EXISTING DROPPED KERB PEDESTRIAN CROSSING AND EXISTING VISIBILITY SPLAYS AT PALK ROAD CROSSING TO 20MPH – SCALE 1:250



PALK ROAD PARKING RESTRICTIONS – SCALE 1:500

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- VISIBILITY SPLAYS ARE IN LINE WITH MFS AND HCC TG3 GUIDANCE FOR 20MPH SPEED LIMIT ROADS GIVEN THE NATURE OF PALK ROAD.

KEY

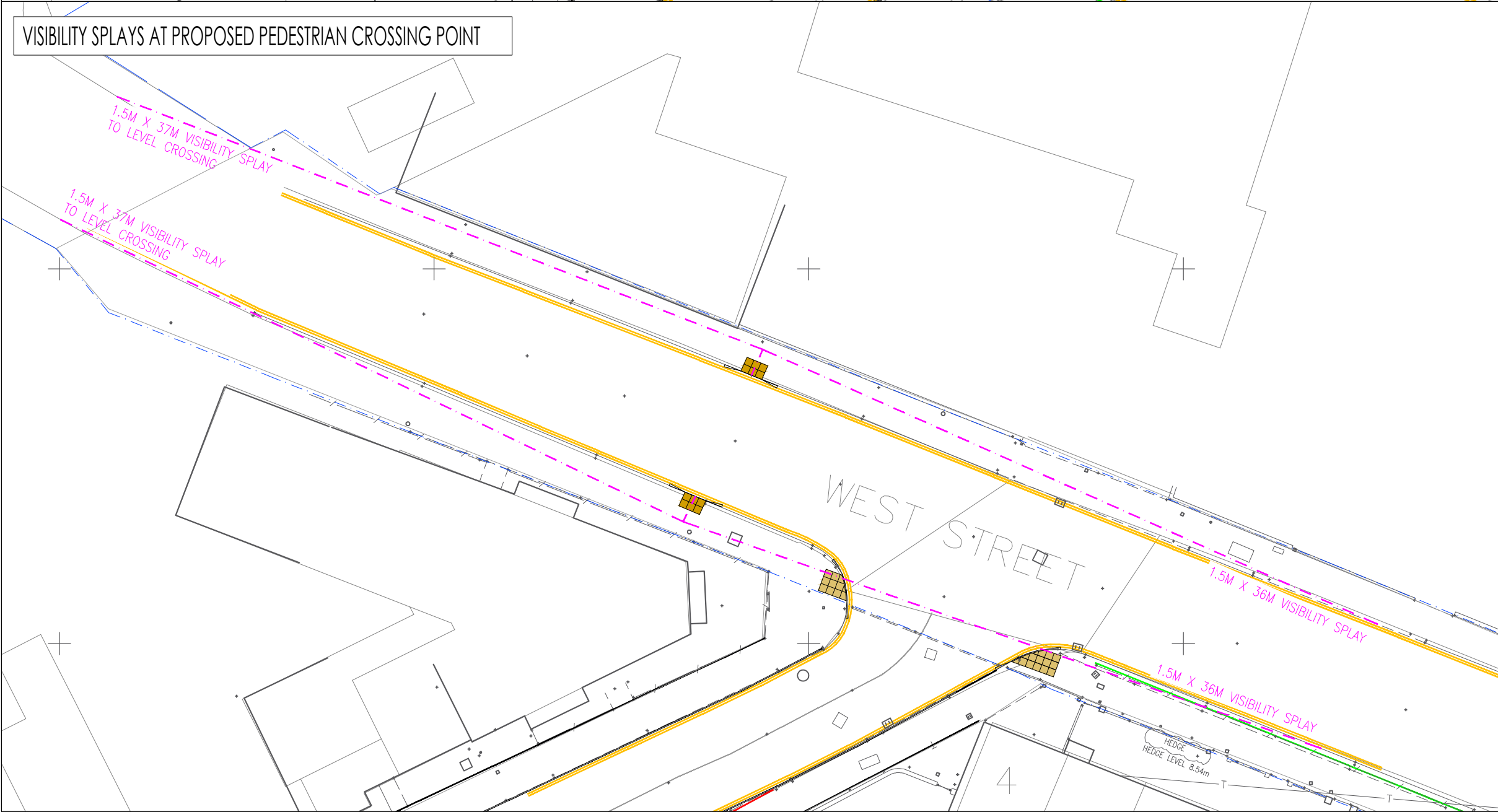
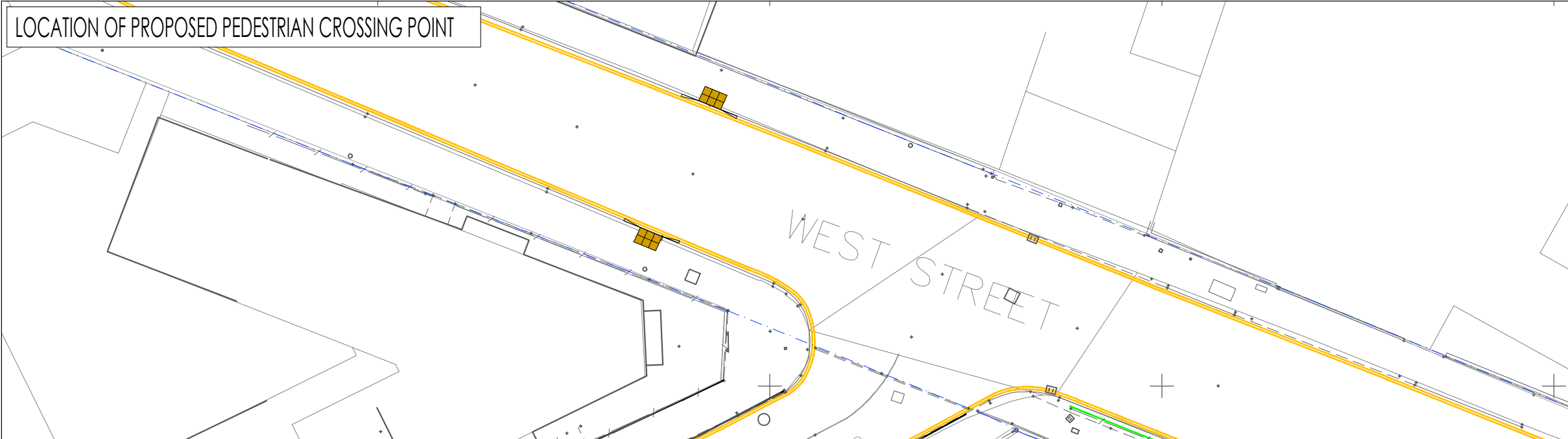
- EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED
- INDICATIVE DOUBLE YELLOW LINES
- PROPOSED PARKING RESTRICTIONS

NORTH

P02	UPDATED DESIGN	16.02.24	CID	TAF
P01	FIRST ISSUE	25.07.23	JAM	MS
Rev	Description	Date	By	App'd
Date Created	Drawn By	Approved By	Suitability Code	
25.07.23	JAM	MS	-	
PBA Project Number		Scale	(AT A3)	
043.0035		AS SHOWN		
PBA Drawing No:			Revision	
043.0035-0008			P02	

Project Name LAND AT PALK ROAD, HAVANT	Title PALK ROAD CROSSING POINTS AND VISIBILITY SPLAY ASSESSMENTS	paulbasham associates Paul Basham Associates Ltd The Bothy, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com	Client Bellway	Date Created 25.07.23	Drawn By JAM	Approved By MS	Suitability Code -
Project Phase PRELIMINARY				PBA Project Number 043.0035	Scale AS SHOWN (AT A3)	PBA Drawing No: 043.0035-0008	Revision P02

Appendix E

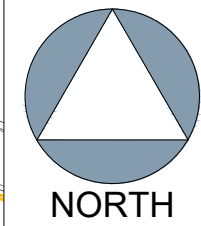


- ### GENERAL NOTES
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 2. ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
 3. PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
 4. ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
 5. THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

