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TM/20/01218/OA - Land Adjacent Ditton Common North of Rede Wood Road Oakapple Lane Barming Kent

Comments from KCC (Highways and Transportation)

Initial response

Introduction

Thank you for your consultation in relation to the above planning application.

It is noted that this application seeks outline planning permission for the erection of up to 118 dwellings, together with associated works for Access, Open space, Infrastructure, Earthworks, Surface Water Drainage Systems and Landscaping. In addition, it is acknowledged that this application is a duplicate of one submitted to Maidstone Borough Council (*MBC*), which the developments access road falls within the administrative area of meaning that they also have to determine the application.

The application includes a Transport Assessment (*TA*) and Travel Plan (*both dated April 2020*) which have been produced by C and A Consultants.

It is noted that a full application for a further 187 residential dwellings has also been submitted to Maidstone Borough Council (*MBC*) on land immediately west of the site. Both the *TA* and Travel Plan account for the potential development of both sites, which would realise a total of 305 residential dwellings. This response should be read in conjunction with this authority's initial consultation response (*dated 26th June 2020*) to the adjacent proposals as many of the comments are also pertinent and valid to this application.

I have the following comments with regard to highway matters:

Proposed Site Access

The applicant has proposed that the 118 dwellings will be served by one primary vehicular access. This is to be provided via a connection with the estate road serving the development that is proposed adjacent to the site. An additional emergency access is also proposed immediately south of the '*LEAP Natural Play Area*,' which will also double as a sustainable connection point but be protected by collapsible bollards, in order to preclude its use by general traffic.

In accordance with the guidance for a Major Access Road (*MAR*) contained in the Kent Design Guide (*KDG*) the estate road which the proposals will be accessed from will be served by two points of access. The primary route of access involves a southwards extension to Broke Wood Way (*part of the Orchard Fields development*) that has been proposed as part of planning permission 18/506068 for 80 residential dwellings. This extension facilitates the creation of two roads with a typical carriageway width of 5.5m that will lead up to the eastern site boundary.

The proposal is to extend both roads into the site to create a loop within the development layout. Broke Wood Way provides onward connectivity to the B2246 (*Hermitage Lane*) via Fullingpits Avenue. It is noted that the entirety of the road connection to Hermitage Lane has been included in the application boundary. This importantly confirms that the proposed development is not dependent on permission 18/506068 being implemented.

Secondary access is proposed via Broomshaw Road, a cul-de-sac that currently terminates to the south of the site. The layout of permission 18/506068 includes an emergency road link to Broomshaw Road that the applicant is now proposing to modify to achieve a 5.5m wide

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all-purpose carriageway. This link is also included in the application boundary. The proposals accord with Policy H1 (4) of Maidstone Borough Council's adopted Local Plan, which requires that primary access is taken from Hermitage Lane via the Orchards Field development site and secondary access is taken from Broomshaw Road/Rede Wood Road. KCC Highways regard the inclusion of a secondary access to be appropriate in view of the substantive scale of development that could otherwise be served via a single access onto Hermitage Lane. This could total 517 dwellings when this proposed development of 118 dwellings is added to the 330 dwellings already consented and could rise further to 635 dwellings if the full application for 187 dwellings on adjacent land to the east is also approved.

The Kent Design Guide recommends that an access road such as Fullingpits Avenue/Broke Wood Way, which conforms to a 'Major Access Road' specification, should serve 50 to 300 dwellings. The proposed development would result in this route serving significantly more than 300 dwellings and it is therefore evident that a secondary access is justifiable in this instance.

It should be noted that these circumstances differ from those at the '*East of Hermitage Lane*' site (*Hermitage Park*), where it was possible to achieve a 6.75m wide 'Local Distributor Road' access directly from Hermitage Lane to serve the proposed 500 dwellings. The Orchard Fields development encompassing Fullingpits Avenue and Broke Wood Way, together with permission 18/506068 and the proposed development site, form part of the '*north west strategic development location*' in the adopted Local Plan. This has ensured that the road layouts have been designed with future extension in mind.

The TA does not comment on the suitability of Broomshaw Road and Rede Wood Road as existing cul-de-sac roads that will be required to perform a new function in providing a route of access to the proposed development. No modifications to these roads have been proposed by the applicant.

KCC Highways notes that both Broomshaw Road and Rede Wood Road currently accommodate two-way traffic flow and incorporate dedicated footways for pedestrians. Although on-street parking is unrestricted, the vast majority of properties with frontage access onto these roads have off-street car parking. This helps to limit the levels of on-street parking that could be obstructive to two-way traffic flow. There is therefore no technical basis on which KCC Highways could sustain an objection to the principle of these roads being used as a route of access to the development.

It is noted that the swept path analysis in Appendix F does not include tracking for large vehicles that may use the secondary access to move to/from the site. This should be included to ensure the modified design can accommodate all vehicles that could use it.

Sustainable Travel

Walking and Cycling

The TA highlights how the site is well placed in relation to several key local facilities. These include Barming Primary School, Maidstone Hospital and both the Marlborough Parade and Hermitage Walk shopping areas, which fall within the 'preferred maximum' walking distances of 2km (*commuting/schools*) and 1.2km (*elsewhere*) quoted in 'Providing for Journeys on Foot' (*Institution of Highways & Transportation, 2000*).

The indicative masterplan confirms that the main streets within the development will be provided with footways on both sides. These are understood to be 1.8m wide in conformity with the MAR specification within the Kent Design Guide. The footways will importantly

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connect to those on Broke Wood Way, thereby enabling pedestrians to make onward journeys to/from Hermitage Lane.

Appendix D of the TA confirms that the secondary access road connection to Broomshaw Road will also include 1.8m wide footways on both sides. This is appropriate in view of the 'Major Access Road' design of this access. Dropped kerbs and signage will be required for the users of public footpath KM11, which runs across this access.

