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Classification:	Open		

Dear Sir/ Madam

Local Plan: Sites Consultation Redhill Aerodrome New Garden Village

In response to the Tandridge Garden Village sites consultation, I have been asked by Nutfield Conservation Society to review the documents provided by the promoter and by Tandridge Council in relation to that site. I write now setting out the principal areas of the Nutfield Conservation Society's objections in relation to highways and transportation for this site.

Garden Village Proposals

In order to provide meaningful comments and responses in relation to the Garden Village consultation, it is critical that the nature of those proposals are unambiguous and commonly understood. This fundamental requirement is not achievable in relation to the Redhill Aerodrome proposals as, not only is there a high degree of variance in the stated quantum of development across the documents supporting the Redhill Aerodrome site, but there are clear gaps in the information available to the public which are essential if an understanding is to be achieved.

Firstly, the variance in the quantum of development is unhelpful as there is a differential of more than 5,000 dwellings, depending on which document, or which part of any document, is referred to:

- 4,500 homes – Thakeham Homes Letter of Representation dated 22 December 2016
- 4,500 – 8,000 homes – Tandridge Local Plan: Transport & Accessibility Assessment of Potential Garden Village Locations
- 6,000 – 8,000 homes – Tandridge Local Plan: Garden Villages Consultation
- 6,000 – 8,000 homes - Thakeham Presentation to Tandridge District Council Members Page 1 (Tuesday 27th June)
- 9,560 homes - Thakeham Presentation to Tandridge District Council Members Page 13 (Tuesday 27th June)

In terms of available information, in addition to the documents produced by the Council, those submitted by each of the promoters are critical to provide scrutiny and oversight on the initial considerations that have been made. These documents have been made available to the public via the Tandridge website here: <https://www.tandridge.gov.uk/Planning-and-building/Planning-strategies-and-policies/Local-Plan-2033-emerging-planning-policies/Local-Plan-Garden-Villages-Consultation/Information-submitted-to-the-council-by-site-promoters>

The representations for Blindley Heath, South Godstone: area to the north, and the area to the south, and Land west of Edenbridge all include consideration of traffic and/ or transport. These have been provided under separate cover to the letter of representation. The letter of representation for Redhill Aerodrome (Savills 22 December 2016) makes reference to ten separate appendices, including a transport Topic Paper, none of which have been provided online at the time of writing. It is therefore impossible for a member of the public to determine what, if any, technical work has been carried out to support the representation and to form the evidence for the statements contained within it.

Further to my direct enquiries however with Tandridge Council, copies of the appendices were made available to me on Friday 6th October 2017. Whilst I acknowledge that those documents do not form part of the overall consultation documents, I would highlight the following major areas of concern from the Transport Topic Paper dated December 2016:

1. *“Direct vehicle access from the development through South Nutfield would be restricted through the application of an area wide traffic management regime.”* In the absence of a route to the north and to the A25 for example via South Nutfield, development traffic to or from the north or northeast will need to use Bower Hill Lane. This route is wholly inadequate and, due to limited adopted highway corridor along its length, there is no scope to deliver the improvements to forward visibility, carriageway width, or footway provision that would be needed as a minimum to accommodate the development.
2. Paragraph 6.1 is emphatic in its assertion that the M23 link road *“will”* reduce congestion, improve journey times, and improve connections across the whole region. In the absence of any evidence to support these assertions, they should be dismissed.
3. It is noted that the Transport Topic Note makes no attempt to quantify the level of traffic that might reasonably be anticipated to be generated by the development, or to provide any information on the potential distribution of that traffic.

M23 Link to A23

The promoters of the site are keen to set out the potential benefit of the provision of a new link between the M23 in the east and the A23 to the west of the development site, with the assertion that:

“new strategic roads and public transport connections will ease current congestion in local settlements not designed to accommodate the current high levels of traffic and will encourage and allow realistic use of sustainable methods of transport” (Savills, 22 December 2016).

There are a number of fundamental flaws in this assertion which must be addressed:

1. **No strategic traffic model** has been produced to test what continues to be the hypothesis that a link road will improve the current situation. Unless and until a strategic traffic model is produced, which takes account of future residential and employment growth in neighbouring areas, and particularly in Reigate, there is absolutely no evidence to support this.