VISIBILITY SPLAYS

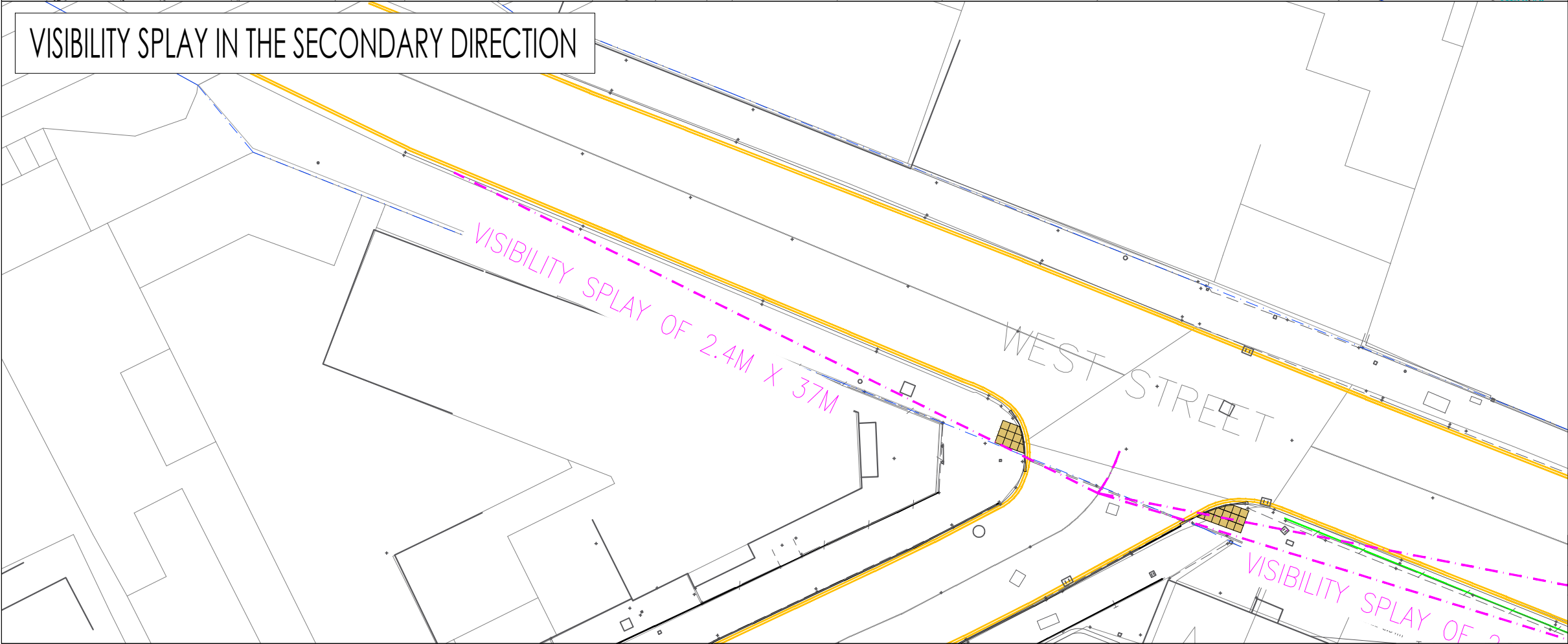
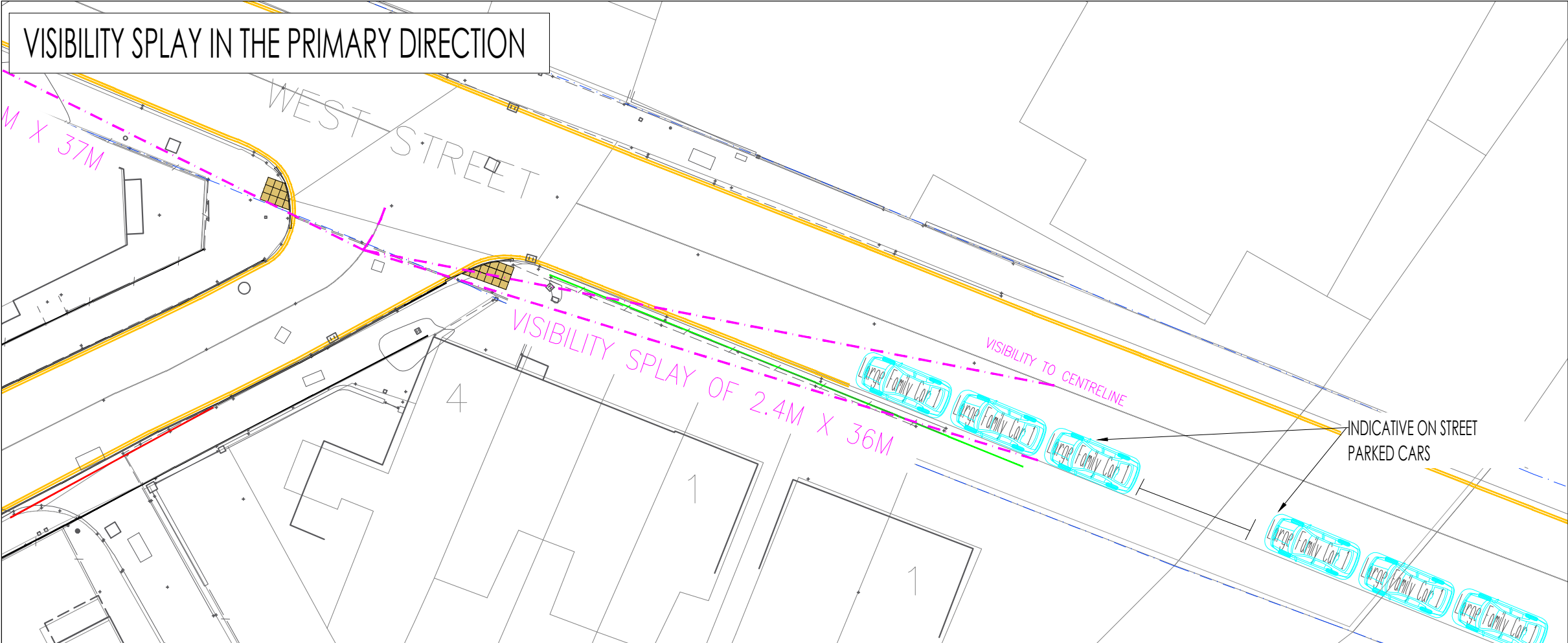
VISIBILITY SPLAYS ARE BASED ON RECORDED 85TH PERCENTILE SPEEDS OF 27.1MPH EASTBOUND AND AND 26.5MPH WESTBOUND RESULTING IN SPLAY LENGTHS OF 36M TO THE EAST AND 37M TO THE WEST.

- ### KEY
- EXISTING BARRIER
 - INDICATIVE DOUBLE YELLOW LINES
 - - - INDICATIVE HIGHWAY BOUNDARY
 - EXISTING ACCESS POINTS ALONG PALK ROAD TO REMAIN



B	UPDATED TOPO SURVEY	16.02.24	CID	TAF
A	REVIEW OF HCC COMMENTS	15.09.23	JAM	TAF
Rev	Description	Date	By	Chkd

Project Name LAND AT PALK ROAD HAVANT	Title PEDESTRIAN VISIBILITY SPLAYS AND PEDESTRIAN CROSSING DESIGN WEST STREET	 Paul Basham Associates Ltd The Botby, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com	Client 	Checked By JM	Checked Date 26.10.22	Scale 1:250 (AT A3 SIZE)
Project Phase PRELIMINARY				Drawn By CD	Drawn Date 26.10.22	Client Drawing No. - PBA Drawing No. 043.0035.003 Revision B



GENERAL NOTES

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2. ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
3. PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
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VISIBILITY SPLAYS

VISIBILITY SPLAYS ARE BASED ON RECORDED 85TH%ILE SPEEDS ALONG WEST STREET. THE RECORDED SPEEDS WERE 27.1MPH EASTBOUND AND 26.5MPH WESTBOUND. THE VISIBILITY SPLAY DISTANCES ARE IN ACCORDANCE WITH HCC TG3 CALCULATIONS.

KEY

- EXISTING BARRIER
- INDICATIVE DOUBLE YELLOW LINES
- INDICATIVE HIGHWAY BOUNDARY
- EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED



C	UPDATED TOPO SURVEY	16.02.24	CID	TAF
B	UPDATED VISIBILITY SPLAYS	15.09.23	JAM	TAF
A	UPDATED VISIBILITY SPLAYS	11.07.23	CID	JAM
Rev	Description	Date	By	Chkd

Project Name LAND AT PALK ROAD HAVANT	Title VISIBILITY SPLAYS PALK ROAD/WEST STREET JUNCTION	 Paul Basham Associates Ltd The Botly, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com	Client 	Checked By JM	Checked Date 26.10.22	Scale 1:250 (AT A3 SIZE)
Project Phase PRELIMINARY				Drawn By CD	Drawn Date 26.10.22	Client Drawing No. - PBA Drawing No. 043.0035.002 Revision C

Appendix F

Junctions 9							
PICADY 9 - Priority Intersection Module							
Version: 9.0.2.5947 © Copyright TRL Limited, 2017							
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Filename: 043.0035 Palk Road Access - Review HCC Comments Dec 23.j9

Path: P:\Southern\040-049\043 Bellway Homes\043.0035 Palk Road, Havant\Modelling

Report generation date: 02/01/2024 14:43:01

- »Baseline 2022, AM
- »Baseline 2022, PM
- »Baseline 2027, AM
- »Baseline 2027, PM
- »Baseline 2027 + Comitted Development , AM
- »Baseline 2027 + Comitted Development , PM
- »Baseline 2027 + Comitted Development + Development, AM
- »Baseline 2027 + Comitted Development + Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Baseline 2022								
Stream B-AC	0.0	7.93	0.01	A	0.0	0.00	0.00	A
Stream C-AB	0.0	6.17	0.01	A	0.0	6.38	0.00	A
Baseline 2027								
Stream B-AC	0.0	7.96	0.01	A	0.0	0.00	0.00	A
Stream C-AB	0.0	6.14	0.01	A	0.0	6.37	0.00	A
Baseline 2027 + Comitted Development								
Stream B-AC	0.0	8.08	0.01	A	0.0	0.00	0.00	A
Stream C-AB	0.0	6.14	0.01	A	0.0	6.29	0.00	A
Baseline 2027 + Comitted Development + Development								
Stream B-AC	0.1	8.96	0.05	A	0.0	9.17	0.03	A
Stream C-AB	0.0	6.16	0.01	A	0.0	6.36	0.02	A

