1 INTRODUCTION

1.1 REPORT PURPOSE

1.1.1 This technical note has been produced by Velocity Transport Planning ('Velocity') on behalf of Ansty Village Parish Council (the 'client') to assess the Outline Planning Application (OPA) submitted by Fairfax Acquisitions Limited (the 'applicant') for the following proposed development:

"Outline planning application (All matters reserved except for access) for the redevelopment of land to the east of Ansty to create a new Garden Community, comprising of the erection of up to 1,450 homes (including 30% affordable housing), up to 90 residential care (C2 units), a primary school, new SEND school, sports facilities including all weather hockey pitches and tennis centre, allotments, retail, community and employment uses together with ancillary and associated development including new and enhanced pedestrian/cycle routes, open spaces, and landscaping"

1.1.2 The proposed development would be located between the villages of Cuckfield and Ansty which are located to the west of Haywards Heath. The applicant is an experienced property developer, who has been supported by Ardent Consulting Engineers (ACE) as the transportation and highways consultant for the OPA submission (ref: DM/23/2866).

1.1.3 As part of the OPA, a Transport Assessment was prepared by ACE, dated October 2023, against which this note has been prepared to critique the suitability of the site for residential development from a transport perspective.

1.1.4 Mid Sussex District Council (MSDC) are the Local Planning Authority and West Sussex County Council (WSCC) are the Local Highway Authority.

2 SITE ACCESSIBILITY

2.1 INTRODUCTION

2.1.1 This section reviews the site accessibility assessment undertaken within the ACE Transport Assessment (*Chapter 3 – 'Accessibility Review'*), to establish whether or not the assessment is robust and whether the development location provides a suitable opportunity for adoption of sustainable transport modes, over private vehicular use.

2.1.2 A copy of the Concept Masterplan included within the ACE Transport Assessment has is provided below in **Figure 2-1**, for reference purposes.

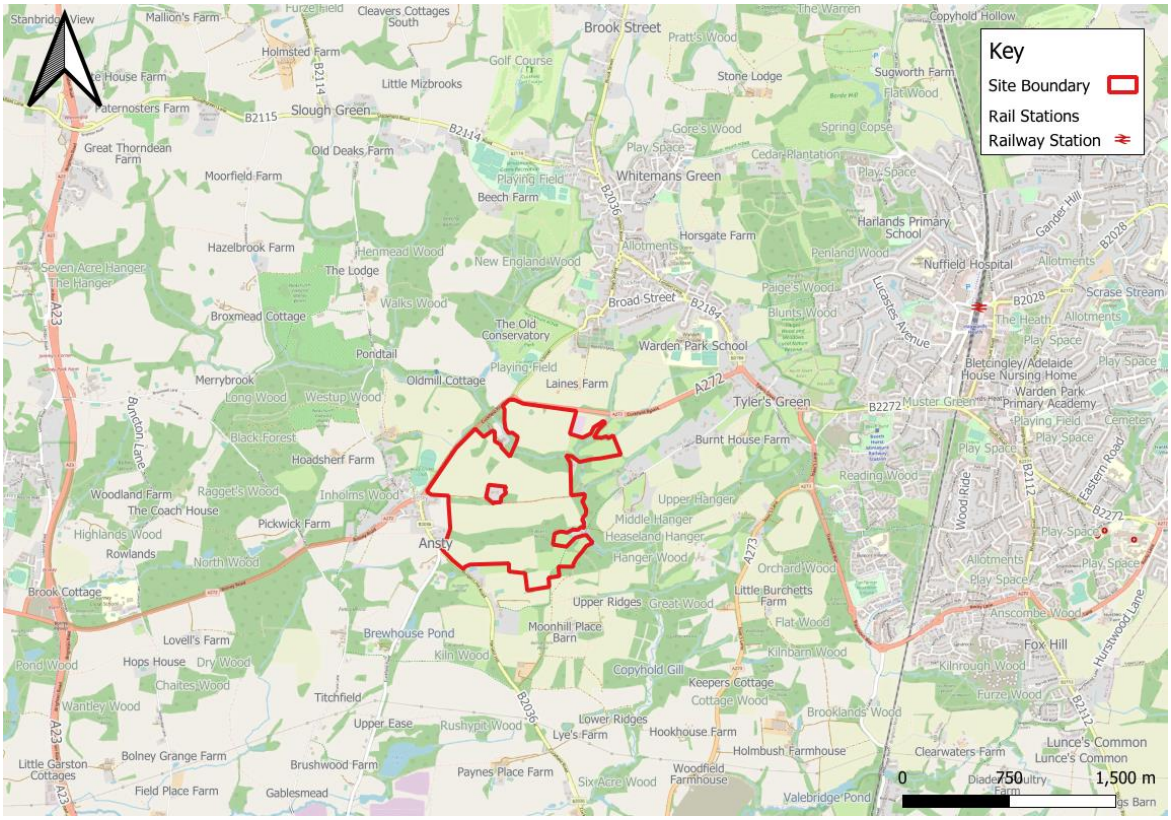
Figure 2-1: Land at Ansty: Concept Masterplan