The TA identifies the Public Rights of Way network and it is noted that the layout includes footway links to public footpath KM12. This footpath runs along the eastern site boundary and extends southwards to provide a direct route towards the Primary School and Marlborough Parade shops. The applicant should therefore be required to make provisions for the upgrading of the surfacing of this footpath, as recommended by the County Council's Public Rights of Way Access Service.

The indicative masterplan indicates that there will be two pedestrian linkages to public footpath KM11, which runs alongside the southern site boundary. This also requires upgrading as it links to KM12 and will therefore also be used for local trips on foot. The site does not benefit from immediate access to the cycle network. Byway KM13, which leads towards East Malling, runs to the west of the site and is currently accessible via North Pole Road. The indicative masterplan shows that direct connectivity to KM13 can be achieved via the land which forms part of the application that is now being considered.

Confirmation is required on whether this connection will be suitable for use by cyclists. The TA highlights the County Council's proposed cycle route between Hermitage Lane and the London Road Park & Ride site. This route would assist residents of the proposed development in cycling to/from schools and shops in the Allington area. There is currently no secured funding for this scheme and, in the event that this planning application is approved, a financial contribution towards its implementation would be appropriate.

Public Transport

The TA highlights how there are currently bus stops on Heath Road, North Street and Hermitage Lane. These all lie well beyond a 400m walking distance from the site. This would be likely to limit the attractiveness of bus services as a convenient travel option. The applicant is proposing to enhance accessibility by public transport by diverting the no.8 bus service into the site. This service currently runs along part of Hermitage Lane and Heath Road in making its hourly journeys between Maidstone Hospital and the town centre (Monday to Friday). The duration of operation is largely confined to the morning period and a more limited service also operates on a Saturday.

The diversion is understood to involve services routing via Fullingpits Avenue, Broke Wood Way and clockwise around the looped road arrangement within the site. The TA also indicates that the frequency of service would be improved in both the peak and off-peak periods.

Although full details are not provided, the applicant has indicated that an hourly off-peak frequency would be achieved.

The applicant has discussed the diversion with the service operator, Arriva. The meeting minutes appended to the TA indicate that this dialogue has primarily focused on the practicalities of the route diversion rather than the details of a modified timetable. A single bus stop location alongside the defined 'focal point' area within the site is proposed. This importantly ensures that all dwellings are within a convenient walking distance, including those within the adjacent outline planning application area.

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As Fullingpits Avenue and Broke Wood Way do not conform to the design specification that is ordinarily required to accommodate a bus route, the applicant has undertaken swept path analysis to determine their suitability. This has identified the need to remove the build out features on Broke Wood Way that are positioned close to the Fullingpits Avenue junction. Such works will require a Section 278 Agreement with the County Council as Local Highway Authority.

The swept path analysis also identified a further constraint on the section of the access road that forms part of the approved layout for permission 18/506068. This will require the omission of a build out feature near the southern end of that site. As this road is not yet built, the applicant will need to amend the associated Section 38 Agreement to cover a scenario whereby 18/506068 is implemented prior to the proposed development.

The swept path analysis illustrates how bus movements will, in places, require the full width of the carriageway. This could result in conflicts with other road users, although the infrequent nature and low speeds ensure any risk is low.

The applicant has acknowledged how on-street parking could inhibit the efficient movement of buses. No measures are proposed that would address the parking that already occurs on Fullingpits Avenue. Within the site, the applicant has taken reasonable steps to minimise on-street parking through the inclusion of on-street parking bays and dedicated off-street parking provision for all dwellings.

KCC Highways is supportive of the applicants' proposals to enable a bus service to be diverted and thereby provide residents with more convenient public transport access. The diversion is likely to require funding via a Section 106 Agreement and it is therefore recommended that any obligation provides flexibility to enable further dialogue to take place on the specific service operation arrangements.

The TA does not investigate the potential for rail travel, despite Barming rail station being accessible via Hermitage Lane. KCC Highways considers there is potential to encourage cycling to the rail station in view of the cycle route provision already planned along Hermitage Lane in support of the Hermitage Park development. The South Eastern request for funding to create a cycling hub at the station would therefore be appropriate in encouraging residents of the new development to access the station by bicycle.

Travel Plan

In accordance with the aims and objectives of the National Planning Policy Framework (paragraph 111), all developments which generate significant amounts of transport movement are required to provide a travel plan.

A Framework Travel Plan has been submitted to provide an ongoing basis for encouraging sustainable travel patterns and reducing vehicle trips.

The potential measures and initiatives put forward in the Travel Plan include the provision of resident travel information packs, cycle parking, bicycle purchase discounts, promotion of car sharing, notice boards and the distribution of newsletters. Implementation will be overseen by a Travel Plan Co-ordinator.

The indicative Travel Plan targets seek to achieve a 10% reduction in single occupancy car trip by achieving mode share increases in travel by walking, cycling, bus, rail and car sharing.

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Prior to commencement of development the applicant shall submit for written approval of the Local Planning Authority a Travel Plan and register the plan with KCC Jambusters website (www.jambusterstpms.co.uk). The applicant shall implement and monitor the approved travel plan, and for each subsequent occupation of the development thereafter maintain and develop the travel plan to the satisfaction of the Local Planning Authority.

Monitoring requirements should only cease when there is sufficient evidence for all parties to be sure that the travel patterns of the development are in line with the objectives of the travel plan.

Completed post occupation survey forms from all new dwellings/occupants on the site will be required to be submitted on the final monitoring period. A fee of £948 is required, prior to first occupation of the development, to fund KCC's Travel Plan Advisor to review monitoring reports and work with the Travel Plan Coordinators to achieve the objectives.

