



**Highways and Transportation**

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**Our Ref:** LRG/LHG/AJC/1

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**Application - TW/23/00086/HYBRID**

**Location - Land West Of Mile Oak Road, Paddock Wood,  
Tonbridge, Kent, TN12 6NP**

**Proposal - HYBRID Application: Full Application for erection of 160 homes. Outline Application (appearance, landscaping, layout and scale reserved) for the erection of up to 400 additional homes, inclusive of associated infrastructure including land for specialist accommodation for the elderly, land for secondary school expansion, a local centre, play areas, network of new roads (and widening of existing roads), surface water drainage features, car and cycle parking and open space and associated works**

Thank you for your consultation in relation to the above planning application. I have the following comments to make with respect to highway matters :-

**1. Introduction**

1..1 A joint Transport Assessment (TA) has been submitted for the following applications:

1. 'The Redrow Development' - Full planning application for erection of 170 homes and Waste Water Treatment Works together with temporary construction / haul road off Queen Street to enable the delivery of the Waste Water Treatment Works and up to 150 of the 170 dwellings; and outline planning application (appearance, landscaping, layout and scale reserved) for the erection of up to 430 additional homes, inclusive of associated infrastructure including land for a new primary school, play areas, allotments, network of new roads (and widening of existing roads), surface water drainage features, car and cycle parking and open space and associated works
2. 'The Persimmon Development' - Full planning application for erection of 160 homes and outline planning application (appearance, landscaping, layout and scale reserved) for the erection of up to 400 additional homes, inclusive of associated infrastructure including land for specialist accommodation for the elderly, expansion of the secondary school, a local centre, play areas, network of new roads (and widening of existing roads), surface water drainage features, car and cycle parking and open space and associated works

3. 'The Bus Link Application' - Full planning application for construction of bus, pedestrian, and cycle link between the land at Church Farm and land at Knells Farm, together with associated works.

The Transport Assessment assesses the cumulative impacts of the developments and this had been reviewed and the following comments are provided:.

## **2. Submission Local Plan**

- 2..1 The sites sit in the Eastern Parcel of the Masterplan Areas for STR/SS 1 Paddock Wood and East Capel Strategic Policy of the Submission Local Plan.

## **3. The Redrow Development - 23/00118/HYBRID**

- 3..1 The Redrow Development forms the northern part of the Masterplan for the current applications and sits east of the Church Farm Development.
- 3..2 For the outline application area of 430 homes, matters of appearance, landscaping, layout and scale are reserved except means of access.
- 3..3 The area of the full application for 170 homes is located at the southernmost section of The Redrow Development and forms Phase 1 (full application) of the Redrow Development – 'RP1'. As shown on the Phase 1 - Site Layout Plan, the site access to RP1 is taken from The Persimmon Development, via an in-site 'Boulevard'.
- 3..4 The full application also includes the delivery of the Waste Water Treatment Works, located at the northern terminus of the Boulevard.
- 3..5 The remaining 430 homes that form the outline element of the Redrow application are also to be accessed through the Persimmon Development, via the main Boulevard.

### Access Strategy within site

- 3..6 A Highway Design Code had been developed for both the Redrow and the Persimmon sites, pre-application with consultation with the KCC agreements team. This outlined the requirements and typical features for each type of road hierarchy:
  - The 'Boulevard' is the Primary Route within site and is proposed to be adopted:
    - 30mph maximum speed (20mph in vicinity of schools/play areas)
    - 6.75m carriageway width
    - Two-way cycleway of 3m width. Segregation of 2m verge from carriageway provided.

- o Footway on each side of 2m width
  - o Maximum distance between speed constraints – 150m
- Secondary Routes ‘Streets’ are proposed within site and link to and from the Boulevard.
  - o 20mph maximum speed
  - o 5.5m carriageway width (if non-bus route)
  - o Cycles to utilise carriageway
  - o Footway on both sides
  - o Direct access frontage
  - o Maximum distance between speed constraints – 100m
- Tertiary routes ‘Lanes’
  - o 20mph maximum speed
  - o 4.8m carriageway width
  - o Cycles to utilise carriageway
  - o Footway on at least one side of 2m width
  - o Direct access frontage
  - o Maximum distance between speed constraints – 60m
- Shared surfaces
  - o 10mph maximum speed
  - o Maximum distance between speed constraints – 40m

3..7 The site plan drawing 09268-FPCR-N1-XX-DR-A-0001, shows 2m wide footways and a segregated 3m cycleway (two-way) set-back at least 2m from the primary Boulevard route. This in accordance with the above principles. A road safety audit (RSA1) is required of the proposed set-back cycle priority over the side roads.