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

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

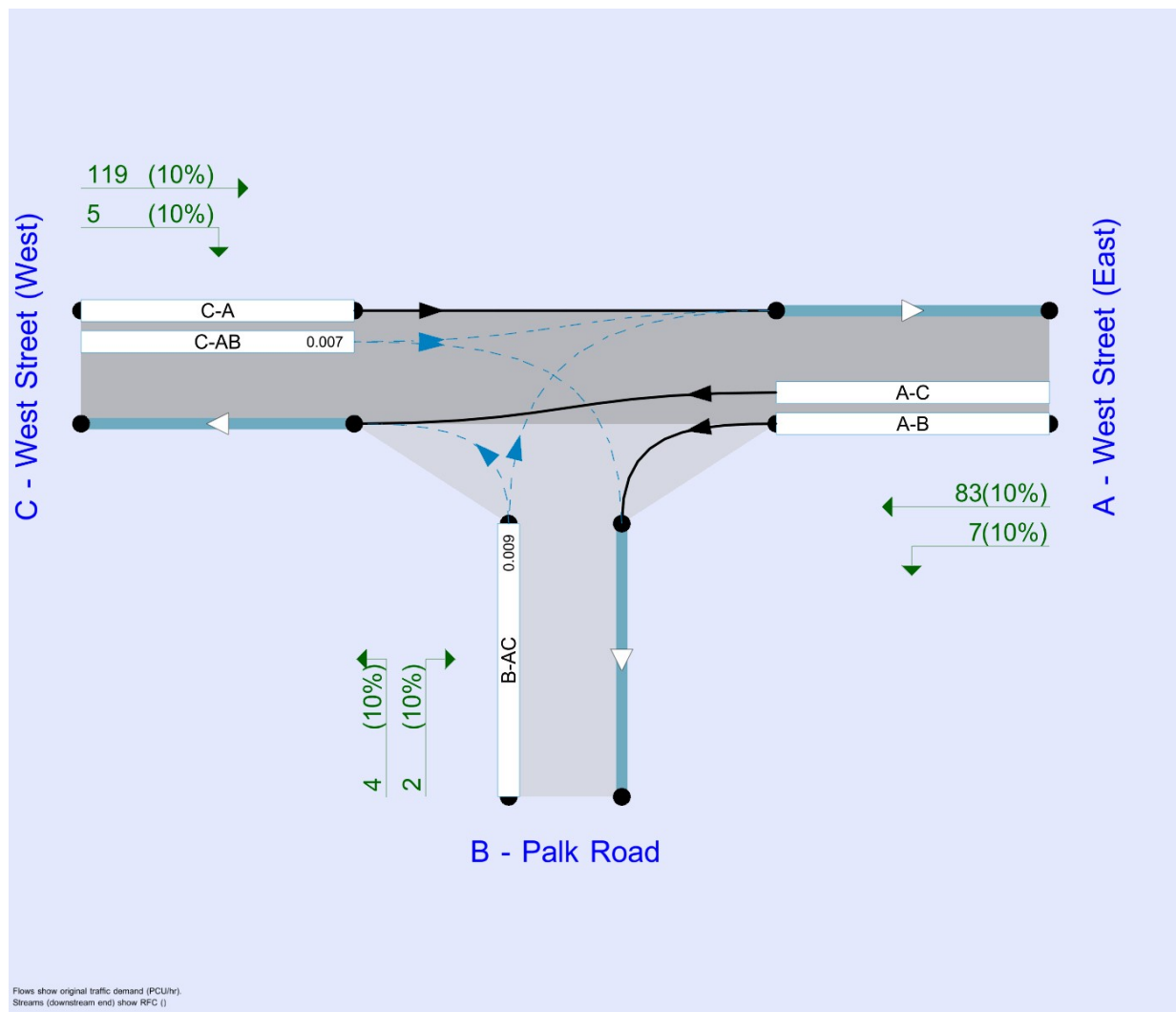
File summary

File Description

Title	Palk Road
Location	Havant
Site number	
Date	05/08/2022
Version	
Status	(new file)
Identifier	
Client	Bellway
Jobnumber	043.0035
Enumerator	AD\model.pc
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Baseline 2022	AM	ONE HOUR	07:45	09:15	15
D2	Baseline 2022	PM	ONE HOUR	16:45	18:15	15
D3	Baseline 2027	AM	ONE HOUR	07:45	09:15	15
D4	Baseline 2027	PM	ONE HOUR	16:45	18:15	15
D7	Baseline 2027 + Comitted Development	AM	ONE HOUR	07:45	09:15	15
D8	Baseline 2027 + Comitted Development	PM	ONE HOUR	16:45	18:15	15
D9	Baseline 2027 + Comitted Development + Development	AM	ONE HOUR	07:45	09:15	15
D10	Baseline 2027 + Comitted Development + Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Baseline 2022, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	West Street (East)		Major
B	Palk Road		Minor
C	West Street (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - West Street (West)	4.80			50.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Palk Road	One lane	2.20	25	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	458	0.088	0.222	0.140	0.317
1	B-C	588	0.095	0.240	-	-
1	C-B	603	0.246	0.246	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Baseline 2022	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)

A - West Street (East)		✓	90	100.000
B - Palk Road		✓	6	100.000
C - West Street (West)		✓	124	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	7	83
	B - Palk Road	2	0	4
	C - West Street (West)	119	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	7.93	0.0	A
C-AB	0.01	6.17	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	516	0.009	4	0.0	7.744	A
C-AB	4	647	0.007	4	0.0	6.164	A
C-A	89			89			
A-B	5			5			
A-C	62			62			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	512	0.011	5	0.0	7.822	A
C-AB	5	655	0.008	5	0.0	6.091	A
C-A	106			106			
A-B	6			6			
A-C	75			75			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	506	0.013	7	0.0	7.934	A
C-AB	7	667	0.010	7	0.0	5.993	A
C-A	130			130			
A-B	8			8			
A-C	91			91			

08:30 - 08:45

Stream	Total Demand	Capacity	RFC	Throughput	End queue	Delay	LOS
--------	--------------	----------	-----	------------	-----------	-------	-----

Stream	(PCU/hr)	Capacity (PCU/hr)	RFC	(PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	506	0.013	7	0.0	7.934	A
C-AB	7	667	0.010	7	0.0	5.993	A
C-A	130			130			
A-B	8			8			
A-C	91			91			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	512	0.011	5	0.0	7.824	A
C-AB	5	655	0.008	5	0.0	6.094	A
C-A	106			106			
A-B	6			6			
A-C	75			75			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	516	0.009	5	0.0	7.746	A
C-AB	4	647	0.007	4	0.0	6.167	A
C-A	89			89			
A-B	5			5			
A-C	62			62			

Baseline 2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	Baseline 2022	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	190	100.000
B - Palk Road		✓	4	100.000
C - West Street (West)		✓	105	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	2	188
	B - Palk Road	1	0	3
	C - West Street (West)	104	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	6.38	0.0	A
C-A				

A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	475	0.000	0	0.0	0.000	A
C-AB	0.86	621	0.001	0.86	0.0	6.381	A
C-A	78			78			
A-B	2			2			
A-C	142			142			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	1	625	0.002	1	0.0	6.343	A
C-A	93			93			
A-B	2			2			
A-C	169			169			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	456	0.000	0	0.0	0.000	A
C-AB	1	631	0.002	1	0.0	6.289	A
C-A	114			114			
A-B	2			2			
A-C	207			207			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	456	0.000	0	0.0	0.000	A
C-AB	1	631	0.002	1	0.0	6.289	A
C-A	114			114			
A-B	2			2			
A-C	207			207			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	1	625	0.002	1	0.0	6.345	A
C-A	93			93			
A-B	2			2			
A-C	169			169			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	475	0.000	0	0.0	0.000	A
C-AB	0.86	621	0.001	0.86	0.0	6.383	A
C-A	78			78			
A-B	2			2			
A-C	142			142			

Baseline 2027, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	Baseline 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	95	100.000
B - Palk Road		✓	6	100.000
C - West Street (West)		✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	7	88
	B - Palk Road	2	0	4
	C - West Street (West)	126	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	7.96	0.0	A
C-AB	0.01	6.14	0.0	A
C-A				

A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	515	0.009	4	0.0	7.763	A
C-AB	4	649	0.007	4	0.0	6.139	A
C-A	94			94			
A-B	5			5			
A-C	66			66			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	510	0.011	5	0.0	7.846	A
C-AB	5	659	0.008	5	0.0	6.062	A
C-A	112			112			
A-B	6			6			
A-C	79			79			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	504	0.013	7	0.0	7.963	A
C-AB	7	671	0.010	7	0.0	5.958	A
C-A	137			137			
A-B	8			8			
A-C	97			97			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	504	0.013	7	0.0	7.963	A
C-AB	7	671	0.010	7	0.0	5.961	A
C-A	137			137			
A-B	8			8			
A-C	97			97			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	510	0.011	5	0.0	7.847	A
C-AB	5	659	0.008	5	0.0	6.064	A
C-A	112			112			
A-B	6			6			
A-C	79			79			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	515	0.009	5	0.0	7.765	A
C-AB	4	649	0.007	4	0.0	6.141	A
C-A	94			94			
A-B	5			5			
A-C	66			66			

Baseline 2027, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	Baseline 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	201	100.000
B - Palk Road		✓	4	100.000
C - West Street (West)		✓	111	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	2	199
	B - Palk Road	1	0	3
	C - West Street (West)	110	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	6.37	0.0	A
C-A				

A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	473	0.000	0	0.0	0.000	A
C-AB	0.87	623	0.001	0.86	0.0	6.369	A
C-A	83			83			
A-B	2			2			
A-C	150			150			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	464	0.000	0	0.0	0.000	A
C-AB	1	627	0.002	1	0.0	6.328	A
C-A	99			99			
A-B	2			2			
A-C	179			179			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	453	0.000	0	0.0	0.000	A
C-AB	1	633	0.002	1	0.0	6.271	A
C-A	121			121			
A-B	2			2			
A-C	219			219			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	453	0.000	0	0.0	0.000	A
C-AB	1	633	0.002	1	0.0	6.271	A
C-A	121			121			
A-B	2			2			
A-C	219			219			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	464	0.000	0	0.0	0.000	A
C-AB	1	627	0.002	1	0.0	6.328	A
C-A	99			99			
A-B	2			2			
A-C	179			179			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	473	0.000	0	0.0	0.000	A
C-AB	0.87	623	0.001	0.87	0.0	6.369	A
C-A	83			83			
A-B	2			2			
A-C	150			150			

Baseline 2027 + Comitted Development , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	Baseline 2027 + Comitted Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	119	100.000
B - Palk Road		✓	6	100.000
C - West Street (West)		✓	140	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	7	112
	B - Palk Road	2	0	4
	C - West Street (West)	135	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	8.08	0.0	A
C-AB	0.01	6.14	0.0	A
C-A				

A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	510	0.009	4	0.0	7.835	A
C-AB	4	650	0.007	4	0.0	6.136	A
C-A	101			101			
A-B	5			5			
A-C	84			84			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	504	0.011	5	0.0	7.934	A
C-AB	6	659	0.008	6	0.0	6.058	A
C-A	120			120			
A-B	6			6			
A-C	101			101			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	497	0.013	7	0.0	8.076	A
C-AB	7	672	0.011	7	0.0	5.952	A
C-A	147			147			
A-B	8			8			
A-C	123			123			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	497	0.013	7	0.0	8.076	A
C-AB	7	672	0.011	7	0.0	5.952	A
C-A	147			147			
A-B	8			8			
A-C	123			123			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	504	0.011	5	0.0	7.936	A
C-AB	6	659	0.008	6	0.0	6.060	A
C-A	120			120			
A-B	6			6			
A-C	101			101			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	510	0.009	5	0.0	7.837	A
C-AB	4	650	0.007	4	0.0	6.136	A
C-A	101			101			
A-B	5			5			
A-C	84			84			