Traffic Generation and Distribution

The trip generation forecasts in the TA indicate that the proposed development will generate 61 vehicle trips in the AM peak hour (08:00 – 09:00) and 69 vehicle trips in the PM peak hour (17:00 – 18:00). This increases to 156 vehicle trips in the AM peak hour and 178 vehicle trips when the proposed 187 dwellings on adjacent land to the north west are also included.

The vehicle trip rates underpinning the forecasts have been derived through reference to comparable sites within the TRICS database. They are broadly in line with those applied in the TAs supporting other nearby sites on Hermitage Lane and are therefore acceptable. For the purposes of assigning vehicle trips across the network, section 5.3 of the TA refers to 2011 Census Travel to Work data as the means of determining a north/south split of trips. It does not confirm what north/south split has been assumed or provide supporting evidence to demonstrate how the split has been derived. This must be clarified.

The TA also lacks clarity on how trips to/from the north have been assigned to each of the two points of access. Confirmation on what has been assumed and how that is justified is required.

The forecast traffic flows indicate that most development trips are expected to use the Broke Wood Way route of access to proceed to/from Hermitage Lane to the north in the AM peak. This pattern is markedly different to the observed turning flows at the Fullingpits Avenue/Hermitage Lane junction, which indicates a relatively even north/south split. The change in weighting towards travel to/from the north is understood to have been influenced by the secondary access. Clarification is required on whether this has arisen in part due to assumptions made on how trips associated with Orchard Fields may redistribute between the two routes of access.

For those development trips heading to/from the north the TA states that they have been distributed in accordance with existing turning proportions at junctions. This is not the case as the supporting figures indicate that traffic has been redistributed onto the prospective link road between Hermitage Lane and Poppy Fields roundabout. Clarification is required on what distribution assumptions have been applied and how they are justified.

The TA confirms that development trips to/from the south have been distributed through a comparison of the forecast journey times associated with various route options. The journey times have been calculated by taking account of distance, assumed travel speeds and assumed delays at junctions (informed by capacity modelling where available). The applied assumptions have then been adjusted to reflect how factors such as on-street parking and

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carriageway width may influence road users' perceptions of route attractiveness. Although journey times and route attractiveness will be heavily influenced by the prevailing conditions that can vary on a day-to-day basis, KCC Highways regards the applicants' methodology to provide a reasonable basis from which to derive route distribution assumptions.

It importantly reflects the likelihood that road users will generally choose to use the route that affords the quickest journey time.

On the basis of this analysis, the applicant has predicted that most development trips involving use of the A26 Tonbridge Road (in either direction) will route via Broke Wood Way/Fullingpits Avenue rather than via Broomshaw Road/Rede Wood Road. This further brings into question why the forecast flows at the Fullingpits Avenue/Hermitage Lane are weighted heavily towards travel to/from the north.

The applicant has also assumed that 70% of trips associated with the existing residential area to the south of the site would choose to re-route through the proposed development to/from Hermitage Lane in preference to using Heath Road. This adds an element of robustness to the network impact analysis in how it accounts for localised changes in route choice arising from the creation of a link between Broomshaw Road and Broke Wood Way. The TA does not quantify these trips and no explanation is given on how they have been calculated. Clarification is therefore required.

The TA does not comment on the likelihood that longer distance traffic may choose to re-route through the development site for journeys between Tonbridge Road and Hermitage Lane. This is a significant omission in view of the applicants' junction capacity modelling results, which confirm how queuing and delay on the Tonbridge Road and Fountain Lane/Hermitage Lane corridors will be extensive even when accounting for the applicants' mitigation proposals.

KCC Highways remain mindful that road users are highly likely to seek alternative routes when confronted with congestion. Such behaviours could have implications on highway safety in the absence of intervention, as the volume and composition of traffic routing via the development site may not be commensurate with the intended function of the individual roads that comprise the alternative route. This issue is pertinent to both existing and future residents and should be addressed by the applicant.

It should be noted that the above comments on trip distribution and the propensity for road users to re-route have a critical bearing on the conclusions that can currently be drawn from the applicants' junction capacity modelling analysis within the TA.

Traffic Impact

The assessment of traffic impact has been founded on an extensive set of link and turning count surveys undertaken in June 2019. These are primarily focused on the Hermitage Lane (B2246), Tonbridge Road (A26), London Road (A20) and Heath Road corridors.

The TA has included a review of road crash incidents in the vicinity of the site over a five-year period (2014-18). This has identified a total of 66 crash incidents. No detailed analysis of causation factors has been included, although the TA notes that around a quarter of the crashes involved pedestrians.

One of the crashes resulted in a fatality at the northern end of Hermitage Lane. A further six crashes resulted in serious injury, of which four occurred at the southern end of Hermitage Lane. The TA also notes that clusters of crashes are evident at the A20/Hermitage Lane and A26 Tonbridge Road/Fountain Lane/Farleigh Lane junctions.

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Background traffic growth over the period to 2025 has been added to the base flows (2030 in the case of M20 J5). Importantly, the traffic associated with the various prospective developments on the Hermitage Lane and North Street corridors has been included to provide a robust representation of future conditions. No breakdown of the traffic flows from each of the committed developments has been provided so KCC Highways is unable to check whether these have been correctly extracted from the respective TAs.

Capacity modelling of key junctions has been undertaken for 2025 (2030 in the case of M20 J5) to reflect when the development is expected to be fully occupied. Model scenarios that account for the outline application for 118 dwellings on adjacent land to the west have also been included.

The key modelling findings are summarised below:

Hermitage Lane/Fullingpits Avenue/Tarragon Road

The modelling indicates that the staggered signalised crossroads will exceed practical capacity (see note 1) as a result of the proposed development. This is due to an increase in queue length of 3 PCUs (see note 2) on the Tarragon Road arm in the PM peak. The TA concludes that the increase is negligible.