3..8 Where there is a shared surface area in site, a 1m verge service strip needs to be provided. In addition, any of the shared surface of 4.1m or less is not suitable for a HGV or an 11.4m refuse vehicle.

3..9 The refuse servicing and delivery strategy for the full application site is required, identifying proposed collection locations and with tracking of these vehicles across the site in accordance to the intended routing. Additionally swept paths are required to evidence tracking and turning of refuse, delivery and emergency vehicles. It is noted that plans 19216-TK01, 02, 03 & 04 are missing from submission, please arrange for these to be provided.

- 3..10 The TA further states “in general, the maximum desirable longitudinal gradient on the footway / cycleway network, including Greenways, within the site will be 2.0% (1:50). Where natural changes in level are unavoidable, short sections of no less than 30m in length may be constructed at 5.0% (1:20). Where these exist, flat platforms of at least 5.0m in length will be provided.” This would meet design requirements for the mobility impaired as per Kent Design Guide. Confirmation is needed that the footways within site are to be DDA compliant.
- 3..11 It is also noted that “the principal access corridors for pedestrians and cyclists will be lit” and consultation should take place with the KCC Street Lighting team and this can be done through the Outline Technical Review process:  
<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>
- 3..12 Raised tables on the Boulevard have been incorporated to the full application Site Layout Plan. These have been provided within the appropriate maximum distance between speed constraints. At this site, it is further noted that there is a bend in the alignment of the Boulevard. The forward visibility at this bend in each direction needs to be provided.
- 3..13 The Site Layout Plan shows a significant number of dwellings with direct access to the primary distributor route, with a number of those being tandem parking. This will lead to parking and turning along the distributor road, interfering with the passage of the buses. It is recommended that the number of properties with direct accesses kept to a minimum.
- 3..14 Where trees are proposed along the distributor route evidence of visibility splays from the accesses are required. In addition, the TA states “Inter-visibility splays of 2m x 2m will be provided at crossovers, path junctions to maintain pedestrian safety” – These pedestrian visibility splays need to be provided at all vehicular accesses and maintained to 0.6m in height.
- 3..15 The Waste Water Treatment Works is to be located at the northern terminus of the Boulevard. Please confirm the largest vehicle requiring access to this facility and provide tracking showing the vehicle is able to access the site, turn and leave in a forward gear.

The development to the north of the proposed Church Road access is to serve a total of 760 homes plus a Waste Water Treatment Works and a primary school. Kent Design Guide requires a second access for this scale of development.

- 3..16 The layout of the full application sites will be subject to consultation with KCC Agreement’s team and this can be done through the Outline Technical Review process:  
<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>

## Visibility Splays

- 3..17 For junctions within the full application sites, The TA notes – “the local street network is designed to incorporate natural speed attenuation based on a target maximum speed of 20mph on the Boulevard and 15mph on side roads.”
- 3..18 The visibility splays from the side roads off the main Boulevard have been provided on the Phase 1 Site Layout drawings. Despite the drawn splays corresponding to a 20mph design speed, it is noted that the Highway Design Code outlined in Appendix 9 sets out aspirations for the Boulevard to have a maximum speed of 30mph. The TA also sets out for the Boulevard to have a design speed of 30mph. Therefore, this discrepancy in information needs to be confirmed such that the visibility splays in the full application site can be fully assessed.
- 3..19 The developer should ensure that there is adequate traffic calming or road alignment considered to limit speeds to the design speed.

## **4. The Persimmon Development - 23/00086/HYBRID**

- 4..1 The Persimmon Development forms the southern part of the Masterplan for the current applications and sits east of the Mascalls Court Farm Development.

### Church Road Vehicular Access – Phase 1

- 4..2 The area of the full application for 160 homes on the Persimmon site, Phase 1 (PP1), is located to the north of Church Road with access proposed via a new priority junction with right turn lane as shown on Drawing Number 19216-GA-00 .and outlined in figure 5 of the TA. A RSA1 is required, tracking and submission through the KCC Outline Technical Review process.
- 4..3 During Phase 1 this junction would serve the full application parts of both developments (160 homes + 170 homes) and the Waste Water Treatment Works. In line with Kent Design development over 300 homes require a second access and this should be addressed.
- 4..4 Visibility Splays at the new junction onto Church Road from the Phase 1 development are shown on Drawing Number 19216-GA-00 comprising of 2.4m x 78m to the west and 2.4m x 79m to the east. For the measured 85<sup>th</sup> %ile speed of traffic at this location, these splays are appropriate, however, the drawing does need a scale bar so that the dimensions can be fully checked.