Baseline 2027 + Comitted Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	Baseline 2027 + Comitted Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	213	100.000
B - Palk Road		✓	4	100.000
C - West Street (West)		✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	2	211
	B - Palk Road	1	0	3
	C - West Street (West)	130	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	6.29	0.0	A
C-A				

A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	469	0.000	0	0.0	0.000	A
C-AB	0.89	631	0.001	0.88	0.0	6.286	A
C-A	98			98			
A-B	2			2			
A-C	159			159			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	460	0.000	0	0.0	0.000	A
C-AB	1	637	0.002	1	0.0	6.230	A
C-A	117			117			
A-B	2			2			
A-C	190			190			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	448	0.000	0	0.0	0.000	A
C-AB	1	645	0.002	1	0.0	6.151	A
C-A	143			143			
A-B	2			2			
A-C	232			232			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	448	0.000	0	0.0	0.000	A
C-AB	1	645	0.002	1	0.0	6.151	A
C-A	143			143			
A-B	2			2			
A-C	232			232			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	460	0.000	0	0.0	0.000	A
C-AB	1	637	0.002	1	0.0	6.230	A
C-A	117			117			
A-B	2			2			
A-C	190			190			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	469	0.000	0	0.0	0.000	A
C-AB	0.89	631	0.001	0.89	0.0	6.289	A
C-A	98			98			
A-B	2			2			
A-C	159			159			

Baseline 2027 + Comitted Development + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	Baseline 2027 + Comitted Development + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	122	100.000
B - Palk Road		✓	23	100.000
C - West Street (West)		✓	142	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	10	112
	B - Palk Road	12	0	11
	C - West Street (West)	135	7	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS

B-AC	0.05	8.96	0.1	A
C-AB	0.01	6.16	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	482	0.036	17	0.0	8.524	A
C-AB	6	649	0.010	6	0.0	6.158	A
C-A	101			101			
A-B	8			8			
A-C	84			84			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	476	0.043	21	0.0	8.706	A
C-AB	8	658	0.012	8	0.0	6.084	A
C-A	120			120			
A-B	9			9			
A-C	101			101			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	467	0.054	25	0.1	8.960	A
C-AB	10	671	0.015	10	0.0	5.985	A
C-A	146			146			
A-B	11			11			
A-C	123			123			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	467	0.054	25	0.1	8.962	A
C-AB	10	671	0.015	10	0.0	5.985	A
C-A	146			146			
A-B	11			11			
A-C	123			123			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	476	0.043	21	0.1	8.709	A
C-AB	8	659	0.012	8	0.0	6.087	A
C-A	120			120			
A-B	9			9			
A-C	101			101			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	482	0.036	17	0.0	8.532	A
C-AB	6	649	0.010	6	0.0	6.158	A
C-A	101			101			
A-B	8			8			
A-C	84			84			

Baseline 2027 + Comitted Development + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - West Street (West) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	West Street/Palk Road	T-Junction	Two-way	0.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	Baseline 2027 + Comitted Development + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - West Street (East)		✓	222	100.000
B - Palk Road		✓	12	100.000
C - West Street (West)		✓	137	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	0	11	211
	B - Palk Road	6	0	6
	C - West Street (West)	130	7	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - West Street (East)	B - Palk Road	C - West Street (West)
From	A - West Street (East)	10	10	10
	B - Palk Road	10	10	10
	C - West Street (West)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS

B-AC	0.03	9.17	0.0	A
C-AB	0.02	6.36	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	468	0.019	9	0.0	8.636	A
C-AB	6	629	0.010	6	0.0	6.356	A
C-A	97			97			
A-B	8			8			
A-C	159			159			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	11	458	0.024	11	0.0	8.850	A
C-AB	8	635	0.012	8	0.0	6.314	A
C-A	115			115			
A-B	10			10			
A-C	190			190			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	13	445	0.030	13	0.0	9.165	A
C-AB	10	643	0.015	10	0.0	6.256	A
C-A	141			141			
A-B	12			12			
A-C	232			232			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	13	445	0.030	13	0.0	9.165	A
C-AB	10	643	0.015	10	0.0	6.256	A
C-A	141			141			
A-B	12			12			
A-C	232			232			

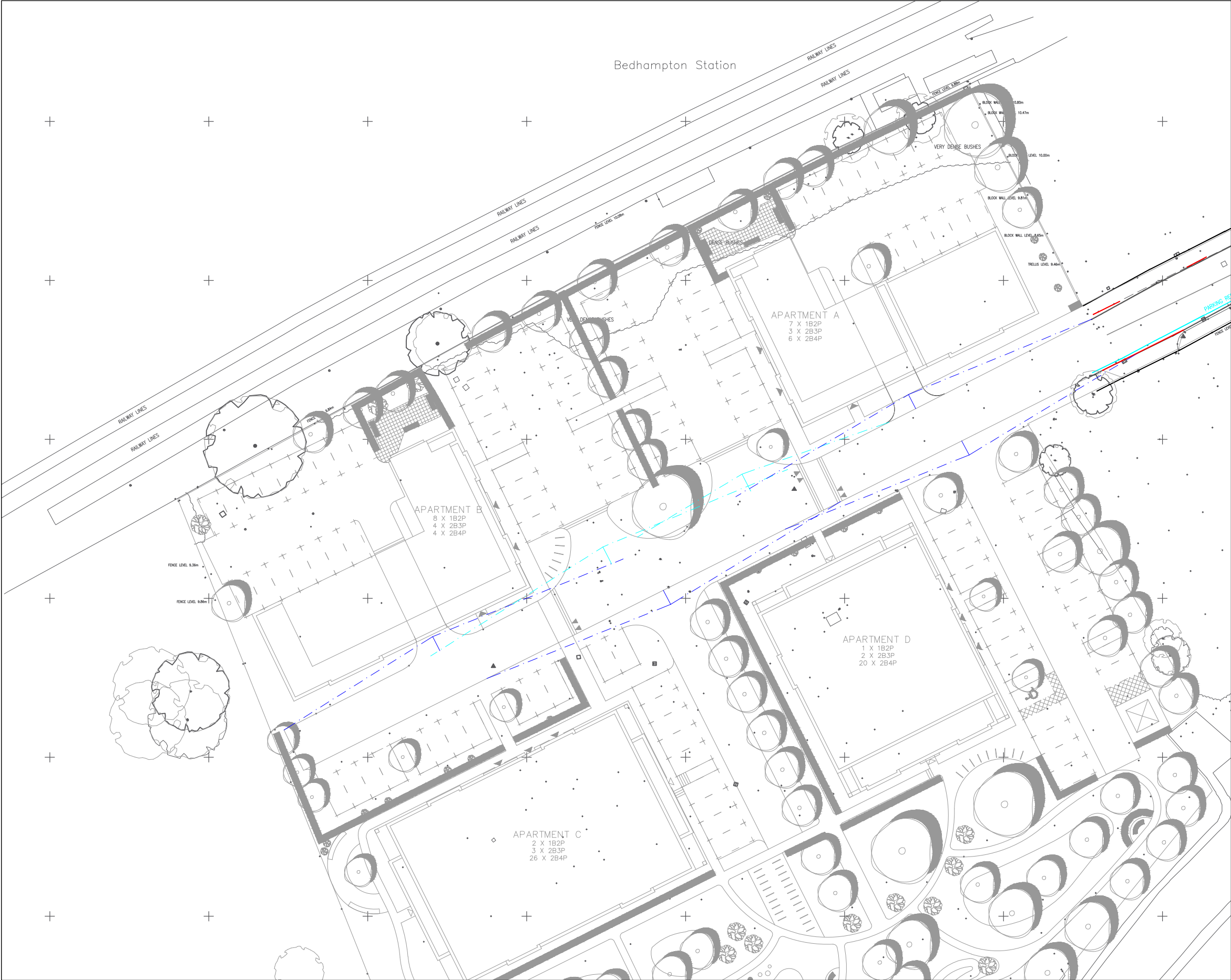
17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	11	458	0.024	11	0.0	8.853	A
C-AB	8	635	0.012	8	0.0	6.317	A
C-A	115			115			
A-B	10			10			
A-C	190			190			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	467	0.019	9	0.0	8.637	A
C-AB	6	629	0.010	6	0.0	6.356	A
C-A	97			97			
A-B	8			8			
A-C	159			159			

Appendix G

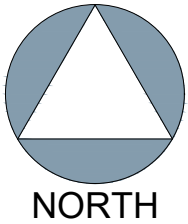


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6. VISIBILITY SPLAYS HAVE BEEN MEASURED IN LINE WITH MANUAL FOR STREETS GUIDANCE FOR 20MPH SPEED LIMITS.

