



Crawley Local Plan

<p>Ref No:</p> <p><i>Office use only</i></p>
--

Crawley Submission draft Local Plan Representation

Please return your completed representation form to Crawley Borough Council.

Representations can be made via this form and emailed to strategic.planning@ Crawley.gov.uk or sent via post to: Local Plan Consultation, Strategic Planning, Crawley Borough Council, Town Hall, The Boulevard, Crawley, RH10 1UZ. Alternatively, representations can be made online using the [eform](#) which allows attachments of documents.

This form has two parts:

PART A – Personal details

By law, representations cannot be made anonymously. All representations will be published alongside your name, company name (if applicable), and your client’s name/company (if applicable). The Council will use the information you submit to assist with formulating planning policy.

Further information about Data Protection Rights in line with the provisions of the General Data Protection Regulations and Data Protection Act 2018, for example, how to contact the Data Protection Officer, how long information is held or how we process your personal information can be found at www.crawley.gov.uk/privacy. Specific reference to the Local Plan and planning policy related public consultation can be found [here](#).

PART B – Your representation

Please fill in a separate sheet for each representation you wish to make. You may submit multiple “PART B” sections with a single “PART A” completed.

PART A – Personal details

Please ensure that you complete all fields in 1. If a planning agent is appointed, please enter the Title, Name and Organisation in 1, and complete the full contact details of the agent in 2.

	1. Personal details	2. Agent’s details
Title:	MR	MR
First name:	AIDAN	DAVID
Surname:	ROBSON	NEAME
Organisation:	DANESCROFT (RLP CRAWLEY) LLP	NEAME SUTTON LIMITED
Address line 1:	REFER TO AGENT	WEST SUITE, COLES YARD BARN

Address line 2:	<input type="text" value="NORTH LANE"/>
Town/city:	<input type="text" value="CLANFIELD"/>
Postcode:	<input type="text" value="PO8 0RN"/>
Telephone:	<input type="text" value="02392597139"/>
Email:	<input type="text" value="david.neame@neamesutton.co.uk"/>

PART B – Your representation

3. Please tick the document that you would like to make a representation on:

- Crawley submission Local Plan
- Crawley submission Local Plan Map
- Crawley submission Sustainability Appraisal
- Habitats Regulation Assessment Screening Report

4. Which part of the Local Plan does this representation relate to?

Paragraph: Policy: Other:
 Table 5.1

5. Do you consider the Local Plan to be: (Please tick)

- | | | |
|---|------------------------------|--|
| 5.1. Legally compliant? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 5.2. Sound? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 5.3. Compliant with the duty to co-operate? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

6. Please give details explaining your response to 5.1, 5.2, or 5.3 below. Please be as clear as possible.

PLEASE SEE ATTACHED REPRESENTATIONS

If required, please continue your response on an additional piece of paper and securely attach it to this response

- 7. Please set out what modification(s) you consider necessary to resolve the issues you have identified above. You need to state why this modification will make the Local Plan legally compliant or sound. It would be helpful if you are able to suggest how the wording of any policy or text should be revised. Please be as clear as possible. Any non-compliance with the duty to co-operate is incapable of modification at examination.**

PLEASE SEE ATTACHED REPRESENTATIONS

If required, please continue your response on an additional piece of paper and securely attach it to this response

*Your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations. **After this stage, further submissions will only be at the request of the Inspector, based on the matters and issues s/he identifies for examination.***

8. If your representation is seeking a modification, do you consider it necessary to participate in the public examination hearings? (Please tick)

No, I do not wish to participate in the examination hearings

Yes, I wish to participate in the examination hearings

9. If you wish to participate in the public examination hearings, please outline why you consider this to be necessary:

THE ATTACHED REPRESENTATIONS RAISE FUNDAMENTAL CONCERNS IN RELATION TO THE LEGAL COMPLIANCE AND SOUNDNESS OF THE PLAN COVERING A RANGE OF TECHNICAL MATTERS THAT WILL NECESSITATE PRESENTATION OF EVIDENCE AND DISCUSSION AT THE EXAMINATION HEARING SESSIONS

The Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

If you would like to make a representation on another policy or part of the Local Plan then please complete a separate PART B section of the form or securely attach an additional piece of paper. Copies of the representation form can also be downloaded from the council's website at: www.crawley.gov.uk/localplanreview

Signature

Date

DAVID NEAME - NEAME SUTTON LIMITED

08 MAY 2021

Town and Country Planning Act 1990 (As Amended)

Crawley Borough Local Plan 2035 –
Regulation 19 Consultation (January 2021)

Representations on Behalf of:
Danescroft (RLP Crawley) LLP

21 April 2021



<u>Contents:</u>	<u>Page:</u>
1.0 Instructions and Introduction	2
2.0 Legal Compliance	4
3.0 Housing Need, Housing Requirement/Target and, Supply	9
4.0 Site-Specific Representations in Relation to Land at Steers Lane, Crawley	14
5.0 Areas Where Changes are Required for Plan to be Legally Compliant and Sound	17

Appendices:

Appendix 1	Location Plan for Danescroft's promotion site – Land at Steers Lane, Crawley
Appendix 2	Bickerdike Allen Partners – Acoustic Review – February 2021 Bickerdike Allen Partners – Gatwick Contour Sensitivity Check – February 2021
Appendix 3	Housing Trajectory Tables: <ul style="list-style-type: none">• Table 1 – Council's Position• Table 2 – Council's Position with 10% Buffer• Table 3 – Neame Sutton Position• Table 4 – Neame Sutton Position with 10% Buffer