### Church Road Vehicular Access – Full Development

- 4..5 For full development of both the Redrow and Persimmon sites, the access arrangement from Church Road is proposed to be formed as a staggered crossroad as shown on Drawing number 19216-GA-003. This is outlined in figure 6 of the TA. Tracking diagrams, RSA1, visibility splays based on the 85%ile dry weather speeds and calculated using MfS and submission through the KCC Outline Technical Review process.
- 4..6 It is noted from the TA – *“for the buildout of the detailed elements of the planning application proposals, the junction onto Church Road will be first formed with its northern arm only, with the ability for the junction to be adapted to serve the wider development when it is brought forward.”*
- 4..7 Paras 3.52 and 3.53 of the TA indicate proposals to extend the 30mph speed limit past the new junction on Church Road and drawings are required of the extent of the speed limit with signing, road marking and gateway features shown.
- 4..8 Access to the outline elements of the Persimmon site is to be taken from the south side of Church Road with a distributor road connecting with Mascalls Court Road. The Design and Access Statement notes – *“Vehicular access around the site includes a main north/south boulevard through the site providing access to secondary roads. The boulevard will support bus movement and be provided with tree-planted verges to segregate pedestrian and cycle infrastructure.”* Para 3.69 indicates the distributor road to the development sites south of Church Road is to be 5.5m wide and this is not sufficient for a bus route which requires a width of 6.75m.
- 4..9 To the south of Church Road the distributor road serves 175 homes and also links to Mascalls Court Road from which a further new access is also proposed to serve 70 homes and a separate emergency access is required. Access to parcel PP4 is proposed via Mascalls Court Lane and this would serve 156 homes which would also require a separate emergency access.
- 4..10 Drawing numbers 19216-TK01 Phase 1 Site Access Swept Path Analysis, 19216-TK02 Full Development Site Access Swept Path Analysis (Refuse Vehicle), 19216-TK03 Full Development Site Access Swept Path Analysis (Bus), 19216-TK04 Bus Crossing Swept Path Analysis are listed in the contents page as being included in the plans but are missing. Please could these be provided along with 19216-GA-07 and 19216-GA-01-07 for highway general arrangement which are referred to but not included with the plans or the appendices.
- 4..11 An extension to the secondary school is shown and further detail of access arrangements is required.

4..12 Visibility Splays at the site accesses from Church Road for both the Phase 1 layout, and the staggered crossroads layout for the full development, require visibility splays based on the 85%ile dry weather speeds and calculated using MfS.

#### Southern Section – Points of Access

4..13 Drawings are provided showing the proposed junction layouts for the full development site and the realignment of Mascalls Court Farm. Comments are as follows:

- Junction 1. Drawing Number 19216/GA/02B shows the junction of the proposed new distributor road with Mascalls Court Road and proposes a priority junction with priority given to the new distributor road. Tracking diagrams and a RSA1 are required. Visibility splays should be based on the 85%ile dry weather speeds along Mascalls Court Road. The proposed junction provides no deflection for vehicles travelling ahead from Mascalls Court Road and may lead to collisions due to failure to give way. Where the pedestrian and cycle crossing is proposed on Mascalls Court Road, visibility splays should be shown reflecting the stopping distance for the 85%ile speed of traffic.
- Junction 2. A width of 6.75m is required to allow for a bus service. A development of c. 100 homes requires a separate emergency access.
- Junction 3. Drawing number 19216/GA/01B shows a change of priority at the junction of Mascalls Court Road/Mascalls Court Lane together with a realignment of the carriageway. Visibility splays, tracking and RSA1 are required for this drawing and also submission through the outline technical review process. The proposals for the realignment of Mascalls Court Road will include a stopping up Order of the existing highway and the applicant will be required to process this through the Town and Country Planning Act.
- Junction 4. A new junction is proposed from Mascalls Court Lane to serve c 150 homes. Visibility splays should be informed by speed surveys in accordance with CA185. Again, tracking and RSA1 are needed together with an emergency access.
- Junction 5. A new junction to serve existing properties from the realigned Mascalls Court Road. The access should be widened at its junction with Mascalls Court Road to allow a vehicle to enter the access when another is leaving. Visibility splays should be informed by speed surveys in accordance with CA185. Again, tracking and RSA1 are required. Please clarify whether this access replaces the existing access to Mascalls Court Farm and if it is to include access to the farm. The access should be designed to accommodate the largest vehicle requiring access and turning provision suitable for the refuse vehicle as a minimum.

