Proposed Residential Development,

Land West of Thaxted Road, Saffron Walden

Transport Assessment prepared on behalf of Kier Ventures Ltd

November 2022

MILESTONE TRANSPORT PLANNING

Proposed Residential Development, Land West of Thaxted Road, Saffron Walden

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1. Introduction & Scope of Assessment

Introduction

1.1 This Transport Assessment (TA) has been prepared on behalf of Kier Ventures Limited to consider the highways and transport matters associated with an outline planning application for the development of land to the west of Thaxted Road, Saffron Walden (the "Site") for up to 170 residential dwelling units, associated landscaping and open space, with access from the B184 Thaxted Road.

1.2 The outline planning application seeks only the principle of the proposed residential land use and the means of access to be determined. Matters such as appearance, landscaping, layout and scale are reserved for future determination however, to inform, the planning application, illustrative material in respect of these is provided for context.

1.3 The Site falls within the administrative boundary of Uttlesford District Council (UDC) as Planning Authority and Essex County Council (ECC) as Highway Authority.

1.4 Work has begun on a new UDC Local Plan. In September 2022, UDC announced a pause on the published local plan timetable and it is now anticipated that the consultation draft Local Plan will be published in Summer 2023 with the proposed Local Plan being submitted for examination in Autumn 2024 and an anticipated adoption of the plan in Autumn 2025.

1.5 The Site is well placed to deliver future housing growth in the area, having scored well in the RAG analysis conducted by UDC in a Call for Sites technical assessment (ref: SafWalden 006 RES), particularly under the theme 'Accessibility'.

1.6 The Site scored 'green' or 'amber' in terms of walk distance / time to access to the bus network, local centres, schools and employment centres by active travel modes, i.e., walking and cycling, and only scored 'red' for access to the nearest railway station (Audley End) by foot or public transport (this being a common theme for the majority of, if not all, potential residential sites in the Saffron Walden area).

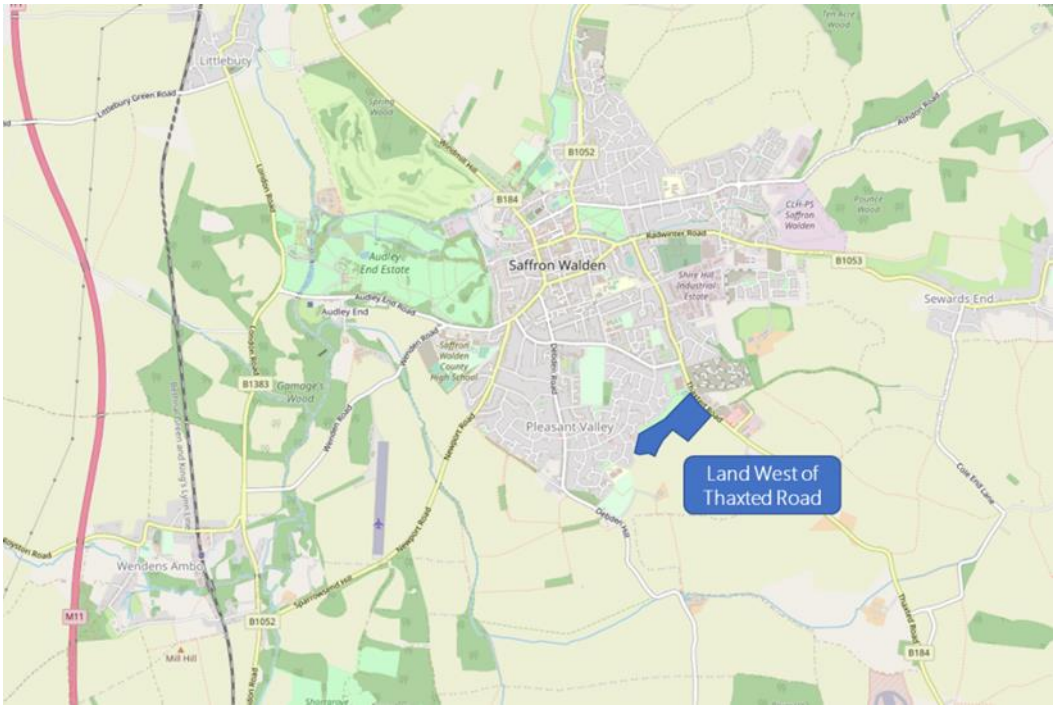
1.7 The TA will demonstrate:

- The hierarchical approach to development on land to the west of Thaxted Road where priority is given to active travel modes, i.e., walking and cycling as well as sustainable transport, i.e., local bus services over vehicle-borne trips.
- The Site can be integrated into the existing settlement through the delivery of permeable and accessible active travel corridors with direct links to key local retail, education and employment opportunities as well as public transport services.
- A commitment from the applicant towards the delivery of enhanced access to Audley End station as a key transport interchange, supporting increased frequency of bus services to / from the station and the town centre, thereby offering a credible alternative and encouraging a mode shift away from reliance on the use of a car.
- The residual, cumulative impact of vehicle borne trips generated by the emerging development on the surrounding highway network, particularly the constrained town centre network, will not be severe.

Site Location

1.8 The Site is c. 8.35 ha of land, currently in agricultural use but outside the green belt and is located to the south of Saffron Walden town centre. The Site is bounded by existing, established residential development to the north and west, a mature hedgerow / ditch boundary to further agricultural fields to the south, the B184 Thaxted Road and Knight Park retail park to the east. The contextual location of the Site in relation to the local area is shown in Figure 1.

Figure 1 Site Location



TA Structure

1.9 Given the scale of development, the suite of documentation to accompany the outline planning application that will assess the implications of development-related travel on the operational and safety characteristics of the surrounding highway and transport networks includes this Transport Assessment (TA) and a Framework Travel Plan (FTP) that is submitted alongside the TA.

1.10 The TA will consider the appropriateness of the type of development proposed in this location in the context of transport-related policy both at National and Local level with the emphasis on ensuring that the site is accessible by all modes of travel.

1.11 The TA will demonstrate that in terms of Planning Policy at both National and Local level and through robust interventions including the implementation of a Travel Plan and, where required, appropriately scaled mitigation measures, the Site and the surrounding highway and transport networks are capable of accommodating the proposed level of development.

1.12 In the lead up to the submission of this planning application, Kier Ventures Ltd and Milestone Transport Planning Ltd ("MTP") have continually engaged in pre-application discussions through regular virtual meetings with ECC's Strategic Development Engineers. In May 2022, a pre-application Technical Note was issued to ECC and a formal response was issued by ECC's Strategic Development team in July 2022. A copy of the ECC Strategic Development pre-application response is included as Appendix 1 to the TA.

1.13 Based upon the formal pre-application response and the ongoing dialogue with ECC's Strategic Development team, and in the context of the DCLG's Planning Practice Guidance on 'Travel Plans, Transport Assessments and Statements in Decision Making' (2014), the scope of the TA is, as follows:

- Section 2 consider the application proposals in the context of relevant transport policy at both National and Local Level including the NPPF (2021), the NPPG (2014), ECC Development Management Policies (2011), the Essex Transport Strategy (2011), the Essex Design Guide (2018), the current UDC Adopted Local Plan (2005), the Saffron Walden Neighbourhood Plan (2022), the UDC Cycling Action Plan (2018) and the Saffron Walden Bus Survey Report (2018).
- Section 3 provides a review of baseline conditions in respect to the proximity of local amenities, active travel (walking and cycling) infrastructure, public transport infrastructure, as well as the operational and safety characteristics of the surrounding highway network.
- Section 4 examines the proposed movement and access strategy for all modes that underpins the development of the indicative masterplan that is based on hierarchical principles where priority is given to pedestrians, cyclists and public transport over vehicular access, deliveries and refuse collection.
- Section 5 outlines peak period and daily trip generational characteristics by all modes of travel and its, distribution & assignment onto the wider highway and transport networks.
- Section 6 provides further detail on modelling input data including the extent of the study area, background data sources, baseline and future assessment years and the growth factors applied as well as details of committed development assumptions.
- Section 7 assesses the impact of the development-related traffic on the operational characteristics of highway links and junctions within the study area against a background of future baseline and future baseline plus development scenarios.
- Section 8 summarises the all-mode gap analysis and mitigation identified to overcome any residual impacts of the proposed development on the external active travel and passenger transport infrastructure as well as the local highway network.
- Section 9 summarises and concludes the findings within the TA.

2. Planning & Transport Policy Context

National Planning Practice Guidance (2014)

2.1 The National Planning Practice Guidance (NPPG) sets out current guidance for different aspects to development. For the purposes of this document, the guidance within the NPPG 'Travel Plans, Transport Assessments and Statements' is the most pertinent.

2.2 The NPPG sets out the following with regards to Transport Assessments:

> *"Transport Assessments and Transport Statements primarily focus on evaluating the potential transport impacts of a development proposal… The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts… Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe" …"*

2.3 It is noted within the NPPG that Transport Assessments can positively contribute towards:

- Encouraging sustainable travel.
- Lessening traffic generation and its detrimental impacts.
- Reducing carbon emissions and climate impacts.
- Creating accessible, connected, inclusive communities.
- Improving health outcomes and quality of life.
- Improving road safety.
- Reducing the need for new development to increase existing road capacity or provide new roads.

National Planning Policy Framework (2021)

2.4 Promoting sustainable transport is a key thread of the NPPF and para. 104 highlights the importance of considering transport issues from the earliest stages of development proposals to ensure that:

- The potential impacts of development on transport networks can be addressed.
- Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
- Opportunities to promote walking, cycling and public transport use are identified and pursued;
- The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains;
- Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

2.5 Para. 105 goes on to state that: *"The planning system should actively manage patterns of growth…Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes…"*

2.6 Para. 106 recommends that: *"Planning policies should support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities"*.

2.7 It goes on to state that sites and routes that could be critical to develop infrastructure to widen transport choice and realise opportunities for large scale development should be identified and protected. The provision for attractive and well-designed walking and cycling networks along with supporting facilities such as secure cycle parking should also be a key component of planning policy.

2.8 Para. 110 requires that when assessing specific allocations for development it is important to ensure that:

- Appropriate opportunities to promote sustainable transport modes have been taken up.
- Safe and suitable access to the site can be achieved for all users.
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

2.9 Para. 111 continues to state that *"…developments should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"*.

2.10 Para. 112 requires that applications for development should:

- First, give priority to pedestrian and cycle movements, both within the scheme and with neighbouring areas.
- Second, so far as is possible, facilitate access to high quality public transport, maximising catchment areas to services and implementing appropriate facilities to encourage use.
- Address the needs of people with disabilities and reduced mobility.
- Create places that are safe, secure and attractive which minimise conflicts between pedestrians, cyclists and vehicles.
- Allow for the efficient delivery of goods and access by service and emergency vehicles.
- Be designed to enable charging of plug-in and other ultra-low emission vehicles.

2.11 Para. 113 requires that: *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."*

Essex County Council Supplementary Guidance – Development Management Policies (2011)

2.12 Essex County Council (ECC) have Transport Development Control Policies that set a framework for protecting the transport network for the safe movement of people and goods in the context of new development proposals. Under Policy DM1, the key aims of the Transport Development Control Policies are to:

- Minimise the number of access points on roads designated within the Development Management Route Hierarchy;
- Ensure that new accesses are designed and constructed in accordance with current standards having regard to the capacity, safety and geometry of the highway network;
- Safeguard safe and convenient access for sustainable transport modes commensurate to its location;
- Ensure that proposals will not create a significant potential risk or be detrimental to the safety of the highway network.

2.13 In respect of roads within new residential estates, Policy DM6 requires that, where required, streets are designed to allow access by passenger transport vehicles, emergency vehicles and refuse vehicles. This requires that streets carrying passenger transport vehicles must have a minimum carriageway width of 6.75 metres.

2.14 Policy DM6 also requires that the design of residential streets should have particular emphasis on ensuring a high quality built environment and public realm and give cognisance to the current standards set out in the Essex Design Guide, Urban Place Supplement, and relevant national guidance including Manual for Streets.

2.15 Where an estate road joins a higher classification of road the junction must be designed and constructed in compliance with the standards contained in the Design Manual for Roads and Bridges (DMRB).

2.16 In respect of vehicle parking standards, Policy DM8 requires that all development proposals comply with ECC's *"Parking Standards: Design & Good Practice"* document.

2.17 Policy DM9 is entitled *"Accessibility and Transport Sustainability"* within which ECC require that development should minimise the number of trips by the private vehicle through the provision of alternative transport modes and/or associated infrastructure.

2.18 In this regard, Policy DM9 requires that alternatives to private car use are considered as a first principle in assessing travel impacts on the transportation network and mitigation will be required through the application of comprehensive travel planning options, where impact is identified.

2.19 Policy DM9 continues to state that all development proposals need to be assessed and determined against a series of strategies developed by ECC in respect of passenger transport, cycling, walking and rail as well as their Schools & Colleges Sustainable Modes of Travel Strategy and Essex Workplace Sustainable Business Strategy. Where any impact is identified against any of these strategies, mitigation is required.

2.20 Policy DM10 *"Travel Plans"* requires the provision of a Residential Travel Information Pack for all new residential dwellings.

2.21 In the context of Public Rights of Way, Policy DM11 states that ECC will ensure, wherever possible that the existing network is safeguarded and that development proposals should be laid out to accommodate it. The creation of new and / or enhanced Definitive Public Rights of Way are encouraged to promote alternative modes of travel and that such new and / or enhanced provision should be convenient and suitable in all respects to all users as well as being constructed in accordance with current standards.

2.22 Thresholds for the assessment of impacts arising from an emerging development proposal in the form of a Transport Statement (TS) or Transport Assessment (TA) are set out in Policy DM13. Policy DM14 goes on to require that a Stage 1 Safety Audit report, including designer's response, must be undertaken and submitted with a planning application where it is proposed to materially alter the existing highway.

2.23 Under Policy DM15 *"Congestion"*, ECC seek to protect the safety and efficiency of the public highway by requiring development to

- *"…demonstrate that the development proposal has no detrimental impact upon the existing or proposed highway in congestion terms, as measured by assessing existing and proposed link/junction capacity relevant to the development site; or*
- *provide appropriate mitigation measures to ensure that there is no detrimental impact to the existing highway."*

2.24 Any identified mitigation will either by secured by way of physical works delivered by the proposed development or by financial contribution either specific to the development itself or pooled with other development to deliver area-wide measures, as set out under Policy DM17. Any requirement for future maintenance liability associated with new highway infrastructure will be secured under Policy DM18.

2.25 Under Policy DM20 *"Construction Management"* ECC will protect the safety and efficiency of the highway network by ensuring that:

- *"any temporary construction access and/or haul road will be agreed with the Highway Authority prior to commencement of development;*
- *a Construction Traffic Management Plan is submitted and agreed with the Highway Authority prior to commencement of development;*
- *details of parking and turning facilities for all construction traffic within the development site are submitted and agreed with the Highway Authority prior to commencement of development;*
- *details of wheel cleaning facilities within the development site are submitted and agreed with the Highway Authority prior to commencement of development."*

Essex Transport Strategy (LTP3, 2011)

2.26 The Essex Transport Strategy is the County's mechanism for delivering transport investment and priorities that:

- *"Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration*

- *Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology*
- *Improve safety on the transport network and enhance and promote a safe travelling environment*
- *Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use*
- *Provide sustainable access and travel choice for Essex residents to help create sustainable communities."*

2.27 Transport priorities for the West Essex that are set out in LTP3 and are pertinent to this planning application include:

- Improving access to and from the M11 corridor.
- Providing the transport improvements needed to support housing and employment growth.
- Improving the attractiveness of bus services.
- Improving cycling networks and walking routes and encouraging their greater use;
- Improving the attractiveness of public spaces and their ease of use;
- Improving access to Stansted Airport by low carbon forms of transport.

2.28 Policy 2 of LTP3, entitled *"Integrated Planning"* states that *"Transport and land-use planning will be used together to secure new development at the most appropriate and sustainable locations by:*

- *"working closely with district planning authorities to enable a better balance of new homes, jobs and services;*
- *locating new developments in areas which are accessible to key services by sustainable forms of transport;*
- *ensuring new developments provide for sustainable transport and effective travel planning;*
- *requiring new developments to provide appropriate transport infrastructure in line with the Council's current development management policies; and*
- *making the most effective use of all available funding sources by co-ordinating the delivery of ECC and development funded works."*

2.29 The County will support and encourage the use of lower carbon travel by promoting the use of more sustainable forms of travel and ensuring new developments minimise the number and length of trips made by private vehicles under Policy 7 of LTP3.

2.30 To promote sustainable travel choices, Policy 8 of LTP 3 requires effective travel planning to be provided with any emerging development.

2.31 Under Policy 10 of LTP3, the County will work to reduce the incidence and severity of road traffic collisions on roads in Essex by ensuring Safety Audits are undertaken of all proposed designs of new highway schemes or proposals to materially alter the existing public highway.

Essex Design Guide (2018)

2.32 The Essex Design Guide (EDG) provides detailed guidance in regard to emerging development form, integrated within which are references to street layout and design, accommodating transport movement and access.

2.33 Section 3 of the EDG requires permeable layouts that connect well with the existing walking and cycle networks within and outside of the development through the creation of direct routes. Covered and secured cycle storage should be located in prominent and accessible locations as part of the design of new dwellings. Section 3 of the EDG goes on to state that:

> *"A well-connected urban environment consists of shared, multi-functional spaces which have convenient and integrated routes for pedestrians, cyclists, cars and public transport and which are therefore more able to support a range of viable travel options…new developments should be planned so as to reduce demand for road space and provide the community with sustainable and realistic alternative transport options."*

2.34 Within Section 3 of the EDG, reference is made to the requirements for electric vehicle charging points within new development. Section 4 of the EDG further explores the requirements for parking within new development and sits alongside the EPOA Essex Parking Standards. The EDG requires that parking is integrated but should not over dominate the public realm.

2.35 In respect of cycle storage, the EDG states that covered and secured cycle storage should be located in prominent and accessible locations. In respect of vehicle parking, on-street provision should not restrict access to footpaths and cycleways. The EDG requires all forms of parking to be connected to and enabled for smart infrastructure, futureproofed to allow for adaptation at a future date.

2.36 At densities of less than 50 dwellings per hectare, such as that proposed, parking for residents should be a mix of on-plot, on-street or in small rear parking courts. Dedicated parking spaces for bicycles are to be provided either within an on-plot garage or in safe and secure communal parking spaces. Rear parking courts can have allocated or non-allocated spaces; if less than 100% parking is provided, spaces should be non-allocated. Parking areas should have no more than 5 spaces in a group, appropriately sub-divided by landscaping features.

2.37 The EDG requires that all residential developments include unallocated visitor parking in accordance with the Essex Parking Standards, evenly distributed across the site to ensure that inappropriate parking does not occur within the development, hindering walking, cycling and access to the development by vehicles and emergency vehicles.

2.38 Section 5 of the EDG focuses on street and road design, giving consideration to permeable layouts that link well to the existing transport, walking and cycle networks both inside and outside of the development, emphasising the Healthy Streets 'whole-street' approach.

2.39 The EDG requires future technology infrastructure, including electric vehicle charging infrastructure, to be planned in and integrated successfully into new streets and spaces. Likewise, a balanced approach to surface materials needs to be made, meeting the needs of users whilst addressing the technical requirements of highways and placing a greater place-making emphasis in sensitive locations.

2.40 Section 6 of the EDG sets out the Highways Technical Manual, the overarching aim of which is to ensure that in new residential development the movement strategy is pleasant, convenient, safe, responds to local context and combines with good placemaking.

2.41 Section 6 of the EDG states that *"motorised vehicle movement must efficiently service development without predominating, while walking, cycling and the use of public transport must be facilitated and encouraged, taking precedence over private modes of motorised transport."* In doing so, the key objectives of the Highways Technical Manual are to:

- Discourage inappropriate traffic from travelling through residential areas.
- Promote very low driver speeds within residential environments.
- Discourage the use of the private car, particularly for short or local trips.

Uttlesford District Council Adopted Local Plan (2005)

2.42 From a Transport and Access perspective, the key objectives of the Uttlesford Local Plan (2005) are to:

- Locate high trip generating activity in areas well served by public transport;
- Increase the proportion of journeys made by rail and bus, on foot and by cycle.
- Reduce the number and length of motor vehicle trips by the location of development.
- Minimise the adverse effects of traffic on residential and shopping areas by traffic management measures.

2.43 This is captured in Policy GEN1 (Access) which states that development will only be permitted if it meets all of the following criteria:

- *"a) Access to the main road network must be capable of carrying the traffic generated by the development safely.*
- *b) The traffic generated by the development must be capable of being accommodated on the surrounding transport network.*
- *c) The design of the site must not compromise road safety and must take account of the needs of cyclists, pedestrians, public transport users, horse riders and people whose mobility is impaired.*
- *d) It must be designed to meet the needs of people with disabilities if it is development to which the general public expect to have access.*
- *e) The development encourages movement by means other than driving a car."*

Saffron Walden Neighbourhood Plan 2021-2036

2.44 The Saffron Walden Neighbourhood Plan (SWNP) was adopted in October 2022. From a series of public consultation the vision of the SWNP, from a movement and access perspective, is that Saffron Walden *"…will be a settlement of the highest environmental sustainability due to provision for pedestrians and cyclists, continued reduction in carbon emissions…Movement within the town will be safe and easy and journeys by car will be minimised."*

2.45 Policy SW4 of the SWNP requires that all new developments must provide for parking spaces for residents and visitors as per the Essex Works publication Parking Standards Design and Good Practice September 2009 or later equivalent. In addition, Policy SW4 requires that the layout of vehicle and cycle parking spaces in all new developments must cross-refer to the Essex Design Guide (2018) as well as UDC's local parking standard for 4+ bedroomed dwellings. In addition, all dwellings need to make provision for electric vehicle charging points. The SWNP requires cycle parking to be secure and covered to encourage people to use bicycles regularly.