Source: ACE Transport Assessment

2.2 SITE LOCATION

2.2.1 **Figure 2-2** shows the site location and local context.

Figure 2-2: Site Location and local context



2.3 LOCAL AMENITIES AND FACILITIES

2.3.1 The ACE Transport Assessment makes very brief mention of local amenities and facilities, with little insight provided in relation to accessibility from the development site. A figure is provided illustrating six local amenities and facilities, of which only two are located in within a close proximity of the development periphery.

2.3.2 No indication of walking distance or time is provided in relation to the development site, therefore it is difficult to determine the accessibility of these facilities within 'reasonable walking' parameters.

2.3.3 Therefore, to determine the suitability of ACE's assessment, a summary of walking accessibility to these facilities is provided in **Table 2-1**, based on the approximate walking distance calculated from the centre of the development site.

Table 2-1: Local facilities and amenities (as per ACE Transport Assessment)

FACILITY	VELOCITY ASSESSMENT	
	Distance	Time
Ansty Community Hall	750m	11 mins
Ansty Football and Cricket Club	750m	11 mins
Cuckfield Recreation Ground	2.0km	30 mins
Cuckfield Medical Practice	2.6km	38 mins
Warden Park Academy	2.8km	40 mins
Co-op Foodstore Cuckfield	2.8km	42 mins

2.3.4 **Table 2-1** demonstrates that, with the exception of facilities located within Ansty, the majority of facilities are beyond a 2.0km or 30-minute walking distance. The National Travel Survey notes that walking is the most frequent travel mode used for short-distance trips, which are considered to be no longer than one mile / 1.6km (20-minute walking distance). Therefore, when considering this to be a reasonable maximum walking distance that residents are likely to travel, the majority of facilities may be considered out of reach by foot.

2.3.5 Comparatively, the ACE Transport Assessment refers to Chartered Institution of Highways and Transportation (CIHT) guidance which recommends:

"acceptable walking distances of between 400m ("Desirable") for general journeys and 2km ("Preferred Maximum") for commuting and journeys to school purposes"

2.3.6 It goes on to compare this to the Manual for Streets (MfS) guidance for a walkable neighbourhood, which indicates a reasonable walking distance of 800m (10-minutes), with trips under 2km considered to have the greatest potential for replacing short car trips.

2.3.7 Whilst this provides a wider margin for what is considered a reasonable walking distance, it remains to demonstrate that the local facilities indicated within the ACE TA fall outside of the preferred maximum distance.

2.3.8 The conclusion to Chapter 3 of the ACE Transport Assessment states that:

"There are a number of local facilities located within Ansty and Cuckfield, ***which allows for a degree of 'local living' by catering for some of the needs to existing residents, thereby minimising the need to travel and/or reducing journey times****."*

2.3.9 It is our view that, based on our review of accessibility to those facilities against recommended walking guidelines, they largely do not allow for the degree of local living as suggested by ACE and are instead likely to lead to increased rather than reduced travel by vehicle.

2.4 ACCESSIBILITY BY FOOT AND CYCLE

WALKING ACCESSIBILITY

2.4.1 The ACE Transport Assessment provides a brief summary of local Public Rights of Way (PRoWs) that dissect the development site and provide onward connection to the local area, providing options for accessibility by foot.

2.4.2 The report lists a number of public rights of way, but does not consider whether public footpaths will provide safe, well-lit, footsure routes in all weather conditions and at all times of year. The necessary civil engineering work of metalling and lighting routes to make them usable by pedestrians cyclists and wheelchair users would not solve the excessive travel distances, the remoteness of the routes leading to concerns over personal safety.

2.4.3 It is Velocity's view that, given the distances involved and remoteness of the development site, the site should not be considered accessible by foot and will encourage additional vehicular travel to the wider area, which would not be necessary for homes located in more sustainable locations.

CYCLING ACCESSIBILTY

2.4.4 The ACE report refers two bridleways in relation to cycling access but, as with footways, it does not address whether these would be suitable for cyclists to use in all weather conditions and at all times of year. Bridleways are extremely unlikely to provide suitable routes to encourage people to cycle to local facilities.