- Junction 6. A new junction is proposed from Mascalls Court Road to serve 32 homes. Visibility splays should be informed by speed surveys in accordance with CA185. Again, tracking and RSA1 are required.

4..14 Additional plans are also needed showing tracking and visibility splays for the junctions of:

- o Church Road/Queen Street
- o Mile Oak Road/Mascalls Court Road
- o Mile Oak Road/Mascalls Court Lane
- o Chantlers Hill with the B2160
- o All other locations identified on the Masterplan with 'C' Proposed Vehicle Access Points

#### Access Strategy within site

4..15 The site layout for the Persimmon full application site is provided on Drawing Number 09268-FPCR-N1-XX-DR-A-0001. The design principles are the same as for the Redrow site and include 2m wide footways and a segregated 3m cycleway (two-way) set-back at least 2m from the primary Boulevard route. A road safety audit is required of the proposed set-back cycle priority over the side roads. The comments made regarding the Redrow site layout also apply to the Persimmon site layout.

#### Connections to and from outside of development sites

4..16 Further detail is required to demonstrate the connectivity of the footways and cycleways between the sites to the Town Centre, schools and train station. Additionally, in consultation with the KCC PRoW tea, further detail on how the PRoWs link safely with existing routes and where improvements can be made to allow use by cyclists.

### **5. Temporary Construction Access from Queen Street**

5..1 The construction access to phase 1 is proposed via Queen Street. A width of 5m is proposed and this is insufficient for 2 HGV's to pass which could lead to vehicles waiting on Queen Street to manoeuvre into the site access. Additionally, the width of Queen Street is insufficient for 2 HGVs to pass and this is apparent from the swept path diagrams shown on Drawing number 19216/CA/01. The arrangements for the construction traffic should be amended to allow for vehicles to pass safely at the site access and along the construction route. Further details of the construction phases are required including the route to be taken by construction vehicles towards the strategic road network, the number of traffic movements generated, the duration of the construction period for each phase and this information included in a Construction Management Plan.



5.2 Visibility from the proposed construction access onto Queen Street is also shown on drawing number 19216/CA/01 comprising of 2.4m x 83m to the left and 2.4m x 87m to the right which is appropriate for the measured speed of traffic at this location. However, the drawing does need a scale bar so that the dimensions can be fully checked.

## 6. Parking in Full Development Sites

6.1 The parking layout is shown on the Phase 1 Site Layouts for each respective application. This shows how parking is allocated and to which dwelling. My commentary is as follows:

- Parking allocations for all 1-bed and 2-bed plots meet requirements.
- For 3-bed units. Kent Design Guide requires a minimum of 1.5 vehicle parking spaces with the allocation of one space per unit possible. Where just 1 space is allocated to a 3-bed unit, there is an additional visitor (unallocated) space that can be shared by two 3-bed units. There is sufficient parking provision located nearby for all 3-bed units.
- A significant number of 4-bed units have tandem parking spaces, or tandem spaces plus a garage. KCC does not include garages in total provision. Furthermore, tandem parking spaces are not attractive to residents and are often underutilised. Kent Design Guide requires a minimum of 2 independently accessible spaces per 4-bedroom unit. Alternative arrangements should be considered to avoid indiscriminate parking. Please note the conversion of the garage to a car barn or car port will not be acceptable in this scenario when sited behind the tandem spaces, or form a tandem parking arrangement.
- KCC's emerging parking standards recommend an additional 'off plot' space for four-bedroom units. I would like to request identification of additional off-plot parking spaces for all four-bedroom units with tandem parking and garages. These could be additional unallocated visitors' spaces. (This is in addition to the 0.2 spaces per unit across each development)
- The Redrow Site:
  - o Plot 19 has 0 car parking spaces allocated to it
  - o The parking to plot 41 is annotated as plot 43, which is assumed to be an error but please can this be clarified.
  - o Regarding the concern raised previously in relation to 4-bed units without 2 independently accessible spaces – when considering the site plan and layout of visitor spaces, 4-bed unit plots 5, 45, 58, 59, 100, 132 and 133 do not have visitor spaces nearby
- The Persimmon Site:
  - o on plot 93, the car barn is annotated as '92'. Can it be clarified as to whether this should be a car barn for plot 93, in tandem with the other space at no. 93.
  - o on plot 96, the car barn is annotated as '95'. Can it be clarified as to whether this should be a car barn for plot 96, in tandem with the other space at no. 96.