Further, the absence of a strategic traffic model also means that, not only is the efficacy of such a link road untested, but the subsequent reassignment of traffic on the surrounding road network has not begun to be understood.

As Surrey County Council states in the document "Transport & Accessibility Assessment of Potential Garden Village Locations 2017" "*A large amount of through traffic unrelated to the development would therefore be expected to be attracted to use this new link between the A23 and M23*". This means that existing traffic will be diverted onto this link from its current routes through the area. In the absence of a Strategic Traffic Model it is impossible to tell how this diversion, or reassignment, of traffic could affect local communities in terms of increased delay, higher emissions levels due to queuing, or due to increased route length.

There is no guarantee that such a link would reduce traffic or congestion in Tandridge communities, particularly as it ostensibly improves connectivity to Reigate and Redhill which are beyond the District boundary. In the district of Tandridge itself, the effects of the link are likely to be higher volumes of traffic and emissions imposed on residents due to the redistribution of traffic through the area.

2. **Severance** As Surrey County Council states in the document "Transport & Accessibility Assessment of Potential Garden Village Locations 2017" "*A large amount of through traffic unrelated to the development would therefore be expected to be attracted to use this new link between the A23 and M23, which forms the main spine road of the development.*"

For the avoidance of doubt, this means that the County Council as highway authority anticipates that the new link would attract a high volume of traffic to use it from locations away from the Garden Village site. As the link is anticipated to form the main spine road, with development to either side of it, a very high degree of severance can be expected between the two parts of the new settlement as a result.

By providing a road which forms part of the strategic highway network, and which will be subject to a very high level of traffic through the development, walking and cycling movements across the road will be suppressed, and there will be high foreseeable social, public health, environmental and economic costs as a result (see Ancaies, P., Jones P., and Mindell J., *Community Severance: Where is it found and at What Cost?* Transport Reviews, Vol 36, 2016). Whilst it is acknowledged that the master plan is indicative only at this stage, it is noted that the master plan has been developed on the basis of some feasibility work looking at potential locations for the new junctions to either end. The link of the road would therefore, necessarily, fall in the centre of the main development area. We would reinforce that this approach is directly at variance to the Garden Village Principles of walkable neighbourhoods, and integrated and accessible transport systems.

3. **Induced demand** will result from the construction of a new road between the A23 and M23. The direct relationship between building new strategic roads and an increase in demand for trip making is very well established (see *The End of the Road? Challenging the road-building consensus* and supporting evidence base, CPRE 2017) and is not discussed in the representation or consultation. In the absence of a strategic traffic model or any supporting transport evidence base, the ramifications of the increased traffic flows on air quality, noise, vibration and quality of life for local communities cannot be estimated.

On the basis of the above, in the absence of any technical supporting evidence, the promoter's assertion that *"there are no technical considerations which would prevent the delivery of the development following detailed assessment and an appropriate mitigation strategy"* is premature and unfounded.

Connections with Local Infrastructure

The Thakeham master plan indicates several locations of *"Integration with wider local road network (public transport emphasis)"* in particular:

- Crab Hill Lane
- Mid Street
- Kings Cross Lane
- Bower Hill Lane
- Clay Lane
- Kings Mill Lane

The documents of representation and consultation focus heavily on the ability of the A23 link road with the M23 to deal with the development's traffic. However, all initial phases of development brought forward in advance of the completed M23 link would be entirely dependent on existing local roads for access. And even with the M23 link in place, significant volumes of traffic would continue to access the development (or the link road) via those same local roads. It is therefore surprising that no attention has been paid to the ability to upgrade those local roads to accommodate the likely levels of traffic.

In particular, all traffic to or from the north are likely to use Bower Hill Lane or Mid Street in South Nutfield. Both of these are narrow in width, constrained by the existing railway bridges, and with narrow, if any, footways and verge strips. The extent of the adopted highway boundary appears to hold closely to the carriageway edge on Bower Hill Lane, and to the eastern side of Mid Street, and there is very little scope to provide any widening to the carriageway or the provision of new footways.