2.4.5 The A272 and B2036 do not provide any particular priority for cyclists and would likely be a major discouragement to most potential cyclists, thereby perpetuating reliance on the private car to leave the confines of the development.

2.4.6 The ACE Transport Assessment makes reference to outputs produced by the *Mid Sussex Local Cycling and Walking Infrastructure Plan* (LCWIP), which denotes a desire line for cyclists between the village of Ansty and Haywards Heath (see **Figure 3-4** of the ACE Transport Assessment).

2.4.7 Notwithstanding the findings of the LCWIP, Figure 3-3 of the ACE Transport Assessment, reproduced as **Figure 2-3, below,** demonstrates a clear lack of suitable cycling infrastructure within close proximity of the development site. The absence of suitable infrastructure combined with the nature of local roads is likely to discourage cycling journeys by residents or commuters at the proposed development.

Figure 2-3: ACE TA Figure 3.3

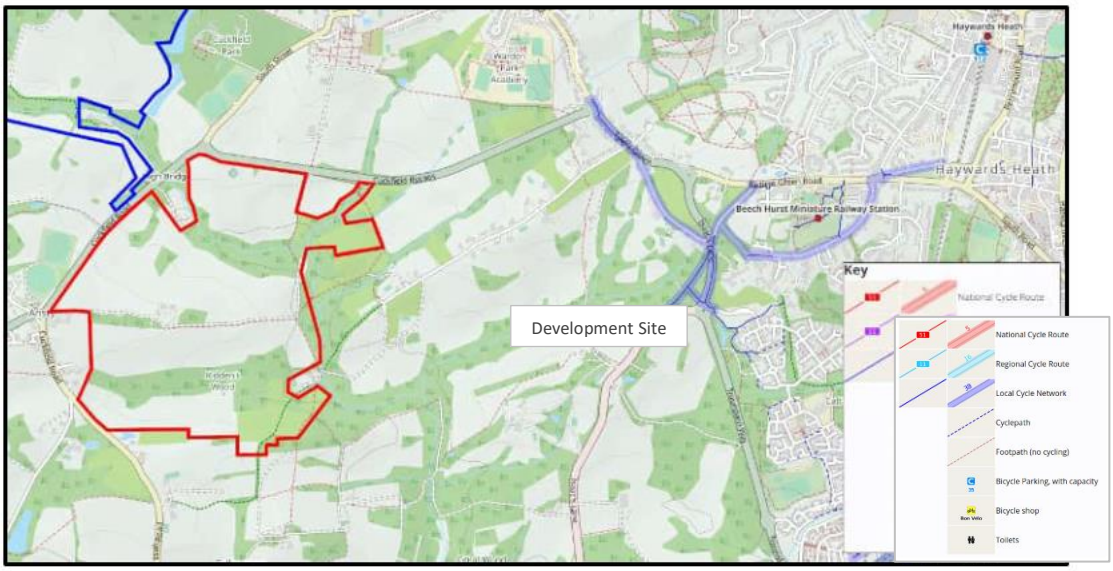


Figure 3.3: Cycle Routes within the Vicinity of the Site

2.4.8 The conclusion to Chapter 3 of the ACE Transport Assessment states that:

"There is an existing propensity to cycle from Ansty Village, with the primary pole of attraction being towards and East and Haywards Heath"

2.4.9 Other than repeating the finding of the LCWIP desire line study, the report does not go on to provide a relevant conclusion on accessibility of the proposed development site by cyclists. It is Velocity's view that, in the absence of suitable infrastructure and given the distances involved, the site should not be considered accessible by cycle and is unlikely to deter vehicular travel unless suitable mitigation is proposed.

2.5 ACCESSIBILITY BY PUBLIC TRANSPORT

2.5.1 The ACE Transport Assessment makes brief reference to the availability of local bus and rail services.

EXISTING BUS ACCESSIBILITY

2.5.2 In relation to bus services, although a brief summary of Route 89 is provided, there is no commentary on the distance between the centre of the development site and the nearest bus stop located at Ansty Cross, at a walking distance of approximately 700m (10-minutes).

2.5.3 Additionally, a review of bus frequency undertaken by Velocity has determined that the statement within the ACE Transport Assessment appears to significantly overestimate service provision across a typical week. The ACE report states the following in relation to Route 89:

"…which operates at a frequency of one bus per hour on weekdays, with no service on Saturdays or Sundays."