2.46 In respect of the promotion of walking and cycling, Policy SW12 of the SWNP states that: *"development proposals which retain, enhance or incorporate safe, attractive and direct walking and cycling routes on site as appropriate and which appropriately mitigate the impact of additional transport movements in the parish created through the development scheme will be supported."*

2.47 In support of this objective, Policy SW12 requires due regard to be given to the Uttlesford Cycling Action Plan and other SWNP infrastructure schemes. It goes on to state that:

- New footpaths, footways and cycleways are to be designed and built to a standard that they can be adopted by Essex County Council Highway Authority;
- New developments are to be permeable in order to encourage and enable pedestrians and cyclists to walk or cycle by the shortest route
- Developer contributions to any off-site highways schemes or improvements must prioritise pedestrian and cycle movement first, then facilitate access to high quality public transport as far as possible including catchment areas and facilities to encourage such use and private vehicles last.

2.48 In respect of Travel Planning, Policy SW13 of the SWNP states that where developments will or are likely to generate significant amounts of movement, the Travel Plan must include provision, where appropriate, for the funding and delivery of necessary, sustainable travel initiatives and must have measurable objectives.

2.49 Under Policy SW14, the SWNP addresses improvements to public transport provision stating that:

> *"Where appropriate, developers will be expected to take every available opportunity to promote the use of public transport including identifying and protecting routes and delivering services and infrastructure to widen transport choice and accessibility to key destinations from the location of the site."*

2.50 Whilst more related to further development beyond the eastern limit of Saffron Walden, Policy SW15 entitled *"Vehicular Transport"* does highlight pertinent policy objectives that can be applied to the emerging development proposals. It states that additional traffic movements through the town will only be supported if it can be demonstrated that they will not increase congestion and that they will not impact on or appropriately mitigate the designated AQMA. Policy SW15 goes on to state that the provision of charging points for electric vehicles will be supported across all development types.

Uttlesford District Cycling Action Plan (2018)

2.51 The Uttlesford District Cycling Action Plan (CAP) was prepared as part of a County-Wide commitment, the key aims of which are to:

- Identify how cycling levels can be increased in the District.
- Prioritise funding for new cycling schemes in Uttlesford.
- Create a usable, high-quality cycle network that connects residential areas with key employment locations, railway stations and town centres; and
- Create opportunities to increase recreational cycling in Uttlesford.

2.52 From a review of the existing infrastructure and the potential opportunities to increase the proportion of trips made by cycle, the CAP makes a number of recommendations for route and infrastructure enhancements within Saffron Walden. This includes the implementation of advisory cycle lanes along Borough Lane/ Mount Pleasant Road and Peaslands Road as well as Cromwell Road/ Winstanley Road.

2.53 The key recommendations of the CAP, pertinent to the scheme proposals, are to create an environment where cycling is normal for future residents, where existing barriers to cycling are removed and a series of cycle routes provided to create a connected cycle network over time. Cycling infrastructure should provide for both key utility journeys and encourage leisure cycling.

Saffron Walden Bus Survey Report (2018)

2.54 The Saffron Walden Bus Survey Report was prepared to inform the preparation of the SWNP. Key recommendations from the report, pertinent to the emerging development on the Site, include:

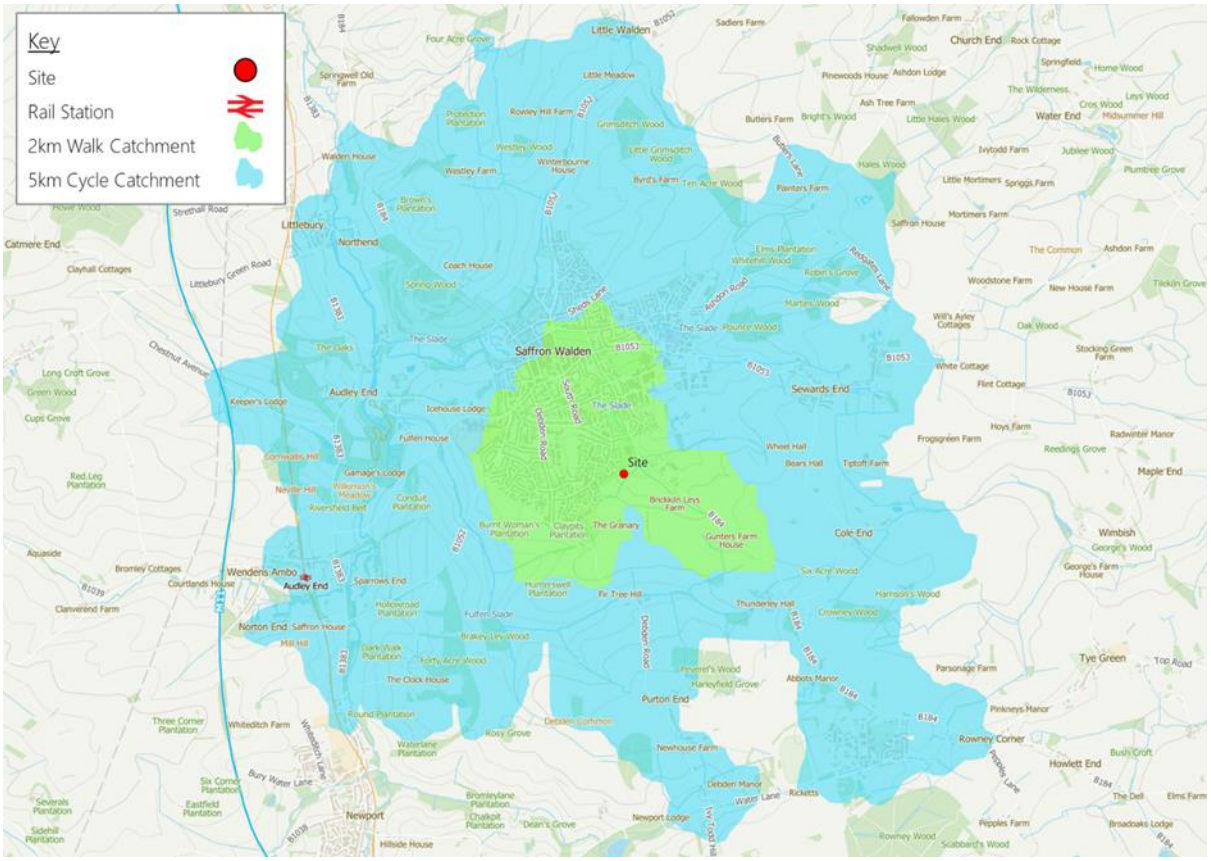
- Clock-face timetabling of buses between Saffron Walden and Audley End station
- Better bus stop facilities with increased seating and real-time passenger information displays
- Introduction of Sunday services.

3. Baseline Conditions

Walking & Cycling Infrastructure

3.1 Figure 2 illustrates the potential 2km walk catchment and 5km cycle catchment of the Site illustrating that the majority of Saffron Walden, including the town centre is accessible by active travel modes and that Audley End railway station is within cycling distance.

Figure 2 Walk & Cycle Catchment

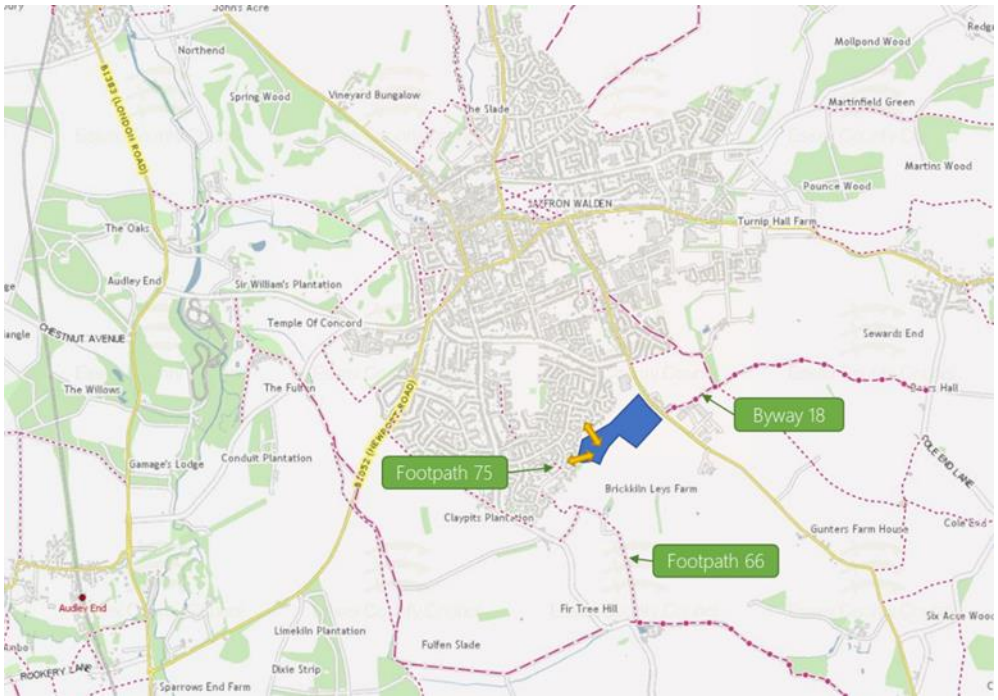


3.2 The Site benefits from its proximity to a number of off-carriageway paths that directly connect to the neighbouring area including publicly maintainable paths to the north and west that connect the Site boundary to Peal Road and The Glebe. In addition, there are a number of public rights of way (PROW) in the immediate vicinity of the Site that are illustrated in Figure 3 and include:

- PROW 18 (Byway) Thaxted Road – Bears Hall
- PROW 66 (Footpath) Clay Pit Piece – Debden Road
- PROW 75 (Footpath) Ross Close – Long Horse Croft

3.3 There is no footway provision currently along the boundary of the Site to the B184 Thaxted Road however on the opposite side of the carriageway there is a shared footway / cycleway. There are footways on both sides of the B184 Thaxted Road north of its junction with Peaslands Road up towards Radwinter Road and the town centre.

Figure 3 PROW Network & Path Connections



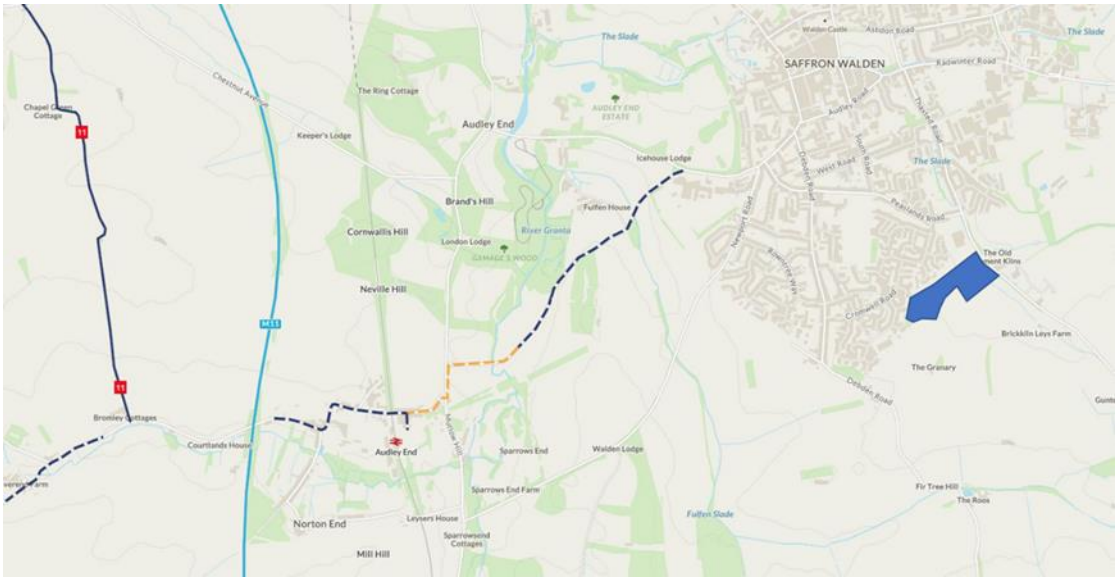
3.4 The majority of other residential streets in the local neighbourhood and northwards towards the town centre have footways on both sides of the carriageway. In general, crossing facilities are uncontrolled however controlled crossings are provided in locations where there is significant demand and in areas where there is an interaction with higher traffic demand.

3.5 To the north of the site is an area of public open space that is owned and maintained by UBC and is regularly used by residents of the adjoining residential estate to the north for recreational purposes. Figure 4 shows that, presently, there are three key connections between the public open space and the existing adopted highway maintainable at the public expense at Tukes Way, The Glebe and Peal Road.

Figure 4 Connections to Public Open Space & Neighbouring Residential Estate

3.6 Dedicated cycle facilities are limited within the immediate area surrounding the Site. In general, traffic speeds on local roads are low enough to accommodate safe cycle movement alongside general traffic within the carriageway. As can be seen in Figure 5, Wenden Road to the west is a signed / recommended on-carriageway cycle route that extends towards Audley End railway station and onwards to connect to the National Cycle Route 11.

Figure 5 Local Cycle Connections



3.7 Table 3.1 provides a summary of the distances to key local amenities surrounding the Site along with associated walk and cycle times.

Table 3.1 Proximity of Local Amenities

Land Use	Destination	Postcode	Distance (kms)	Walk Time (mins)	Cycle Time (mins)
Education	St Thomas More Catholic Primary	CB11 3DW	0.8	10	3
	R A Butler Infant / Junior	CB11 3DG	1.1	12	4
	Saffron Walden Nursery	CB11 3AQ	1.4	17	6
	Saffron Walden County High	CB11 4UH	1.8	23	7
	Dame Bradbury's	CB10 2AL	1.9	26	7
	Katherine Semar Infant / Junior	CB11 4DU	2.1	-	11
	Joyce Frankland Academy	CB11 3TR	5.3	-	18
Employment	Shire Hill	CB11 3AU	1.2	15	5
	Saffron Walden Town Centre	CB10 1HR	1.6	19	7
	Ashdon Road Commercial Centre	CB10 2NQ	2.6	-	10
	Audley End Business Centre	CB11 4JL	4.2	-	15
Retail	Knight Park (Aldi, Costa, Pets at Home, B&M, Pure Gym, Premier Inn, Howdens)	CB10 2SG	0.4	6	2
	Cromwell Road Local Shops	CB11 4BE	0.4	6	2
	Tesco Express, Pleasant Valley	CB11 4AW	0.8	10	3
	Waitrose, Saffron Walden Town Centre	CB10 1EH	1.5	18	6
	Tesco, Radwinter Road	CB10 2JP	1.5	18	6
	Saffron Walden Post Office	CB10 1AR	1.7	21	7
Civic	Golden Acre Community Centre	CB11 4BL	0.6	8	2
	Saffron Walden Household Recycling Centre	CB10 2UP	0.6	8	2
	Uttlesford District Council Offices	CB11 4ER	1.5	19	6
Health	The Walden Dental Clinic	CB11 4ED	1.3	16	5
	New Road Dental Practice	CB10 1LR	1.4	17	5
	Boots Pharmacy	CB10 1HR	1.6	19	7
	The Gold Street Surgery	CB10 1EJ	1.7	20	7
	Crocus Medical Practice / Saffron Walden Community Hospital	CB11 3HY	2.2	-	7

Table 3.1 Proximity of Local Amenities (Cont.)

Land Use	Destination	Postcode	Distance (kms)	Walk Time (mins)	Cycle Time (mins)
Recreation	One Minet Skatepark	CB11 3ED	0.1	1	1
	Lord Butler Fitness & Leisure Centre	CB11 3EG	0.2	2	1
	Saffron Walden Community FC	CB11 3JS	1.3	16	5
	Saffron Walden Common	CB10 1FH	1.5	17	5
	Saffron Walden Tourist Information Centre	CB10 1HR	1.5	19	7
	Saffron Walden Library	CB10 1ES	1.6	19	7
	St Mary's Church	CB10 1JP	1.9	23	8
	Saffron Walden Museum	CB10 1JL	2.2	-	8
	Audley End Park	CB11 4JB	2.3	28	8

3.8 Para 4.4.1 of Manual for Streets (MfS) (2007) defines a walkable neighbourhood as a range of facilities within a 10-minute walk distance which, at a typical walking speed of 1.4 metres per second, is a walk distance of circa 840 metres.

3.9 From Table 3.1, it is evident that there are a number of day to day facilities within the walkable neighbourhood of the Site including a local primary school, shops and community centre to the north, the Knight Park retail park and recycling centre to the south-east as well as the skatepark and leisure centre to the north-east.

3.10 The Institute of Highways and Transportation (IHT) *'Providing for Journeys on Foot'* document (2000) references 1.0km as an acceptable walking distance for all journeys with a maximum of 2.0km for commuting and education purposes. From Table 3.1 it is evident that there are a wide range of schools for all age ranges and the town centre that fall within this threshold walk distance from the Site.

3.11 In respect of cycling, the Local Transport Note LTN 1/20 'Cycle Infrastructure Design' (2020) considers a journey distance of five miles (or 8.0 kilometres) as an achievable distance to cycle for most people. Evidently, from Table 3.1 all of the local education, employment, retail, civic health and recreation facilities fall within this journey distance by cycle. Audley End railway station is also well within this journey distance threshold.

Public Transport Infrastructure

Bus Services

3.12 The nearest bus stops to the Site are as located at Winstanley Road (Tukes Way) to the north of the site within a 200m walk distance (3-minute walk time).

3.13 The Winstanley Road (Tukes Way) bus stops are served by the Saffron Walden Town Centre service (Route 34) operated by Stephensons of Essex and the Stanstead Airport to Saffron Walden service (Route 316) operated by Central Connect.

3.14 Route 34 operates on Tuesdays and Thursdays only with five return journeys per day. Route 316 operates between Monday and Saturday and provides an hourly service in both directions throughout the day and evening. Journey times from the Winstanley Road (Tukes Way) bus stops to key destinations are as follows:

- Saffron Walden (High Street) - 7 mins.
- Saffron Walden (Tesco) - 16 mins.
- Debden - 7 mins.
- Thaxted - 18 mins.
- Stanstead Airport (Coach Station) - 39 mins.

3.15 In addition to the above, bus routes 59 & 590 provide weekday peak period commuter services between Saffron Walden and Audley End railway station alongside route 301 which provides an hourly service throughout the day, Monday to Saturday between Saffron Walden and Bishops Stortford via Audley End railway station. Route 321 provides three return journeys per day, Monday to Saturday, between Audley End railway station and Haverhill via Saffron Walden.

3.16 All of these additional services are routed via Audley Road and London Road to the north-west of the Site. The nearest stops to the Site are at the Council Offices, a walk distance of 1.5kms (19 minute walk time).

3.17 ECC also operate a demand-responsive bus service, known as Essex DaRT, around the rural villages surrounding Saffron Walden. The DaRT 1 Service serves the villages to the west of Saffron Walden down towards Bishops Stortford. The DaRT 2 Service serves villages to the south-east of Saffron Walden towards Braintree.

3.18 Essex DaRT operates between 06:00 and 20:00hrs, Mondays to Saturdays, and is a flexible service that is pre-bookable enabling the bus to divert on and off its route to collect and drop off passengers within their operating area. When not operating a timetabled bus route or group booking, the DaRT bus is available for individual runs where no alternative transport is available.

Rail Services

3.19 Audley End railway station is located 4.4kms to the west of the Site, a cycle journey time of 16 minutes. Audley End railway station is managed by Greater Anglia and located on the West Anglia Main Line. The ticket office at the station is manned during daytime hours throughout the week.

3.20 The station has 86 cycle storage spaces and 664 car parking spaces. Audley End is served predominately by trains operated by Greater Anglia although a few CrossCountry services still remain. Off peak frequencies are:

- Greater Anglia
  - 2 tph to London Liverpool Street (1 stopping, 1 semi-fast)
  - 2 tph to Cambridge North (1 stopping, 1 semi-fast)
  - 1 tph to Stansted Airport
  - 1 tph to Norwich via Cambridge

  tph = trains per hour

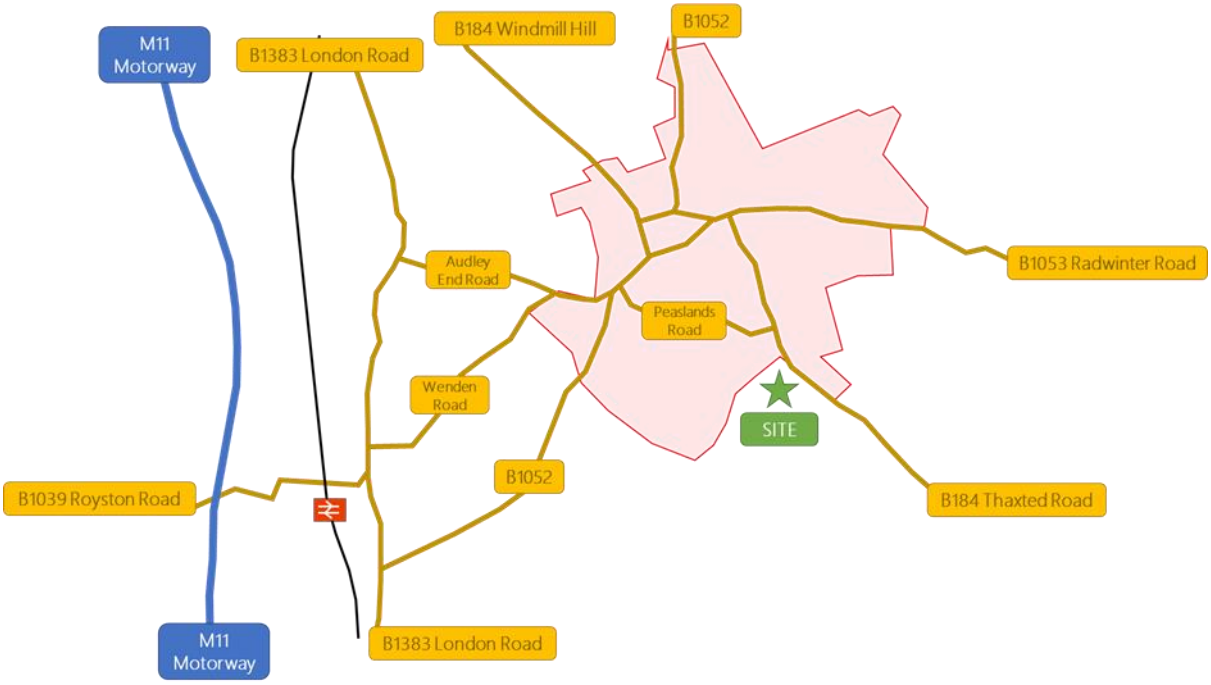
- CrossCountry
  - 3tpd to Cambridge (fast) then Birmingham New Street
  - 3tpd to Stansted Airport

  tpd = trains per day

Surrounding Highway Network

3.21 Figure 6 shows the key highway network in the vicinity of the Site.

Figure 6 Surrounding Highway Network



B184 Thaxted Road

3.22 The Site is provided with an existing field gate access on its eastern boundary to the B184 Thaxted Road which runs north-south from M11 J9a at Hinxton, through Saffron Walden town centre and Thaxted to the B1256 at Great Dunmow (with connections to the A120).