This is an important point as for the future residents of the initial phases of the development to access schools, day to day services and leisure facilities to the north of the site, without new footways and cycleways the car will be the principal mode of transport used. In addition, a high level review of road traffic accident data via the Crashmap website shows that multiple accidents have occurred in the past five years on Bower Hill Lane, Clay Lane, and Mid Street, of which seven have resulted in cyclists sustaining an injury.

There needs to be full consideration of this point at this stage in the planning process or else there is a risk that the full impact of the development on existing communities will be significantly underestimated. This is borne out by Surrey County Council's review which states that *"The majority of existing roads in the vicinity of the site are minor, some with sharp turns and poor visibility. They are therefore not suitable for significantly increased traffic flow."*

Trip Generation

Surrey County Council's "Transport & Accessibility Assessment" provides an initial calculation for trips associated with the proposed development site. The exact methodology for these calculations is not detailed in that report, except to say that the TRICS database was used. The results of that exercise identified potential peak hour flows of 3,500 to 4,000 trips in the AM peak hour. It is assumed that by the "potential quantum of trips" paragraph 5.2.1 actually refers to vehicular trips rather than total person trips.

It is our view that this is a substantial under-estimate of the level of trip making that is likely to be associated with the Redhill Aerodrome development, before any consideration of the reassignment of trips associated with the M23 link. A more rigorous methodology is set out below which has derived a realistic, and evidence based, level of trip making for the site.

The number of vehicular trips that would be generated by the new settlement can be estimated by the following:

1. Use of Census 2011 data for Journey to Work for trips by all modes of transport originating in the area and commuting out to other locations. As the level of employment land proposed in the development site is modest, and local towns including Reigate are set to have significantly greater levels of employment development in the lifetime of their Local Plan, current travel patterns provide a reasonable and empirical basis for the calculations.
2. Use of the TRICS database to establish Total Person Trips for the new development based on residential developments outside of Greater London.
3. Adjustment of the TRICS-based Total Person Trips using the Census 2011 mode share to estimate the number of vehicular trips that would be generated by the development in each of the weekday peak hours.

Census 2011 journey to work data

The Census 2011 Journey to Work data has been extracted from Nomisweb for the MSOA (Tandridge 008) in which the aerodrome settlement is located. Data has been extracted for all commuting journeys originating in the MSOA by mode.

Mode	Percentage Mode Share
Underground	0.41%
Train	17.28%
Bus	2.65%
Taxi	0.32%
Powered Two Wheeler	1.19%
Driving a Car or Van	69.14%
Passenger in a Car or Van	4.21%
Bicycle	0.82%
On Foot	3.80%
Other Method	0.18%

Table 1 Census 2011 Mode Share for Journeys to Work (Tandridge 008)

The Census data clearly shows that the majority of journeys to work are undertaken by car or other private vehicle (Taxi + Motorcycle + Driving a car or van) at 70.64%. Of the 17.28% trips made by rail, the level of car parking demand at the railway stations locally suggest that these railway trips form the larger part of a multi-modal trip which includes car driving. Therefore the overall level of car and motor vehicle use for journeys to work is likely to be higher than that demonstrated in the Census mode share. However, for this exercise the data relating to train use has been excluded from the following calculations.

Total People Trips

TRICS has been used to estimate the total number of trips that are likely to be made by all modes of transport in the peak hours by the residential element of the new development. These are set out below.

	In	Out	Total
AM	0.391	1.130	1.521
PM	0.767	0.568	1.335

Table 2 TRICS 85th Percentile Trip Rates per Residential Unit

The TRICS trip rates have been adjusted using the Census Mode Share data in Table 1 to create Vehicular Trip Rates as in Table 3.

	In	Out	Total
AM	0.276	0.798	1.075
PM	0.542	0.401	1.075

Table 3 TRICS Vehicular Trip Rates per Residential Unit Adjusted by Census Mode Share Data

The numbers of vehicle trip generated by the residential element of the development depends on the number of units. Table 4 sets out a series of options depending on the scale of development.