KCC Highways is concerned at the predicted deterioration in conditions at this junction, which functions as an access to Maidstone Hospital. It is nonetheless accepted that the level of impact does not enable mitigation to be justifiably required.

M20 J5

The modelling indicates that the roundabout will operate over practical capacity during both peak periods in 2030 due to queuing on the M20 westbound slip road (AM) and A20 Coldharbour Lane (PM). The proposed development is shown to have a marginal impact, with typical queue lengths remaining at 7 PCUs.

KCC Highways is mindful that conditions at this junction are affected by congestion at the nearby Coldharbour Roundabout. It will therefore benefit from the planned upgrade of Coldharbour Roundabout that is due to commence in Autumn 2020. On this basis KCC Highways regard it to be essential that the planned junction improvement is completed in advance of first occupation of the proposed development.

A20 Coldharbour Roundabout

The modelling has taken account of the planned junction upgrade that is scheduled to commence in Autumn 2020 and be completed by Summer 2022. This will remove the existing traffic signals and enlarge the roundabout.

The modelling demonstrates that the modified junction will satisfactorily accommodate the additional vehicle movements generated by the proposed development. On this basis KCC Highways regard it to be essential that the planned junction improvement is completed in advance of first occupation of the proposed development.

A20 Poppy Fields Roundabout

The modelling has taken account of the planned modifications to the roundabout that will facilitate the provision of a new link road connection to Hermitage Lane. This will be delivered in conjunction with the consented Whitepost Field residential development. The modelling demonstrates that the modified junction will satisfactorily accommodate the additional vehicle movements generated by the proposed development. On this basis KCC

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Highways regard it to be essential that the junction improvement and associated link road are completed in advance of first occupation of this development.

The TA has not accounted for a scenario whereby the Whitepost Fields planning permission is not implemented. This omission means that the mitigation required under such circumstances has not been identified. The applicant should therefore be required to provide further information.

It should be noted that the Whitepost Field planning permission requires provision of the link road prior to the occupation of 175 dwellings or within 5 years, whichever is earlier. Any assessment of a scenario without the link road should therefore include the traffic associated with 175 dwellings.

A20 London Road/Hermitage Lane/Preston Hall

This signal controlled staggered crossroads will benefit from improved capacity because of the planned link road between Hermitage Lane and the Poppy Fields roundabout. As noted above, the link road is to be delivered in conjunction with the consented Whitepost Field residential development.

The modelling, in taking account of the re-routing of traffic due to the link road, demonstrates that the junction will satisfactorily accommodate the additional vehicle movements generated by the proposed development.

The TA has not accounted for a scenario whereby the Whitepost Fields planning permission is not implemented. This omission means that the mitigation required under such circumstances has not been identified. The applicant should therefore be required to provide further information.

It should be noted that the Whitepost Field planning permission requires provision of the link road prior to the occupation of 175 dwellings or within 5 years, whichever is earlier. Any assessment of a scenario without the link road should therefore include the traffic associated with 175 dwellings.

A20 London Road/Mills Road/Hall Road

The modelling has taken account of the planned junction upgrade that is scheduled to commence in Summer 2021 and be completed by Summer 2022. This will convert the signalised crossroads to a roundabout form of junction.

The modelling demonstrates that the modified junction will satisfactorily accommodate the additional vehicle movements generated by the proposed development. On this basis KCC Highways regard it to be essential that the junction improvement is completed in advance of first occupation of the proposed development.

Hermitage Lane/Retail Park

The modelling demonstrates that the junction will operate satisfactorily during both peak periods.

Hermitage Lane/Chapelfield Way

The modelling demonstrates that the junction will operate satisfactorily during both peak periods.

Hermitage Lane/St Andrews Road/Fountain Lane/Heath Road

The modelling indicates that the junction is expected to operate satisfactorily during both peak periods. It should be noted that the modelling cannot replicate the way in which this junction is routinely affected by southbound queuing on Fountain Lane from the junction with

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Tonbridge Road. The results therefore have to be viewed in the context of this inter-dependency.

It should also be borne in mind that the County Council is planning to implement pedestrian crossing facilities at this junction, which will have a further bearing on traffic conditions. The addition of the proposed development is predicted to provide a marginal improvement in operating conditions. This is due to the applicants' prediction that the site access arrangements will enable some development traffic and an element of existing local traffic to route through the site and avoid having to use this junction.

KCC Highways acceptance of this conclusion is dependent on clarifications associated with the assignment and distribution of development traffic.

Tonbridge Road/Fountain Lane/Farleigh Lane

The capacity modelling indicates that the junction is expected to operate over theoretical capacity (see note 3) in both peak periods in 2025 due to extensive queuing on all arms. The proposed development is shown to result in a worsening of the levels of queuing and delay. The TA acknowledges the ongoing work that is being undertaken by KCC Highways to identify a comprehensive form of junction improvement that will relieve congestion on this part of the network. It confirms that the applicant does not want the proposed development to be dependent on KCC Highways future delivery of a junction improvement scheme. The approach taken by the applicant has therefore been to devise an interim junction improvement that could enable the proposed development to come forward in advance of a KCC Highways scheme by mitigating its impact.

The applicants' interim mitigation proposal is comprised of modified road markings for road users wishing to make right turns, extension of the two lane approaches on Fountain Lane and Tonbridge Road (*westbound*), conversion of the pedestrian crossings to a puffin specification and the installation of MOVA (*Microprocessor Optimised Vehicle Actuation*) to optimise capacity. The pedestrian refuge to the east of the junction on Tonbridge Road is also proposed to be upgraded to a signal-controlled puffin crossing.

