

Introduction

This document presents a review of the information submitted by the Aldborough Hatch Defence Association (AHDA) as a response to the London Borough of Redbridge (LBR) Local Plan (LP) Inspector 'Issue 4a', contained within the document 'Inspectors issues and questions'¹. The information submitted by AHDA² is a one page objection statement and three technical submissions including traffic surveys and interpretation of the data presented, specifically relating to the site allocation 'Land at Billet Road'.

'Issue 4a' raises points relating to the Investment and Growth areas as presented in the Local Plan submission document³. It is understood that the response submitted by AHDA specifically refers to the following question with regards to strategic site Billet Road (Site 97⁴):

"Are the strategic and key sites within each of the Investment and Growth Areas justified when compared to other reasonable alternatives, deliverable within the plan period having regard to any constraints and consistent with national policy?"

Whilst a more detailed rationale supporting the allocation of the Billet Road site has already been provided by LBR⁵, the intention of this document is to objectively review the information presented by AHDA within the context of commonly accepted transportation evaluation practices and relevant national and local policies and/or guidance.

The AHDA document outlines that the three transport survey documents presented relate to an 'objection to the development of land at Billet Road'. The three documents are explained to be headed as the following:

- Long Term Report;
- Traffic Flow Comparison Painters Road Aldborough Road North; and
- Actual.

The AHDA document, herein referred to as the 'AHDA response', is presented as one whole document, with no specific section headings corresponding to those outlined above being present within the document. As a result, page numbers will be referred to in this review for clarity.

'Long Term Report'

Page 1, para. 2 of the AHDA response outlines that the 'Long Term Report' document 'sets the scene' and presents data logged by contractor DCA Monisyst Limited (DCA). This data, and interpretation, appears to be contained within pages 2 to 34 of the AHDA response. As the section is described to 'set the scene', the information presented has been reviewed in terms of being a baseline demonstration of existing conditions along the lines of those commonly presented in transport assessments.

It is noted that DCA's business address, taken from their website⁶, is Willow Farm, Billet Road (approximately 200 metres from the Hainault Road/Billet Road roundabout) to the west of the proposed allocation site. In addition, DCA's website also outlines their support for the AHDA, stating that 'we are pleased to be associated with the Aldborough Hatch Defence Association and offer our assistance when possible'. The use of a contractor with a vested interest in results can represent a conflict of interest and is not considered to conform to best practice. Whilst the surveys conducted would be expected to be completed to the relevant standards and will be reviewed as such, the integrity of the

¹ Examination hearing documents; IED004 (dated 6th April 2017). All Local Plan Documents referenced can be found at <https://www.redbridge.gov.uk/planning-and-building/planning-policy/redbridge-local-plan-2015-2030/>, with only section headings and document numbers referred to hereafter.

² Responses to Inspectors Issues and Comments; R01098 (dated 11th May 2017)

³ Redbridge Local Plan and strategic documents; LBR 1.01

⁴ As referred to in Examination hearing documents; IED004. We note that updated site numbers have been presented in Examination hearing documents; LBR 2.06.1. In this document Billet Road is now listed as Site 79

⁵ Responses to Inspectors Issues and Comments; CED009

⁶ DCA Monisyst (2015) *About Us* <http://www.monisyst.com/aboutus> (Accessed 23rd May 2017)

interpretation relating to the data in this case could be questioned, and would need to be substantiated with robust evidence.

DCA have presented an interpretation of data on page 2, although much of it appears to bear little relation to the data presented in pages 3 to 34 of the AHDA response, and in instances where it does the information provided has a number of limitations which are discussed further, later within this document. It should be noted that some of the traffic survey data provided (for example pages 3-6, 9-13, 16-17, 20-24) has not been labelled with the survey location, dates, times or direction of flow and it is therefore not possible to verify it.

Firstly, a 'virtual days report' based upon Automatic Traffic Counts (ATC) which were carried out from 'August 2016 through to the end of September 2016' has been presented. The specific days presented are from Monday 1st August to Wednesday 28th September. The ATC locations are shown to be along Painters Road and Aldborough Road, to the west of the proposed development site. The rationale behind using these locations is unclear from AHDA's response, although from the information on page 75 they may have been selected with a view to considering 'rat-running'.