- on plot 132, the car barn is annotated as '131'. Can it be clarified as to whether this should be a car barn for plot 132, in tandem with the other space at no. 132.
  - on plot 146, the car barn is annotated as '145'. Can it be clarified as to whether this should be a car barn for plot 146, in tandem with the other space at no. 146.
  - Regarding the concern raised previously in relation to 4-bed units without 2 independently accessible spaces – when considering the site plan and layout of visitor spaces, 4-bed unit plots 77, 78, 79 and 80 do not have visitor spaces nearby
  - Furthermore, visitor parking for plots 1, 2, 3, 4 and 5 are a distance away from these 4-bed plots
- Please can the applicant provide details of the dimensions for all parking spaces. KCC's emerging parking standards recommend that a standard reverse in / reverse out space should be 2.5m x 5.0m. In addition:
- An extra 20cm should be added to any side with a wall or other barrier likely to affect the ease of opening doors (a space between two walls should therefore be 2.9m wide).
  - An extra metre should be added to the rear of any reverse in / reverse out bay where the space abuts an access door or garage door (if it is to swing forwards – please clarify)
  - A 50cm setback should be provided between any footway or carriageway and the parking space.
  - Tandem spaces should be increased to 11.0m in length
- For the parallel visitor spaces – KCC's emerging parking standards recommend that a standard parallel parking space should be 2.5m by 6.0m.
- Garages:
- Although garages do not count towards the number of parking spaces provided, KCC's emerging parking standards do have minimum dimensions to encourage their use for parking alongside likely utility / storage use.
    - The dimensions of single garages and twin garages have been indicated in the House Type Pack on drawings 09268-FPCR-S1-XX-DR-A-0260 and 09268-FPCR-S1-XX-DR-A-0262.
    - Using the scale bar provided, this shows 3m x 6m (W x L) for single, which falls under the minimum internal dimensions of 3.6m x 7m minimum from the emerging parking standards.

- The double garages have a dividing wall. Therefore, both portions of the double garage should each meet the above standards. The drawing is shown to measure 3m x 6m (W x L) for each portion and therefore falls under the minimum internal dimensions.
  - The minimum internal dimensions for a double garage (without a dividing wall) is 7.0m (depth) x 6.0m (width).
- Car Barns single and twin:
    - The dimensions of single car barns and twin car barns have been indicated in the House Type Pack on drawing 09268-FPCR-S1-XX-DR-A-0261.
    - The KCC emerging parking standards requires for a minimum of 2.5m x 5m (W x L) single car barn, and a minimum of 5.5m x 5m (W x L) double car barn.
    - The drawing shows that these standards are met
  - Electric Vehicle Chargepoints:
    - o The TA notes “Electric Vehicle Charging Points (EVCPs) will be provided to accord with new Kent Design Guide standards. For residential uses, dwellings with on-plot parking will be provided with 1 active charging point per dwelling with a minimum output rating of 7kW whilst dwellings with unallocated communal parking will be provided with 10% active charging spaces and 100% passive charging spaces. Passive provision comprises the provision of ducting to enable cabling / connections to be installed at a later date.” This proposal is acceptable.
  - o Cycle Parking:
    - o The TA states “Cycle parking facilities will be provided either within the curtilage of each residential dwelling (in garages where applicable) or communal stores dependent upon the finalised accommodation mix. Cycle parking for non-residential uses will be provided in sheltered, secure and communally accessible locations”
    - o For C3 residential use, cycle parking is proposed to be allocated on 1 space per bedroom, which is acceptable.
    - o Details of cycle parking provision for Phase 1 of both developments can be covered by condition, such that it can be shown how the space can accommodate for the bicycles.
  - Car Club
    - o Car club provision is to be included in the development and further details would be welcomed together with an appropriate condition towards car club membership for the new residents.

## 7. Bus Access

7..1 The KCC Public Transport team have been consulted internally and comments will be provided once received.

#### Bus link - TW/23/00091/FULL

7..2 A bus only access is proposed to link in the northern part of the site, from the western site boundary at Church Farm. This is to facilitate a proposed demand-responsive bus service through Paddock Wood. A bus gate is also proposed. The Design and Access statement notes – “The main route will accommodate a bus route with the northern section of the site controlled by a bus gate to the north west within the Redrow development.”