3.23 The B184 Thaxted Road is a County Priority 1 (PR1) road. It is a single carriageway two-way road that is subject to a 40mph speed limit and is lit as it passes the Site. To the north the speed limit changes to 30mph just south of the Peaslands Road mini-roundabout and onwards through Saffron Walden town centre. To the south of the Knight Park retail park, the speed limit reverts to national speed limit (60mph) and the B184 Thaxted Road is more rural in terms of its characteristics.

3.24 In conjunction with the recently consented development to the east of Thaxted Road (LPA Ref. 19/2355) a traffic signal junction with pedestrian / cycle crossing facilities has been constructed immediately north-east of the Site on the B184 Thaxted Road to form a new spine road through the site that will ultimately link through to the B1053 Radwinter Road.

3.25 Side road junction to Tiptofts Lane and the Knight Park retail park are give-way controlled priority junctions with ghosted right turn lane provision on the main carriageway.

3.26 To the north of the Site, the B184 Thaxted Road / Peaslands Road mini roundabout is to be converted to a traffic signal controlled junction in conjunction with the recently consented development on Land South of Radwinter Road (East of Griffin Place) (LPA Ref. 21/2509). Beyond the Peaslands Road junction, the B184 Thaxted Road continues northwards to a traffic signal controlled junction with the B1053 Radwinter Road.

3.27 Within Saffron Walden Town Centre, the B184 continues as East Street, Hill Street, George Street, Audley Road, High Street, Bridge Street and Windmill Hill. Both East Street and Audley Road are one-way street eastbound and westbound respectively. High Street is the main route through the town centre.

Peaslands Road / Mount Pleasant Road

3.28 Peaslands Road / Mount Pleasant Road extends west from the existing mini-roundabout junction with the B184 Thaxted Road to the north of the Site. It is a single carriageway two-way distributor road with primarily direct residential frontage.

3.29 Peaslands Road / Mount Pleasant Road extends around the south of Saffron Walden Town Centre providing access to Council Offices, Audley End railway station via the B1052 Newport Road and the B1383 London Road for access south towards Stanstead Mountfitchet, Bishops Stortford and the M11 J8 and north towards M11 J9 via Great Chesterford, avoiding Saffron Walden town centre.

3.30 Peaslands Road has a variable carriageway width of circa. 7.0-7.3m and is provided with single yellow line parking restrictions on both sides of the carriageway for its entire length that restrict parking between 8am and 6pm, Monday to Friday. Mount Pleasant Road narrows to 5.0-5.5m in width as it extends further westwards to the traffic signal controlled junction with Debden Road. Lit footways of 1.8-2.0m in width are provided either side of the carriageway on both Peaslands Road and Mount Pleasant Road.

Winstanley Road / Cromwell Road

3.31 Winstanley Road / Cromwell Road is the main access corridor through the existing residential estate to the north of the Site extending south-west from Peaslands Road to Debden Road. Winstanley Road / Cromwell Road form part of the local bus route network and provide direct access frontage residential units as well as the local neighbourhood centre.

3.32 Both roads are two-way single carriageways of circa. 6.0m in width with lit footways of circa. 2.0m in width on both sides. Parking for adjoining residential frontage is mainly on-plot or in lay-bys albeit there are no parking restrictions on the main carriageway. Cromwell Road incorporates traffic calming features including raised tables at regular intervals.

Road Safety Analysis

3.33 Personal Injury Accident (PIA) data, recorded by the police, has been obtained from ECC for the section of the B184 Thaxted Road from south of the Knight Park access, along the Site frontage and then stretching northwards to beyond the mini-roundabout junction with Peaslands Road and including Peaslands Road, west to the junction with Winstanley Road. The PIA study area is shown in Figure 7.

Figure 7 PIA Study Area

3.34 The PIA data obtained relates to the most recent 5-year period from 1 July 2017 to 30 June 2022 which shows that there have been only two recorded accidents over the period under consideration. A full copy of the PIA data is provided as Appendix 2 to the TA.

3.35 The first of the recorded PIA occurred in proximity of the B184 Thaxted Road junction with Tiptofts Lane where a motorcyclist failed to anticipate other members of the motorcycle group turning right and has fallen from the bike in taking avoiding action, resulting in a serious injury to the rider. The second recorded PIA involved a rear end shunt between two cars waiting to turn out of the Knight Park retail park resulting in a slight injury to the driver of the car in front.

3.36 Both PIAs occurred during fine, dry conditions in daytime hours and it is evident from the descriptions provided of the incidents that there are no attributable factors to the road geometry, conditions or characteristics. Overall, the B184 Thaxted Road in the vicinity of the Site has a very low accident record for the type of road and volumes of existing traffic using it.

4. Movement & Access Strategy

General Principles

4.1 As referenced in Section 1 of the TA, the development proposals comprise an outline planning application for up to 170 dwellings, associated landscaping and open space with access from Thaxted Road. Only the principle of the proposed residential land use and the means of access are to be determined. Matters such as appearance, landscaping, layout and scale are reserved for future determination.

4.2 Appendix 3 to the TA provides a copy of the illustrative masterplan for the Site.

4.3 In accordance with the Essex Design Guide (EDG) (2018), the sustainable development proposals will promote integration into the surrounding neighbourhoods, social cohesion and active travel modes with the aim of realising a reduction in the need to travel. A hierarchical approach will be a guiding feature of the planning and design stages to ensure that priority is given to more sustainable forms of transport and opportunities to reduce travel demand over motor vehicle access.

4.4 The Development is supported by a comprehensive Movement & Access Strategy that seeks to deliver a good quality environment for all modes of travel to / from the Site that is:

- Attractive.
- Well-connected and permeable to encourage walking and cycling to local destinations.
- Able to encourage activity thereby improving personal security and safety.

4.5 The anticipated date for 1st completions on the Site, subject to planning approvals, is the 1st quarter of Year 2024 and thereafter, based on an annual delivery rate of c. 60-80 dwellings per annum will lead to the completion of the final dwellings by the 1st quarter of 2026.

Promoting Smarter Choices & Opportunities to Reduce Travel Demand

4.6 A commitment is made by the applicant to develop, implement and monitor a comprehensive Framework Travel Plan (FTP) for the Site, working in partnership with the UDC / ECC to incorporate Smarter Choices measures and include the application of personalised travel planning techniques, marketing and other behavioural change initiatives with the aim of sustaining these changes over the long term.

4.7 The FTP measures are planned to work alongside the delivery of physical improvements to the pedestrian, cycle & public transport environment to achieve modal shift, reduce the impact of traffic generated by the development, to improve accessibility, promote healthier lifestyle choices as well as wider social / community benefits and to assist in minimising the environmental impacts of the development.

4.8 The TP will outline a commitment to the appointment and funding of a Travel Plan Coordinator (TPC) alongside the funding of measures / incentives identified in the TP. Such measures / incentives to be delivered by the Site include a community website, travel packs, car sharing promotional strategies and personalised travel planning.

4.9 The TPC will be committed to setting of targets, monitoring & review, including bi-annual travel surveys to check performance against targets. Measurable targets and overriding objectives will be continuously monitored and reviewed over the lifetime of the Travel Plan. Review reports will be made available to UDC / ECC and protocols will be established in agreement with UDC / ECC for corrective measures to be put in place if targets not met.

4.10 A copy of the FTP is submitted alongside this Transport Assessment (TA).

Enhanced Access & Permeability for Active Travel Modes

4.11 Within the Site, local streets are recognised corridors that not only provide a permeable, legible circulation pattern but also have important functions beyond just the movement of traffic, i.e., multi-functional spaces with a much higher 'place' function that are integrated within their surroundings and where pedestrians and cyclists are, in general, afforded greater priority than vehicular traffic.

4.12 The freedom of movement for pedestrians and cyclists to directly access the broad range of local facilities and services surrounding the Site is a priority of the Movement & Access Strategy. Specifically, with regard to the provision of new and improved active travel mode infrastructure, the Movement & Access Strategy comprises the following:

- The creation of a high quality environment within the Site that provides direct connections to origins and destinations within the developable area and beyond that are permeable, coherent, safe and reflect the desire lines of movement.
- The provision of key landmarks as well as easy to understand wayfinding both within and on key routes to / from external destinations to provide legibility.
- The protection and enhancement of the Public Right of Way network in the immediate vicinity, integrated into the network of new infrastructure within the Site, accommodating the requirements for pedestrians, cyclists and equestrian users.

4.13 Based on this framework, the aim is to:

- Provide a continuous network.
- Maximise convenience by ensuring that all routes are direct and reflect desire lines of movement.
- Ensure that usable, comfortable places are created and that crossing places are level.
- Make routes clear and easy to follow with good sightlines and signage.
- Create spaces that are safe, active and accessible to all, including equestrian users.

4.14 To accommodate all active travel mode user requirements, the Movement & Access Strategy incorporates a range of pathway types within the proposed development that are summarised below:

- Multi-User Orbital Greenway
  - 4.0m width
  - 1.0m managed grass margin on both sides
  - resin or polymer bound rubber crumb–grit compound surface (Trailflex or similar)

- Shared Footway / Cycleway
  - 3.5m width
  - 0.5m managed grass margin on both sides
  - Asphalt sealed surface
- Footway
  - 2.0m min. width
  - 0.5m managed grass margin to adjoining dwellings preferred
  - Asphalt sealed surface
- Recreational Path
  - 2.0m min. width (variable)
  - 0.5m managed grass margin to adjoining dwellings preferred
  - Un-sealed surface

4.15 Figure 8 shows the distribution of these pathway types throughout the illustrative masterplan.

Figure 8 Active Travel Hierarchy

4.16 The Movement & Access Strategy will deliver a 'walkable neighbourhood' with interconnected street patterns incorporating formal shared footway / cycleway and / or footway provision and where the daily needs of people within the area, such as work, play, education and shopping are within walking distance to minimise any reliance on the use of the car.

4.17 All formal footways and cycleways within the Site will be constructed to full highway standards with sealed asphalt surfaces and concrete edging. On some secondary and tertiary routes where there is no identified pedestrian desire line on one side of the street over a section, then footways may be omitted.

4.18 Hedges and fences to adjoining properties will be set back at least 0.5m from footways or cycleways. Inter-visibility splays of 2m x 2m will be provided at crossovers, path junctions to maintain pedestrian safety. Where cycle traffic crosses a road, footway or PROW, visibility splays of 2.4m x 31m will be maintained.

4.19 Crime and the fear of crime can deter people from making trips by foot and cycle. In this regard, active travel corridors and user activity will be overlooked and generally concentrated on active frontages avoiding, where possible, routes to the rear of building plots and other blind spots.

4.20 The formal shared footway / cycleway and / or footway provision will be lit. All pathways will be accompanied by a legible signage strategy. Crossing points are intended to be uncontrolled and will tie in with desire lines of movement.

4.21 Priority will be given to users of the formal, surfaced path network where it intersects with the internal street network through measures such as carriageway narrowing and changes to surface material.

4.22 The multi-user Orbital Greenway will provide direct, convenient routes to the new green spaces (including Children's Play) and the semi-natural greenspaces in and around the Site. Strong landscape features, including the retention of existing hedgerows where possible, will define the multi-user Orbital Greenway.

4.23 The multi-user Orbital Greenway will, at its eastern end, connect into the existing Public Rights of Way network via PROW18 (Byway) that extends along Tiptofts Lane. The multi-user Orbital Greenway will connect into the existing public open space and residential estate to the north of the Site and will also be constructed to the south-western boundary to enable UDC to further extend the route towards Debden Road in the future as part of its Local Plan review.

4.24 In general, the maximum desirable longitudinal gradient on the footway / cycleway network, including the multi-user Orbital Greenway, within the Site will be 5.0% (1:20). Where natural steep changes in level are unavoidable, short sections may be constructed at 8.0% (1:12). Where these exist, flat platforms of at least 5.0m in length will be provided along its length.

4.25 Drainage will either be integrated into the wider highway solution or, where facilities are off-carriageway, such as multi-user Orbital Greenway and recreational paths, then drainage may be dealt with by a combination of French drains, rain gardens, natural ditches and swales.

Vehicular Access Strategy

4.26 Plan 22078/002 included as Appendix 4 to the TA shows the proposed arrangements for vehicular access to the Site that is proposed to take the form of a give-way controlled priority junction off the B184 Thaxted Road sited opposite The Kilns and 60 metres (centre to centre) south-east of the recently constructed traffic signals junction serving the development to the east of Thaxted Road (LPA Ref. 19/2355).

4.27 To accommodate the proposed vehicular access it is proposed to widen the existing carriageway on the south-western side of the B184 Thaxted Road within publicly maintainable highway land, adjacent to the Site, that will enable a ghosted right turn lane of 50 metres in length into the Site to be accommodated as well as maintaining the existing ghosted right turn lane into The Kilns. These works will also require the removal and replacement of the existing traffic island to the north-west of The Kilns.

4.28 The works on the B184 Thaxted Road to accommodate the proposed vehicular access will not reduce the length of the right turn lane on approach to the recently constructed traffic signals junction serving the development to the east of Thaxted Road.

4.29 'Keep Clear' road markings will be provided across the bell-mouth of the proposed vehicular access to ensure that there is no conflict between traffic turning into and out of the Site and traffic approaching the traffic signals from the south-easterly direction on the B184 Thaxted Road.

4.30 The site access leading from the proposed vehicular access will be designed as a Street Type D 'Feeder' in accordance with the EDG (2018). This will be a single carriageway two-way road of 6.0m in width with a single lane approach to the give-way line on the B184 Thaxted Road. Minor widening to accommodate the swept path movement of a large refuse collection vehicle (RCV) will be providing on approach to the junction with the B184 Thaxted Road that will also incorporate 10.5m radii on both sides of the bell-mouth.

4.31 A raised table crossing is proposed on the site access to enable the proposed shared footway / cycleway to cross the proposed vehicular access at-grade and also to provide a gateway feature / speed restraint on transition to the 20mph targeted maximum vehicle speed within the Site. The raised table crossing will be a minimum of 7.0m in length and set back at least 6.0m from the edge of the main running carriageway on the B184 Thaxted Road, in accordance with the EDG (2018).

4.32 Visibility splays of 4.5m x 90m will be accommodated in both directions along the B184 Thaxted Road on both sides of the proposed vehicular access. These will be maintained clear of obstruction with planting maintained at a maximum height of 600mm within the new verge areas and shared footway / cycleway on the south-western side of the main carriageway.

4.33 From Plan 22078/002 included as Appendix 4 it is noted that a raised table crossing is also proposed on the B184 Thaxted Road, 115 metres (centre to centre) south-east of the proposed vehicular access that provides an informal crossing connecting the proposed Orbital Greenway route to the existing PROW18 (Byway) that extends along Tiptofts Lane.

4.34 The raised table crossing will be a minimum of 12.0m in length and will be lit with refuge islands accommodated within the centreline hatch markings provided on both sides of the crossing. The existing refuge islands on the B184 Thaxted Road in proximity to the location of the proposed raised table crossing will be removed as part of these works.

Street Hierarchy

4.35 In consideration of the internal street network and hierarchy within the Site, the EDG (2018) is a key reference. In this regard, it is recognised that streets are corridors that not only provide a permeable, legible circulation pattern but also have important functions beyond just the movement of traffic, i.e., multi-functional spaces with a much higher 'place' function that are integrated with their surroundings and where pedestrians and cyclists are afforded the same, if not greater, priority than vehicular traffic.

4.36 Junction design within the internal street network will fit in the space between buildings / features. Dimensions will be determined by the need to prioritise direct pedestrian desire lines and parameters are set by the use of swept path analysis.

4.37 The internal street network will be designed to incorporate natural speed attenuation that will also include changes to surface treatment at features such as squares, gateways, junctions, crossings and interfaces with key public open spaces to create focal points and promote legibility.

4.38 The target maximum speed will be on the internal street network will be 20mph in accordance with the EDG (2018), which states:

> *"All new residential developments containing a road system which measures more than 100m from the entrance of the development to the furthest extremity of the road system are to constitute, or form part of, a 20mph zone."*

4.39 To reinforce the 20mph targeted maximum speed, restraint features will be spaced at a maximum of 60m intervals, starting within 50m of the entry junction. Change in surface materials and gateway treatment will be used to compliment the speed restraint measures.

4.40 Figure 9 shows a marked up version of the illustrative masterplan for the Site depicting the proposed street hierarchy. Plans 22078/001/01 & 22078/001/02 included as Appendix 5 to the TA provides a more detailed illustrative street hierarchy general arrangement plan.

Figure 9 Street Hierarchy

4.41 In accordance with EDG (2018) the key characteristics of each street type within the internal street network will be:

- Street Type D – Feeder
  - 6.0m carriageway width
  - Target maximum vehicle speed – 20mph
  - Maximum gradient – 8%
  - Centreline radius – 20m (min.)
  - Kerb radii at junction – 6.0m
  - 1 x 3.5m footway / cycleway & 1 x 2.0m footway

  Additional features:

  - 3.0m verges (ideal)
  - No parking unless off-carriageway provision made
  - No frontage access within 15.0m of junctions
  - Egress in forward gear only within 15.0-30.0m of junctions

  - Straight section for 22.0m from entrance junction
  - Street lighting in accordance with ECC Operational Plan
- Street Type E – Access
  - 5.5m carriageway width
  - Target maximum vehicle speed – 20mph
  - Maximum gradient – 8%
  - Centreline radius – 13.6m (min.) 30.0m (max.)
  - Kerb radii at junction – 6.0m
  - 2 x 2.0m footways (1 x 2.0m footway where less than 25 dwellings served)

  Additional features:

  - Direct access to dwellings
  - Straight section for 15.0m from entrance junction
  - Street lighting in accordance with ECC Operational Plan
- Street Type F – Minor Access
  - 6.0m width combined vehicular and pedestrian shared surface with localised narrowing where appropriate
  - Maximum length – 125.0m
  - Target maximum vehicle speed – 20mph
  - Maximum gradient – 8%
  - Centreline radius – 13.6m (min.) 30.0m (max.)

  Additional features:

  - Direct access to dwellings
  - Tabled entrance with priority for pedestrians / cyclists across junction
  - Straight section for 15.0m from entrance junction
  - No requirement for street lighting
- Street Type G – Mews Court
  - 6.0m width combined vehicular and pedestrian shared surface with localised narrowing where appropriate
  - Maximum length – 50.0m
  - Target maximum vehicle speed – 20mph
  - Maximum gradient – 8%
  - Centreline radius – 13.6m (min.) 30.0m (max.)

Additional features:

- Direct access to dwellings
- Tabled entrance with priority for pedestrians / cyclists across junction
- Constricted entrance enclosed by buildings or walls for first 8.0m (except for 1.5m x 1.5m pedestrian visibility splay requirements)
- Straight section for 10.0m from entrance junction
- No requirement for street lighting

- Street Type H – Shared Private Drive
  - Maximum of 5 x dwelling units served
  - 5.5m width for first 6.0m tapering down to a lesser width
  - Maximum length – 18.0m (desirable) (longer length required Size 5 turning head & passing bays)
  - Maximum gradient – 8%

Additional features

- Straight section for 6.0m from entrance junction
- No requirement for street lighting

Parking Provision

4.42 Parking provision within the Site will adopt the Essex Parking Standards – Design & Good Practice (2009) guidance for Use Class C3: dwelling houses combined with local UDC parking standards for dwellings with 4+ bedrooms, as detailed in Table 4.2.

4.43 For all dwellings within the Site, a minimum of one secure covered space per dwelling will be provided. For houses where a garage meets the required minimum internal dimensions there will be no separate provision. For flats, cycle parking will be grouped in one lockable storage area within the building.

4.44 The Site will also provide visitor cycle spaces located in accessible, convenient locations throughout the site layout and provided at a ratio of 1 space per 8 dwellings.

4.45 In terms of parking bay dimensions, the aim is to meet the ECC (EPOA) Parking Standards & Good Practice (2009) preferred minimum dimension for perpendicular bays of 5.5m (length) x 2.9m (width). In some exceptional circumstances where space is constrained, the minimum parking bay dimensions will be 5.0m x 2.5m.

4.46 In the same way, it is proposed that the dimensions for parallel parking bays will meet the EPOA (2009) preferred standard of 6.0m x 2.9m with minimum dimensions where space is constrained of 6.0m x 2.5m.