Department for Transport (DfT) WebTAG guidance⁷ states that '*Surveys should be carried out during a 'neutral', or representative, month avoiding main and local holiday periods, local school holidays and half terms, and other abnormal traffic periods.* It is good practice to agree the scope of traffic surveys with the local highway authority in advance of any work being carried out; it is unclear whether this agreement was sought and DCA would need to clarify this.

Given that the Autumn term for schools in Redbridge commenced on Tuesday 6th September⁸, only 11 of the 59 days used to inform the 'virtual days report' can be considered neutral in accordance with DfT guidance. Furthermore, the virtual days report is based on an average of the 59 days of data which includes both the school summer holidays and weekends. This data is not considered to be robust in accordance with DfT guidance and is not representative of a typical day.

Much of DCA's comment in this section refers to parking and the number of vehicles per household on the site. DCA assert that 'Parking Beat' survey averages of 2.25 vehicles per household (a total of 1,800 for the allocation site) are common, however no evidence has been provided to support this. It is not generally considered reasonable to equate an observed number of parked vehicles to households as a proxy for car ownership and any such estimation does not follow good practice.

DCA outline that the development has the potential to generate 400 vehicles along Billet Road towards Hainault Road, which 'if they all came on the road at the same time' would result in a substantial queue from the Billet Road/Hainault Road roundabout to Rose Lane (approximately 1.2 km away). There are a number of methodological concerns relating to this interpretation, as it is not supported by evidence normally expected through a full transport assessment. These concerns have been summarised in Table 1. These comments are not exhaustive, and additional details would be required as part of a full Transport Assessment to support a planning application when the allocation site is brought forward for development.

⁷ Department for Transport (2014) *WebTAG Unit M1.2 Data Sources and Surveys Paragraph 3.3.6*
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427119/webtag-tag-unit-m1-2-data-sources-and-surveys.pdf

⁸ London Borough of Redbridge (2017) *Term Dates* <https://www.redbridge.gov.uk/schools/term-dates/> (Accessed 24th May 2017)

Table 1: DCA Billet Road queue length interpretation methodological shortcomings (when compared to commonly accepted transport practices)

Commonly Accepted Practice	DCA Information	Within Commonly Accepted Practice?	Comment
Baseline Traffic Surveys (including queue lengths)	Partial (pp.27 – 34)	Partial	Traffic counts and vehicle speed data for Billet Road and Hainault Road have been provided for a neutral day in September 2016. However, no queue lengths have been provided.
Traffic Forecasting (Trip Generation and Distribution)	Yes	No	The 400 vehicles mentioned by DCA are assumed to be the proposed trip generation and distribution. It is unclear how the figure of 400 vehicles has been calculated. Standard procedure is for trip rates to be derived from empirical evidence, and subsequent trip generation, for any development to be forecast. In addition, these trips would be expected to be assigned to the local highway network based upon journey purpose, through use of information such as 2011 Census Journey to Work origin-destination information which is publically available.
Model Production and Commission	No	No	In order to consider impacts in respect of queuing, as the AHDA report attempts to, a capacity model would be needed to test the existing conditions and the relative impact of development traffic. Such a model would need to be calibrated to represent existing conditions and accepted by the relevant Highway Authority. In order to calibrate a model, existing queue length data would be required, although none is provided in this instance. This approach would reflect good practice and would need to be presented in any TA for a planning application, but is not present in the AHDA work. Common modelling practice will also reflect the nature of traffic assignment throughout a chosen assessment period to reflect expected travel behaviours, i.e. spreading the development trips across a peak hour using accepted proportions. Based on this, it is highly unlikely that all development traffic would utilise the road at the same time, as hypothesised by DCA.
Model Result Interpretation	No	No	As no model has been produced to establish the impact of the proposed allocation development, the specific queue length increases resulting from the allocation site are unclear. Without robust supporting evidence, predictions of future queue lengths are considered to be unreliable.
Potential Highway Mitigation	No	No	In the event that any modelling results (accepted by the local Highway Authority) indicate that development traffic has the potential to cause a queuing problem, mitigation would be expected to be provided to reduce the impact to an acceptable level. Much of the interpretation presented by DCA, and also by AHDA, does not acknowledge this requirement.

It has not been possible to comment on DCA's conclusion as it appears incomplete in the document submitted.