2.5.4 A review of the timetable for Route 89, available via Compass Travel's website, suggests that service provision is not hourly, nor daily. A copy of the timetable (included at **Appendix A** of this note) suggests that only one service is available every day from Ansty Cross at 17:08 or 17:48, depending on direction of travel. Other services across the day, which are not hourly, either operate as a School service, during School holidays-only, or on Mondays, Wednesday's and Friday's only.

2.5.5 On this basis, the very low level of service provision does not provide an acceptable alternative to private car use for the majority of most people's journeys and will lead to an increase in unnecessary car journeys compared to more suitable sustainable locations for housing growth within the district.

PROPOSED BUS ROUTE

2.5.6 It is noted from the ACE TA and previous representations provided to WSCC that a dedicated bus route is proposed through the development site, with the access junctions and sections of internal street work designed to accommodate public service vehicles should they be introduced.

2.5.7 ACE state that discussions have been held with local operators with a view to diverting an existing route, or creating a new service, that will provide a direct connection between the development and Haywards Heath.

2.5.8 Proposals are included in the ACE TA for an intermediary bus service (pending agreement through Section 106 obligations for a final service), which would involve the introduction of a Demand Responsive Transport (DRT) solution. A final bus service would subsequently replace this following completion of the development, pending agreement on bus routeing, frequency and funding with the operator and/ or WSCC at a later stage.

2.5.9 A service extension is likely to require one or two additional buses, and a new service could require many more. Previous representations have envisaged that a new Community Land Trust would be endowed to fund this new route for a period of at least 5 years, to enable it to become established as a viable route in its own right.

2.5.10 Given that each additional bus that is required to make a service operational can come at a cost of approximately £300,000 per annum, there is concern regarding the viability of bus route diversion or creation, given the rurality of the site and anticipated travel patterns. Importantly, if the bus service is not self-sustaining after five years, it would fall to the local authority to fund or subsidise the route. If this is not viable, the bus service would be removed leaving residents with no other viable alternative than the private car.

2.5.11 Additionally, if the bus service is a diversion of an existing route, this may lead to an increase in journey times for existing passengers reducing the desirability of the service and potentially resulting in some existing passengers switching modes to private car.

RAIL ACCESSIBILITY

2.5.12 The ACE Transport Assessment makes brief reference to the availability of rail services at Haywards Heath Railway Station, which is reported to be *"approximately 3.5km from the centre of the proposal site"*.

2.5.13 Velocity has conducted a review of this statement and has determined that the station is located approximately 4.5km from the centre of the development site. In comparison, the station is actually located 3.5km from the proposed northern access point to the development site on the A272.

2.5.14 Notwithstanding the above, it is Velocity's view that local rail services are not easily accessible by walking or cycling, given the distances involved and lack of suitable cycle infrastructure between the development site and Hayward's Heath. Whilst it is noted that Bus Route 89 provides a connection between the local bus stop and the station, the relatively low service frequency does not make this a preferable option for commuters and is unlikely to deter significant modal shift from private vehicle use.

2.5.15 Any future resident wishing to travel by rail from Haywards Heath is therefore likely to rely on private car trips, with a high likelihood of single occupancy car trips exacerbating the traffic generation of this highly inaccessible location.

2.6 SUMMARY OF ACCESSIBILITY

2.6.1 The assessment lacks detail, useful insight and fails to comment on realistic accessibility by walking, cycling and public transport. Certain information, such as travel distance, appears to be taken from the site boundary rather than its centre, or is omitted altogether. Where evidence is provided, such as local cycle routes and bus service availability, it does not justify an acceptable level of accessibility to the local area.

2.6.2 The local facilities and amenities used within the accessibility assessment are deemed to be largely out of reach by walking and cycling modes, given the majority are located beyond 2km from the centre of the proposed development site.

2.6.3 The diversion of an existing bus route or creation of a new bus route to serve the development appears unlikely to be viable in the long term. If the service is not self-sustaining after its initial funding period, then it would be withdrawn should it not be adopted by the local authority. Increased journey times for existing passengers may also reduce the desirability of the service and any increases in passenger uptake from the development may be offset by falls in patronage elsewhere. Therefore, without a suitable strategy that secured a long-term service provision, it is likely that a higher levels of vehicle trips will be generated.

2.6.4 In summary, based on the information we have available, the location of the site and the lack of sustainable transport infrastructure would lead to all but a few journeys being made to destinations outside of the site by private car. Therefore, the proposals go against national, regional and local transport policy with regard to locating developments in locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.