The upgraded junction traffic signals and new pedestrian crossing will be coordinated with those at the Hermitage Lane/St. Andrews Road/Fountain Lane/Heath Road junction to optimise the operation of the network. This would require the new crossing to be cable linked and utilises the available SCOOT (*Split Cycle Offset Optimisation Technique*) capability. The proposals are consistent with those previously put forward in support of residential development at Fant Farm (15/509962). They therefore follow an established precedent, although the demands on the junction are likely to have increased further over the intervening period.

It is noted that a Stage 1 Road Safety Audit has not been provided in support of the proposals. An audit is usually required where changes to the layout or facilities on the highway are being proposed. The capacity modelling results, which cannot replicate the benefits of MOVA, highlight how the junction would continue to operate well above theoretical capacity. This limits the confidence that can be attached to the applicants' conclusion that the improvement will achieve effective mitigation as the extent to which the junction is predicted to operate over capacity is likely to have distorted the modelling outputs. KCC Highways is also concerned that the modelling does not use the maximum extendable crossing times for the intergreen periods (see note 4), as these would account for a worst-case scenario where the crossing is used by a large group of pedestrians or an individual pedestrian that is less mobile.

The modelling findings are consistent with the investigations previously undertaken by KCC

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Highways under the auspices of a Member led working group. This had reviewed a wide range of potential junction improvements that were largely found to achieve limited capacity benefits and therefore represented poor value for money.

The working group concluded that a new roundabout layout would provide the most effective means of upgrading the junction to reduce congestion and accommodate planned growth. KCC Highways is moving forward with this scheme in seeking to secure the land and funding necessary for its implementation.

It would therefore be more appropriate for the applicant to provide a financial contribution towards the County Council's roundabout scheme as the means of mitigating the impact of the proposed development.

Tonbridge Road/Queens Road

The modelling demonstrates that the junction will operate satisfactorily during both peak periods.

Tonbridge Road/North Street/South Street

The modelling demonstrates that the junction will operate satisfactorily during both peak periods.

North Street/Heath Road

The modelling demonstrates that the junction will operate satisfactorily during both peak periods.

Heath Road/Redewood Road

The modelling demonstrates that the junction will operate satisfactorily during both peak periods.

A26 Watlington Road Crossroads

The TA has not included a quantification of impact at this junction, which had been requested at scoping stage in view of the known congestion and air quality issues. This should be provided for review.

Notes

(1) A measure of the overall performance of a junction, where the ratio of flow to capacity is at or above 90% in the case of traffic signalled junctions and 85% in the case of priority junctions and roundabouts.

(2) Passenger Car Units (PCUs) are a means of translating all types of vehicle into a common traffic 'currency'.

(3) A measure of the overall performance of a junction, where the ratio of flow to capacity is at or above 100%.

(4) The clearance time between one phase losing right of way and the next phase gaining right of way.

Parking and Layout

As this application seeks outline permission only a parking plan has not been provided in support of the application, as all matters are reserved except for access. Should the proposals be granted consent then matter, including parking provision, will be determined as part future reserved matters applications.

Consistent with the proposals for the main service roads associated with the adjacent site a

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carriageway width of 5.5 meters has also been proposed for the services roads associated with this element of the site. This commensurate with the guidance in both Manual for Streets and the KDG which stipulates a minimum carriageway width of 5.5 meters in order to allow 2 larger vehicles to pass. Whilst no supporting swept path analysis has been provided it is again acknowledged that the proposals are in outline only and that the submission of such analysis at any future reserved matters stage would be reasonable.

Recommendation

KCC Highways wishes to raise a holding objection in respect of this planning application, on the

basis that the applicant should be required to address the following key issues:

- Swept path analysis to check the tracking of large vehicles using secondary access;
- Provision of route connectivity for cyclists to Byway KM13;
- A breakdown of the vehicle trips associated with the committed developments;
- Clarification on the assumptions made regarding the north/south distribution of vehicle trips;
- Clarification on the assumptions made regarding the distribution of vehicle trips between the two points of access;
- Clarification on the assumptions made regarding the re-routing of vehicle trips onto the prospective link road between Hermitage Lane and Poppy Fields roundabout;
- Quantification of the element of existing residential vehicle trips that have been redistributed and an explanation on how this has been calculated;
- An assessment of the propensity for longer distance traffic to re-route via the site and confirmation on whether this requires mitigation on the affected existing and/or proposed roads;
- Verification of the accuracy of the junction models in the absence of model runs based on existing conditions;
- Clarification on the impact of the proposed development on capacity at the Poppy Fields and A20 London Road/Hermitage Lane/Preston Hall junctions in the event that provision of the Hermitage Lane to Poppy Fields Roundabout link road is not triggered as part of the Whitepost Field planning permission and what mitigation measures will then be required and
- Quantification of the impact of additional vehicle trips at the A26 Wateringbury Crossroads.

KCC Highways would wish to be reconsulted following the submission of further information by the applicant to address the above issues.

In the event that the Borough Council is minded to grant planning approval against the advice of the Highway Authority, KCC Highways would seek agreement with the Borough Council on the level of financial contributions required for the A26 Tonbridge Road/Fountain Lane/Farleigh Lane junction, Hermitage Lane to London Road cycle route and bus service diversion.

A planning condition should be imposed that prevents occupation of the development prior to the planned A20 Coldharbour Roundabout and A20 London Road/Mills Road/Hall Road junction improvements being completed.

In the absence of satisfactory investigation of the propensity for traffic to re-route through the

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development site to avoid congestion and the associated need for mitigation measures, a planning condition should also be imposed that prevents occupation of the development prior to the planned A26 Tonbridge Road/Fountain Lane/Farleigh Lane junction improvement being completed.