4.47 Parking bays located adjacent to solid structures will make allowance of an additional 1.0m for manoeuvrability. Accessible Blue Badge parking bays, if required, will have minimum dimensions of 6.5m x 3.9m whether they are parallel or perpendicular to the street.

Table 4.2 Parking Standards to be Adopted

Dwelling Size	Vehicle (min)	Cycle (min)	PTW (min)*	Disabled (min)
1 bedroom	1 space per dwelling**	1 secure covered space per dwelling	N/A	N/A if parking is in curtilage of dwelling, otherwise as visitor/unallocated
2 or 3 bedrooms	2 spaces per dwelling**	1 space per 8 units (visitors)	2 PTW spaces and 1 space per 2 dwellings for mobility scooters	N/A if parking is in curtilage of dwelling, otherwise as visitor/unallocated
4+ bedrooms	3 spaces per dwelling**	1 space per 8 units (visitors)	2 PTW spaces and 1 space per 2 dwellings for mobility scooters	N/A if parking is in curtilage of dwelling, otherwise as visitor/unallocated
Visitor/unallocated	0.25 spaces per dwelling (unallocated) (rounded up to nearest whole number)	If no garage of secure area is provided within curtilage of dwelling then 1 covered and secure space per dwelling in a communal area for residents plus 1 space per 8 dwellings for visitors	1 space + 1 per 20 car spaces (for 1st 100 car spaces), then 1 space per 30 car spaces (over 100 car spaces)	200 vehicle bay or less= 3 bays or 6% of total capacity, whichever is greater, Over 200 vehicle bays= 4 bays plus 4% of total capacity

* PTW = Powered Two-Wheeler

** Excluding garage if less than 7m x 3m internal dimension

4.48 The minimum internal dimensions for any garage provision will be 7.0m (length) x 3.0m (width). This will allow for secure covered cycle storage within the dwelling units as well as car parking.

4.49 Parking courts within the Site will serve no more than six dwellings. Parking courts will be overlooked and provided with direct access to / from surrounding dwellings.

4.50 A key objective of the development on the Site will be to deliver liveable streets that are not overly dominated by parked cars. Where on-street parking is provided, changes in surface material will be considered to provide definition and continuous lengths or no more than 5 spaces will be provided before being broken up by landscape / street furniture features.

4.51 Car Club bays will also be integrated into the on-street visitor parking and will be evenly distributed throughout the Site. The Car Club will be a key deliverable of the Site and will reduce occupants' reliance and requirement to own a second vehicle with the objective of reducing pressure on parking provision.

4.52 Careful detailing in terms of the plot arrangement, frontages, landscape boundary treatments, street alignment and surface treatments will help to sensitively integrate vehicles into the layout. In general, the residential element of the development proposals will be provided with a mix of on and off-plot (on-street) parking.

4.53 Electric vehicle charging points (EVCPs) will be located in easily accessible locations within the Site to ensure that future demand is accommodated. In identifying appropriate levels of EVCPs to be provided, account is taken of the view that the majority of charging will take place at home and be done overnight.

4.54 It is also recognised that as EV charging technology develops, wired charging is likely to be replaced by passive wireless charging which allows vehicles to park or travel over a pad buried beneath the surface. The proposed development will therefore not only ensure that sufficient capacity is built-in to the electricity supply for wired charging but also makes allowance for passive when this method of charging becomes cost effective for general use.

4.55 For dwellings with garages and/or dedicated off-street parking, each new dwelling should be fitted with a standard (3-7kW) ChargePoint.

4.56 For dwellings with no off-street parking, 10% of the unallocated parking bays will have an active (i.e., wired and ready to use) ChargePoint. A further 10% will have the necessary underlying infrastructure (i.e., cabling and ducting) to enable quick, simple installation at a later date when there is sufficient demand.

Waste Collection & Emergency Vehicle Access

4.57 Each of the dwelling houses within the Site will be provided with individual, screened hard standing areas for the storing of refuse / recycling receptacles. Any flatted element will be provided with a centrally located secure bin store for residents to dispose of refuse / recycling.

4.58 Streets will be designed to ensure that refuse collection vehicles (RCVs) can enter, manoeuvre and then exit in a forward gear. Where RCVs are required to use private drives for collection, then these will have to be designed to adoptable standards.

4.59 Refuse collection points will be located no more than 25m from the adopted public highway and no more than 30m from the furthest dwelling. Where communal bin storage receptacles are provided, these will be located no more than 10 metres from the edge of the adopted public highway.

4.60 Fire tenders will be able to reach within 45m of the furthest part of the ground floor of the furthest building.

5. Development-Related Trip Generation

Source Data & Methodology

5.1 To determine the trip generational characteristics of the emerging development on the Ste, an exercise has been undertaken to establish potential weekday daily and peak hourly person trip rates using the TRICS (v7.9.2) database sub-category *'Houses Privately Owned'*. Parameters incorporated into the selection of sites from the TRICS database include:

- Sites in South-East England and East Anglia selected (all other regions and the Isle of Wight excluded)
- No. Dwellings Range: 50-250
- Suburban, Edge of Town & Neighbourhood Centre locations only
- Sites with a minimum of 70% private dwellings selected
- Surveys undertaken during the COVID period excluded

5.2 As a result of the selection process, a total of thirteen sites were included in the TRICS output, a copy of which is provided at Appendix 6 of the TA.

Derivation of Person Trips

5.3 Table 5.1 summarises the resultant weekday daily and peak hourly trip rates / resultant person trips based on a residential development of up to 170 dwellings on the Site.

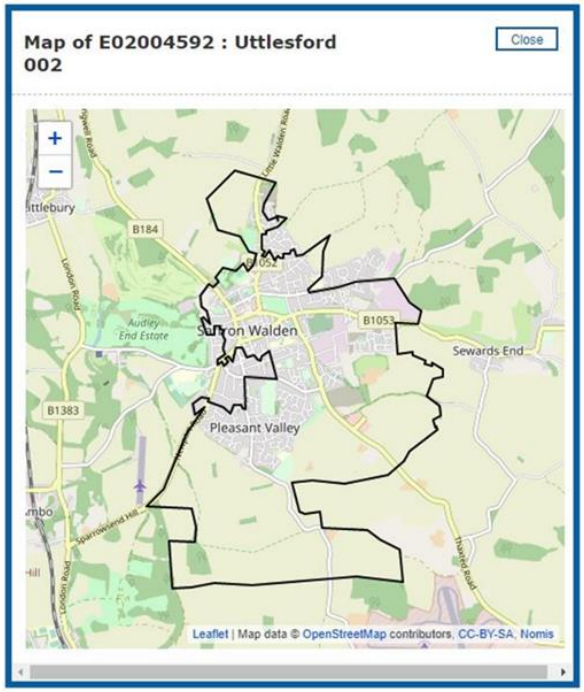
Table 5.1 Calculation of Person Trips (all modes)

Time Period	Arrivals		Departures		Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
AM Peak Hour	0.199	34	0.708	120	0.906	154
PM Peak Hour	0.500	85	0.217	37	0.717	122
Daily	3.548	603	3.654	621	7.202	1,224

Modal Split Calculation

5.4 To determine the potential mode split of person trips generated by the proposed development on the Site, reference has been made to the 2011 Census Origin / Destination data, specifically for the Uttlesford 002 MSOA (Middle Super Output Area). The 2011 Census Data used for this purpose is included as Appendix 7 to the TA. Figure 10 shows the extent of the Uttlesford 002 MSOA within which the Site is located.

Figure 10 Uttlesford 002 MSOA



5.5 Table 5.2 provides a summary of the baseline mode split for the proposed development based on the 2011 Census O-D data for Uttlesford 002 MSOA.

Table 5.2 Baseline Mode Split of Daily Person Trips (Uttlesford 002 MSOA)

Mode of Travel	Percentage Split (Uttlesford 002 MSOA)	Total Trips
Walk	7.1%	87
Cycle	1.1%	14
Bus	2.3%	28
Rail	10.4%	127
Vehicle Driver	74.2%	908
Vehicle Passenger	3.7%	45
Other (incl. taxi & m/cycle)	1.2%	15
TOTAL	100.0%	1,224

5.6 Through pre-application discussions, ECC noted that the proportion of overall person trips by rail, at 10.4%, is relatively high but is representative of the proximity of Audley End station and its access to Cambridge, Stanstead and London for commuting trips. ECC also noted that a proportion of rail trips as a primary mode of travel would also involve trip by car to / from the station as a secondary mode.

5.7 Future residents of the proposed development would have access to a range of secondary modes. A large proportion would be vehicle passenger trips, i.e. being dropped off by a partner or spouse and are already accounted for in the high proportion of vehicle driver trips. In addition, a proportion may choose to access the station by other modes such as motorcycle, cycle or taxi.

5.8 Nevertheless, for the purposes of a robust assessment, it has been agreed with ECC through pre-app consultation to adjust the proportion of vehicle driver trips from 74.2% to 77.0% with a subsequent reduction in the proportion of rail trips, as summarised on Table 5.3.

Table 5.3 Adjusted Baseline Mode Split of Daily Person Trips

Mode of Travel	Percentage Split	Total Trips
Walk	7.1%	87
Cycle	1.1%	14
Bus	2.3%	28
Rail	7.6%	93
Vehicle Driver	77.0%	942
Vehicle Passenger	3.7%	45
Other (incl. taxi & m/cycle)	1.2%	15
TOTAL	100.0%	1,224

5.9 As noted in Section 4 of the TA, a key focus of the Movement & Access Strategy is to encourage greater use of sustainable modes of travel and increase mode share by foot, cycle and public transport with an associated reduction in the reliance on car-borne trips and associated decrease in mode share. This goal will be met by a combination of a comprehensive package of physical infrastructure within the fabric of the Site masterplan that prioritises non-car modes alongside the implementation of a robust Travel Plan with appropriately scaled measures / incentives to meet the mode shift objectives.

5.10 However, for the purposes of a robust assessment of the impacts of vehicular traffic on the operation of key highway links / junctions in the vicinity of the Proposed Development, no further adjustment has been made to the mode splits, as detailed in Table 5.3.

Temporal Breakdown

5.11 Based upon a combination of the TRICS output and the adjusted 2011 Census O-D mode split data, Tables 5.4 – 5.6 provide a breakdown of person trips by primary mode of travel for the AM and PM peak hourly periods and daily period for the proposed development on the subject site.

Table 5.4 Breakdown of Person Trip Generation by Mode – AM Peak Hour

Mode of Travel	Arrivals		Departures		Total Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Walk	0.014	2	0.050	9	0.064	11
Cycle	0.002	0	0.007	1	0.009	1
Bus	0.005	1	0.016	3	0.021	4
Rail	0.015	3	0.054	9	0.069	12
Vehicle Driver	0.152	26	0.545	93	0.698	119
Vehicle Passenger	0.007	1	0.026	4	0.033	6
Other (incl. taxi & m/cycle)	0.002	1	0.007	1	0.009	2
TOTAL	0.198	34	0.708	120	0.906	154

Table 5.5 Breakdown of Person Trip Generation by Mode – PM Peak Hour

Mode of Travel	Arrivals		Departures		Total Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Walk	0.036	6	0.015	3	0.051	9
Cycle	0.006	1	0.002	0	0.008	1
Bus	0.012	2	0.005	1	0.016	3
Rail	0.038	6	0.016	3	0.054	9
Vehicle Driver	0.385	65	0.167	29	0.552	94
Vehicle Passenger	0.019	4	0.008	1	0.027	5
Other (incl. taxi & m/cycle)	0.005	1	0.002	0	0.007	1
TOTAL	0.500	85	0.217	37	0.717	122

Table 5.6 Breakdown of Person Trip Generation by Mode – Daily

Mode of Travel	Arrivals		Departures		Total Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Walk	0.252	43	0.259	44	0.511	87
Cycle	0.039	7	0.040	7	0.079	14
Bus	0.082	14	0.084	14	0.166	28
Rail	0.270	46	0.278	47	0.548	93
Vehicle Driver	2.732	464	2.814	478	5.546	942
Vehicle Passenger	0.131	22	0.135	23	0.266	45
Other (incl. taxi & m/cycle)	0.033	6	0.034	6	0.067	12
TOTAL	3.548	603	3.654	621	7.202	1,224

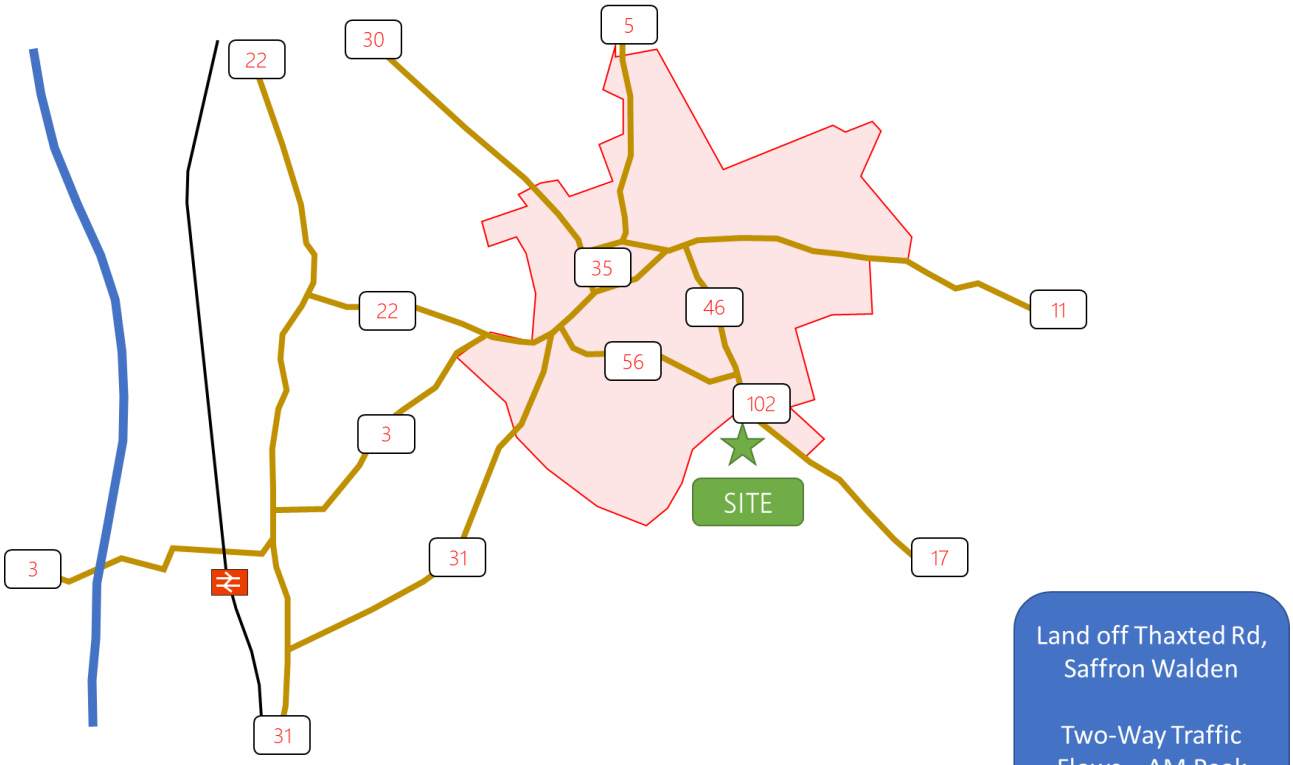
Vehicular Trip Distribution

5.12 Using the 2011 Census O-D data for Uttlesford 002 MSOA, an exercise has been undertaken to establish the distribution of vehicle driver trips generated by the proposed development on the Site.

5.13 The routing assignment has been based on peak hour journey times and distances and where similar times and / or distances for multiple routes are available for a destination this has been assigned accordingly to reflect driver choice. It is therefore considered that the distribution represents a robust approach where driver choice has been considered.

5.14 Appendix 8 to the TA provides spreadsheet analysis of trip origins / destinations that is then summarised in Table 5.7 in terms of weekday AM and PM peak hourly vehicle arrivals and departures by direction. This is also illustrated in Figure 11.

Figure 11 Peak Hourly Distribution of Development-Related Vehicular Trips



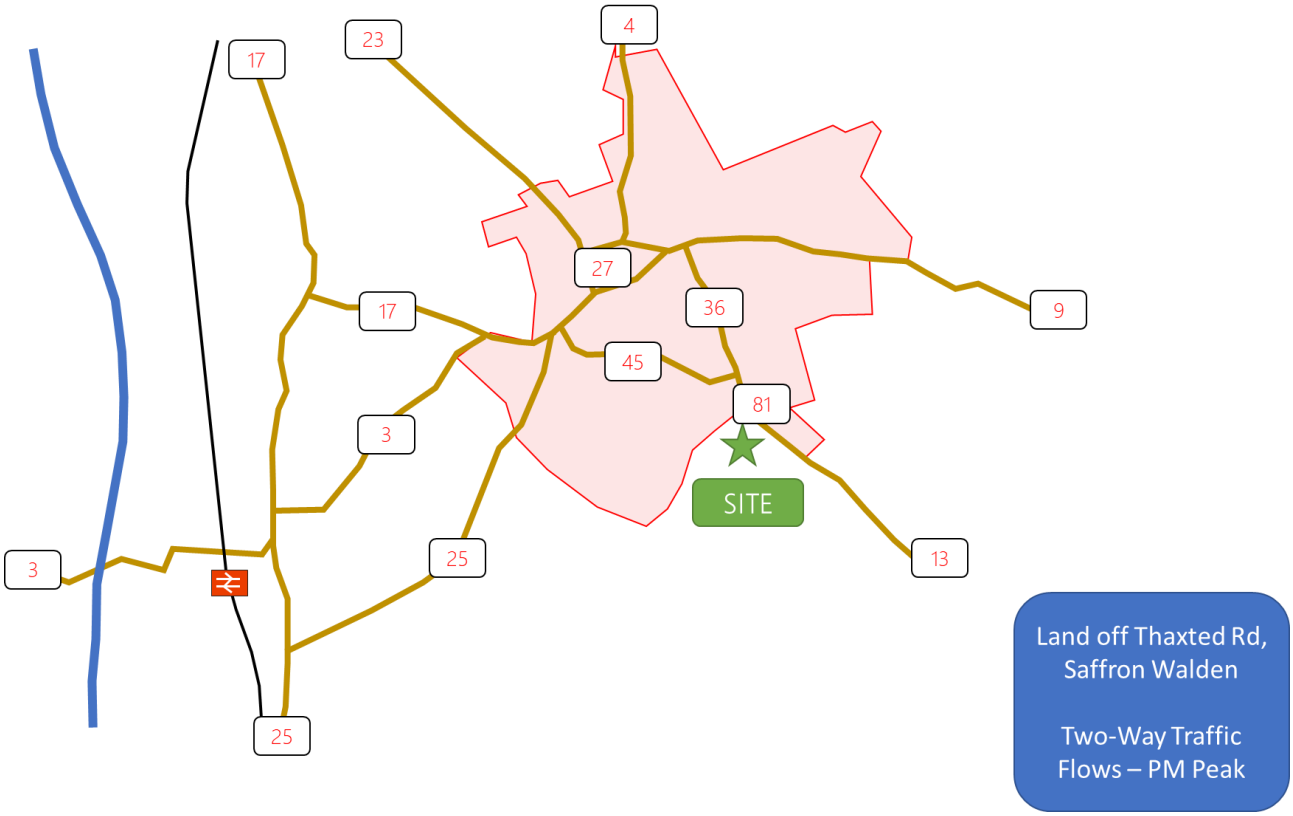


Table 5.7 Potential Distribution of Development-Related Vehicular Trips

O/D Direction	% Split	AM Peak Hour			PM Peak Hour		
		From	To	Total	From	To	Total
B184 Thaxted Rd	14.1%	4	13	17	9	4	13
B1053 Radwinter Rd	9.4%	2	9	11	6	3	9
B1052 Little Walden Rd	4.2%	1	4	5	3	1	4
B184 Windmill Hill	24.9%	7	23	30	16	7	23
Audley End Rd / B1383 London Rd	18.6%	5	17	22	12	5	17
Wenden Rd / B1039 Royston Rd	3.0%	0	3	3	2	1	3
B1052 Newport Rd / B1383 London Rd	25.8%	7	24	31	17	8	25
TOTALS	100.0%	26	93	119	65	29	94

5.15 From Figure 8 the dispersal of development-related vehicular traffic is evident, particularly on the B184 Thaxted Road to the north of the Site where is can be seen that a significant proportion is anticipated to use the Peaslands Road corridor to gain access towards the B1383 corridor and Audley End.

5.16 For the traffic remaining on the B184 Thaxted Road corridor, there is a further dispersion at its junction with the B1053 Radwinter Road resulting in the number of additional vehicular trips through the town centre network being no more than 35 two-way trips in the AM peak and 27 two-way trips in the PM peak, circa one vehicle movement every two minutes, even without any effect of mode shift generated through the implementation of Travel Plan measures.

5.17 Once the link road is completed between the B184 Thaxted Road and the B1053 Radwinter Road, the impact of development on the Site is further lessened at the current traffic signal controlled junction between these two roads.