In summary, there are a number of serious concerns with the 'Long Term Report' section presented, relating specifically to the traffic survey data. The data presented to support the assertion in page 2 of AHDA's response is not considered to be robust.

'Traffic Flow Comparison Painters Road Aldborough Road North'

DCA's interpretation of traffic comparison tables from ATC surveys at Painters Road and Aldborough Road North has been presented in pages 35 to 51 of the AHDA response. Page 35 explains the data demonstrates that *'there is a significant increase of vehicles using Painters Road in September compared to the number of vehicles using the same road in April, most days'*. There are a number of concerns with this interpretation, which are detailed within this section.

The April data presented for comparison was extracted from surveys completed the week commencing Monday 4th April 2016. At this time schools within LBR were on Easter Holidays⁹. Based upon the DfT WebTAG guidance outlined earlier in this review, this would not be considered a neutral dataset; therefore the use of this data for comparison is not considered to be robust.

Page 42 of the AHDA response suggests that, from April to September, there was an increase in vehicles of 358 vehicles. This increase only applies to one date of the four scenarios presented, which each contained seven days of data. Notwithstanding the previously mentioned unsuitability of the April survey for comparison, the use of this day could be perceived as taking the data out of context.

The use of non-neutral data, particularly as a comparison, makes it difficult to establish the exact nature of the difference in flow as there may be a natural fluctuation through seasonality. The presence of Little Heath School to the south of Hainault Road might lead to traffic displacement in the AM peak (towards the A12), particularly given that the increase is not replicated as significantly in the PM peak. It is also unclear whether there are any other external factors which may have influenced the travel behaviours for this day, such as roadworks on the wider road network within the borough.

Page 47 of the AHDA response presents data displaying southbound traffic speeds at a location along Hainault Road (north of the A12). The location of the data collection point is explained to be the same as that used in LBR's Transport Evidence (Billet Road High Level Transport Study)¹⁰. From figure 2-21 of the High Level Transport Study, the collection point is along the 30mph speed limit section of Hainault Road adjacent to the Little Heath School. Within this distance there is the start of the signalised A12/Hainault Road junction, the Little Heath School priority junction, the signalised pedestrian crossing adjacent to the school and the Billet Road/Hainault Road roundabout. A number of traffic counts at speeds of between 0 to 15mph are highlighted for the time period between 06:00 to 00:00 in AHDA's response and it is suggested that *'from 06:00hrs to midnight the traffic is slow moving due to weight of traffic'*.

This interpretation, that the speeds displayed represent 'weight of traffic' is considered to be incorrect as the speeds along this section of road would reasonably be expected to be lower due to navigation of the previously mentioned road features. Furthermore, the location of the ATC is described to be adjacent to the Little Heath School and therefore the speed results are likely to have been affected by the proximity of the counter to the pedestrian crossing. The pedestrian crossing is likely to experience peak demand in the AM peak with pupils crossing the road to enter the school.

Therefore the low speeds observed are to be expected due to the activity on this part of Hainault Road which is typical of a morning peak and cannot be attributed to 'weight of traffic' alone.

Page 48 of the AHDA response raises a concern about the location of the traffic count sites in LBR's Transport Evidence (Billet Road High Level Transport Study) suggesting that *"these sites were chosen so they would not reflect true traffic flow or saturation. These sites were placed where they would be affected by slow moving, queuing traffic"*. The accompanying text is incomplete and therefore AHDA's key argument is unclear, however paragraph 2.8.3 of the High Level Transport Study explains, *"It should be noted that speeds are collected 24 hours a day for a week long period and therefore capture speeds*

⁹ London Borough of Redbridge (2015) 2015-16 School Closure Dates <http://nrhs.redbridge.sch.uk/wp-content/uploads/2015/10/2015-16-RTS-Dates.pdf> (Accessed 22nd May 2017)

¹⁰ Submission evidence base and policies map; LBR 2.52.1

that may not be representative of those observed during either AM or PM Peak Hour Periods". The speed analysis in the High Level Transport Study is therefore not intended to represent peak hour speeds.

'Actual'

Pages 52 to 79 of the AHDA response presents road distance isochrones to the nearest rail stations from the centre of the proposed allocation site, a series of images relating to driver behaviour and also collision mapping extracted from Crashmap.