A planning condition is also required that prevents occupation of the development prior to the link road between Hermitage Lane and Poppy Fields roundabout being delivered. This is dependent on delivery through a third party but is justifiable as the applicants' TA has relied upon it.

A Section 278 Agreement is also required to secure the proposed highway works on Broke Wood Way. The following should be also secured via a Section 106 Agreement and planning conditions as appropriate:

- Provision of works to upgrade the surfacing of Public Rights of Way KM11 and KM12;
 - Provision of a financial contribution to facilitate the provision of a cycle hub at Barming station;
 - Provision and implementation of a site-wide Travel Plan that has been approved by the planning and highway authorities;
 - Provision of a Travel Plan monitoring fee (£948);
 - Provision of construction vehicle loading/unloading and turning facilities prior to commencement of work on site and for the duration of construction;
 - Provision of parking facilities for site personnel and visitors prior to commencement of work on site and for the duration of construction;
 - Provision of wheel washing facilities prior to commencement of work on site and for the duration of construction;
 - Provision of measures to prevent the discharge of surface water onto the highway;
- Provision and permanent retention of the vehicle parking spaces and/or garages shown on the submitted plans prior to the use of the site commencing;
- Provision and permanent retention of the vehicle loading/unloading and turning facilities shown on the submitted plans prior to the use of the site commencing;
 - Provision and permanent retention of the cycle parking facilities shown on the submitted plans prior to the use of the site commencing; and
 - Completion and maintenance of the access shown on the submitted plans prior to the use of the site commencing.

INFORMATIVE: It is the responsibility of the applicant to ensure , before the development hereby approved is commenced, that all necessary highway approvals and consents where required are obtained and that the limits of highway boundary are clearly established in order to avoid any enforcement action being taken by the Highway Authority.

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 road. This is called 'highway land'. Some of this land is owned by The Kent County Council (KCC) whilst some are owned by third party owners. Irrespective of the ownership, this land may have 'highway rights' over the topsoil. Information about how to clarify the highway boundary can be found at

<https://www.kent.gov.uk/roads-and-travel/what-we-look-after/highway-land/highway-boundary-enquiries>

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The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under such 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.

Subsequent response

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

It is noted that the applicant has submitted a 'Transport Assessment Addendum' (dated August 2020), Stage 1 Road Safety Audit (dated July 2020) and Designers Response to the Stage 1 Road Safety Audit (dated August 2020) in response to KCC Highways consultation comments dated 26 June 2020.

I have the following additional comments with regard to highway matters:

Site Access

Swept path analysis has been provided to demonstrate how the turning manoeuvres of refuse vehicles and fire tenders entering the site via the secondary access can be accommodated.

The tracking shows how such vehicles will require the full width of the carriageway, although such instances can be expected to occur on an infrequent basis.

The confirmation that direct route connectivity to byway KM13 will be provided via a suitable a suitable connection point is welcomed. KCC Highways require this to be secured this via a planning condition attached to this outline application.

Traffic Generation

The applicant has provided a breakdown of the traffic flows associated with the various committed developments. These are consistent with the relevant Transport Assessments.

Traffic Distribution Assumptions

The Transport Assessment Addendum (TAA) has confirmed that the methodology for distributing trips between the two points of access is set out in Appendix I of the Transport Assessment (TA).

It should be noted that Appendix I only covers those development trips that are associated with use of the A26 to the south of the site. It does not confirm how development trips to/from the north have been distributed between the two access points. This should have

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been clarified, although the forecast traffic flows indicate that the majority have been assigned via BrokeWood Way/Fullingpits Avenue.

In the case of the existing residential area to the south of the site, Appendix I of the TA had confirmed that 70% of the trips to/from Hermitage Lane are expected to re-route through the site via Fullingpits Lane and 30% are expected to continue to route via Heath Road. This had been based on the differential in predicted journey times.

The TAA elaborates that the quantification of existing trips re-routing through the site from the residential area has been derived from existing turning flows at the Redewood Road/Heath Road junction, which have then been doubled to account for other adjacent streets. The figures quoted in Table 2.4 broadly correspond with this methodology when viewed against the observed traffic flows in the TA. The applicants' expectation is that up to 52 existing trips from the residential area to the south could re-route through the site in travelling to/from Hermitage Lane in the peak hours.

The TAA does not comment on whether trips between the existing residential area to the north of the site (Orchard Fields) and the A26 are expected to re-route through the site. As a result, this point has not been clarified.

With regard to trip distribution across the wider network, the TAA confirms that the TA was incorrect in stating that the distribution of development traffic is derived from 2011 Census data.

It clarifies that the distribution is based on observed turning flows at the Hermitage Lane/Fullingpits Avenue junction and, in the case of the wider network, observed turning flows at other existing junctions. Adjustments have been made to account for the prospective link road between Hermitage Lane and Poppy Fields roundabout through reference to the assumed distribution within the Whitepost Fields TA.

The observed pattern of turning movements at the Hermitage Lane/Fullingpits Avenue junction is a relatively even north/south split. The forecast traffic flows for 2025 at the junction, with the development trips included, differ from the observed pattern in how a higher proportion of trips are assigned to/from the north.

The TAA indicates that this change can be attributed to the route choice assumptions applied to development trips and those trips associated with the adjacent existing residential area. This is plausible as Appendix I of the TA had estimated that 40-45% of development trips associated with use of the A26 to/from the town centre would involve use of the secondary access. This would have the effect of altering the balance of traffic flows at the Hermitage Lane/Fullingpits Avenue junction in favour of movement to/from the north.

Re-Routing of Long-Distance Traffic

The applicant has undertaken journey time analysis to examine the propensity for existing longer distance traffic to re-route through the site for journeys involving the A26 (Tonbridge Road) and Hermitage Lane.