6. Modelling Input Data

Study Area

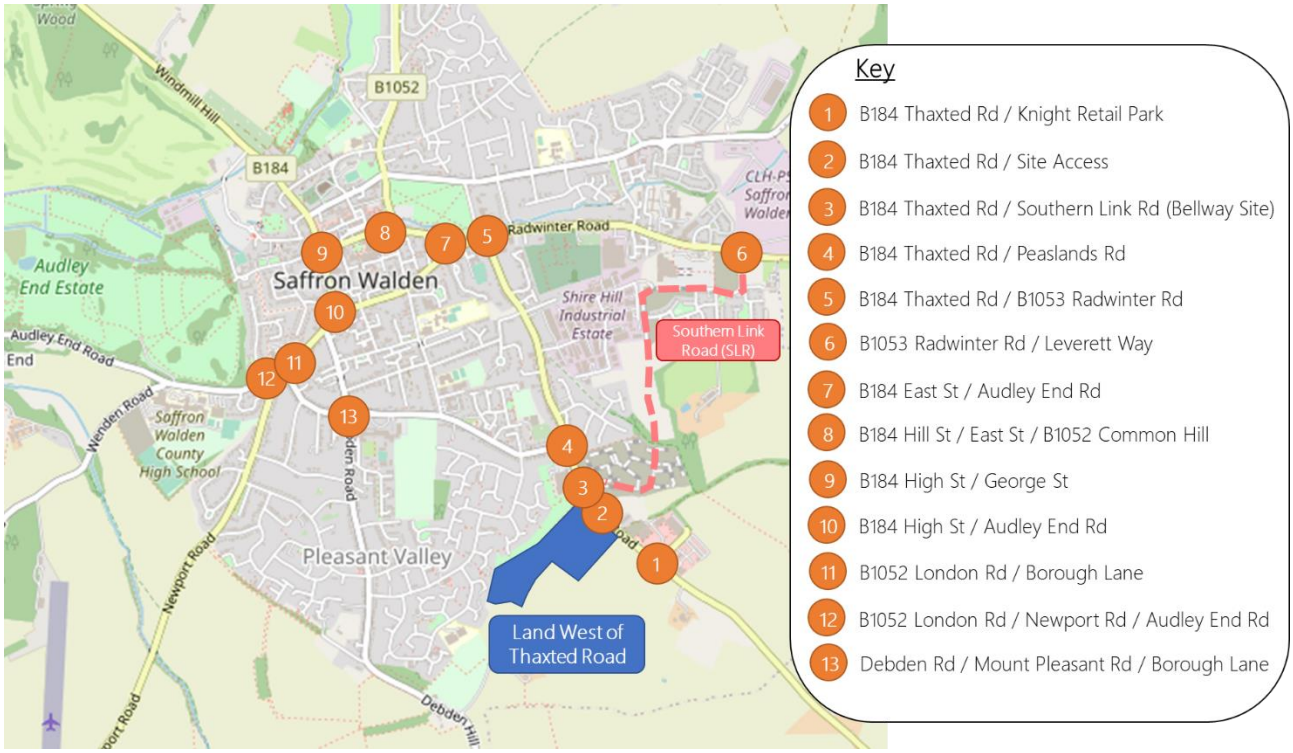
6.1 Based upon the anticipated trip generational and distributional characteristics of the proposed development on the Site, an assessment of the impact arising from development-related vehicular trips on the capacity, safety and operational characteristics of the surrounding highway network will be undertaken.

6.2 From the trip generational and distributional characteristics, it is proposed that the study area for this exercise will include the key highway nodes listed below and illustrated in Figure 12.

- B184 Thaxted Road / Knight Park retail park give-way controlled priority junction
- B184 Thaxted Road / Site Access
- B184 Thaxted Road / Southern Road Link (Bellway site) consented junction
- B184 Thaxted Road / Peaslands Road existing mini-roundabout junction (and the approved scheme for its conversion to traffic signal control)
- B184 Thaxted Road / B1053 Radwinter Road traffic signals junction
- B1053 Radwinter Road / Leverett Way give-way controlled junction
- B184 East Street / Audley End Road give-way controlled junction
- B184 Hill Street / East Street / B1052 Common Hill mini-roundabout junction
- B184 High Street / George Street traffic signals junction
- B184 High Street / Audley End Road give-way controlled junction
- B1052 London Road / Borough Lane mini-roundabout junction
- B1052 London Road / Newport Road / Audley End Road mini-roundabout junction
- Debden Road / Mount Pleasant Road / Borough Lane traffic signals junction

6.3 For the purposes of this TA, the road connection that will ultimately be delivered through consented and committed development to link the B184 Thaxted Road to the B1053 Radwinter Road is referred to as the Southern Link Road (or SLR).

Figure 12 Study Area



Background Data Sources

6.4 As part of pre-application discussions with UDC / ECC, the benefits of assessing the impacts of vehicular traffic arising from the emerging proposals through the Saffron Walden VISUM Model (SWVM) that is currently under development were discussed.

6.5 The SWVM has been commissioned by UDC as part of the Local Plan Review process and benefits from recently undertaken and validated traffic and queue length data which has formed the basis of the 2021 'Base' model.

6.6 In due course the SWVM model will include all current consented and committed development in order to assess the implications of emerging sites identified as part of the Local Plan review. As noted earlier in the TA, the Local Plan review was paused in September 2022 and is no subject to a new programme. As referenced later in this section of the TA, consented and committed development has been added to the 2021 'Base' model outputs for assessing the future year baseline flows for assessment.

6.7 The 2021 Base Year model was validated at the end of August 2022 and UDC's appointed modelling consultants have supplied weekday AM peak hour and PM peak hour model outputs that are provided in Appendix 9 to the TA.

6.8 For each of the nine junctions included within the study area and the SWVM, arrival (demand) flows on each approach to each junction are expressed as turning counts, including total flows and proportion of light vehicles and heavy vehicles. In addition, the model outputs provide modelled turning delays (in seconds) on each approach.

6.9 A number of junctions within the study area are not included in the SWVM including:

- B184 Thaxted Road / Bellway Site Access
- B184 Thaxted Road / Site Access
- B184 Thaxted Road / Knight Park Retail Park
- B1053 Radwinter Road / Leverett Way

6.10 In this regard, additional classified turning count surveys have been undertaken at all junctions within the study area, including the three junctions on the B184 Thaxted Road corridor where data was not available from the SWVM that were conducted in October 2022, outside of the school half-term holiday period, copies of which are included as Appendix 10 to the TA.

6.11 The surveyed flows were lower than the SWVM 2021 Base Year flows. Therefore, to provide a robust assessment of the B184 junctions the SWVM flows at the Peaslands Road junction have been proportionally distributed on the subsequent B184 junctions in line with the turning proportions from the 2022 CTC surveys.

6.12 This same approach has also been undertaken taken with the B1053 Radwinter Road / Leverett Way junction but using the turning proportions detailed within Appendix D of the UTT/21/2509/OP TA and the SWVM flows at the B184 Thaxted Road / B1053 Radwinter Road traffic signals junction.

Committed Development

6.13 The committed developments included in our assessment account for a total of 668 residential units, these are: -

- UTT/16/2210/OP - Land East of Little Walden Road (85 Dwellings)
- UTT/17/2832/OP - North of Shire Hill Farm (100 Units)
- UTT/18/0824/OP - East of Thaxted Road (150 Units)
- UTT/21/2509/OP - South of Radwinter Road (East of Griffin Place) (233 Dwellings)
- UTT/19/1744 - Friends School (<100 Dwellings)

6.14 Any smaller developments which did not provide traffic flows as part of their submitted material will be accounted for within the TEMPro growth rates detailed below.

Baseline & Future Assessment Years

6.15 It is proposed that a future year of 2027 will be adopted, being 5-years post the data of a planning application and appropriate adjusted TEMPRO growth rates have been applied to baseline survey data to reflect future 'base' operational conditions, taking account of the consented and committed development within the local area listed above.

6.16 A copy of the TEMPro growth rates are attached as Appendix 11 to the TA. The alternative assumptions approach taken is to take the District-wide rate and have applied the alternative assumptions, namely the committed development (668 dwellings), to avoid double counting.

6.17 At the request of ECC, consideration was given to looking at growth rates for Minor / Principal roads only, but this led to a less robust growth rate.

6.18 Summary traffic flow diagrams are included as Appendix 12 to the TA, that include:

- Figure 1 2021 Base (SWVM Output) AM Peak
- Figure 2 2021 Base (SWVM Output) PM Peak
- Figure 3 2027 Base (No SLR) AM Peak
- Figure 4 2027 Base (No SLR) PM Peak
- Figure 5 Total Committed Development (CD) (No SLR) AM Peak
- Figure 6 Total Committed Development (CD) (No SLR) PM Peak
- Figure 7 2027 Base + CD (No SLR) AM Peak
- Figure 8 2027 Base + CD (No SLR) PM Peak
- Figure 9 Development Distribution (% split) (No SLR)
- Figure 10 Development Trips (No SLR) AM Peak
- Figure 11 Development Trips (No SLR) PM Peak
- Figure 12 2027 Base + CD + Development (No SLR) AM Peak
- Figure 13 2027 Base + CD + Development (No SLR) PM Peak
- Figure 14 SLR Redistribution 2027 Base AM Peak
- Figure 15 SLR Redistribution 2027 Base PM Peak
- Figure 16 2027 Base (With SLR) AM Peak
- Figure 17 2027 Base (With SLR) PM Peak
- Figure 18 Total Committed Development (CD) (With SLR) AM Peak
- Figure 19 Total Committed Development (CD) (With SLR) PM Peak
- Figure 20 2027 Base + CD (With SLR) AM Peak
- Figure 21 2027 Base + CD (With SLR) PM Peak
- Figure 22 Development Distribution (% split) (With SLR)
- Figure 23 Development Trips (With SLR) AM Peak
- Figure 24 Development Trips (With SLR) PM Peak
- Figure 25 2027 Base + CD + Development (With SLR) AM Peak
- Figure 26 2027 Base + CD + Development (With SLR) PM Peak

7. Assessment of Impacts

7.1 Analysis has been undertaken to make a comparison between future forecast year 2027 'Base+ Committed' (hereon referred to as 'Do Minimum' or DM) and 2027 'Base + Committed + Development' (hereon referred to as 'Do Something' or DS) traffic conditions on the highway network within the vicinity of the Site. This analysis is undertaken on the basis of the existing network without the Southern Link Road and the future network with the Southern Link Road (SLR).

7.2 The purpose of this analysis is to establish the potential impact of development-related traffic flows during the weekday AM and PM peak periods with a combination of peak traffic demands generated by the proposed development and on the highway network itself.

Highway Link Flows

7.3 Table 7.1 provides a comparison between 2027 weekday AM and PM peak 'Base+ Committed' and 'Base + Committed + Development' two-way traffic flows on critical highway links within the existing highway network, i.e., without the SLR that will experience changes in traffic flow levels as a result of the development proposals on the Site. Table 7.2 provides the same comparison based upon the future highway network with the SLR.

7.4 From Tables 7.1 and 7.2 it is noted that the greatest increase in two-way flows on highway links in the vicinity of the Site are concentrated on the B184 Thaxted Road (north of the Site) and Peaslands Road / Mount Pleasant Road / Borough Lane (to the north-west of the Site).

Table 7.1 Changes in Two-Way Highway Link Flows (2027) – No SLR

Highway Link	AM Peak				PM Peak			
	DM	DS	Changes (No.)	Changes (%)	DM	DS	Changes (No.)	Changes (%)
B184 Thaxted Rd (S of Knight Park)	681	697	16	2.3%	634	647	13	2.1%
B184 Thaxted Rd (S of Peaslands Rd)	1004	1106	102	10.2%	1030	1110	80	7.8%
Peaslands Rd	913	969	56	6.1%	905	949	44	4.9%
B184 Thaxted Rd (N of Peaslands Rd)	855	901	46	5.4%	867	903	36	4.2%
B1053 Radwinter Rd (E of Thaxted Rd)	1094	1105	11	1.0%	1295	1304	9	0.7%
B1053 Radwinter Rd (E of Leverett Way)	588	599	11	1.9%	667	676	9	1.3%
B184 East St (W of Thaxted Rd)	827	861	34	4.1%	998	1025	27	2.7%
B184 Audley End Rd (one-way)	733	760	27	3.7%	604	612	8	1.3%
B1052 Common Hill	642	647	5	0.8%	587	590	3	0.5%
George St (one-way)	596	606	10	1.7%	733	751	18	2.5%
B184 High St (N of George St)	850	879	29	3.4%	898	928	30	3.3%
B184 High St (S of George St)	1137	1164	27	2.4%	1176	1184	8	0.7%
B1052 London Rd (N of Borough Lane)	1018	1018	0	0.0%	993	993	0	0.0%
Borough Lane	383	439	56	14.6%	406	450	44	10.8%
Audley End Rd	896	922	26	2.9%	731	751	20	2.7%
B1052 Newport Rd	894	925	31	3.5%	981	1005	24	2.4%
Debden Rd (S of Borough Lane)	328	328	0	0.0%	330	330	0	0.0%
Debden Rd (N of Borough Lane)	522	522	0	0.0%	583	583	0	0.0%
Mount Pleasant Rd	738	794	56	7.6%	837	881	44	5.3%

Table 7.2 Changes in Two-Way Highway Link Flows (2027) – With SLR

Highway Link	AM Peak				PM Peak			
	DM	DS	Changes (No.)	Changes (%)	DM	DS	Changes (No.)	Changes (%)
B184 Thaxted Rd (S of Knight Park)	678	694	16	2.4%	622	635	13	2.1%
B184 Thaxted Rd (S of Peaslands Rd)	972	1062	90	9.3%	1033	1105	72	7.0%
Peaslands Rd	894	950	56	6.3%	886	931	45	5.1%
B184 Thaxted Rd (N of Peaslands Rd)	498	532	34	6.8%	543	570	27	5.0%
B1053 Radwinter Rd (E of Thaxted Rd)	747	747	0	0.0%	987	987	0	0.0%
B1053 Radwinter Rd (E of Leverett Way)	592	603	11	1.9%	664	673	9	1.4%
B184 East St (W of Thaxted Rd)	827	861	34	4.1%	998	1025	27	2.7%
B184 Audley End Rd (one-way)	733	760	27	3.7%	604	612	8	1.3%
B1052 Common Hill	641	646	5	0.8%	585	588	3	0.5%
George St (one-way)	595	605	10	1.7%	731	749	18	2.5%
B184 High St (N of George St)	830	859	29	3.5%	866	890	24	2.8%
B184 High St (S of George St)	1116	1143	27	2.4%	1136	1144	8	0.7%
B1052 London Rd (N of Borough Lane)	1018	1018	0	0.0%	993	993	0	0.0%
Borough Lane	366	422	56	15.3%	374	418	44	11.8%
Audley End Rd	888	914	26	2.9%	718	738	20	2.8%
B1052 Newport Rd	885	916	31	3.5%	962	986	24	2.5%
Debden Rd (S of Borough Lane)	327	327	0	0.0%	333	333	0	0.0%
Debden Rd (N of Borough Lane)	500	500	0	0.0%	541	541	0	0.0%
Mount Pleasant Rd	698	754	56	8.0%	766	810	44	5.7%
Southern Link Road	448	459	11	2.5%	401	410	9	2.2%

7.5 Based on DMRB Vol 5 Sec 1 TA79/99, the B184 Thaxted Road between the Site and the junction with Peaslands Road falls within the UAP2 road type that has a two-way highway link capacity of 2,100 vehicles per hour. From Tables 7.1 and 7.2 it can be seen that the maximum two-way flow on the B184 Thaxted Road, with development, is 1,110 vehicles in the PM peak period (no SLR).

7.6 It is therefore evident that the B184 Thaxted Road will continue to operate at less than 53% of its highway link capacity, even with the additional traffic demand generated by the proposed development on the Site.

7.7 Peaslands Road falls within the UAP3 road type within TA79/99 and has a two-way highway link capacity of 1,850 vehicles per hour. Tables 7.1 and 7.2 indicate that the maximum two-way flow on Peaslands Road, with development is in the AM peak period (no SLR) of 969 vehicles. Peaslands Road will therefore continue to operate at less than 53% of its highway link capacity even with the additional traffic demand generated by the proposed development on the Site.

7.8 Mount Pleasant Road is also a UAP3 road type but with its reduced carriageway width it has a two-way highway link capacity of 1,500 vehicles per hour according to TA79/99. From Tables 7.1 and 7.2 it can be seen that the maximum two-way flow on the Mount Pleasant Road, with development, is 881 vehicles in the PM peak period (no SLR), equivalent to less than 59% of its highway link capacity, even with the additional traffic demand generated by the proposed development on the Site.

7.9 Borough Lane is also a UAP3 road type with a two-way highway link capacity of 1,500 vehicles per hour according to TA79/99. Tables 7.1 an 7.2 indicate that the maximum two-way flow on Borough Lane, with development is in the AM peak period (no SLR) of 439 vehicles. Borough Lane will therefore continue to operate at less than 30% of its highway link capacity even with the additional traffic demand generated by the proposed development on the Site.

7.10 In the context of all the highway links within the study area under consideration, it is generally regarded that daily changes in vehicle numbers can fluctuate by as much as 10% on any given highway link. In the context of paragraph 111 of the NPPF, the cumulative impact of the proposed development on the Site on highway link operational characteristics is not severe.

Junction Capacity - Overview

7.11 For this exercise, only those junctions that will experience an increase in traffic flows of more than 2% and / or 30 two-way trips during either the AM and PM peak hourly periods have been assessed. These thresholds for assessment were agreed between the applicant's transport consultants on the recently consented Land South of Radwinter Road (East of Griffin Place) application (LPA Ref. 21/2509/OP).

7.12 On this basis, Tables 7.3 and 7.4 summarise the 2027 future year weekday AM and PM peak hour total 'in' flows to each of the junctions within the study area, as defined in Section 6 of the TA. Table 7.3 presents the results of the 'No SLR' scenario and Table 7.4 presents the results of the 'With SLR' scenario.

Table 7.3 Changes in Total Junction 'In' Flows (2027) – No SLR

Junction	AM Peak				PM Peak			
	Base + CD	Base + CD + Dev	Changes (No.)	Changes (%)	Base + CD	Base + CD + Dev	Changes (No.)	Changes (%)
B184 Thaxted Rd / Knight Park	994	1010	16	1.6%	1077	1090	13	1.2%
B184 Thaxted Rd / Bellway Site Access	1008	1109	101	10.0%	1045	1126	81	7.8%
B184 Thaxted Rd / Peaslands Rd	1386	1488	102	7.4%	1401	1481	80	5.7%
B184 Thaxted Rd / B1053 Radwinter Road	1418	1464	46	3.2%	1642	1678	36	2.2%
B1053 Radwinter Rd / Leverett Way	652	663	11	1.7%	702	711	9	1.3%
B184 East St / Audley End Rd	1131	1165	34	3.0%	1176	1203	27	2.3%
B184 Hill St / East St / B1052 Common Hill	979	990	11	1.1%	1062	1082	20	1.9%
B184 High St / George St	1307	1340	33	2.5%	1413	1438	25	1.8%
B184 High St / Audley End Rd	1604	1626	22	1.4%	1638	1646	8	0.5%
B1052 London Rd / Borough Lane	1382	1438	56	4.1%	1388	1432	44	3.2%
B1052 London Rd / Newport Rd / Audley End Rd	1576	1633	57	3.6%	1545	1589	44	2.8%
Debden Rd / Mount Pleasant Rd / Borough Lane	985	1041	56	5.7%	1077	1121	44	4.1%

Table 7.4 Changes in Total Junction 'In' Flows (2027) – With SLR

Junction	AM Peak				PM Peak			
	Base + CD	Base + CD + Dev	Changes (No.)	Changes (%)	Base + CD	Base + CD + Dev	Changes (No.)	Changes (%)
B184 Thaxted Rd / Knight Park	991	1007	16	1.6%	1065	1078	13	1.2%
B184 Thaxted Rd / Bellway Site Access	1161	1263	102	8.8%	1214	1296	82	6.8%
B184 Thaxted Rd / Peaslands Rd	1182	1272	90	7.6%	1231	1303	72	5.8%
B184 Thaxted Rd / B1053 Radwinter Road	1070	1105	35	3.3%	1333	1360	27	2.0%
B1053 Radwinter Rd / Leverett Way	768	779	11	1.4%	750	759	9	1.2%
B184 East St / Audley End Rd	1131	1165	34	3.0%	1176	1203	27	2.3%
B184 Hill St / East St / B1052 Common Hill	978	989	11	1.1%	1060	1080	20	1.9%
B184 High St / George St	1286	1319	33	2.6%	1367	1392	25	1.8%
B184 High St / Audley End Rd	1577	1604	27	1.7%	1596	1604	8	0.5%
B1052 London Rd / Borough Lane	1365	1421	56	4.1%	1356	1400	44	3.2%
B1052 London Rd / Newport Rd / Audley End Rd	1559	1616	57	3.7%	1513	1557	44	2.9%
Debden Rd / Mount Pleasant Rd / Borough Lane	945	1001	56	5.9%	1006	1050	44	4.4%

7.13 Within Tables 7.3 and 7.4, those junctions that do not meet the threshold of an increase in traffic flows of more than 2% and / or 30 two-way trips during either the AM and PM peak hourly periods are highlighted and are no included in the assessments summarised in the following paragraphs.

B184 Thaxted Road / Site Access

7.14 The proposed give-way controlled site access junction, the details of which are as described in Section 4 of the TA, has been modelled using Junctions 9 / PICADY9 software to identify junction operational characteristics under future year, 2027, weekday AM and PM peak base plus committed development plus development flow conditions. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.5 and 7.6 respectively. Junctions 9 / PICADY9 outputs are provided as Appendix 13 to the TA.

Table 7.5 B184 Thaxted Rd / Site Access – No SLR

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Site Access (right turn)	0.15	0.2	0.04	0.0
Site Access (left turn)	0.04	0.0	0.01	0.0
B184 Thaxted Rd (N) (right turn)	0.04	0.0	0.09	0.1
Junction Delay (secs)	0.82		0.51	

Table 7.6 B184 Thaxted Rd / Site Access –With SLR

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Site Access (right turn)	0.15	0.2	0.04	0.0
Site Access (left turn)	0.04	0.0	0.01	0.0
B184 Thaxted Rd (N) (right turn)	0.04	0.0	0.09	0.1
Junction Delay (secs)	0.82		0.52	

7.15 From Tables 7.5 and 7.6 it is noted that under future year, 2027, flow conditions the proposed site access junction onto the B184 Thaxted Road operates well within capacity (RFC 1.00) during both the weekday AM and PM peak hours under both scenarios of 'No SLR' and 'With SLR. Queue lengths and delays during both the weekday AM and PM peak hours are also insignificant.