- KEY:**
- INTERNAL VISIBILITY SPLAY AT 2M X 25M
 - INTERNAL VISIBILITY SPLAY AT 2.4M X 25M
 - EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED
 - PROPOSED PARKING RESTRICTIONS

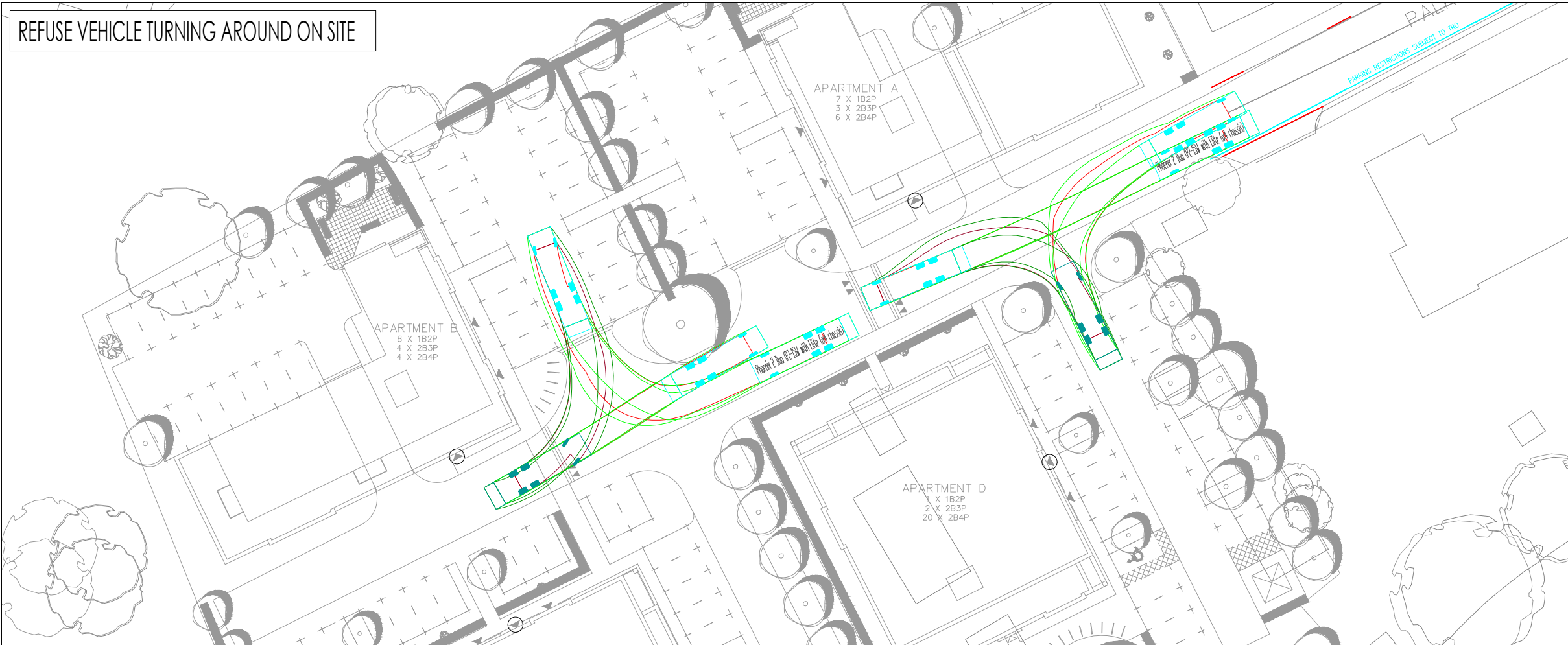


GEOMETRIES THROUGHOUT THE INTERNAL LAYOUT

Project Name LAND AT PALK ROAD, HAVANT	Title INTERNAL VISIBILITY	</
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Appendix H

REFUSE VEHICLE TURNING AROUND ON SITE



GENERAL NOTES

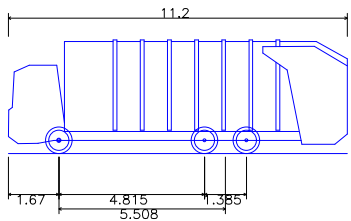
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- VEHICLES HAVE BEEN TRACKED TO 10MPH.

KEY

- BIN COLLECTION POINT
- PROPOSED PARKING RESTRICTIONS
- EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED

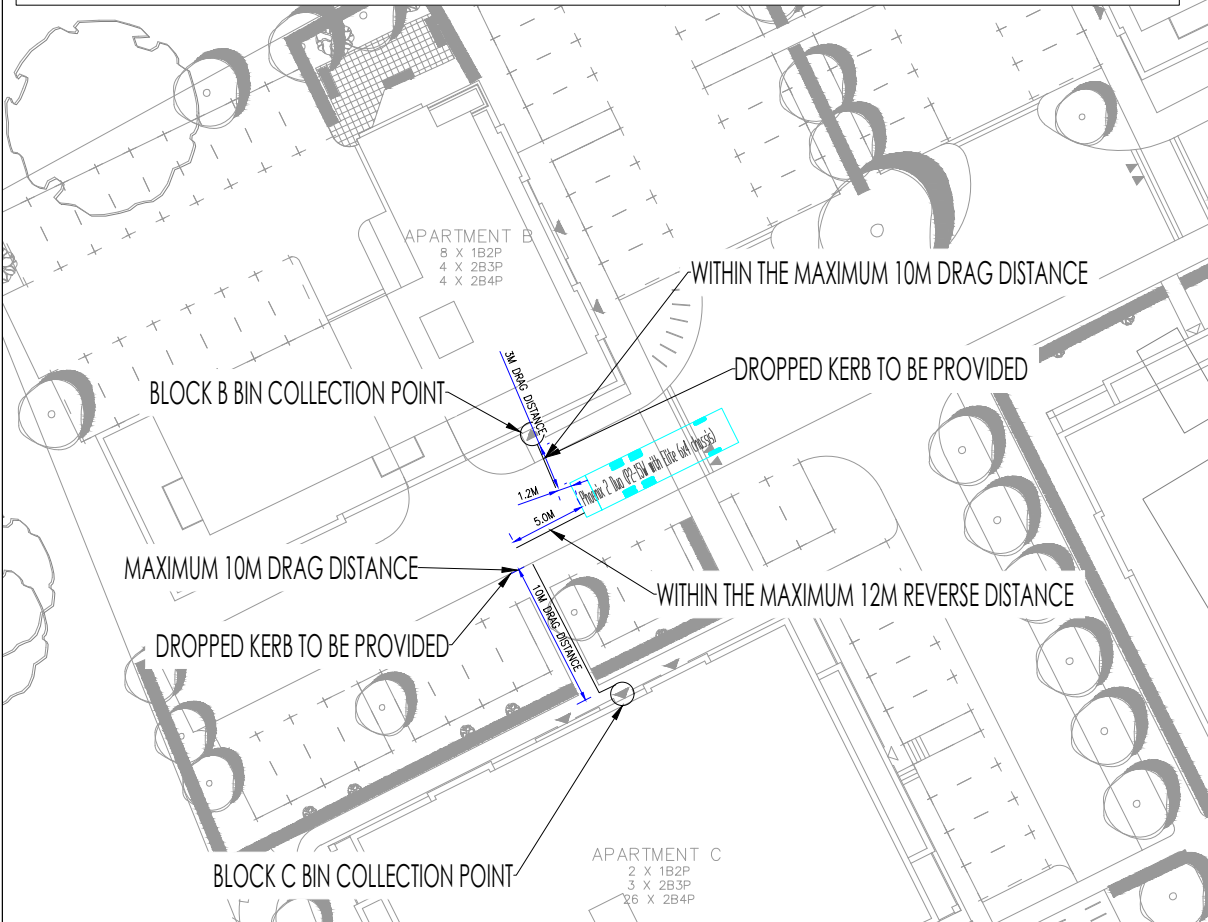


VEHICLE PROFILE

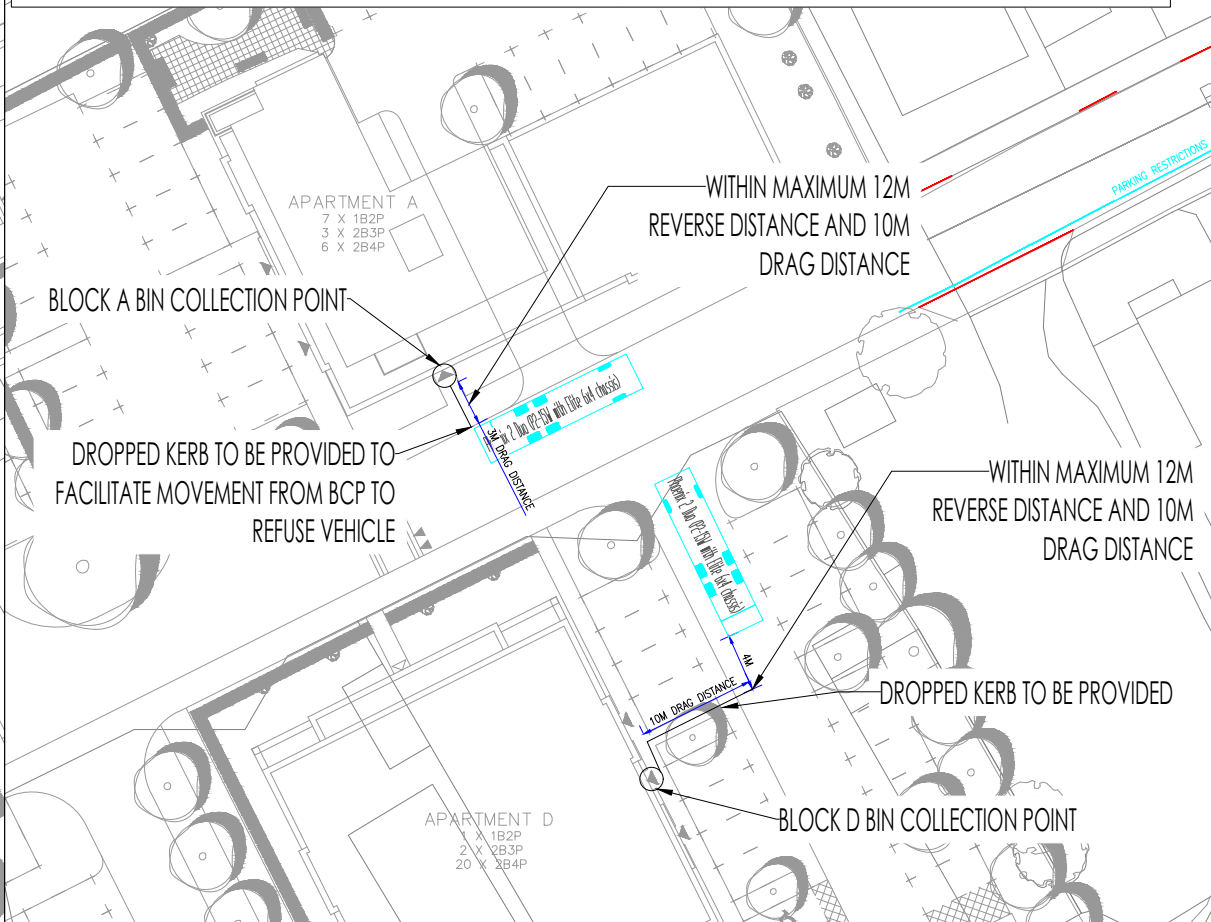


Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)
Overall Length 11.200m
Overall Width 2.530m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.500m