2.6.5 In conclusion, it is Velocity's view that the accessibility assessment contained within the ACE Transport Assessment does not address the significant deficiencies in accessibility by walking, cycling and public transport that combined lead to the conclusion that this is a highly inaccessible, unsustainable location (in transport terms) that is highly unsuitable for significant residential development

3 TECHNICAL ANALYSIS

3.1 TRIP RATES AND TRIP GENERATION

3.1.1 ACE state in the Transport Assessment (Paragraph 6.31) that they have agreed trip rates with WSCC based on TRICS outputs contained in Appendix F of the TA. They go on to state in Paragraphs 6.32 – 6.36 that they have agreed reductions in these trip rates to account for home working, internalisation, future mode share assumptions and the effects of the active and public transport strategies. The overall effect of these reductions is shown in Table 6.2 of the TA, which presents trips representing an approximate 7% reduction from the original TRICS trip rates.

3.1.2 It is not clear from the Transport Assessment how the discounts have been calculated, and this information should be provided for transparency.

3.1.3 Table 6.2 of the TA sets out the proposed residential vehicular trips with and without the reduction (reproduced below for ease of reference)

Peak Hour	Total Development Trips (Without Reduction)			Total Development Trips (With Reduction)		
	Arr	Dep	Tot	Arr	Dep	Tot
AM (08:00 - 09:00)	196	547	743	181	514	695
PM (17:00 - 18:00)	460	206	666	190	427	617

Table 6.2: Total Development Trips With & Without Reduction

3.1.4 The Transport Assessment does not appear to include any trip generation for the non-residential uses within the site, and while it is accepted there will be a substantial amount of trip internalisation for these uses, we would expect their garden gate and post-internalisation trip predictions to be included in the overall model.

3.1.5 The Transport Assessment states at Paragraph 6.40 that the predicted traffic flows are provided at Appendix G. Paragraph 6.41 states that the flows *"reflect 'Actual Flows' (rather than 'Demand Flows'), therefore include the effect of capacity and queuing to present the most likely forecast of traffic across the local highway network"*.

3.1.6 Appendix G of the TA includes traffic flow diagrams of the "Proposed Development Traffic Effect". This shows that the total predicted flows into and out of the development are substantially lower (20% in the AM peak, 30% in the PM peak) than the predicted development trips (with reduction) presented in Table 6.2 of the TA, presumably because the network is so congested that the expected number of trips cannot take place.

Peak Hour	Total Development Trips (With Reduction)			Modelled Trips		
AM (08:00 - 09:00)	181	514	695	116	450	566
PM (17:00 – 18:00	190	427	617	277	148	425

3.1.7 This reconciliation appears to indicate that a substantial proportion of expected trips are missing from the modelling. In addition, the "Proposed Development Traffic Effect" diagrams (contained in **Appendix B**) show negative traffic flows on the A272, suggesting that existing traffic is either routing via different, potentially less suitable, roads or the model assumes the traffic is being supressed. Given the potential for these impacts to have severe negative impacts on existing road users, the applicant should test 'Demand Flows' from the Saturn model, with the results compared to the actual flows.

3.1.8 The applicant should explain why the development results in negative background traffic flows, with reductions in traffic on to the A23, west to Cowfold, traffic through the Haywards Heath and through Burgess Hill, all experiencing unexplained reductions in traffic flows which do not appear to be redistributed elsewhere within the model.

3.1.9 Similarly some traffic does seem to be redistributed, such as 40 southbound vehicle trips being removed from the B2184 in Cuckfield and redistributed to Ardingly Road. However, no assessment is provided as to the potential impacts on Ardingly Road, Hanlye Lane and Balcombe Road, which is presumably the the route the diverted traffic will be taking to Haywards Heath.

3.1.10 The applicant must be able to demonstrate that their development traffic can be sufficiently constrained so as not to generate severe impacts to other road users on the wider network. If the application is to be approved, this constraint (maximum permissible vehicular trip generation rates during peak hours) should be secured via S106, and may need physical design changes such as signal controlled junctions at the site accesses, with signal timings set to limit traffic flow onto the wider network and ensure all excessive queuing and delay happens within the development and not on the wider highway network.

3.1.11 Further assessment should be undertaken to ensure that the proposed trip rates reflect the nature and location of the development (I.e. the non-residential land uses should be considered and any internalisation assumptions clearly set out and justified for audit purposes). A vast array of uncertainties regarding future trip generation forecasts leans to the possibility that travel behaviours may trend towards higher vehicular use in rural areas that are not suitably connected to urban areas through proposed active travel and/or public transport solutions. The impact of recent policy change (e.g. the Government's 'Plan for Drivers') may need to be considered as part of any revised assessment.