7..3 The highway design of the bus link is shown in Appendix 10 of the TA and the RSA1 at Appendix 11.

7..4 The proposals for the bus link and the bus gate should be submitted through the KCC Outline Technical Review process:

<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>

#### Bus access throughout the sites

7..5 In relation to the access from Church Road, during Phase 1 of the Development (i.e. the northern arm), the TA states “The side road arm serving the proposed development will be provided to a width of 6.75m to accommodate a bus route. This road width accords with the principles of the Kent Design Guide which identifies that a ‘Distributor Road’ to serve 300+ dwellings should be provided to a 6.75m width. The road will ultimately form the main Boulevard through the site.”

7..6 However, in relation to the section of Boulevard to the South of Church Road where it intersects with Mascalls Court Road and Mascalls Court Lane, it is noted that the Boulevard is to be typically provided with a 5.5m carriageway width which falls short of the 6.75m required for a bus route.

## **8. Baseline Data**

### Personal Injury Collisions

8..1 The area covered in the TA shows no particular problems, however it is requested that the scope of assessment is extended to include:

- The B2016 to and including its junction with the A21
- The route to the A21 through Mile Oak, Pixot Hill, Brenchley to the A21

- Chantler's Hill, including its junctions with Mascalls Court Road and the B2160
- B2017 between its junction with the B2160 Maidstone Road to the junction with the A26
- Queen Street north of the railway line to and including the junctions with Lucks Lane and Wagon Lane
- Lucks Lane and Wagon Lane including their junctions with the B2160 Maidstone Road
- B2160 Maidstone Road to and including its junction with the A228 at the Hop Farm roundabout
- A228/Whested Road
- A228 Colts Hill

## **9. Traffic Impact of Development**

### Trip Generation

- 9..1 The trip generational potential of the development has been analysed in section 6 of the TA. The vehicular trip rates used for the Local Plan Evidence Base has been applied. The use of the strategic trip rates used for the borough wide Local Plan assessment may not reflect the characteristics of the Paddock Wood development site and so a bespoke assessment of trip generation using TRICs for sites with similar characteristics is required, as was provided in the original pre application scoping. The reduction of the trip rates by 10% should be an additional sensitivity test.
- 9..2 The residential trip rates used in the TA are 0.48 (two way) for both the AM and PM peaks, however these should be updated as previously mentioned. For the first phase of development (330 units) this would equate to 158 two-way vehicle movements. A 10% reduction for sustainable travel would result in 142 vehicle trips in the peak hours. Using the same trip rate 1100 dwellings would generate 528 two-way vehicle trips in the peak hours and with 10% reduction for sustainable travel this would be 475.
- 9..3 Trip rates for the specialist accommodation for the elderly (60 units) have been derived using TRICs and this methodology is acceptable. The proposal is estimated to generate 16 two way vehicle movements in the AM peak and 13 in the PM peak.
- 9..4 The development includes for a 2FE primary school and an extension to the existing secondary school; Mascalls Academy and trip generation and distributions should be included in the assessment.

## **10. Development Related Impact on the Highway Network**

### Future year growth

10..1 A future year of 2027 has been used for Phase 1 (330 units), and 2034 for full development (1,160 units), with TEMPRO growth rate factors applied to the 2021 surveys. Committed development is not included in the assessment. Bearing in mind the high levels of growth being experienced in Paddock Wood and that proposed and included in the Submitted Local Plan it is considered that the committed development should be included in the impact assessment as well as Temprow growth factors.

### Trip Distribution

10..2 Trip distribution has been based on 2011 census data and the routing based on peak hour journey times. The details of this are currently being reviewed and the comments on this provided separately.

10..3 Traffic flow diagrams showing 2027 flows are missing from Appendix 19. Please could these be provided.

### Impact

10..4 Impact assessments have been completed on a number of junctions for both the AM and PM peak periods which are identified as 0730 - 0830 and 1630 - 1730. Please provide evidence to show how these peak periods have been identified, the Arcady and Picady models used in the capacity assessments, CAD files for the junctions modelled and a copy of the full result printouts for the Linsig modelling. Once this information is provided I will be able to review the impact assessment and provide further comment. I have however received an initial response from the KCC Traffic and Network Solutions team who have stated that the existing LINSIG model at the Maidstone Road/Badsell Road/Mascalls Court Road junction needs to be based on the current junction's operation (as built drawing have been provided separately) and stage sequence, utilising the existing intergreen timings. Also, the scenario with the improvement scheme (also provided separately) requires the extendable pedestrian crossing intergreen timings to be extended to their maximum when modelling the junction in order to give a worse case scenario.