REFUSE VEHICLE GETTING WITHIN 10M OF BIN COLLECTION POINT FOR BLOCK B AND BLOCK C

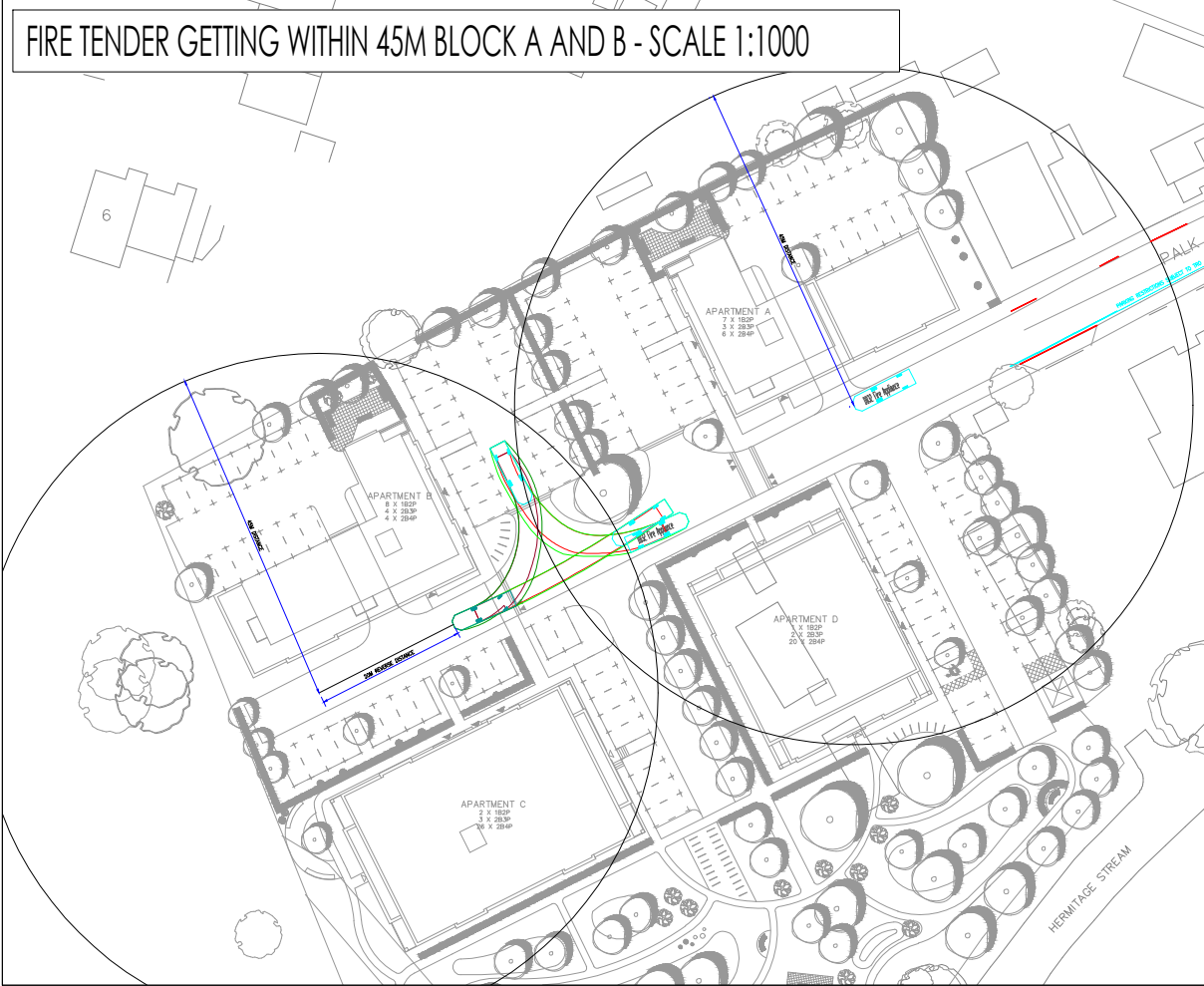
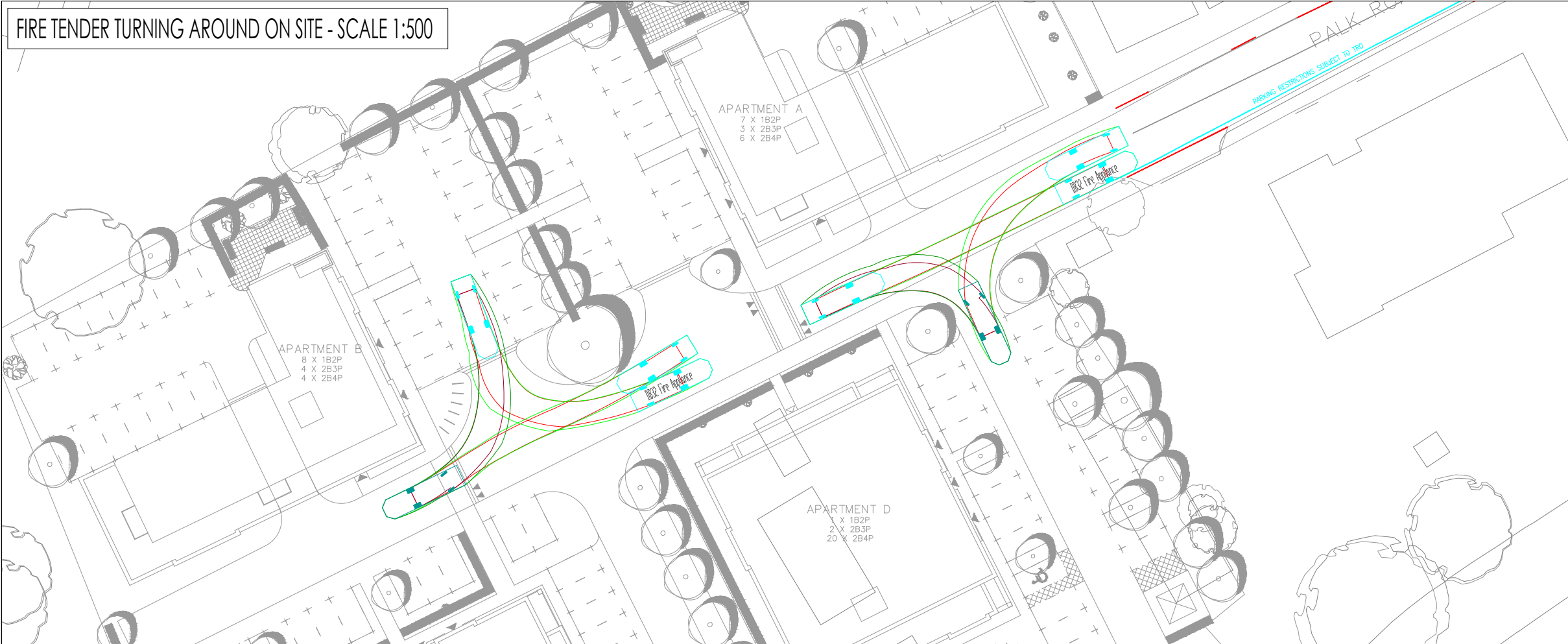


REFUSE VEHICLE GETTING WITHIN 10M OF BIN COLLECTION POINT FOR BLOCK A AND BLOCK D



B	UPDATED LAYOUT	16.02.24	CID	TAF
A	UPDATED LAYOUT	23.11.22	CD	JM
Rev	Description	Date	By	Chkd

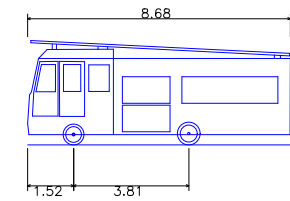
Project Name LAND AT PALK ROAD HAVANT	Title REFUSE VEHICLE SWEEP PATH ANALYSIS	 Paul Basham Associates Ltd The Botly, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com	Client 	Checked By JM	Checked Date 27.10.22	Scale 1:250	(AT A3 SIZE)		
Project Phase PRELIMINARY				Drawn By CD	Drawn Date 26.10.22	Client Drawing No. -	PBA Drawing No. 043.0035.004	Revision B	



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- VEHICLES HAVE BEEN TRACKED TO 10MPH.
- FIRE TENDER CAN GET WITHIN 45M OF ALL BLOCKS OF FLATS. HOWEVER, IN LINE WITH BUILDING REGULATIONS, A PUMPING SYSTEM IS TO BE PROVIDED TO GET WITHIN 45M OF ALL POINTS WITHIN EACH BLOCK.