Two methodologies have been used. The first has utilised the Google on-line journey planner to estimate the journey time between Hermitage Lane and Tonbridge Road via Fountain Lane during peak periods. A similar method has then been used to estimate the journey time associated with the alternative route through the site, using an unspecified assumed travel speed for the unbuilt section of route between Broomshaw Road and Broke Wood Way. The results indicate that the route via Fountain Lane is between 1 to 5 minutes quicker in each direction in both peak periods.

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The second methodology breaks each of the routes down into their component parts of links and junctions. The Google on-line journey planner has been used to identify average speeds on links and capacity assessments have been used to identify delays at junctions.

It is noted that the route via Fountain Lane has an assumed average link speed of 30mph, which is more than double than that for the route via the site at 14mph. The applicant regards this to be justified by the different route characteristics on the road links, such as the presence of on-street parking.

The calculations used to derive the junction delays have not been provided and it is unclear how the blocking back of queues across multiple junctions, such as along Fountain Lane, has

been accounted for. It is notable that a markedly lower degree of junction delay is predicted southbound on Fountain Lane in the AM peak, although this is corroborated by the observed queuing data presented in Appendix C of the TAA.

In all cases the assumed junction delay is substantially higher on the Fountain Lane route, which is in line with expectations.

The results indicate that the route via Fountain Lane is expected to be between half a minute and two and a half minutes quicker in each direction in both peak periods.

The findings associated with the two methodologies are therefore broadly consistent.

On this basis, the applicant has concluded that the vast majority of the projected 310-350 peak hour turning movements between Tonbridge Road (west) and Fountain Lane in 2025 will continue to route via Fountain Lane. Any transfer from the parallel route via North Street and Heath Road is also expected to be minimal.

KCC Highways is mindful that the congestion already prevalent on Tonbridge Road and Fountain Lane is likely to encourage road users to use an alternative route if it offers an actual or perceived journey time saving. By creating an alternative route, the proposed development will give road users a choice of routes.

The evidence within the TAA indicates that the alternative route through the site is unlikely to offer any meaningful journey time saving. This will reduce any incentive for road users to re-route. Whilst the potential for an element of traffic to re-route through the site cannot be entirely discounted, it has been concluded that an objection on this basis is unlikely to be sustainable.

There is scope to amend and reconfigure parts of the proposed development layout to further inhibit or deter through traffic movement. Modifications of this nature are a matter for the applicant and Local Planning Authority.

Model Validation

Appendix C of the TAA has provided details of the queue length surveys that were included in the traffic surveys undertaken in June 2019. The surveyed queues have been compared against the modelled queues as a means of validating the capacity modelling findings.

This is an appropriate method of checking that there is confidence in the accuracy of the modelling. It is noted that the queues are broadly comparable in most instances, although there are more sizable differentials on the busier corridors such as Tonbridge Road and Hermitage Lane. These do not invalidate the modelling but must be factored into any interpretation of results.

Hermitage Lane – Poppy Fields Roundabout Link Road

The traffic distribution and capacity modelling within the TA was predicated on the link road proposed as part of the Whitepost Fields development having been implemented. There is a high likelihood that this scenario will materialise in view of the planning permission granted by Tonbridge & Malling Borough Council for the 840 dwelling Whitepost Fields development.

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Importantly, the planning permission requires provision of the link road prior to the occupation of 175 dwellings or within 5 years, whichever is earlier. It is therefore possible that a smaller scale of development could be implemented at Whitepost Fields without a need for the link road.

The TAA, whilst arguing that this alternative scenario is unlikely to arise, has now provided an assessment of the traffic impact of the proposed development at Oakapple Lane in the event that the link road is not provided.

Capacity modelling shows how the A20 London Road/Hermitage Lane/Preston Hall junction would operate over theoretical capacity (see note 1) in the AM peak in 2025. The TAA does not confirm whether this accounts for the traffic associated with up to 175 dwellings at Whitepost Fields.

The proposed development is shown to have a marginal impact on queuing and delay. The queue on the problematic eastern London Road (A20) arm is predicted to increase from 94 to 96 PCUs (see note 2) in the AM peak.

The TAA contends that any requirement for mitigation would be inconsistent in view of the Whitepost Fields TA having already provided an assessment of impact that accounts for the proposed development. KCC Highways nonetheless maintain the view that each planning application is required to provide evidence of cumulative impact to determine whether mitigation is necessary in the event of a planning approval.

In this case, the modelling evidence has confirmed how there will continue to be extensive congestion in the absence of a link road. This congestion will be worsened by the proposed development. It is therefore maintained that a planning condition should be attached to any consent that requires delivery of the link road prior to first occupation. Whilst it is recognised that delivery of the link is dependent on a third party, it is evident from the modelling that this infrastructure is necessary in advance of further housing growth in this locality.

A26 Wateringbury Crossroads

The TAA has confirmed that the proposed development will add up to 11 peak period vehicle movements to this junction. These will add to the congestion that is already prevalent at this location and thereby strengthen the need for the junction improvement scheme that KCC Highways is seeking to bring forward.

In order to mitigate this impact by helping to facilitate delivery of the scheme, the applicant should be required to provide a financial contribution via a Section 106 Agreement.

A20 Coldharbour Roundabout and A20 London Road/Mills Road/Hall Road Junction

The TAA contends that a planning condition preventing occupation of the development until both junction improvement schemes are completed is unreasonable. This is based on the forecast traffic flow increase of the proposed development at these locations.

KCC Highways maintain the view that these junctions have been placed under increasing pressure due to the cumulative effects of housing growth in this part of Maidstone. Those developments already consented have been required to mitigate their impact on this part of the network. The TA is predicated on the junction improvements being implemented. It is therefore reasonable that a condition is imposed preventing occupation of the proposed development until these junction improvements are completed.