3.2 SITE ACCESS JUNCTION ASSESSMENTS

3.2.1 The proposed development will be accessed by vehicles from three locations:

- Access 1 – On the northern edge of the site onto the A272;
- Access 2 – On the western edge of the site onto the A272; and
- Access 3 – On the south-western edge of the site onto the B2036 Harvest Hill.

3.2.2 These access points are illustrated in **Figure 2-1** of the ACE TA.

3.2.3 A high-level review of site access junction assessments has been undertaken, namely the ARCADY modelling outputs generated and summarised in Section 7 of the ACE Transport Assessment, to determine if the assessment is robust.

3.2.4 The following scenarios were tested, described in the ACE report as follows:

- *2019 Baseline – The calibrated model*
- *2039 Do Minimum ('Without Development')*
- *2039 Do Something ('With Development')*

3.2.5 It is noted that ACE state that the methodology for modelling assessments was agreed with WSCC Highways Officers during pre-application discussions. However, Velocity's review suggests that the number of vehicular trips used in the models reflect assumed network constraint from the strategic model, rather than assessing demand flows both from the wider highway network and from the proposed development. In our view demand flow models should be presented as a baseline and if necessary additional models presented with justification for any reductions in flows.

3.3 ADDITIONAL JUNCTION ASSESSMENTS

3.3.1 ACE state that a sifting exercise was agreed with WSCC, whereby only junctions with more than 30 additional movements would require junction assessment modelling. In our view this fundamentally underestimates the possibility of an additional 30 movements in one direction having a severe impact even where there is a corresponding decrease in movements in another direction. Therefore, the sifting operation should be re-run to include any junction where any movement experiences an increase of more than 30 movements in the hour should be assessed with junction modelling. This would include additional junctions not considered in the original modelling such as Hanlye Lane / Borde Hill Lane / Balcombe Road; Balcombe Road / Burrell Road; and Balcombe Road Mill Green Road.

3.3.2 In addition, the repeat of the sifting operation should be undertaken with demand flows, as it is impossible to tell where the development may generate a severe impact, when the detailed junction modelling traffic flow data is taken from a strategic traffic model output which has already limited the flows to the maximum values that can be absorbed by the network (i.e. within the theoretical capacity of junctions).

3.3.3 Taking account of the need to assess junctions where there is an increase of more than 30 vehicles per hour on any one movement (and assuming a 20% - 30% uplift in development traffic to reflect demand), the following junctions would likely need to be assessed: **C**, **D**, B2036 / Broad Street, **E**, B2184 / Broad Street, **F**, **G**, **H**, **L**, **M, O, P. Q, R, S, T, U, V, W, Y, Z** Hanlye Lane / Brode Hill Lane / Balcombe Road; Balcombe Road / Burrell Road; and Balcombe Road Mill Green Road

3.3.4 Only two junctions were subject to assessment within the ACE TA in addition to the three site junctions, following the original site sifting process. The additional junctions were:

- *Junction C – B0236 / Ardingly Road Mini-Roundabout*
- *Junction O – A23 / London Road Roundabout*

3.3.5 It is noted that Junction C was modelled in ARCADY as if it were a standard roundabout. This is based on advice given by the Transport Research Laboratory (TRL) on a similar assessment of this junction undertaken in support of the local Penland Farm development, located northeast of the proposed development site.

3.3.6 A high-level review of the junction geometry and anticipated operation, based on the scale and location of priority road markings and the central dome, indicates that the junction may indeed operate more like a mini-roundabout than a standard roundabout, despite the presence of a major road arm.

3.3.7 It is recommended therefore that, for robustness, additional analysis is undertaken to determine if this methodology is robust. In the absence of recorded video survey data to observe the nature of junction operation, a sensitivity test should be undertaken through ARCADY using the 'mini-roundabout' classification, to determine if the traffic impact of the proposed development is more severe than reported.

3.4 PRELIMINARY HIGHWAY LAYOUT DESIGN

3.4.1 A review of the access junction design prepared in support of the OPA has been undertaken (as shown in **Appendix E**), to ensure that layouts take in to account the relevant design parameters set by the Design Manual for Roads and Bridges (DMRB) and Manual for Streets (MfS).

3.4.2 The following drawings were subject to a high-level design review:

- 2207280-003-F (Access 1)
- 2207280-004-D (Access 2)
- 2207280-005-D (Access 3)

3.4.3 The review found that, whilst no fundamental concerns were observed in relation to overall design or visibility, the following two areas may require further consideration.