	4,500 Dwellings			6,000 Dwellings			8,000 Dwellings		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	1,243	3,592	4,835	1,657	4,790	6,447	2,210	6,386	8,596
PM	2,438	1,806	4,244	3,251	2,408	5,659	4,335	3,210	7,545

Table 4 Peak Hour Vehicle Trips by Scale of Development

Table 4 shows that with the smallest scale of development, in the region of 4,835 trips could be generated in the AM peak, with 4,244 in the PM peak. With the largest scale of development this increases to 8,596 trips in the AM and 7,545 in the PM.

It is noted that an element of light industrial and commercial development is also proposed under the current master plan totalling some 8.5ha of industrial park land. TRICS has again been interrogated to identify the trip rates per ha for this land use as shown in Table 5. Given that Redhill has just 20% of its workplace population residing in Redhill also, it is not unreasonable to apply these employment based trips to the residential trips to derive an overall quantum of trip making associated with the site.

	IN	OUT	TOTAL
AM	37.079	23.596	60.675
PM	8.889	33.889	42.778

Table 5 Industrial Estate Vehicular Trip Rates per Hectare

These trip rates in Table 5 have been used to identify the total number of peak hour vehicle trips associated with this element of the development as in Table 6.

	IN	OUT	TOTAL
AM	315	201	516
PM	76	288	364

Table 6 Peak Hour Industrial Estate Vehicle Trips

The trips associated with the Industrial Estate element of the development have been combined with the trips associated with the different scales of residential development to create total vehicle trip estimates as shown in Table 7.

	4,500 Dwellings			6,000 Dwellings			8,000 Dwellings		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	1,558	3,793	5,351	1,972	4,990	6,963	2,525	6,587	9,112
PM	2,514	2,094	4,608	3,327	2,696	6,022	4,410	3,498	7,908

Table 7 Total Development Peak Hour Vehicle Trips

As detailed in Table 7, the trip generation estimated for even the smallest scale of development is, at 5,351 in the AM peak, far in excess of that set out in Surrey County Council's Assessment. A development of 6,000 – 8,000 dwellings is the scale of development most frequently cited, and this would result in a very high level of trip making associated with the development in each peak hour.

Added to this would be additional trips associated with staff and pupils at the schools originating from elsewhere, any other employment sites within the development site, and the M23 link road which have not been taken into account in the calculations above. Given the small quantum of employment development proposed to be included in Redhill Aerodrome site, it is not unreasonable to posit that the vast majority of these trips will be made on the highway network beyond the site's limits.

It is worthy of note that as of the 2011 Census, average household size stood in Redhill stood at 2.37 people per household. This would mean that a "Garden Village" of 8,000 homes would equate to 18,960 people. On this basis, the quantum of trip making set out in the above tables would appear to be realistic.

Overall, it can be seen that a very high level of vehicle traffic will be imposed on the surrounding highway network as a result of the development regardless of the improvements or changes to local highway infrastructure.

Conclusions

As detailed above, there are several significant concerns relating to exactly what form and scale of development is being sought to be allocated; the basis by which a link to the M23 is sought to be incorporated into local planning policy; the ramifications and impacts on existing communities as a result of the development; and the very high volume of traffic that would be generated by the development and which would not be adequately accommodated by the local highway network.

In the absence of any substantive technical evidence supporting the master plan and the site representations, the Nutfield Conservation Society objects to the Garden Village proposal at Redhill Aerodrome particularly on grounds of:

- Highways impact – the development will impose a very high volume of traffic onto local roads and will have a severe impact on the operation of those roads, both during initial phases of development, and with any M23 link road in place. There is no evidence provided that adequate measures could be taken to ensure no significant impact is borne by local residents and communities as a result of the development. In addition, the absence of a Strategic Traffic Model means that the impact on the strategic road network and the effects of traffic reassignment are unknown and unevidenced.
- Road safety – the alignment and geometry of local roads, as well as the absence of any opportunity to significantly improve those roads will, when combined with the increase in traffic along those roads, exacerbate local road safety issues, particularly in relation to pedestrian and cyclist safety;
- Environmental Impact – noise and air quality will be significantly impacted due to this development, particularly with the elevated nature of the link road over the roads in South Nutfield, and the overwhelming increase in road traffic that can be anticipated as a result of the development.

I trust that this letter will inform your considerations in relation to the Garden Village Consultation process,

Yours faithfully



Sarah Simpson

Director Transport Planning
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