VEHICLE PROFILE



DB32 Fire Appliance	
Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

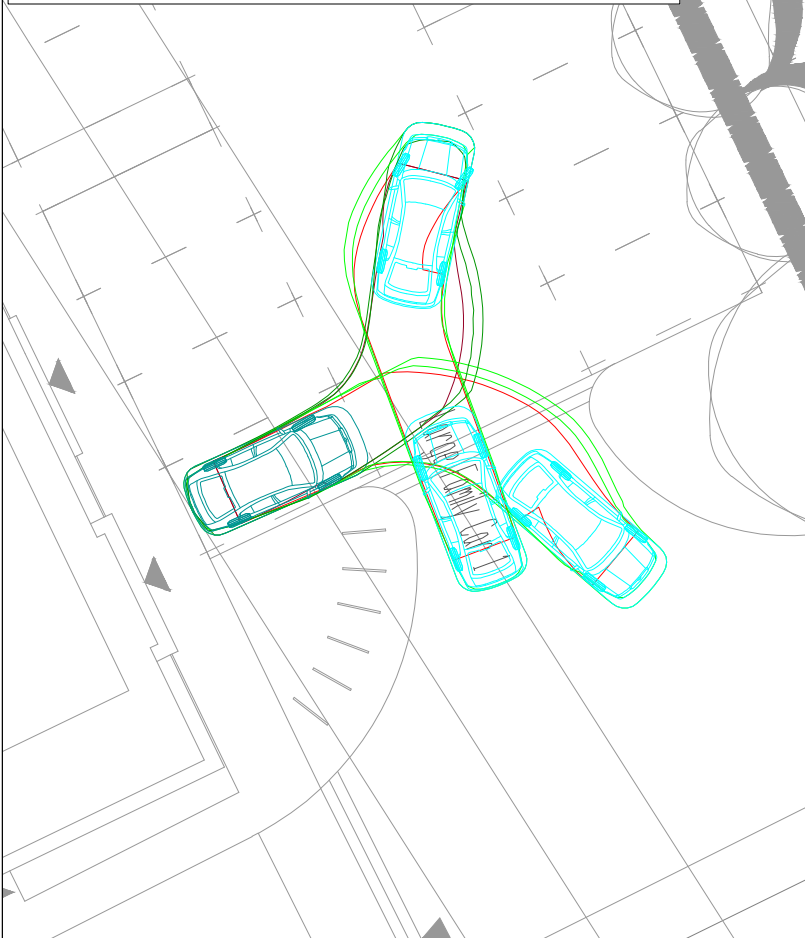
KEY

- PROPOSED PARKING RESTRICTIONS
- EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED

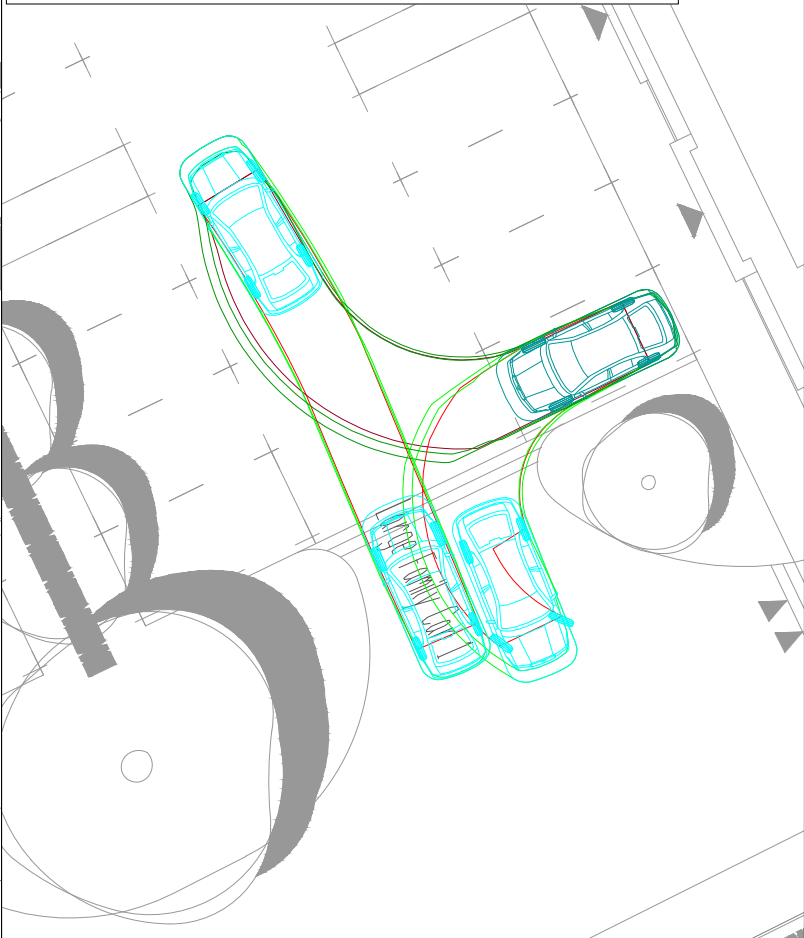
B	UPDATED LAYOUT	16.02.24	CID	TAF
A	UPDATED LAYOUT	23.11.22	CD	JM
Rev	Description	Date	By	Chkd

Project Name LAND AT PALK ROAD HAVANT	Title FIRE TENDER SWEEP PATH ANALYSIS	 Paul Basham Associates Ltd The Botly, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com	Client 	Checked By JM	Checked Date 26.10.22	Scale AS SHOWN (AT A3 SIZE)
Project Phase PRELIMINARY				Drawn By CD	Drawn Date 24.10.22	Client Drawing No. - PBA Drawing No. 043.0035.005 Revision B