ROUNDABOUT GEOMETRY

3.4.4 It is observed that there may be discrepancies between the methodology used for junction design and the guidance for deflection angles to the roundabouts, based on road speeds.

3.4.5 It is noted that on each of proposed access junctions, deflection distances do not appear to meet the minimum requirements for a 40mph road (where proposed by the design):

3.4.6 CD116 of the DMRB states that:

"Where the speed limit is 40mph or less within 100 metres of the give way line on any approach, the entry path radius shall not exceed 70 metres"

3.4.7 A high-level review of the drawings indicates that on at least one arm of each junction, where a speed limit reduction to 40mph is proposed, the entry path radius exceeds 70m. Noting that we have not had access to the applicants CAD models, our assessment of the geometries for each arm is as follows:

North Access

ARCADY ROUNDABOUT GEOMETRY:	(ARM 1) A272 EAST	(ARM 2) DEVELOPMENT ACCESS	(ARM 3) A272 WEST
APPROACH ROAD HALF WIDTH	3.65m	3.25m	3.50m
ENTRY WIDTH	4.50m	4.50m	4.50m
EFFECTIVE FLARE LENGTH	13.50m	12.50m	4.50m
ENTRY RADIUS	40.00m	42.00m	15.00m
INSCRIBED CIRCLE DIAMETER	30.00m	30.00m	30.00m
CONFLICT ANGLE	26.00°	23.00°	31.00°
DEFLECTION	81.29m	96.25m	92.79m

West Access

ARCADY ROUNDABOUT GEOMETRY:	(ARM 1) A272 NORTH-EAST	(ARM 2) DEVELOPMENT ACCESS	(ARM 3) A272 SOUTH WEST
APPROACH ROAD HALF WIDTH	3.10m	3.375m	3.10m
ENTRY WIDTH	6.00m	4.50m	6.00m
EFFECTIVE FLARE LENGTH	23.54m	18.07m	29.08m
ENTRY RADIUS	40.00m	42.00m	20.00m
INSCRIBED CIRCLE DIAMETER	36.00m	36.00m	36.00m
CONFLICT ANGLE	21.45°	21.20°	39.55°
DEFLECTION	69.25m	96.53m	98.92m

South Access

ARCADY ROUNDABOUT GEOMETRY:	(ARM 1) B2036 NORTH	(ARM 2) DEVELOPMENT ACCESS	(ARM 3) B2036 SOUTH
APPROACH ROAD HALF WIDTH	3.00m	3.25m	3.30m
ENTRY WIDTH	4.50m	4.50m	4.50m
EFFECTIVE FLARE LENGTH	10.00m	11.00m	14.50m
ENTRY RADIUS	40.00m	20.00m	15.00m
INSCRIBED CIRCLE DIAMETER	30.00m	30.00m	30.00m
CONFLICT ANGLE	30.00°	37.00°	29.00°
DEFLECTION	70.18m	67.00m	99.84m

3.4.8 DMRB CD116 Notes that: "*The entry path radius is a measure of the deflection to the left imposed on vehicles entering a roundabout.* ***It is the most important determinant of safety at roundabouts because it governs the speed of vehicles through the junction and whether drivers are likely to give way to circulating vehicles.***" [Our emphasis].

3.4.9 It is recommended therefore that additional analysis is undertaken, by the local authority obtaining the access junction designs in .dwg format, in order to accurately measure the proposed deflection for each arm. If the deflection is substandard it is likely that significantly larger inscribed circle diameters (ICDs) will be required [i.e. larger roundabouts].

SWEPT PATH ANALYSIS

3.4.10 It is noted that a 16.5m articulated Heavy Goods Vehicle (HGV) has been used for the tracking. Whilst this is typically deemed suitable for undertaking swept path analysis of highway layouts, recent legislation introduced in May 2023 has extended the maximum legal length of HGVs permitted on UK roads to 18.5m.

3.4.11 Whilst this is unlikely to have a material impact on junction design, additional swept path analysis of the proposed access roundabouts and sections of the internal street network may be beneficial to ensure that any pinch points on key routes are mitigated.