B184 Thaxted Road / Bellway Site Access

7.16 A LINSIG model has been prepared to assess the performance of the recently constructed traffic signals junction on the B184 Thaxted Road that serves the Bellway development scheme (UTT/18/0824/OP - East of Thaxted Road (150 Units)) and that will ultimately provide a through connection to the B1053 Radwinter Road via the SLR when fully constructed.

7.17 As with the site access junction, the B184 Thaxted Road / Bellway site access traffic signals junction is assessed based upon Year 2027 weekday AM and PM peak flow conditions. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.7 and 7.8 respectively with the full summary of the results provided as Appendix 14 to the TA.

7.18 In preparing the LINSIG assessments, reference is made to the traffic signal data sheets supplied by Essex County Council's ITS team including phase / stage data, intergreens and stage sequencing. The cycle time for the stage sequence has then been optimised in the assessment process.

Table 7.7 B184 Thaxted Rd / Bellway Site Access – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N) (ahead & left)	52.3	11.9	54.3	12.7	58.0	14.0	63.1	16.1
Bellway Site Access (left & right)	50.3	2.8	50.3	2.8	53.3	2.6	53.5	2.6
B184 Thaxted Rd (S) (ahead & right)	34.5	6.5	40.6	8.1	28.4	5.0	30.3	5.4
PRC (%)	72.2		65.7		55.1		42.6	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	6.01		6.54		6.08		6.72	

Table 7.8 B184 Thaxted Rd / Bellway Site Access – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N) (ahead & left)	68.0	15.6	70.4	16.6	75.3	20.7	80.2	23.3
Bellway Site Access (left & right)	68.8	8.1	69.7	8.2	75.1	5.6	78.6	6.1
B184 Thaxted Rd (S) (ahead & right)	61.7	7.7	68.9	10.1	74.5	5.2	76.1	5.6
PRC (%)	30.8		27.8		19.5		12.2	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	12.50		13.74		12.81		14.39	

7.19 From Tables 7.7 and 7.8 it is noted that the B184 Thaxted Road / Bellway site access will continue to operate within capacity (Deg. Sat. 85.0%) with minimal queues and delays under future year 2027 weekday AM and PM peak hourly flow conditions, both in the 'No SLR' and 'With SLR' scenarios. It can also be seen that the impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is minimal.

B184 Thaxted Road / Peaslands Road

7.20 The existing mini-roundabout junction between the B184 Thaxted Road and Peaslands Road has been assessed using Junctions 9 / ARCADY 9 software based upon Year 2027 weekday AM and PM peak flow conditions. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.9 and 7.10 respectively with the full summary of the results also provided within Appendix 14 of the TA.

Table 7.9 B184 Thaxted Rd / Peaslands Rd – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N)	0.49	1.0	0.51	1.0	0.58	1.4	0.63	1.6
B184 Thaxted Rd (S)	0.57	1.3	0.66	1.9	0.48	0.9	0.51	1.0
Peaslands Road	0.75	3.0	0.79	3.6	0.75	2.9	0.80	3.7
Junction Delay (secs)	12.64		14.90		12.22		14.57	

Table 7.10 B184 Thaxted Rd / Peaslands Rd – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N)	0.31	0.5	0.33	0.5	0.52	1.1	0.57	1.3
B184 Thaxted Rd (S)	0.51	1.0	0.59	1.4	0.39	0.6	0.41	0.7
Peaslands Road	0.69	2.2	0.73	2.6	0.69	2.1	0.73	2.6
Junction Delay (secs)	10.45		11.79		10.39		11.84	

7.21 In conjunction with the planning application UTT/21/2509/OP (South of Radwinter Road (East of Griffin Place) (233 Dwellings)), it is proposed to convert the B184 Thaxted Road / Peaslands Road junction to traffic signal control. Based on the scheme proposals as presented in the TA submitted with the planning application a LINSIG model has been prepared to assess the performance of the consented traffic signals junction.

7.22 As with the existing mini-roundabout, the assessment of the B184 Thaxted Road / Peaslands Road consented traffic signals junction is assessed based upon Year 2027 weekday AM and PM peak flow conditions. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.11 and 7.12 respectively with the full summary of the results provided as Appendix 15 to the TA.

Table 7.11 B184 Thaxted Rd / Peaslands Rd – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N) (ahead & right)	65.8	9.3	64.5	9.6	69.7	11.7	74.0	13.1
B184 Thaxted Rd (S) (ahead & left)	61.6	7.0	69.0	8.4	46.3	5.1	49.2	5.5
Peaslands Rd (left & right)	65.3	14.4	69.0	15.5	69.6	15.5	73.5	17.0
PRC (%)	36.8		30.4		29.2		21.7	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	13.28		14.44		13.18		14.54	

Table 7.12 B184 Thaxted Rd / Peaslands Rd – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N) (ahead & right)	52.9	5.6	51.4	5.8	62.4	8.9	66.0	9.9
B184 Thaxted Rd (S) (ahead & left)	50.5	4.7	54.7	5.6	24.8	2.8	26.8	2.9
Peaslands Rd (left & right)	54.2	11.6	57.1	12.4	62.8	13.9	66.4	15.2
PRC (%)	65.9		57.7		43.3		35.6	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	9.10		9.89		10.01		10.97	

7.23 From the results in Tables 7.9 – 7.12 above it is evident that the proposed development has an insignificant impact on the operation of the B184 Thaxted Road / Peaslands Road based on future year 2027 weekday AM and PM peak hour flow conditions in both 'No SLR' and 'With SLR' scenarios. This conclusion is the same for both the current configuration as a mini-roundabout junction as well as its future configuration based on the consented traffic signals scheme.

B184 Thaxted Road / B1053 Radwinter Road

7.24 The operational characteristics of the B184 Thaxted Road / B1053 Radwinter Road traffic signals junction under future year, 2027, weekday AM and PM peak hourly flow conditions has been assessed using LINSIG. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.13 and 7.14 respectively with the full summary of the results provided as Appendix 16 to the TA.

7.25 In preparing the LINSIG assessments, reference is made to the traffic signal data sheets supplied by Essex County Council's ITS team including phase / stage data, intergreens and stage sequencing. The cycle time for the stage sequence has then been optimised in the assessment process.

Table 7.13 B184 Thaxted Rd / B1053 Radwinter Rd – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B1053 Radwinter Rd (all movements)	81.6	7.3	82.1	7.4	82.6	7.5	81.9	7.4
B184 Thaxted Rd (all movements)	88.3	8.4	95.8	12.4	100.3	17.0	106.1	27.0
B184 East St (all movements)	87.7	7.6	90.9	8.8	102.6	22.3	107.2	33.2
PRC (%)	1.9		-6.5		-14.1		-19.1	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	23.25		28.67		46.86		67.56	

Table 7.14 B184 Thaxted Rd / B1053 Radwinter Rd – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B1053 Radwinter Rd (all movements)	52.8	3.5	53.8	3.6	61.2	4.1	60.2	4.0
B184 Thaxted Rd (all movements)	55.0	3.3	59.4	3.7	64.4	3.9	69.4	4.3
B184 East St (all movements)	55.1	3.4	58.9	3.8	66.5	4.5	69.3	4.9
PRC (%)	63.4		51.4		35.3		29.6	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	10.22		11.09		12.48		13.12	

7.26 From Table 7.13 it is noted that the B184 Thaxted Road / B1053 Radwinter Road operates at or over capacity (Deg. Sat. 85.0%) based on future year 2027 weekday AM and PM peak hourly flow conditions under the 'No SLR' scenario, even with no development traffic added. With the addition of development-related traffic, there is a further reduction in capacity with associated increases in queues and delays.

7.27 What is evident from Table 7.14 is that once the SLR is completed, the capacity of the B184 Thaxted Road / B1053 Radwinter Road substantially improves with an associated significant reduction in queues and delays in both weekday AM and PM peak hourly periods, both with and without development traffic added.

7.28 It is therefore evident that any impacts arising from the proposed development on the operation of the B184 Thaxted Road / B1053 Radwinter Road are short lived and are fully mitigated by the SLR.

B184 East Street / Audley End Road

7.29 The existing give-way controlled priority junction between the B184 East Street and Audley End Road has been assessed using Junctions 9 / PICADY 9 software based upon Year 2027 weekday AM and PM peak flow conditions. Audley End Road is a one-way street away from the junction and therefore only the capacity of the two B184 approaches is assessed within the PICADY 9 software.

7.30 Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.15 and 7.16 respectively with the full summary of the results provided as Appendix 17 to the TA.

Table 7.15 B184 East St / Audley End Rd – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 East St (W)	0.69	2.1	0.69	2.2	0.41	0.7	0.41	0.7
B184 East St (E)	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0
Junction Delay (secs)	9.59		9.54		3.80		3.77	

Table 7.16 B184 East St / Audley End Rd – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 East St (W)	0.69	2.1	0.69	2.2	0.41	0.7	0.41	0.7
B184 East St (E)	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0
Junction Delay (secs)	9.59		9.54		3.80		3.77	

7.31 From Tables 7.15 and 7.16 it is evident that the proposed development will have no impact on the operation of the B184 East Street / Audley End Road give-way controlled priority junction that will continue to operate within capacity (Deg. Sat. 85.0%) with minimal queues and delays under future year 2027 weekday AM and PM peak hourly flow conditions, both in the 'No SLR' and 'With SLR' scenarios.

B184 High Street / George Street / Abbey Lane

7.32 A LINSIG model has been prepared to assess the performance of the B184 High Street / George Street / Abbey Lane traffic signal-controlled junction based upon Year 2027 weekday AM and PM peak flow conditions. Both George Street and Abbey Lane are one-way streets leading away from the B184 High Street and so therefore the LINSIG model only identifies the capacity, queuing and delay on the two B184 High Street approaches.

7.33 In preparing the LINSIG assessments, reference is made to the traffic signal data sheets supplied by Essex County Council's ITS team including phase / stage data, intergreens and stage sequencing. The cycle time for the stage sequence has then been optimised in the assessment process.

7.34 Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.17 and 7.18 respectively with the full summary of the results provided as Appendix 18 to the TA.

Table 7.17 B184 High St / George St / Abbey Lane – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 High St (N) (all movements)	100.5	16.8	102.3	19.7	106.7	33.2	110.3	42.8
B184 High St (S) (all movements)	102.7	31.3	105.5	42.8	108.0	48.4	108.9	52.0
PRC (%)	-14.1		-17.2		-20.0		-22.5	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	48.13		62.44		81.55		94.80	

Table 7.18 B184 High St / George St / Abbey Lane– With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 High St (N) (all movements)	99.7	15.7	101.5	18.4	105.8	30.2	106.8	33.0
B184 High St (S) (all movements)	101.0	25.3	103.7	35.4	104.1	34.0	106.9	44.1
PRC (%)	-12.2		-15.2		-17.6		-18.8	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	41.07		53.81		64.20		77.16	

7.35 From Tables 7.17 and 7.18 it is evident that the B184 High Street / George Street / Abbey Lane operates well above capacity with substantial queues and delays on both High Street approaches under future year 2027 weekday AM and PM peak hourly base plus committed development flow conditions, both in the 'No SLR' and 'With SLR' scenarios.

7.36 It can also be seen that the impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is not significant.

B1052 London Road / Borough Lane

7.37 The B1052 London Road / Borough Lane mini-roundabout junction has been assessed using Junctions 9 / ARCADY 9 software based upon Year 2027 weekday AM and PM peak flow conditions. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.19 and 7.20 respectively with the full summary of the results provided as Appendix 19 to the TA.

Table 7.19 B1052 London Rd / Borough Lane – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B1052 London Rd (N)	0.67	2.0	0.67	2.0	0.68	2.1	0.70	2.2
Borough Lane	0.46	0.8	0.55	1.2	0.34	0.5	0.36	0.6
B1052 London Rd (S)	0.80	3.9	0.82	4.2	0.86	5.8	0.90	7.7
Junction Delay (secs)	16.26		17.46		20.56		25.25	

Table 7.20 B1052 London Rd / Borough Lane – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B1052 London Rd (N)	0.66	1.9	0.67	2.0	0.67	2.0	0.69	2.1
Borough Lane	0.43	0.7	0.52	1.1	0.31	0.4	0.34	0.5
B1052 London Rd (S)	0.80	3.8	0.81	4.1	0.84	5.0	0.88	6.4
Junction Delay (secs)	15.94		17.04		18.47		22.18	

7.38 From Tables 7.19 and 7.20 it can be seen that the B1052 London Road / Borough Lane mini roundabout operates close to capacity, particularly on the B1052 London Road (south) approach arm under future year 2027 weekday AM and PM peak hourly flow conditions, both in the 'No SLR' and 'With SLR' scenarios.

7.39 What is evident is that the additional traffic generated by the proposed development has only a minimal impact on the operation on the B1052 London Road / Borough Lane mini-roundabout with only minor increases in queues and delays.

B1052 London Road / Newport Road / Audley End Road

7.40 The B1052 London Road / Newport Road / Audley End Road mini-roundabout junction has been assessed using Junctions 9 / ARCADY 9 software based upon Year 2027 weekday AM and PM peak flow conditions. Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.21 and 7.22 respectively with the full summary of the results provided as Appendix 20 to the TA.

Table 7.21 B1052 London Rd / Newport Rd / Audley End Rd – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B1052 London Rd (N)	0.88	6.6	0.94	10.8	0.81	4.0	0.82	4.4
B1052 Newport Rd	0.90	6.8	0.93	8.6	0.75	2.9	0.78	3.4
Audley End Rd	0.56	1.3	0.57	1.3	0.61	1.5	0.64	1.7
Junction Delay (secs)	32.42		44.17		18.27		20.32	

Table 7.22 B1052 London Rd / Newport Rd / Audley End Rd – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B1052 London Rd (N)	0.87	6.0	0.92	9.2	0.80	3.7	0.81	4.0
B1052 Newport Rd	0.89	6.5	0.92	8.0	0.73	2.6	0.76	3.0
Audley End Rd	0.56	1.3	0.57	1.3	0.59	1.4	0.62	1.6
Junction Delay (secs)	30.83		39.98		17.17		18.66	

7.41 Tables 7.21 and 7.22 show that the B1052 London Road / Newport Road / Audley End Road mini roundabout operates close to capacity under future year 2027 weekday AM and PM peak hourly flow conditions, both in the 'No SLR' and 'With SLR' scenarios.

7.42 What is evident is that the additional traffic generated by the proposed development has only a minimal impact on the operation on the B1052 London Road / / Newport Road / Audley End Road mini-roundabout with only minor increases in queues and delays.

Debden Road / Mount Pleasant Road / Borough Lane

7.43 A LINSIG model has been prepared to assess the performance of the Debden Road / Mount Pleasant Road / Borough Lane traffic signal-controlled junction based upon Year 2027 weekday AM and PM peak flow conditions. In preparing the LINSIG assessments, reference is made to the traffic signal data sheets supplied by Essex County Council's ITS team including phase / stage data, intergreens and stage sequencing. The cycle time for the stage sequence has then been optimised in the assessment process.

7.44 Separate assessments are provided of 'No SLR' and 'With SLR' scenarios that are summarised in Tables 7.23 and 7.24 respectively with the full summary of the results provided as Appendix 21 to the TA.

Table 7.23 Debden Rd / Mount Pleasant Rd / Borough Lane – No SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
Debden Rd (N) (all movements)	68.4	3.4	68.4	3.4	75.0	5.2	79.7	5.8
Mount Pleasant Rd (all movements)	69.7	4.4	75.0	5.2	76.5	5.0	79.2	5.4
Debden Rd (S) (all movements)	70.0	4.1	73.0	4.3	63.0	3.1	69.4	3.5
Borough Lane (all movements)	20.3	1.1	21.3	1.1	34.5	2.0	37.3	2.2
PRC (%)	28.6		20.0		17.6		12.9	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	12.97		14.03		15.28		16.82	

Table 7.24 Debden Rd / Mount Pleasant Rd / Borough Lane – With SLR

Arm	AM Peak				PM Peak			
	Base + CD		Base + CD + Dev		Base + CD		Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
Debden Rd (N) (all movements)	65.4	3.2	65.4	3.2	67.2	4.3	71.4	4.7
Mount Pleasant Rd (all movements)	65.3	4.0	70.9	4.7	69.0	4.1	71.7	4.4
Debden Rd (S) (all movements)	66.6	3.8	69.4	4.0	56.4	2.8	61.7	3.1
Borough Lane (all movements)	20.1	1.1	21.3	1.1	32.6	1.9	35.5	2.0
PRC (%)	35.2		26.9		30.5		25.5	
Cycle Time (secs)	120		120		120		120	
Delay (pcu/hr)	12.01		12.95		13.09		14.22	

7.45 From Tables 7.23 and 7.24 it is noted that the Debden Road / Mount Pleasant Road / Borough Lane traffic signal-controlled junction will continue to operate within capacity (Deg. Sat. 85.0%) with minimal queues and delays under future year 2027 weekday AM and PM peak hourly flow conditions, both in the 'No SLR' and 'With SLR' scenarios. It can also be seen that the impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is minimal.

8. Mitigation Package

Preamble

8.1 The application of a hierarchical approach, ensuring that priority is given to more sustainable forms of transport and opportunities to reduce travel demand over motor vehicle access, is a guiding feature of the proposed development.

8.2 The TA has set out a comprehensive package of measures in the form of a Movement & Access Strategy that is a series of tailored transport solutions to ensure that the future community within the Site are fully accessible but also ensures efficient, reliable and legible travel connections to local amenities and Saffron Walden town centre, encouraging sustainable travel choices and removing physical and psychological barriers to movement.

8.3 Accordingly, the Movement & Access Strategy delivers a package of mitigation that combines hard interventions (infrastructure such as improved footways, cycleways and crossing facilities) and soft interventions (travel planning, promotions and marketing) to achieve meaningful changes in travel behaviour and an ambitious shift in modal share targets.

8.4 The Movement & Access Strategy delivers:

- Measures to reduce the need to travel and a broad range of local services and facilities within a walkable and cyclable neighbourhood
- Travel Plan measures and incentives including community website, travel information packs, car sharing promotional strategies
- A comprehensive network of on-site traffic-free segregated multi-user routes connecting key on and off-site land uses, including the delivery of the first phase of the Council's vision for an Orbital Greenway around Saffron Walden
- Cycle parking in accordance with the Essex Parking Standards – Design & Good Practice (2009) guidance for all land uses within the Site
- Integration of Car Club operation within the development
- Inclusion of electric vehicle charging in accordance with the Essex Parking Standards – Design & Good Practice (2009) guidance standards for all land uses within the Site
- Speed attenuation measures on the internal street network

8.5 To supplement the Movement & Access Strategy a comprehensive package of off-site works is proposed, that includes:

- B184 Thaxted Road shared footway / cycleway improvements
- The potential for active travel connections across the public open space to the north of the Site for connections to the local bus stops at Winstanley Road (Tukes Way) and safe routes towards the local shops on Cromwell Road, local schools and Saffron Walden town centre via South Road
- Funding to facilitate improvements to the Saffron Walden town centre bus service as well as enhanced passenger transport connections to Audley End railway station.

- Additional wayfinding on the wider Saffron Walden pedestrian and cycle network

8.6 The following sub-sections provide a summary of the mitigation package at the heart of the Movement & Access Strategy, confirming that all listed solutions and interventions not only addresses and can be delivered in advance of any impacts arising from the scale of development proposed but that such works are deliverable within adopted highway and/or land under the control of the applicants.

Travel Plan Interventions / Smarter Choices

8.7 Described in full detail within the Framework Travel Plan (FTP) that accompanies the TA, Table 8.1 provides a summary of the identified Travel Plan interventions that are aimed at improving smarter travel choices and reducing the need to travel.

Table 8.1 Summary of Travel Plan Interventions / Smarter Choices

Intervention	Timescale for Delivery
Super-fast broadband connectivity to all dwellings	From 1st occupation
Appointment of Travel Plan Coordinator & ongoing financial support to deliver measures / County monitoring fees	Prior to 1st occupation and maintained for a minimum period of 5 yrs.
Distribution of Travel Information Packs around residences throughout the Site	From 1st occupation
Establishment of Community web resource, car sharing & cycle forums and personalised travel planning tools	Prior to 1st occupation
Network of zero emission Car Club vehicles located at key locations throughout the Site	From 1st occupation

Active Travel Measures

8.8 The Site will deliver improved active travel modes access along the western side of the B184 Thaxted Road corridor from the existing northbound bus stop to the existing infrastructure at Peaslands Road. In addition, the Site will deliver improved crossing facilities in the form of a raised table crossing over the B184 Thaxted Road, immediately north of Tiptofts Lane, providing safe access to PROW 18 (Byway) for recreational routes towards Bears Hill and to Knight Park retail park.

8.9 The improved active travel modes access will comprise the construction of a 3.5m wide sealed asphalt surfaced shared footway / cycleway with improved lighting and drainage and will be delivered wholly within the publicly maintainable highway verge. Beyond Peaslands Road, this improved active travel modes access will connect into the existing town centre footway network. These improvement measures are shown on Plan 22078/002 and included as Appendix 4 to the TA.

8.10 In addition, the Site has the potential to deliver formal lit, surfaced shared footway / cycleway links through to the publicly maintainable highway on Peal Road, The Glebe and Tukes Way, across the public open space to the north of the red line boundary. These active travel improvement works can be physically delivered with the consent of UDC, as landowner, or by way of financial contribution to cover the full cost of constructing the links to be carried out by the Council.