Page 52 disputes the travel distances to rail stations included in LBR's Transport Evidence (Billet Road High Level Transport Study). It appears that the main difference in distance relates to measurement methodologies, with the High Level Transport Study using an 'as the crow flies' measurement and AHDA using the travel distance by road. Section 2.4.1 of the High Level Transport Study simply states that the location of Chadwell Heath station is 1.8km from the site. This appears to have been taken out of context in the AHDA response as page 13 of the High Level Transport Study (*Figure 2-2 Billet Road Site - Walking Isochrone Map*) clearly shows Chadwell Heath outside of the 2km walking distance radius. Furthermore, the distance from the Billet Road site to existing public transport services is acknowledged in the accessibility appraisal section of the LB Redbridge Transport Assessment. Para 6.5.4 *Development Cluster ER5: Billet Road* states that the Billet Road site has a 'red' rating in the category of 'proximity to existing train services'.

Page 52 of the AHDA response also asserts that the Central Line from Newbury Park is overcrowded and that neither Newbury Park nor Barkingside stations having disabled access. The specific figures relating to overcrowding on this section of the rail route have not been reviewed, although it is noted that Figure 8 of LBR's LP submission outlines that improved connectivity to Goodmayes Station will be required to assist development within the allocation site area. Chadwell Heath and Goodmayes stations are both closer to the development site and will provide step-free access (in line with the Crossrail Inclusivity Policy¹¹) to the increased capacity Crossrail services, which should also provide increased capacity.

A number of issues relating to road safety are raised in AHDA's response. Page 78 includes an image extracted from Crashmap for the area surrounding the allocation site. It is understood that has been presented by AHDA in response to the images shown in Figures 2-19 and 2-20 of the LBR's Transport Evidence (Billet Road High Level Transport Study). It is of note that Transport for London have recently completed a series of improvements at the A12/ Hainault Road/ B177 Barley Lane junction (as acknowledged on page 75 of the AHDA response) aimed at increasing capacity for right turners and improving safety for pedestrians and cyclists.¹² (April 2017).

The map also identifies that Crashmap does not include *'minor bumps or crashes that were not reported to the police, so the actual number of accidents shown should be higher'*. The method employed in the Billet Road High Level Transport Study is a generally accepted practice at a high level. In order to understand any existing accident patterns or trends in the area surrounding the site, an analysis of Personal Injury Accident (PIA) data, which records reported accidents by severity and includes causation factors would be in accordance with best practice. The AHDA response does not include PIA accident data or analysis and it is therefore not possible to ascertain the causation factors of the accidents shown on the Crashmap extract presented.

It is worth noting that any planning application for the site would be expected to be accompanied by a detailed Transport Assessment which would include an analysis of personal injury accidents on the road network surrounding the site. Should this analysis find any recognised accident patterns or trends

¹¹ Crossrail (2009) *Crossrail Inclusivity Policy* <http://www.crossrail.co.uk/route/inclusive-design> (Accessed 24th May 2017)

¹² Transport for London (2017) *Have your say on proposals for new pedestrian crossings and junction improvements on the A12 Eastern Avenue at B177 Barley Lane and Hainault Road* <https://consultations.tfl.gov.uk/roads/barley-lane-pedestrian-crossings/> (Accessed 22nd May 2017)

which could be exacerbated by additional development traffic, mitigation measures to reduce the risk of accidents would need to be explored and agreed with the Highway Authorities.

Additional Comments

The ADHA response raises concerns (page 75, para 1) regarding the recent TfL junction improvements at the Hainault Road / A12 junction, specifically that the green time on the minor road appears to have been reduced. The scheme TfL consulted on introduced a right turn in / out of Barley Lane from / to the A12, along with new pedestrian and cycling crossing facilities at this junction. These improvements were intended to improve capacity at the junction and reduce severance caused by the A12. The consultation raised a number of issues and as a result TfL will be considering further improvements to the B177 Hainault Road to discourage poor driver behaviour and improve road safety. As part of the scheme the signal times have been optimised and the extension of the right turn filter on the A12 eastbound has improved capacity and flows. The intention is to distribute the extra capacity and allocate more green time to all arms, including Barley Lane and Hainault Road. The junction operates under SCOOT¹³ which allocates green times to each arm in real time depending on traffic conditions, such as flows and queue lengths.