A26 Tonbridge Road/Fountain Lane/Farleigh Lane Junction

The applicant has submitted a Stage 1 Road Safety Audit and Designers Response in support of the proposed 'interim' junction improvement.

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All of the audit recommendations have been addressed with one exception. In the case of recommendation 2.1, the applicant has not removed the right turn markings that are on the line of northbound movements into Fountain Lane. The Designers Response argues that this situation already exists, and that removal of the markings may cause confusion for road users right turning into Farleigh Lane. KCC Highways is of the view that there is scope to modify the markings without removing them entirely, thereby addressing the audit recommendation.

Parking restrictions in the form of double yellow lines are proposed on the southbound side of Fountain Lane to address audit recommendation 2.2, which highlighted the potential for parked vehicles to result in lane changing collisions. The restrictions will require a Traffic Regulation Order. The loss of on-street parking has implications for the residents that currently park at this location, although most properties benefit from off-street parking. Three on-street parking bays are proposed for those properties on the western side of Fountain Lane that do not have off-street parking. It is uncertain whether this is sufficient to cater for demand, as there would be no certainty that the spaces would be available for these residents to use at any one time.

It is noted that road markings and bollards have been included to address recommendations 2.3 and 2.4.

The TAA has reiterated the applicants' view that the capacity modelling should be regarded as a robust representation of future conditions and that the proposed 'interim' junction improvement provides effective mitigation. It contends that the application of maximum extendable intergreen periods, as previously requested by KCC Highways, would not be appropriate as the modelling has sought to represent 'typical' use of the pedestrian crossings.

KCC Highways, whilst noting the findings of the safety audit and the applicants' additional comments, maintains the view that the interim junction improvement proposal will provide a less effective form of mitigation than the County Council's more comprehensive roundabout scheme.

It would therefore be more appropriate for mitigation to be achieved through a financial contribution to be made towards the roundabout via a Section 106 Agreement. The TAA indicates that the applicant agrees with the principle of a contribution for this purpose. KCC Highways also maintains the view that the planned junction improvement needs to be in place ahead of further large-scale housing growth in this locality. A condition restricting occupation of the development until the improvement is in place is therefore considered reasonable.

Cycle Route Provision

It is noted that the applicant has requested further details in relation to the proposed cycle route connection between Hermitage Lane and London Road. The County Council has already secured funding to convert footpath KB18 to enable it to be used by cyclists. Further works that include the removal of a gate, signing and lining are required to complete connectivity of the route to London Road via Juniper Close. The cost is estimated at £18,000 and no funding is currently secured. KCC Highways maintain the view that completion of the route would enhance the accessibility of the proposed development and this amount should therefore be secured via a Section 106 Agreement.

Recommendation

The proposed development is situated in north west Maidstone, where the cumulative effects of housing growth have continued to contribute to worsening levels of congestion on the

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highway network. It is evident that improvements are required to mitigate these impacts and prevent further housing growth from resulting in a severe impact on queuing and delays.

KCC Highways is taking forward numerous road improvement schemes that, in alleviating congestion hotspots, will better enable the local network to accommodate the additional housing growth proposed by this planning application. These complement the important link road that is to be provided between Hermitage Lane and Poppy Fields roundabout as part of the Whitepost Fields development.

KCC Highways does not therefore raise an objection to this planning application, subject to conditions being imposed that prevent occupation of the development until the following road improvements are implemented:

- A20 Coldharbour Roundabout
- A20 London Road/Mills Road/Hall Road
- Link road between Hermitage Lane and Poppy Fields Roundabout
- A26 Tonbridge Road/Fountain Lane/Farleigh Lane junction improvement (KCC scheme)

The recommendation of no objection is also subject to the applicant being required to enter into a Section 106 Agreement to secure financial contributions towards:

- A26 Tonbridge Road/Fountain Lane/Farleigh Lane junction improvement (KCC scheme)
- A26 Watringbury Crossroads junction improvement
- Hermitage Lane to London Road cycle route
- Bus service diversion

A Section 278 Agreement is also required to secure the proposed highway works on Broke Wood Way.

The following should be also secured via a Section 106 Agreement and planning conditions as appropriate:

- Provision of works to upgrade the surfacing of Public Rights of Way KM11 and KM12;
- Provision of a financial contribution to facilitate the provision of a cycle hub at Barming station;
- Provision of direct cycle connectivity to byway KM13 via a suitable connection point;
- Provision and implementation of a site-wide Travel Plan that has been approved by the planning and highway authorities;
- Provision of a Travel Plan monitoring fee (£948);
- Provision of construction vehicle loading/unloading and turning facilities prior to commencement of work on site and for the duration of construction;
- Provision of parking facilities for site personnel and visitors prior to commencement of work on site and for the duration of construction;
- Provision of wheel washing facilities prior to commencement of work on site and for the duration of construction;
- Provision of measures to prevent the discharge of surface water onto the highway;
- Completion and maintenance of the access shown on the submitted plans prior to the use of the site commencing.

INFORMATIVE: It is the responsibility of the applicant to ensure , before the development

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hereby approved is commenced, that all necessary highway approvals and consents where required are obtained and that the limits of highway boundary are clearly established in order to

avoid any enforcement action being taken by the Highway Authority.

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 road. This is called 'highway land'. Some of

this land is owned by The Kent County Council (KCC) whilst some are owned by third party owners. Irrespective of the ownership, this land may have 'highway rights' over the topsoil.

Information about how to clarify the highway boundary can be found at

<https://www.kent.gov.uk/roads-and-travel/what-we-look-after/highway-land/highway-boundary-enquiries>

The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under such 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.