8.11 Plan 22078/003 included as Appendix 22 to the TA shows the extent of the potential off-site active travel corridor links across the public open space to the north of the Site.

8.12 These formal lit, surfaced shared footway / cycleway links across the public open space will provide direct access to the local bus stops at Winstanley Road (Tukes Way) and safe routes towards the local shops on Cromwell Road and local schools. It will also provide future residents of the site a more attractive route north towards the town centre on lighter trafficked corridors such as South Road.

Improved Access to Passenger Transport Services

8.13 The two key factors to be taken into consideration in maximising potential public transport patronage from the Site are to:

- Provide competitive journey times to key destinations to present a realistic alternative to private car use.
- Minimise impact on existing public transport users elsewhere on the networks.

8.14 The Site benefits from the proximity of existing bus services that stop on Winstanley Road (Tukes Way). It is also proposed that as part of the off-site highway infrastructure package, new bus stops will be delivered on the B184 Thaxted Road to the north-east of the Site, adjacent and opposite the Lord Butler Leisure Centre.

8.15 To maximise public transport accessibility, the opportunity exists for the Site to deliver safe, direct access routes from the development to these bus stops as well as to provide enhanced infrastructure in terms of passenger waiting facilities, step-free access, seating and Real-Time Passenger Information (RTPI).

8.16 In addition, the applicant is committed to delivering a proportionate financial contribution, subject to the appropriate statutory tests and secured by legal agreement, to enhance the frequency of the services that call at these stops.

8.17 Given the growth in population and potential passenger demand secured through committed development as well as the additional demand generated by development of the Site, the opportunity exists, and a robust financial case can be made, to enhance the coverage and frequency of the Saffron Walden Town Centre service (Route 34) as well as the Saffron Walden – Audley End railway station service (Route 59/590).

8.18 An indicative route map for the enhanced services as well as an illustrative weekday timetable is provided in Figure 13 and Table 8.2 respectively where the intention is to run a service pattern that complements and maintains the viability of other existing inter-urban services in the Saffron Walden area.

8.19 It is envisaged that two Passenger Service Vehicles (PSVs) would be required to operate the illustrative weekday timetable across both routes. It can also be seen from Figure 8 and Table 8.2 that it is assumed the Southern Link Road (SLR) is in place prior to the introduction of the new service patterns albeit the routing could also be adapted to follow the existing street network if the revised service is introduced prior to the completion of the SLR.

8.20 The revised Route 59/590 timings during the weekday AM peak period (05:00-09:00hrs) and PM peak period (16:00-20:00hrs) are designed to encourage rail commuters with the service pattern linked to the train arrivals and departures at Audley End railway station from both the London Liverpool Street and Cambridge directions. In doing so, this delivers a door-door total journey time from the bus stops closest to the Site to London Liverpool Street of 83 minutes and Cambridge 52 minutes.

8.21 The revised Route 34 Saffron Walden Town Centre service would, during weekdays, operate between the AM and PM peak hour periods with both clockwise (Route 34) and anti-clockwise (Route 340) services travelling to / from the Tesco store on Radwinter Road on an hourly frequency in both directions effectively delivering a half-hourly service throughout the day from any location on the route.

8.22 During late evenings it is envisaged that one PSV would be taken off service but still effectively delivering an hourly service from any location on the route.

8.23 On Saturdays, it is envisaged that only the Town Centre service (Route 34/340) would operate and with a minor revision to the route could be delivered by a single PSV whilst maintaining an hourly frequency in both directions effectively delivering a half-hourly service throughout the day from any location on the route. On Saturday evenings and all-day Sundays it is envisaged that the service pattern would be similar to the weekday late evenings.

Figure 13 Indicative Route Map for Enhanced Passenger Transport Services

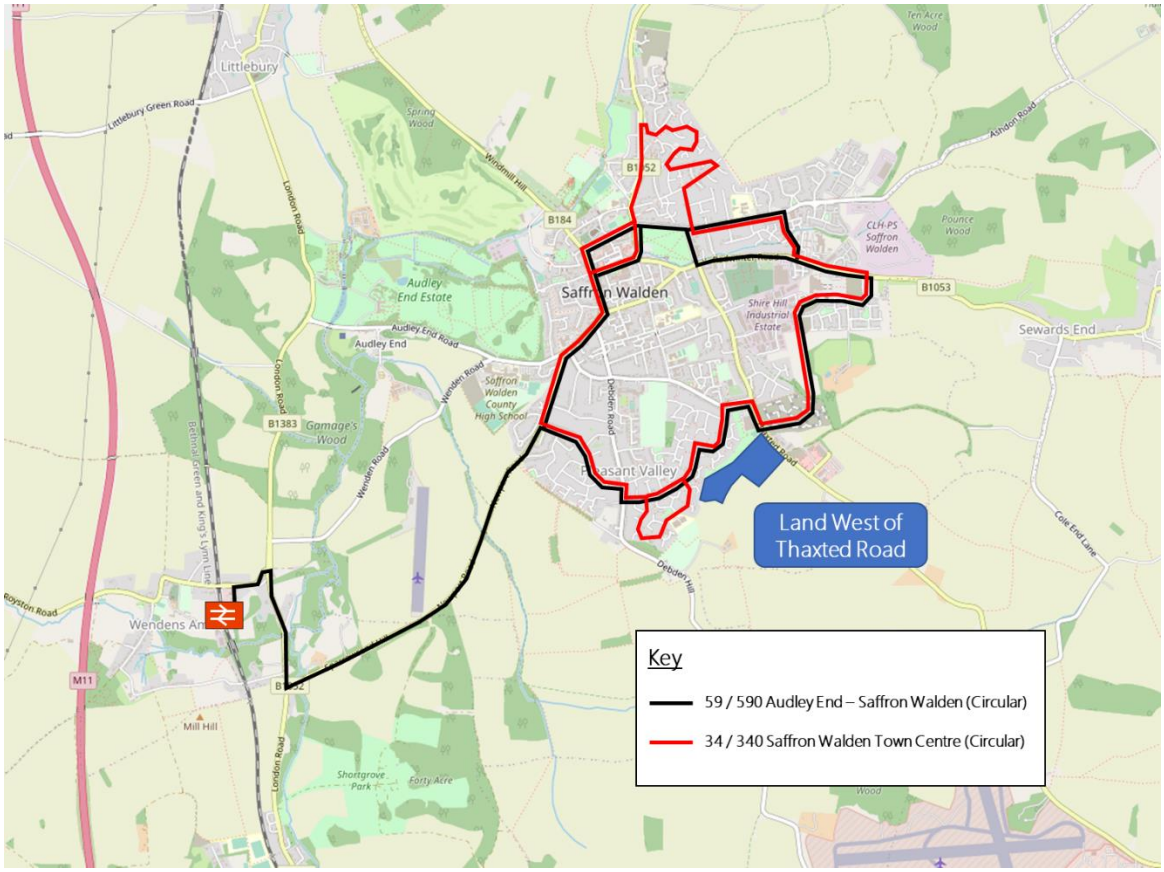


Table 8.2 Illustrative Enhanced Passenger Transport Service Timetable (weekday)

34	Saffron Walden Town Centre Service (Circular)										
Tesco Store	**0840**	**0940**	**1040**	**1140**	**1240**	**1340**	**1440**	**1540**		**2040**	**2240**
Leverett Way (Griffin Place)	0841	0941	1041	1141	1241	1341	1441	1541		2041	2241
Leverett Way (Shire Hill)	0842	0942	1042	1142	1242	1342	1442	1542		2042	2242
Thaxted Road o/s Lord Butler Leisure Centre	**0845**	**0945**	**1045**	**1145**	**1245**	**1345**	**1445**	**1545**		**2045**	**2245**
Winstanley Road Tukes Way (S-bound)	0846	0946	1046	1146	1246	1346	1446	1546		2046	2246
Cromwell Road Shops (W-bound)	0847	0947	1047	1147	1247	1347	1447	1547		2047	2247
Fulfen Way	0848	0948	1048	1148	1248	1348	1448	1548		2048	2248
Council Offices (NE-bound)	0852	0952	1052	1152	1252	1352	1452	1552		2052	2252
High Street (N-bound)	**0854**	**0954**	**1054**	**1154**	**1254**	**1354**	**1454**	**1554**		**2054**	**2254**
Common Hill (N-bound)	0857	0957	1057	1157	1257	1357	1457	1557		2057	2257
Lambert Cross (E-bound)	0859	0959	1059	1159	1259	1359	1459	1559		2059	2259
Goddard Way (S-bound)	0901	1001	1101	1201	1301	1401	1501	1601		2101	2301
Usterdale Road (E-bound)	0903	1003	1103	1203	1303	1403	1503	1603		2103	2303
Highfields (S-bound)	0905	1005	1105	1205	1305	1405	1505	1605		2105	2305
Elizabeth Way (SE-bound)	0909	1009	1109	1209	1309	1409	1509	1609		2109	2309
Tesco Store	**0912**	**1012**	**1112**	**1212**	**1312**	**1412**	**1512**	**1612**		**2112**	**2312**

340	Saffron Walden Town Centre Service (Circular)										
Tesco Store	**0910**	**1010**	**1110**	**1210**	**1310**	**1410**	**1510**	**1610**		**1950**	**2140**	**2320**
Elizabeth Way (NW-bound)	0913	1013	1113	1213	1313	1413	1513	1613		1953	2143	2323
Highfields (N-bound)	0917	1017	1117	1217	1317	1417	1517	1617		1957	2147	2327
Usterdale Road (W-bound)	0919	1019	1119	1219	1319	1419	1519	1619		1959	2149	2329
Goddard Way (N-bound)	0921	1021	1121	1221	1321	1421	1521	1621		2001	2151	2331
Lambert Cross (W-bound)	0923	1023	1123	1223	1323	1423	1523	1623		2003	2153	2333
Church Street (SW-bound)	0925	1025	1125	1225	1325	1425	1525	1625		2005	2155	2335
High Street (S-bound)	**0927**	**1027**	**1127**	**1227**	**1327**	**1427**	**1527**	**1627**		**2007**	**2157**	**2337**
Council Offices (SW-bound)	0928	1028	1128	1228	1328	1428	1528	1628		2008	2158	2338
The Crocus (Rowntree Way)	0932	1032	1132	1232	1332	1432	1532	1632		2012	2202	2342
Ross Close Katherine Semar School	0935	1035	1135	1235	1335	1435	1535	1635		2015	2205	2345
Winstanley Road Tukes Way (N-bound)	0936	1036	1136	1236	1336	1436	1536	1636		2016	2206	2346
Thaxted Road opp Lord Butler Leisure Centre	0937	1037	1137	1237	1337	1437	1537	1637		2017	2207	2347
Leverett Way (Shire Hill)	0940	1040	1140	1240	1340	1440	1540	1640		2020	2210	2350
Leverett Way (Griffin Place)	0941	1041	1141	1241	1341	1441	1541	1641		2021	2211	2351
Tesco Store	0942	1042	1142	1242	1342	1442	1542	1642		2022	2212	2352

59	Audley End - Saffron Walden (Circular)									
(Arr London Liverpool Street)			*0702*	*0804*		*1630*	*1748*	*1849*	*1948*	
(Arr Cambridge)	*0503*	*0610*	*0710*	*0810*		*1640*	*1740*	*1840*	*1940*	
Audley End (o/s Railway Sta.)	**0532**	**0624**	**0721**	**0820**		**1700**	**1800**	**1900**	**2000**	
Sparrowsend Hill (S-bound)				0822		1702	1802	1902	2002	
Council Offices (NE-bound)	0538	0630	0727	0827		1707	1807	1907	2007	
High Street (N-bound)	**0540**	**0632**	**0729**	**0829**		**1709**	**1809**	**1909**	**2009**	
Common Hill (N-bound)	0543	0635	0732	0832		1712	1812	1912	2012	
Elizabeth Way (SE-bound)	0546	0638	0735	0835		1715	1815	1915	2015	
Tesco Store			**0738**	**0838**		**1718**	**1818**	**1918**	**2018**	
			0740		**1642**	**1720**	**1820**	**1920**		
Leverett Way (Griffin Place)	0549	0641	0741		1643	1721	1821	1921		
Leverett Way (Shire Hill)	0550	0642	0742		1644	1722	1822	1922		
Thaxted Road o/s Lord Butler Leisure Centre	**0553**	**0645**	**0745**		**1647**	**1725**	**1825**	**1925**		
Winstanley Road Tukes Way (S-bound)	0554	0646	0746		1648	1726	1826	1926		
Cromwell Road Shops (W-bound)	0555	0647	0747		1649	1727	1827	1927		
Fulfen Way	0556	0648	0748		1650	1728	1828	1928		
Sparrowsend Hill (N-bound)	0602	0654	0754		1656					
Audley End (o/s Railway Sta.)	**0604**	**0656**	**0756**		**1658**	**1736**	**1836**	**1936**		
(Dep London Liverpool Street)	*0610*	*0703*	*0803*		*1710*	*1740*	*1840*	*1940*		
(Dep Cambridge)	*0616*	*0702*	*0804*		*1705*	*1748*	*1849*	*1948*		

590	Audley End - Saffron Walden (Circular)								
(Arr London Liverpool Street)		*0631*	*0745*	*0833*		*1602*	*1726*	*1826*	*1926*
(Arr Cambridge)	*0549*	*0650*	*0740*	*0840*		*1610*	*1710*	*1810*	*1910*
Audley End (o/s Railway Sta.)	**0602**	**0654**	**0752**	**0852**		**1630**	**1730**	**1830**	**1930**
Sparrowsend Hill (S-bound)				0854		1632	1732	1832	1932
The Crocus (Rowntree Way)	0610	0702	0800	0900		1638	1738	1838	1938
Cromwell Road Shops (E-bound)	0611	0703	0801	0901		1639	1739	1839	1939
Winstanley Road Tukes Way (N-bound)	0612	0704	0802	0902		1640	1740	1840	1940
Thaxted Road opp Lord Butler Leisure Centre	**0613**	**0705**	**0803**	**0903**		**1641**	**1741**	**1841**	**1941**
Leverett Way (Shire Hill)	0616	0708	0806	0906		1644	1744	1844	1944
Leverett Way (Griffin Place)	0617	0709	0807	0907		1645	1745	1845	1945
Tesco Store			**0808**	**0908**		**1646**	**1746**	**1846**	**1946**
			0810		**1612**	**1648**	**1748**	**1848**	
Chaters Hill	0621	0713	0813		1615	1651	1751	1851	
Church Street (SW-bound)	0624	0716	0816		1618	1654	1754	1854	
High Street (S-bound)	**0626**	**0718**	**0818**		**1620**	**1656**	**1756**	**1856**	
Council Offices (SW-bound)	0627	0719	0819		1621	1657	1757	1857	
Sparrowsend Hill (N-bound)	0632	0724	0824						
Audley End (o/s Railway Sta.)	**0634**	**0726**	**0826**		**1628**	**1704**	**1804**	**1904**	
(Dep London Liverpool Street)	*0640*	*0733*	*0834*		*1640*	*1710*	*1810*	*1910*	
(Dep Cambridge)		*0741*	*0833*		*1652*	*1726*	*1809*	*1918*	

8.24 The revised bus route will be fully integrated into the wider bus network and will accommodate flexible ticketing options with rail operators. The aspiration is to work with the operators to provide the following:

- High specification vehicles with appropriate branding, climate control, executive seating, DDA wheelchair accessibility, Wi-Fi and USB charging.
- Printed bus network guides for distribution amongst residents.
- Inclusion of services on the operators' UK website.
- Flexible ticketing / multi-journey products with other services on the network, purchased either on-bus or on the operators' website.
- Joint promotion of services with associated rail networks, including PlusBus.
- Customer assistance by telephone, email and postal letter as well as a dedicated disability helpdesk.
- GPS/AVL tracking systems on vehicles to deliver real time passenger information through on-street displays and smartphones.
- ERG smartcard capability on every vehicle for smart ticket products.

Highway Mitigation

8.25 From the results of the highway link capacity and junction capacity analysis included within Section 7 of the TA, impacts arising from the proposed development on the Site are not material and therefore no requirement for any additional off-site highway mitigation has been identified.

9. Summary & Conclusions

Summary

9.1 Milestone Transport Planning (MTP) have been commissioned by Kier Ventures Ltd to prepare a Transport Assessment (TA) in support of an outline planning application for the development of land to the west of Thaxted Road, Saffron Walden (the "Site") for up to 170 residential dwelling units, associated landscaping and open space, with access from the B184 Thaxted Road.

9.2 A key part of the vision for the emerging development proposals is to deliver a new neighbourhood that embraces the principles of healthy living, sustainability with high quality and well-designed public realm.

9.3 The Site is to be a place that connects with the rest of Saffron Walden with pleasant multi-user active travel routes as well as delivering convenient links to the countryside on its doorstep coupled with good public transport links. The layout of the new neighbourhood is designed such that it is more convenient and navigable for people to choose to walk and cycle rather than using the private car.

9.4 The implications of development related travel on the operational and safety characteristics of the surrounding highway and transport networks have been comprehensively considered within the TA.

9.5 The TA has demonstrated that in terms of Planning Policy at both National and Local level and through a deliverable package of interventions including a robust Movement & Access Strategy, Framework Travel Plan as well as a comprehensive package of on and off-site sustainable transport and highway improvement measures, travel demand generated by the Site can be accommodated on the surrounding highways and transport networks up to and beyond the full completion of the proposed development.

Conclusions

9.6 There are a number of day to day facilities within the walkable neighbourhood of the Site including a local primary school, shops and community centre to the north, the Knight Park retail park and recycling centre to the south-east as well as the skatepark and leisure centre to the north-east.

9.7 The Site benefits from its proximity to a number of off-carriageway paths that directly connect to the neighbouring area including publicly maintainable paths to the north and west that connect the Site boundary to Peal Road and The Glebe.

9.8 There is no footway provision currently along the boundary of the Site to the B184 Thaxted Road however on the opposite side of the carriageway there is a shared footway / cycleway. There are footways on both sides of the B184 Thaxted Road north of its junction with Peaslands Road up towards Radwinter Road and the town centre.

9.9 The majority of other residential streets in the local neighbourhood and northwards towards the town centre have footways on both sides of the carriageway. In general, crossing facilities are uncontrolled however controlled crossings are provided in locations where there is significant demand and in areas where there is an interaction with higher traffic demand.

9.10 Dedicated cycle facilities are limited within the immediate area surrounding the Site. In general, traffic speeds on local roads are low enough to accommodate safe cycle movement alongside general traffic within the carriageway.

9.11 The nearest bus stops to the Site are as located at Winstanley Road (Tukes Way) to the north of the Site. The Winstanley Road (Tukes Way) bus stops are served by the Saffron Walden Town Centre service (Route 34) operated by Stephensons of Essex and the Stanstead Airport to Saffron Walden service (Route 316) operated by Central Connect.

9.12 In addition to the above, Routes 59 & 590 provide weekday peak period commuter services between Saffron Walden and Audley End railway station alongside Route 301 that connects Saffron Walden and Bishops Stortford via Audley End railway station. Route 321 provides three return journeys per day, Monday to Saturday, between Audley End railway station and Haverhill via Saffron Walden.

9.13 ECC also operate a demand-responsive bus service, known as Essex DaRT, around the rural villages surrounding Saffron Walden. The DaRT 1 Service serves the villages to the west of Saffron Walden down towards Bishops Stortford. The DaRT 2 Service serves villages to the south-east of Saffron Walden towards Braintree.

9.14 Audley End railway station is located west of the Site. It is managed by Greater Anglia and located on the West Anglia Main Line between London Liverpool Street, Stanstead Airport and Cambridge.

9.15 The Site is provided with an existing field gate access on its eastern boundary to the B184 Thaxted Road that is a single carriageway two-way road, subject to a 40mph speed limit and is lit as it passes the Site. To the north the speed limit changes to 30mph just south of the Peaslands Road mini-roundabout and onwards through Saffron Walden town centre. To the south of the Knight Park retail park, the speed limit reverts to national speed limit (60mph) and the B184 Thaxted Road is more rural in terms of its characteristics.

9.16 In conjunction with the recently consented development to the east of Thaxted Road (LPA Ref. 19/2355) a traffic signal junction with pedestrian / cycle crossing facilities has been constructed immediately north-east of the Site on the B184 Thaxted Road to form a new spine road through the site that will ultimately link through to the B1053 Radwinter Road. For the purposes of this TA, the link road is referred to as the Southern Link Road (SLR.

9.17 Side road junction to Tiptofts Lane and the Knight Park retail park are give-way controlled priority junctions with ghosted right turn lane provision on the main carriageway.

9.18 To the north of the Site, the B184 Thaxted Road / Peaslands Road mini-roundabout that is to be converted to a traffic signal controlled junction in conjunction with the recently consented development on Land South of Radwinter Road (East of Griffin Place) (LPA Ref. 21/2509). Beyond the Peaslands Road junction, the B184 Thaxted Road continues northwards to a traffic signal controlled junction with the B1053 Radwinter Road.

9.19 Within Saffron Walden Town Centre, the B184 continues as East Street, Hill Street, George Street, Audley Road, High Street, Bridge Street and Windmill Hill. Both East Street and Audley Road are one-way street eastbound and westbound respectively. High Street is the main route through the town centre.

9.20 Road safety records supplied by ECC for the section of the B184 Thaxted Road from south of the Knight Park access, along the Site frontage and then stretching northwards to beyond the mini-roundabout junction with Peaslands Road and including Peaslands Road, west to the junction with Winstanley Road shows that there have been only two recorded accidents over the most recent 5-year period.

9.21 The Movement and Access Strategy for the site adopts a hierarchical approach, ensuring that priority is given to more sustainable forms of transport and opportunities to reduce travel demand over motor vehicle access.

9.22 The Movement & Access Strategy is a series of tailored transport solutions to ensure that the future community within the Site are fully accessible but also ensures efficient, reliable and legible travel connections to local amenities and Saffron Walden town centre, encouraging sustainable travel choices and removing physical and psychological barriers to movement.