Page 1, para. 4 of the AHDA response explains that they believe the Greater London Authority (GLA) will 'call in' the Billet Road development if approved by LBR, as occurred for an application for 425 residential dwellings at Five Oaks¹⁴. Page 79 of the response provides an interpretation of GLA's planning report, stating that the *'key comment is that the development will have an adverse effect on the surrounding road network!!'*.

It is unclear whether the comments relate to an approval at the plan-making stage or at the decision-taking stage. As set out in the Mayor of London Order 2008¹⁵, an application is referable if a development is over 150 residential units or more, therefore the development would fall within this criterion.

Para 108 of the GLA planning report noted that 'a significant amount of information is required to ensure full compliance with the transport policies of the London Plan. In addition, a number of recommendations were provided in the planning report, outlining that mitigation would be required in response to development. The overall application was deemed to be non-compliant with the London Plan for a number of factors, including affordable housing, urban design and energy requirements.

Based upon the above review of the application at Five Oaks, the comments made by the GLA are considered to have been taken out of context. At no point do the GLA raise transport issues which they feel cannot be mitigated, and as such it is considered that the use of the Five Oaks case as a precedent for potential GLA non-compliance is unfounded.

In relation to the decision taking elements of the planning system, Para 9.16 of the IDP¹⁶ outlines that Transport Assessments will be required to accompany planning applications, and *'Where appropriate, scheme mitigation will need to be proposed and LBR will look to secure contributions in addition to CIL'*. Therefore the approach presented by LBR in the LP has the potential to account for any issues identified by the GLA as part of the Five Oaks planning response, if required in the instance of Billet Road.

¹³ SCOOT (Split Cycle Offset Optimisation Technique) is a tool for managing and controlling traffic signals in urban areas. It is an adaptive system that responds automatically to fluctuations in traffic flow through the use of on-street detectors embedded in the road.

¹⁴ Greater London Authority (2011) planning report PDU/261a/01: Land at Five Oaks, Chigwell
https://www.london.gov.uk/sites/default/files/PAWS/media_id_13462/land_at_five_oaks_lane_collier_row_report.pdf (Accessed 25th May 2017)

¹⁵ Greater London Authority (2017) What powers does the Mayor have for planning applications?
<https://www.london.gov.uk/what-we-do/planning/planning-applications-and-decisions/what-powers-does-mayor-have-planning>
(Accessed 25th May 2017)

¹⁶ Submission evidence base and policies map; LBR 2.21

Paragraph 5 of the AHDA response questions the accuracy of the data modelling presented in the 2017 Transport Assessment¹⁷ and suggests that increases in flow under 20% are being ignored. This is not the case; the LB Redbridge Transport Assessment (page 31) identifies the junctions where the impact is greater than 20% in that section of the report. The application of a certain threshold in no way relates to the fundamental accuracy of the model results presented, therefore this statement is considered to be of minimal merit and unsubstantiated.

The LBR TA model has been set up to capture forecast changes in traffic demand at 22 key junctions and 7 key links agreed in advance with the highway authority to ascertain the cumulative impact of development at those locations. The next step will be to study each of the junctions and links in greater detail to determine if the additional traffic can be accommodated in the junction or link's existing capacity or whether mitigation works would be required.

The modelling of the Billet Road proposed site allocation was based around LBR's original allocation of approximately 1,100 dwellings. As the modified allocation is now 800 dwellings, the contested traffic increases would now be expected to be lower, moving the results further below the threshold utilised in the Transport Assessment.

Conclusion

This document presents a review of the information submitted by the Aldborough Hatch Defence Association (AHDA) as a response to the London Borough of Redbridge (LBR) Local Plan (LP) Inspector 'Issue 4a', contained within the 'Inspectors issues and questions'.

AHDA have presented a number of pieces of information which have serious shortcomings and do not follow commonly accepted practice or guidance. In addition, the interpretation of such information is frequently either taken out of wider context and/or unsubstantiated by evidence in a way which is inconsistent with commonly accepted practice or guidance.

In summary, Billet Road has existing local highway problems and without any mitigation, additional development would exacerbate these problems but that is not what is proposed in the Local Plan. The intention is to identify development sites and to improve the local highway network and access arrangements to accommodate the proposed increase in traffic arising from development. As part of the more detailed studies which will be required for each of the sites taken forward, the existing local transport problems will be quantified and mitigation measures will be provided, where required.

¹⁷ Submission evidence base and policies map; LBR 2.50