10..5 The assessments have been provided for :

- o 2027 base;
- o 2027 base + development of 330 homes;
- o 2034 base; and
- o 2034 base + development comprising 1100 homes and 60 units specialist accommodation for the elderly.

10..6 It is recommended that the 2021 models are validated against queue lengths or the Local Plan model.

10..7 An assessment of the junctions with the full local plan development strategy is not provided.

10..8 A summary of the results is as follows:

**Results of capacity assessments taken from the TA**

Junction	2027	2034
<b>Church Road/ site Access Phase 1</b>	No capacity issues for the scenarios modelled	
<b>Church Road / Site Access full development</b>	No capacity issues for the scenarios modelled	
<b>Church Road/Mile Oak Road/Pearsons Green Road/Queen Street staggered priority crossroads</b>	No capacity issues for the scenarios modelled	
<b>B2160 Maidstone Road/Badsell Road/Mascalls Court Road staggered signalised crossroads</b>  <b>Existing layout</b>	Maidstone Road (N) right DoS* 94.8% in the pm peak this increases to 97.3% DoS with development.  Badsell Road is 92.6% DoS in the PM peak and increases to 98.6% with development.	The junction is over capacity in the 2034 base year scenario Maidstone Road (N) right DoS is 100.5% this increases to 110.3% with development.  Badsell Road is 99.4% DoS increasing to 110.7% with development.
<b>B2160 Maidstone Road/Badsell Road/Mascalls Court Road staggered signalised crossroads</b>  <b>Proposed layout</b>		shows operation within capacity
<b>A228/B2160 Maidstone Road roundabout (Hop Farm)</b>	No capacity issues	2034 base scenario indicates the junction will be over practical capacity with an RFC** of 0.94 in the PM peak. The 'with development' scenario increases the RFC to 0.97.

<b>A228/B2017 Badsell Road roundabout</b>	the junction operates over practical capacity in the 2027 base with the A228 Maidstone Road RFC reaching 0.91 in the AM pk and increases to 0.92 in the + dev scenario.	In 2034 the A228 Maidstone Road arm RFC increases from 0.96 to 0.99 with the addition of the development traffic and the queue length increases from 14.9 in the base scenario to 22.1 with development. Additionally, the B2017 Badsell Road RFC becomes over practical capacity in the PM peak with development with an RFC of 0.89.
<b>A228/Alders Road/Crittenden Road staggered crossroads</b>	No capacity issues for the scenarios modelled	
<b>Church Road/Warrington Road</b>	No capacity issues for the scenarios modelled	
<b>Maidstone Road/Station Road</b>	No capacity issues for the scenarios modelled	
<b>B2160 Maidstone Road/ Commercial Road</b>	No capacity issues for the scenarios modelled	
<b>B2160 Maidstone Road/Warrington Road</b>	No capacity issues for the scenarios modelled	
<b>B2160 Maidstone Road/Chantlers Hill</b>	No capacity issues for the scenarios modelled	

\*DoS is Degree of saturation , as the DoS becomes close to 100% the manoeuvre becomes very sensitive to any further increase in traffic. A DoS of 90% is usually taken as Practical Capacity, and it is desirable to achieve a Practical Reserve Capacity (PRC) of at least +10%.

\*\* RFC is ratio of flow to capacity An RFC value of 0.85 is usually taken as indicating that the manoeuvre is operating at practical capacity, while a value of 1.0 indicates that it is operating at theoretical capacity.



10..9 The results of the impact analysis show that mitigation measures are required at:

- B2160 Maidstone Road/Badsell Road/Mascalls Court Road staggered signalised crossroads – the junction is over capacity in the 2027 base PM peak and this becomes worse with the development. However, with the planned improvement scheme the junction can accommodate the 2034 flows with full development and remain within capacity.
- A228/B2160 Maidstone Road roundabout (Hop Farm)
- A228/B2017 Badsell Road roundabout

**NB It should be noted that the results above are a summary of those in the TA and further assessment may be required with altered trip rates. The distribution of traffic and the junction models are currently being reviewed for accuracy and additional information has been requested to facilitate this. Once this is completed the findings will be made available and the models may need to be amended accordingly.**

#### Additional Impact Assessment requirements

10..10 I would also like to understand the impact of the development on the surrounding highway network outside of the existing study area as listed below:

- Impact along the B2160 Maidstone Road through the local villages and to the A21, including an assessment of the impact at the A21/B2160 junction (Kippings Cross)

It would also be useful to validate the distributions proposed along this route by comparing the increase in traffic along the B2160 with that predicted for the committed residential development sites to ascertain whether this route is likely to become more popular than predicted.