9.23 The Movement & Access Strategy delivers a package of mitigation that combines hard interventions (infrastructure such as improved footways, cycleways and crossing facilities) and soft interventions (travel planning, promotions and marketing) to achieve meaningful changes in travel behaviour and an ambitious shift in modal share targets.

9.24 Key deliverables of the Movement & Access Strategy are:

- Measures to reduce the need to travel and a broad range of local services and facilities within a walkable and cyclable neighbourhood
- Travel Plan measures and incentives including community website, travel information packs, car sharing promotional strategies
- A comprehensive network of on-site traffic-free segregated multi-user routes connecting key on and off-site land uses, including the delivery of the first phase of the Council's vision for an Orbital Greenway around Saffron Walden
- Cycle parking in accordance with the Essex Parking Standards – Design & Good Practice (2009) guidance for all land uses within the Site
- Integration of Car Club operation within the development
- Inclusion of electric vehicle charging in accordance with the Essex Parking Standards – Design & Good Practice (2009) guidance standards for all land uses within the Site
- Speed attenuation measures on the internal street network

9.25 To supplement the Movement & Access Strategy a comprehensive package of off-site works is proposed, that includes:

- B184 Thaxted Road shared footway / cycleway improvements
- The potential for active travel connections across the public open space to the north of the Site for connections to the local bus stops at Winstanley Road (Tukes Way) and safe routes towards the local shops on Cromwell Road, local schools and Saffron Walden town centre via South Road
- Funding to facilitate improvements to the Saffron Walden town centre bus service as well as enhanced passenger transport connections to Audley End railway station.

- Additional wayfinding on the wider Saffron Walden pedestrian and cycle network

9.26 The proposed arrangements for vehicular access to the Site that is proposed to take the form of a give-way controlled priority junction off the B184 Thaxted Road sited opposite The Kilns and 60 metres (centre to centre) south-east of the recently constructed traffic signals junction serving the development to the east of Thaxted Road (LPA Ref. 19/2355).

9.27 The proposed vehicular access involves widening of the B184 Thaxted Road within publicly maintainable highway land, adjacent to the Site to enable a ghosted right turn lane into the Site to be accommodated as well as maintaining the existing ghosted right turn lane into The Kilns. These works will also require the removal and replacement of the existing traffic island to the north-west of The Kilns.

9.28 'Keep Clear' road markings will be provided across the bell-mouth of the proposed vehicular access to ensure that there is no conflict between traffic turning into and out of the Site and traffic approaching the traffic signals from the south-easterly direction on the B184 Thaxted Road.

9.29 Visibility splays of 4.5m x 90m will be accommodated in both directions along the B184 Thaxted Road on both sides of the proposed vehicular access. These will be maintained clear of obstruction with planting maintained at a maximum height of 600mm within the new verge areas and shared footway / cycleway on the south-western side of the main carriageway.

9.30 A raised table crossing is also proposed on the B184 Thaxted Road, 115 metres (centre to centre) south-east of the proposed vehicular access that provides an informal crossing connecting the proposed Orbital Greenway route to the existing PROW18 (Byway) that extends along Tiptofts Lane. The existing refuge islands on the B184 Thaxted Road in proximity to the location of the proposed raised table crossing will be removed as part of these works.

9.31 The EDG (2018) is a key reference in the strategy for the internal street network and hierarchy within the Site. Internal streets are corridors that not only provide a permeable, legible circulation pattern but also have important functions beyond just the movement of traffic, i.e., multi-functional spaces with a much higher 'place' function that are integrated with their surroundings and where pedestrians and cyclists are afforded the same, if not greater, priority than vehicular traffic. The target maximum speed will be on the internal street network will be 20mph.

9.32 Junction design within the internal street network will fit in the space between buildings / features. Dimensions will be determined by the need to prioritise direct pedestrian desire lines and parameters are set by the use of swept path analysis.

9.33 The internal street network will be designed to incorporate natural speed attenuation that will also include changes to surface treatment at features such as squares, gateways, junctions, crossings and interfaces with key public open spaces to create focal points and promote legibility.

9.34 Parking provision within the Site will adopt the Essex Parking Standards – Design & Good Practice (2009) guidance for Use Class C3: dwelling houses combined with local UDC parking standards for dwellings with 4+ bedrooms

9.35 A key objective of the development on the Site will be to deliver liveable streets that are not overly dominated by parked cars. Where on-street parking is provided, changes in surface material will be considered to provide definition and continuous lengths or no more than 5 spaces will be provided before being broken up by landscape / street furniture features.

9.36 Car Club bays will also be integrated into the on-street visitor parking and will be evenly distributed throughout the Site.

9.37 Electric vehicle charging points (EVCPs) will be located in easily accessible locations within the Site to ensure that future demand is accommodated. For dwellings with garages and/or dedicated off-street parking, each new dwelling should be fitted with a standard (3-7kW) ChargePoint. For dwellings with no off-street parking, 10% of the unallocated parking bays will have an active (i.e., wired and ready to use) ChargePoint. A further 10% will have the necessary underlying infrastructure (i.e., cabling and ducting) to enable quick, simple installation at a later date when there is sufficient demand.

9.38 Each of the dwelling houses within the Site will be provided with individual, screened hard standing areas for the storing of refuse / recycling receptacles. Any flatted element will be provided with a centrally located secure bin store for residents to dispose of refuse / recycling.

9.39 Streets will be designed to ensure that refuse collection vehicles (RCVs) can enter, manoeuvre and then exit in a forward gear. Refuse collection points will be located no more than 25m from the adopted public highway and no more than 30m from the furthest dwelling. Where communal bin storage receptacles are provided, these will be located no more than 10 metres from the edge of the adopted public highway.

9.40 Fire tenders will be able to reach within 45m of the furthest part of the ground floor of the furthest building.

9.41 To determine the trip generational characteristics of the emerging development on the Ste, the TRICS (v7.9.2) database sub-category 'Houses Privately Owned' has been used.

9.42 To determine the potential mode split of person trips generated by the proposed development on the Site, reference has been made to the 2011 Census Origin / Destination data, specifically for the Uttlesford 002 MSOA (Middle Super Output Area). In agreement with ECC, the vehicle driver proportion has been increased to account for a proportion of rail commuters driving to / from the station.

9.43 For the purposes of assessing the future operational characteristics of the surrounding highway network, no adjustment has been made to the vehicle driver mode split to reflect Travel Plan targets.

9.44 The distribution of vehicle driver trips generated by the proposed development is based on the 2011 Census O-D data for Uttlesford 002 MSOA on the Site. The routing assignment has been based on peak hour journey times and distances and where similar times and / or distances for multiple routes are available for a destination this has been assigned accordingly to reflect driver choice.

9.45 Based on the trip generational and distributional exercises, the proposed development adds no more than 35 two-way trips in the AM peak and 27 two-way trips in the PM peak on the B184 corridor through Saffron Walden town centre. This is equivalent to no more than one vehicle movement every two minutes, even without any effect of mode shift generated through the implementation of Travel Plan measures.

9.46 Once the SLR is completed between the B184 Thaxted Road and the B1053 Radwinter Road, the impact of development on the Site is further lessened at the current traffic signal controlled junction between these two roads.

9.47 The assessment of impacts arising from development-related vehicular trips on the capacity, safety and operational characteristics of the surrounding highway network uses baseline data taken from the Saffron Walden VISUM Model (SWVM) supplemented by classified turning counts commissioned by the applicant as well as traffic data contained within consented development submission where the SWVM does not cover highway links / junctions within the study area.

9.48 Committed developments taken account of within the assessment of impacts include:

- UTT/16/2210/OP - Land East of Little Walden Road (85 Dwellings)
- UTT/17/2832/OP - North of Shire Hill Farm (100 Units)
- UTT/18/0824/OP - East of Thaxted Road (150 Units)
- UTT/21/2509/OP - South of Radwinter Road (East of Griffin Place) (233 Dwellings)
- UTT/19/1744 - Friends School (<100 Dwellings)

9.49 Any smaller developments which did not provide traffic flows as part of their submitted material will be accounted for within the TEMPro growth rates.

9.50 A future year of 2027 is adopted in the assessment of impacts and appropriate adjusted TEMPRO growth rates have been applied to baseline survey data to reflect future 'base' operational conditions, taking account of the consented and committed developments.

9.51 The assessment of impacts compares future forecast year 2027 'Base+ Committed' (or 'Do Minimum' (DM)) and 2027 'Base + Committed + Development' (or 'Do Something' or (DS)) traffic conditions on the highway network within the vicinity of the Site. This analysis is undertaken on the basis of the existing network without the SLR and the future network with the SLR.

9.52 In the context of all the highway links within the study area under consideration, it is generally regarded that daily changes in vehicle numbers can fluctuate by as much as 10% on any given highway link.

9.53 The greatest increase in two-way flows on highway links in the vicinity of the Site are concentrated on the B184 Thaxted Road (north of the Site) and Peaslands Road / Mount Pleasant Road / Borough Lane (to the north-west of the Site). Based on 2027 weekday AM and PM peak hourly DS traffic conditions:

- The B184 Thaxted Road will operate at less than 53% of its highway link capacity
- Peaslands Road will operate at less than 53% of its highway link capacity
- Mount Pleasant Road will operate at less than 59% of its highway link capacity
- Borough Lane will continue to operate at less than 30% of its highway link capacity.

9.54 In the context of paragraph 111 of the NPPF, the cumulative impact of the proposed development on the Site on highway link operational characteristics is not severe.

9.55 In assessing junction capacity, only those junctions that will experience an increase in traffic flows of more than 2% and / or 30 two-way trips during either the AM and PM peak hourly periods have been assessed. These thresholds for assessment were agreed between the applicant's transport consultants on the recently consented Land South of Radwinter Road (East of Griffin Place) application (LPA Ref. 21/2509/OP).

9.56 From the results of the junction capacity analysis for the 2027 AM and PM peak hourly periods under DM and DS traffic conditions, the following is noted:

- The proposed site access junction onto the B184 Thaxted Road operates well within capacity under both scenarios of 'No SLR' and 'With SLR'. Queue lengths and delays during both the weekday AM and PM peak hours are also insignificant.
- The B184 Thaxted Road / Bellway site access will continue to operate within capacity with minimal queues and delays, both in the 'No SLR' and 'With SLR' scenarios. The impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is minimal.
- The proposed development has an insignificant impact on the operation of the B184 Thaxted Road / Peaslands Road in both 'No SLR' and 'With SLR' scenarios. This conclusion is the same for both the current configuration as a mini-roundabout junction as well as its future configuration based on the consented traffic signals scheme.
- The B184 Thaxted Road / B1053 Radwinter Road operates at or over capacity under the 'No SLR' scenario, even with no development traffic added. With the addition of development-related traffic, there is a further reduction in capacity with associated increases in queues and delays.
  - Once the SLR is completed, the capacity of the B184 Thaxted Road / B1053 Radwinter Road substantially improves with an associated significant reduction in queues and delays in both weekday AM and PM peak hourly periods, both with and without development traffic added.
  - Any impacts arising from the proposed development on the operation of the B184 Thaxted Road / B1053 Radwinter Road are short lived and are fully mitigated by the SLR.
- The proposed development will have no impact on the operation of the B184 East Street / Audley End Road give-way controlled priority junction that will continue to operate within capacity with minimal queues and delays, both in the 'No SLR' and 'With SLR' scenarios.
- The B184 High Street / George Street / Abbey Lane operates well above capacity with substantial queues and delays on both High Street approaches, both in the 'No SLR' and 'With SLR' scenarios. The impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is not significant.
- Both the B1052 London Road / Borough Lane mini-roundabout and B1052 London Road / Newport Road / Audley End Road mini-roundabout operate close to capacity, both in the 'No SLR' and 'With SLR' scenarios. The additional traffic generated by the proposed development has only a minimal impact on the operation of both junctions with only minor increases in queues and delays.
- The Debden Road / Mount Pleasant Road / Borough Lane traffic signal controlled junction will continue to operate within capacity with minimal queues and delays, both in the 'No SLR' and 'With SLR' scenarios. It can also be seen that the impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is minimal.

Overall Conclusion

9.57 Based on the findings within this Transport Assessment and in the context of the guidelines within para. 111 of the NPPF, it is considered that there are no residual cumulative impacts in terms of highway safety or the operational capacity of the surrounding road network and therefore planning permission should not be withheld on transport grounds.

Appendix 1

HIGHWAYS PRE-APP CONSULTATION
NAME: Land West of Thaxted Road
SITE NUMBER: TBC
DATE: 19/07/2022

1. General

The proposal is for 180 dwelling situated accessed off Thaxted Road. This road is PR1 on the Essex network and subject to a 40mph speed limit at this point.

Saffron Walden is sensitive to traffic and significant works and sustainable travel mitigation would be required to with any development in this area. Including sustainable transport measures and physical highway measure. Consultation with UDC should include discussions on this.

2. Transport Assessment

i. A Transport Assessment conforming to the current guidance should accompany the planning application.

ii. Growth
The approach to growth is acceptable, alternative assumptions in TEMPRO should be used to avoid double counting with committed development.

iii. Trip Generation
TRICS is an acceptable way to forecast trip generation, populations of over 100,00 within 5 miles should be excluded.
A comparison of the car trips in TRICS and what is generated using model split based on census journey to work data should be made.
Pubic transport should be divided between bus and train as trips to the station are likely to be by car.

iv. Distribution
The distribution shows quite a high percentage using Audley End Road to access south Cambs – can you provide some more information on this?
Please provide information on distribution on a map with times and distances to make it easier to check.

v. Committed Development
The committed development is appropriate. Please also add the Lidel site on Radwinter Road.

vi. Junctions to be assessed
Saffron Walden is subject to congestion at peak times a small change can have a big impact. Please include junctions in the town centre for example, but not limited to, HighStreet/ George Street, Ashdon Road or justify reasons for not assessing them through information on impact of traffic.

3. Access

The access to the site is proposed to be via signalised junction. Please provide information on why this is proposed as it is a big scheme for a relatively small development.

The following information should be provided in the TA.

i. Visibility
ii. Dimensions
iii. Tracking
iv. Sustainable Access
v. Safety Audit

4. Accessibility

i. Mitigation for the impact of the development should be considered including links and improvements to the sustainable transport network, for walking, cycling and buses to ensure accessibility and sustainability.
ii. Pedestrian and cycling links into the neighbouring developments are essential.
iii. A residential travel plan for a development will be required to maximise the use of sustainable infrastructure provided to mitigate the development.
iv. Contributions to the electric car club that is being developed in Saffron Walden would be expected as part of the travel plan measures
v. Contributions to the bus network in Saffron Walden would be expected
vi. Electric charging points should be considered in line with the UDC Draft Local Plan and NPPF.
vii. Please consult the Uttlesford Cycle Action Plan [redacted]

5. Other

- Current accident data can be obtained from: [redacted]

- Highway Boundary Information. Please contact [redacted] who process the requests.

- General information on highways planning issues can be found at [redacted]

- Information on s106 contributions towards funding highways and transport mitigations can be found in the Essex County Council Developer's Guide to Infrastructure Contributions, Revised 2020:

[redacted]

- [redacted]

- Development and Public Rights of Way - [redacted]

If your proposal requires a Road Safety Audit – you may want consider using Essex Highways as they will carrying out the later audits in the process and so there will be continuity. They can be contacted at[redacted]

Do not hesitate to contact me if you wish to discuss anything further.

Please note the following:
The content of this communication is based on information supplied at the time of the enquiry and is not a formal response to a planning application. Please be aware that it may not reflect the contents of any formal reply made by the Highway Authority in response to an official consultation from the LPA on a planning application submitted for a proposal containing more detailed information and following comprehensive internal consultation with appropriate departments of Essex Highways; particularly if in the opinion of the Highway Authority highway safety, efficiency and accessibility standards cannot be achieved.

Appendix 2

Colour-coding by SEVERITY
Total Accidents (2)

Severity	Count
Fatal	(0)
Serious	(1)
Slight	(1)

Total Casualties (2)

Fatal	(0)
Serious	(1)
Slight	(1)

Selected Range of Accidents between dates 01/07/2017 and 30/06/2022
Selected using Manual Selection

Essex Highways

DRAWING TITLE

2034 Matt Stevens

SCALE	1 : 5430
DATE	01/09/2022
DRAWING No.	
DRAWN BY	

Accidents between dates **01/07/2017** **and** **30/06/2022** (60) months

Selection: **Notes:**

Selected using Manual Selection

18344754 17/11/2018 Time 1200 Vehicles 2 Casualties 1 Serious
E: 554825 N: 237430 First Road: B 184 Road Type Single carriageway
Speed limit: 40 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Junction overshoot	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

V1 WAS PART OF A PLANNED RIDE, HE HAS FAILED TO ANTICIPATE THE GROUP TURNING RIGHT AND TAKEN ACTION TO AVOID HITTING ANYONE ELSE. INSTEAD HE HAS CLIPPED MOTORCYCLE 2 BEFORE FAILING TO THE GROUND.

Occurred on THAXTED ROAD B184 NEAR JN WITH TIPTOFTS LANE

Vehicle Reference 1 Motor Cycle over 125 cc and up to 500cc Turning right
Vehicle movement from S to N No tow / articulation
On main carriageway Skidded
Location at impact Jct Approach First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 50 Male Driver/rider Severity: Serious
Postcode Seatbelt

Vehicle Reference 2 Motor Cycle over 125 cc and up to 500cc Turning right
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 49 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2017** **and** **30/06/2022** (60) months

Selection: **Notes:**

Selected using Manual Selection

211021576 10/02/2021 Time 1325 Vehicles 2 Casualties 1 Slight
E: 555076 N: 237228 First Road: U Road Type Single carriageway
Speed limit: 20 Junction Detail: T & Stag Jct Give way or controlled B 184
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

I WAS LEAVING ALDI CAR PARK AND INDICATING TO TURN RIGHT ONTO THE THAXTED ROAD TOWARDS SAFFRON WALDEN. THERE WAS A HONDA IN FRONT OF ME ALSO TURNING RIGHT A CAR TO THE LEFT OF ME TUNRING LEFT AND A CAR BEHIND ME. SUDDENLY THE CAR IN FRONT ROLLED BA CK AND HIT THE FRONT ON MY CAR. AS HE HIT MY CAR I SAW HIM PULL ON THE HAND BRAKE. MY HEAD JOLTED BACK ON IMPACT. BOTH THE MALE DRIVER OF THE OTHER CAR AND MYSELF GOT OUT OF OUR CARS. THE MAN THEN STARTED SHOUTING AT ME SAYING I HIT HIS BLOODY CAR
ND I WAS A STUPID BLOODY WOMAN DRIVER, TO WHICH I REPLIED TO STOP ABUSING ME AND THAT IT WAS IN FACT HIM THAT HAD ROLLED INTO ME. TWO WOMEN IN THE CAR THAT WAS TURNING LEFT GOT OUT OF THERE CAR AND SAID THEY HAD SEEN HIM ROLL INTO ME. AT THIS POINT

Occurred on UNCLASSIFIED ROAD NEAR JUNCTION WITH THAXTED ROAD (B184)

Vehicle Reference 1 Car Reversing
Vehicle movement from NE to SW No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 86 Male
Hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
Vehicle movement from NE to SW No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 62 Female
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 62 Female Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2017** **and** **30/06/2022** (60) months

Selection:

Selected using Manual Selection

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	1	1
2-wheeled motor vehicles	0	1	0	1
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	1	1	2

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	1	1
Passenger	0	0	0	0
Motorcycle rider	0	1	0	1
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	1	1	2

Appendix 3


N
0m 20m 40m 60m 80m 100m
Scale
KIER
Client: Kier Group
Drawing Title: Sketch Scheme
Project: Land West of Thaxted Road, Saffron Walden
Scale: 1:500 @ A0
Revision A
Drawn --
Check --
Date --.--.--
Omega Architects
The Front Barn, 124 Manor Road North, Thames Ditton Surrey, KT7 0BH
T: 01372 470 313 W: www.omega-architects.co.uk
Project No' 3118
Class C
Dwg No' 1005
Status SK
Rev G
CLASS: C - COLOURED, A - BLACK & WHITE
STATUS: SK - SKETCH, PR - PRELIMINARY, PL - PLANNING, WD - WORKING DRAWING

Appendix 4

INDICATIVE

Proposed 3.5m sealed surface footway / cycleway extended to Peaslands Road

See inset

Existing traffic island to be removed

New traffic island

Informal recreational path using existing field gates

Existing refuge island to be removed

Tie into existing footway / cycleway

Existing Byway 18 Tiptoffs Lane - Beer Hall

Proposed table crossing for Orbital Greenway

Equestrian crossing holding area

Proposed section of Saffron Walden Orbital Greenway

Proposed 3.5m sealed surface footway / cycleway extended to Northbound Bus Stop

Existing Northbound Bus Stop

THAXTED ROAD

25m 20 15 10 5 0 10 20 30m

SCALE IN METRES
1:500

Notes

1. Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.
2. This drawing has been based upon topographical survey information produced by CD Surveys Ltd and Milestone Transport Planning cannot be held responsible for any discrepancies which may arise because of it.

Key

- Carriageway
- Footway
- Cycleway
- Multi-User Route
- Verge
- Visibility Splay 4.5m x 90m

Ordnance Survey Licence number: 100057360

Drawing Revisions

Rev:	Drn:	Date:	Details:	Chk:
-	DC	18/11/2022	First issue	MS

Client

Kier Ventures Limited

Project

Land of Thaxted Road, Saffron Walden

Title

Site Access Arrangments

MILESTONE TRANSPORT PLANNING
Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
Tel: 01483 39788
Gateshead IBC, M[redacted]

Drawing Number: 22078/002

Scale: 1:500 @ A1

Revision: -