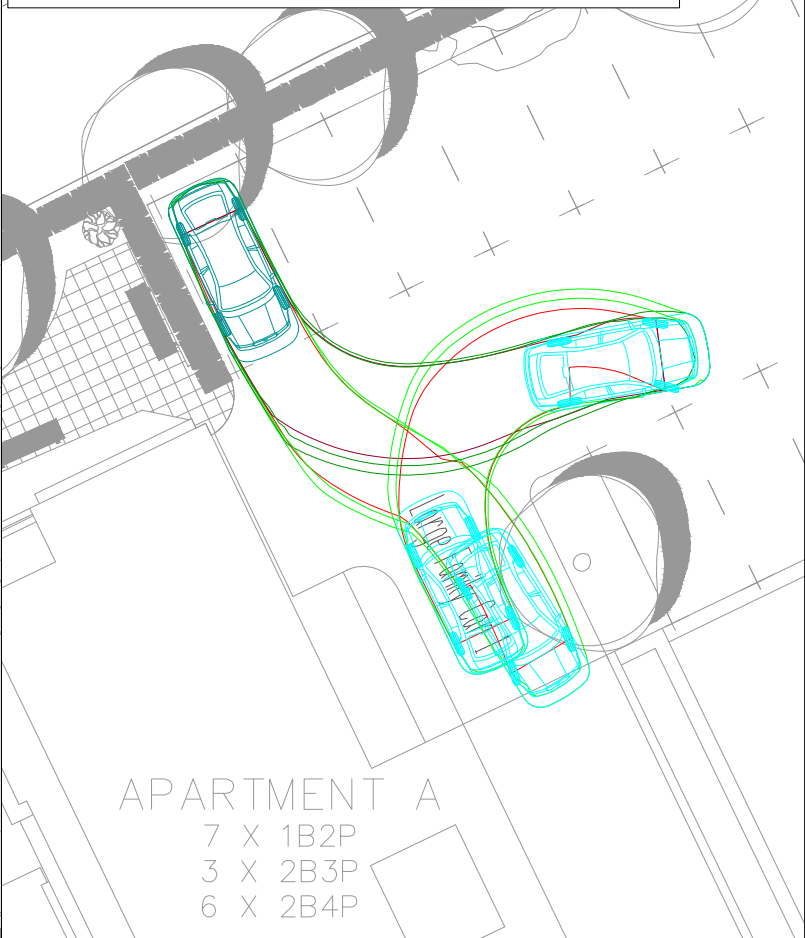
CAR REVERSING INTO PARKING BAY AND EXITING FORWARDS



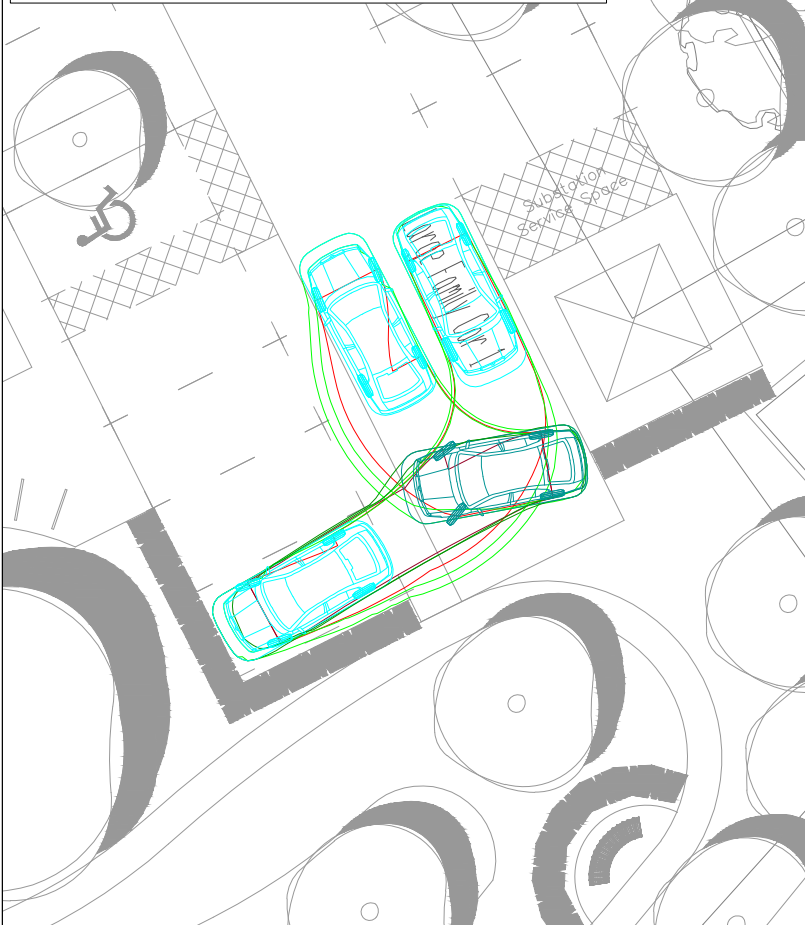
CAR REVERSING INTO PARKING BAY AND EXITING FORWARDS



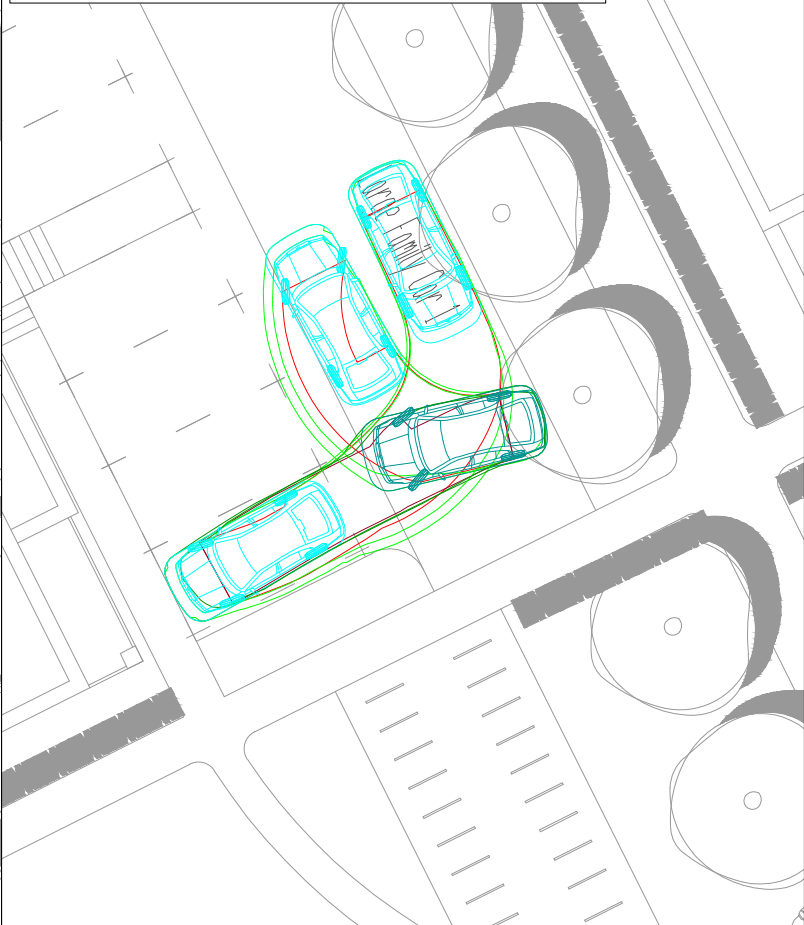
CAR REVERSING INTO PARKING BAY AND EXITING FORWARDS



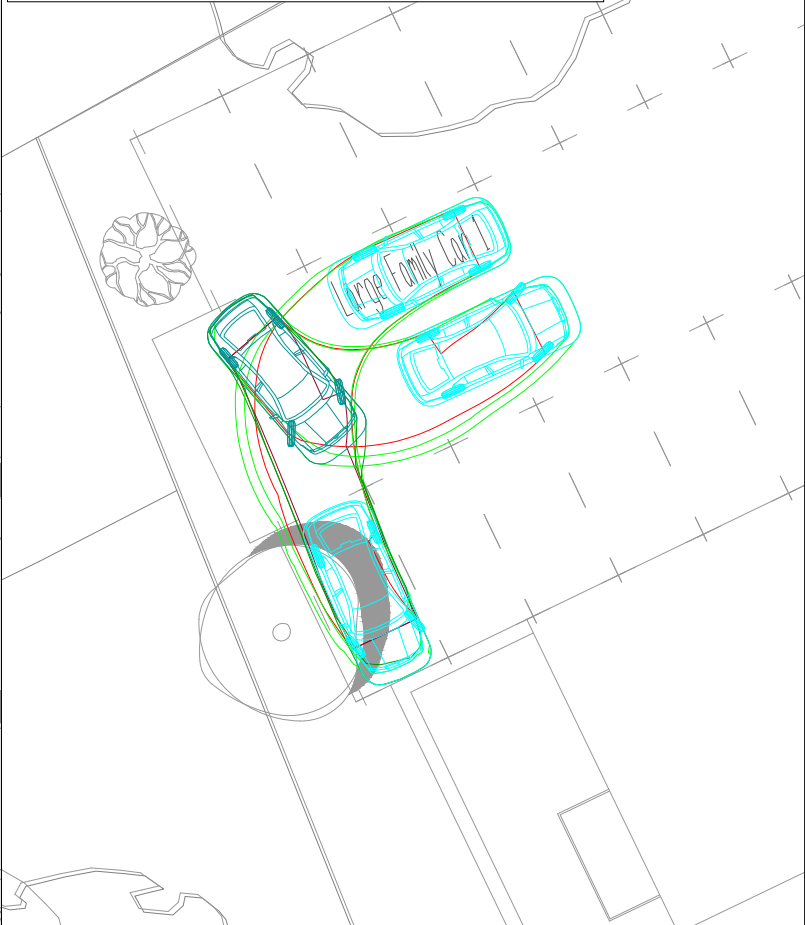
CAR FORWARD PARKING IN BAY AND REVERSING OUT



CAR FORWARD PARKING IN BAY AND REVERSING OUT



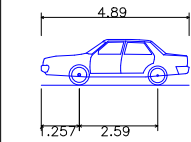
CAR FORWARD PARKING IN BAY AND REVERSING OUT



GENERAL NOTES

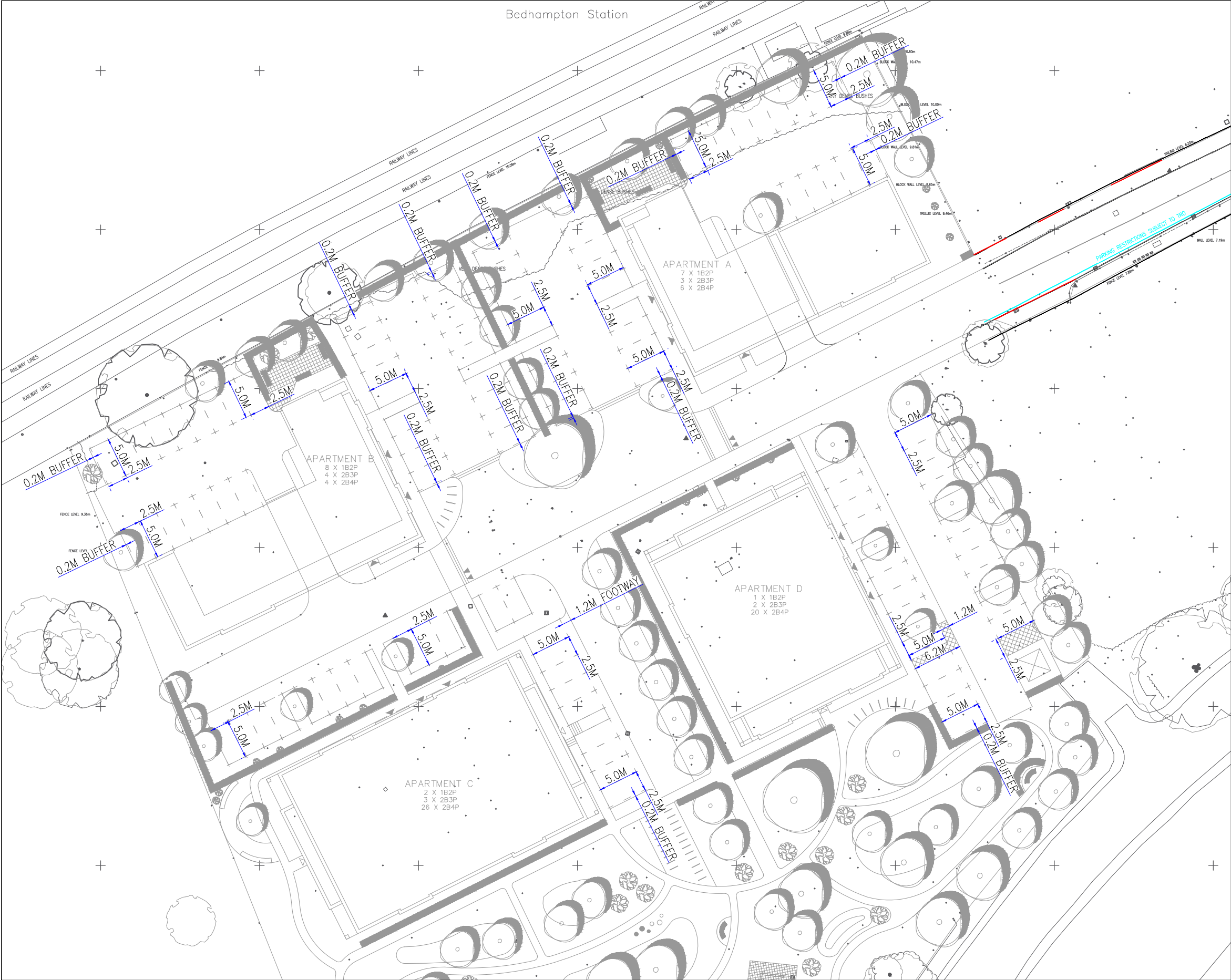
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6. VEHICLES TRACKED TO 2.5MPH.

VEHICLE PROFILE



Large Family Car 1	
Overall Length	4.890m
Overall Width	1.940m
Overall Body Height	1.512m
Min Body Ground Clearance	0.273m
Max Track Width	1.890m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.100m

B	UPDATED LAYOUT	16.02.24	CID	TAF
A	UPDATED LAYOUT	25.11.22	CD	JM
Rev	Description	Date	By	Chkd



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KEY

EXISTING ACCESS POINTS ALONG PALK ROAD TO BE RETAINED

PROPOSED PARKING RESTRICTIONS

NORTH

P01	FIRST ISSUE	16.02.24	CID	TAF
Rev	Description	Date	By	App'd
	Date Created	Drawn By	Approved By	Suitability Code
	16.02.24	CID	TAF	-
	PBA Project Number	Scale	(AT A3)	
	043.0035	1:500		
PBA Drawing No:				Revision
043.0035-0018				P01

PARKING GEOMETRIES THROUGHOUT THE INTERNAL LAYOUT

Project Name LAND AT PALK ROAD, HAVANT	Title INTERNAL PARKING SPACE GEOMETRIES PLAN	 paulbasham associates Paul Basham Associates Ltd The Bothy, Cams Hall Estate, Fareham, PO16 8UT 01329 711 000 info@paulbashamassociates.com www.paulbashamassociates.com	Client 
Project Phase PRELIMINARY			