- There have been concerns relating to capacity and safety along Colts Hill and through Five Oak Green for numerous years and therefore a review of safety conditions and link capacity would be extremely helpful.
- An increase of approximately 73 two-way peak hour movements is expected on the B2017 towards its junction with the A26 west of Tudeley (Woodgate Way roundabout) and so a capacity assessment is required at this junction with an extended distribution assessment to identify the increase in traffic expected at the neighbouring junctions.
- I note that 26.7% of generated traffic (141 two way movements) is predicted to route along the A228 to/from the north and this is likely to impact on the junction of the A228/A26/Seven Mile Lane which is known to suffer congestion at peak times. Please include a capacity assessment of this junction, the A26/A228 junction at Mereworth and the junction of Seven Mile Lane with the A20.

- B2160 junction with Chantlers Hill. Chantlers Hill provides a direct route between Mascalls Court Road and the B2160 Maidstone Road towards the A21 and is likely to see a significant increase in traffic arising from this development. Please provide evidence to demonstrate the suitability of this route in terms of road width and visibility at its junctions with the B2160 and with Mascalls Court Road.
- The A21 junction with Pembury Road
- The A264 Pembury Road junction with Halls Hole Road and Blackhurst Lane
- A264/Sandhurst Road
- A264/Sandrook Road
- A264/Calverley Park Gardens and A264/ Calverley Road

## 11. Travel Plan

11..1 The Travel Plan has been forwarded to the KCC Travel Plan Monitoring Officer and the following comments provided:

Para. 2.72 – for the car park spaces how will these spaces be managed and monitored?

Para. 3.12 – Please include the name of the bus provider for this area .

Para. 5.5 – It states that surveys will be taken once occupation is at 50% , I would like it to be clear if this is all the applications/ phases of the different developments or all as it is going to be monitored over 5 years there could be space between completion of one of the applications to others .

Para. 6.21 – For the car club it would be good to know the take up for this service included when doing the surveys

Para. 6.3 – Once set up it would be good to have a link to the community website included.

Para. 6.7 – I would like to see a copy of the Information Pack once produced and for it to be included in the Travel Plan document

Para. 8.3- Please update with TPC Details once appointed.

## 12. Conclusion

12.1 Additional information is required as outlined above in order that the highway related impacts of these developments can be fully assessed. Once that information is received and reviewed I shall provide additional comments.

**Informative: It is important to note that planning permission does not convey any approval to carry out works on or affecting the public highway.**

Any changes to or affecting the public highway in Kent require the formal agreement of the Highway Authority, Kent County Council (KCC), and it should not be assumed that this will be a given because planning permission has been granted. For this reason, anyone considering works which may affect the public highway, including any highway-owned street furniture, is advised to engage with KCC Highways and Transportation at an early stage in the design process.

Across the county there are pieces of land next to private homes and gardens that do not look like roads or pavements but are actually part of the public highway. Some of this highway land is owned by Kent County Council whilst some is owned by third party owners. Irrespective of the ownership, this land may have highway rights over the topsoil.

Works on private land may also affect the public highway. These include works to cellars, to retaining walls which support the highway or land above the highway, and to balconies, signs or other structures which project over the highway. Such works also require the approval of the Highway Authority.

Kent County Council has now introduced a formal technical approval process for new or altered highway assets, with the aim of improving future maintainability. This process applies to all development works affecting the public highway other than applications for vehicle crossings, which are covered by a separate approval process.

Should the development be approved by the Planning Authority, it is the responsibility of the applicant to ensure, before the development is commenced, that all necessary highway approvals and consents have been obtained and that the limits of the highway boundary have been clearly established, since failure to do so may result in enforcement action being taken by the Highway Authority. The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under the relevant legislation and common law. It is therefore important for the applicant to contact KCC Highways and Transportation to progress this aspect of the works prior to commencement on site.

Guidance for applicants, including information about how to clarify the highway boundary and links to application forms for vehicular crossings and other highway matters, may be found on Kent County Council's website: <https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>. Alternatively, KCC Highways and Transportation may be contacted by telephone: 03000 418181

Yours faithfully

**Director of Highways & Transportation**