4 SUMMARY

4.1.1 This technical note has been produced by Velocity Transport Planning ('Velocity') on behalf of Ansty Village Parish Council (the 'client') to assess the Outline Planning Application (OPA) submitted by Fairfax Acquisitions Limited (the 'applicant') for the following proposed development:

"Outline planning application (All matters reserved except for access) for the redevelopment of land to the east of Ansty to create a new Garden Community, comprising of the erection of up to 1,450 homes (including 30% affordable housing), up to 90 residential care (C2 units), a primary school, new SEND school, sports facilities including all weather hockey pitches and tennis centre, allotments, retail, community and employment uses together with ancillary and associated development including new and enhanced pedestrian/cycle routes, open spaces, and landscaping"

4.1.2 At present, MSDC are not proposing to include the site in the emerging District Plan.

4.1.3 The findings of this technical note demonstrate that the site's accessibility assessment, undertaken by ACE, is fundamentally flawed, with a view of overexaggerating the ability for residents or visitors to travel to or from the site by active travel or public transport modes. Analysis undertaken by Velocity has demonstrated that the facilities, amenities and local settlements would be largely inaccessible for the majority of residents in the proposed development, given the distances involved and lack of supporting infrastructure.

4.1.4 Despite proposed improvements to public transport accessibility, there lacks sufficient confidence in the proposal that a re-diverted or entirely new bus route through the development site would be viable in the long-term (i.e. after a 5-year funding period).

4.1.5 High level technical analysis has been undertaken to ascertain whether the ACE Transport Assessment has demonstrated a robust methodology for calculating the anticipated traffic impact of the development. In our view the ACE report does not provide sufficient confidence in its strategic assumptions around trip rates and trip generation, and additional work is required to understand the likely impact of the development proposals, including an assessment of the non-residential trip generation, clearly identified auditable justification for internalisation rates, and use of 'demand flow' data, rather than supressed 'actual flow' data.

4.1.6 All junction impact sifting and modelling assessment should be repeated once the trip generation has been appropriately updated and audited, and any junction where a movement is increased by 30 vehicles in an hour should be assessed.

4.1.7 Given the strategic model appears to remove traffic from the network to provide 'actual flows' rather than 'demand flows' it is likely that the highway network is already operating largely at or beyond theoretical capacity without the ability to accommodate significant additional traffic without substantial highway capacity improvements. The provision of substantial highway capacity improvements would be fundamentally at odds with the principles of sustainable development. It is clear that if the district needs additional homes (which we understand it does not, by virtue of its five year land supply), these should be located close to amenities with good pedestrian, cycle and public transport connectivity, and not in a location which will always be fundamentally reliant on private vehicular transport by virtue of its remoteness.

4.1.8 At a local level, a review of site specific and network junction modelling has not uncovered any significant flaws in the assessment of geometry. However, further analysis is recommended in relation to the ARCADY modelling assumptions used on network junctions selected for detailed modelling. This relates specifically to *'Junction C',* within ACE's network junction modelling assessment, against which a non-standard approach has been undertaken for determining junction capacity in future year scenarios. Further to this, it is recommended that an in-depth review of baseline model calibration is undertaken, on the basis that flows across these junctions are not based on recorded data from the point of assessment.

4.1.9 A high-level review of access junction design has been undertaken, to ensure that relevant design standards and principles have been applied correctly. This review found that the deflection radii appear to be substandard for the proposed access roundabouts, and as this is "***the most important determinant of safety at roundabouts because it governs the speed of vehicles through the junction and whether drivers are likely to give way to circulating vehicles"*** [Ref DMRB CD116 Note to para 3.21], the highway authority should undertake detailed checks of the defection geometry, which may necessitate significantly larger roundabouts. Further consideration should be given to the use of swept path analysis to test vehicle manoeuvrability for 18m articulated vehicles.

4.1.10 It may be necessary to introduce signal controlled junctions with signal timings set to control the flow of traffic out of the development to a level which would not have any severe external impacts on the access junctions or the wider network.

4.1.11 The initial findings of the assessment undertaken by Velocity and summarised within this technical note demonstrate that the residential development proposals put forward by the applicant are not sustainable in transport terms, and would be much more heavily reliant on vehicular use than appears to be set out in the Transport Assessment. The location is inherently disconnected from many essential destinations apart from by private vehicular transport.

4.1.12 The transport assessment appears to underplay the likely severity of the impacts of the additional vehicle borne traffic, and it is not possible to ascertain what those impacts would be until the assessment is revised. Irrespective of this housing development could be better and more sustainably located in other areas of the district, and as there is no shortfall of proposed housing within the district, there is no justification for permitting large scale development in an inherently unsustainable location.

4.1.13 Based on this, it is Velocity's view that the proposed development transport assessment leaves substantial concerns that severe transport impacts could arise and the OPA should therefore be refused on transportation and highways grounds.

APPENDIX A

ROUTE 89 BUS TIMETABLE

APPENDIX B

"PROPOSED DEVELOPMENT TRAFFIC EFFECT" DIAGRAMS