1.0 Instructions and Introduction

- 1.1 Neame Sutton Limited, Chartered Town Planners, is instructed by Danescroft (RLP Crawley) LLP ("Danescroft") to prepare and submit representations in relation to the second Regulation 19 consultation version of the Crawley Local Plan 2035 ("the Plan") published in January 2021.
- 1.2 This document sets out Danescroft's Representations on the Plan and deals with the following specific matters:
- Matters of Legal Compliance
 - Consideration of the correct Housing Need and Housing Requirement within the Plan in the context of the Housing Supply identified by the Council; and,
 - Site-specific representations in relation to Danescroft's promotion site at Steers Lane.
- 1.3 The relevant sections of the Plan, including paragraph and policy references, are cited throughout these representations along with the soundness tests that it is considered the Plan fails to comply with.
- 1.4 As an overarching point Danescroft is concerned by the fact the Council has published this second Regulation 19 version of the Plan clearly without having all of the necessary evidence base ready and complete at the time of publication on 06 January 2021. Even the Plan itself anticipated a 6 week consultation expiring on 17 February 2021¹.
- 1.5 Since the publication of the Plan in January 2021 the Council has been trickle feeding the key evidence:

Evidence Update	Date of Update	Extension to Reg 19 Consultation
Draft Habitats Regulations Assessment	18 January 2021	17 February 2021
Confirmation that Viability and Transport Modelling outstanding	03 February 2021	31 March 2021
Viability Study Published	19 March 2021	30 April 2021
Draft DtC Statement	15 April 2021	28 May 2021

¹ Paragraph 1.5 on Page 9 of the Plan confirms.

- 1.6 The Council's website also confirms that a 6 week consultation will commence once the Transport Modelling work is complete. The timetable will therefore be extended even further.
- 1.7 It is clear from this chronology of events that this second version of the Regulation 19 draft Plan was not ready for publication in January 2021 and it must also follow that its content is not reflective of the evidence that has subsequently been published. It cannot therefore be the case that the document as drafted is Sound as a matter of principle.

2.0 Legal Compliance

Duty to Cooperate:

- 2.1 There are a number of Legal Compliance matters that the Council must address if it intends to proceed with the submission of a Local Plan for Examination. The Regulation 19 consultation stage is intended to comprise the version of the Plan that the Council considers to be Sound and in compliance with the various legal requirements.
- 2.2 Unlike matters of Soundness that can be addressed through modifications to the Plan any issues relating to Legal Compliance of the Plan cannot be addressed retrospectively.
- 2.3 It is therefore of vital importance to the Council that the Plan meets the Legal Compliance requirements before it proceeds.
- 2.4 Of particular importance in the case of Crawley is the Duty to Cooperate ("DtC"). Section 110 of the Localism Act 2011 introduces a new Section 33a into the Planning and Compulsory Purchase Act 2004, which requires the Local Planning Authority to cooperate with its neighbouring authorities and other bodies.
- 2.5 Sub-section (2) goes onto set out how the engagement should be undertaken by stating:

'In particular, the duty imposed on a person by subsection (1) requires the person—
(a). to engage constructively, actively and on an ongoing basis in any process by means of which activities within subsection (3) are undertaken, and
(b). to have regard to activities of a person within subsection (9) so far as they are relevant to activities within subsection (3).'

- 2.6 Government policy also confirms that:

*'In order to demonstrate effective and on-going joint working, strategic policy-making authorities should prepare and maintain one or more statements of common ground, documenting the cross-boundary matters being addressed and progress in cooperating to address these. These should be produced using the approach set out in national planning guidance, and be made publicly available throughout the plan-making process to provide transparency.'*²

² Paragraph 27 of National Planning Policy Framework (February 2019)

- 2.7 It is therefore a vital legal requirement of the Plan making process that the Council engages with its neighbours on a constructive, active and, ongoing basis. The engagement should be documented throughout the process to demonstrate compliance with the legal requirements.
- 2.8 In our Representations to the first Regulation 19 draft of the Plan in February 2020 we highlighted the fact that, at that time, no evidence at all of engagement with neighbouring authorities, the County Council or other bodies, either as part of that consultation nor in relation to any earlier stage in the preparation of the Plan had been provided by the Council.
- 2.9 As part of this second Regulation 19 consultation the Council has published the following documents:
- Draft Duty to Cooperate Statement – March 2021
 - North West Sussex Statement of Common Ground – May 2020
 - West Sussex Statement of Common Ground – April 2020
 - SoCG between Crawley and Reigate and Banstead – February 2021
 - SoCG between Crawley and Mole Valley – January 2021
 - SoCG between Tandridge and Crawley – December 2018
 - Ashdown Forest Statement of Common Ground – April 2018
- 2.10 The above SoCGs are appended to the Draft Duty to Cooperate Statement (“**DtC**”). The Draft DtC Statement also references a SoCG between Crawley and Horsham and states that is ‘outstanding’. Even by the Council’s own standard the DtC evidence base is therefore incomplete. Given that Horsham is one of only two primary candidates for accommodating any unmet need arising in Crawley the absence of a SoCG is arguably a significant gap in the evidence base.
- 2.11 Furthermore it is important to note that the SoCGs with Reigate and Banstead and Mole Valley were both produced after the commencement of the current Regulation 19 consultation and therefore the draft Plan cannot possibly be reflective of those DtC discussions.
- 2.12 Secondly, the SoCGs prepared in relation to Tandridge and Ashdown Forest are now 2 ½ and 3 years old respectively, which is not evidence of continuous and ongoing engagement.

2.13 Finally, the North West Sussex SoCG is predicated on a lower level of unmet need than the Council is currently expecting in this Regulation 19 version of the Plan, which therefore renders that document out of date.

2.14 Turning now to consider some of the detail in the DtC evidence presented by the Council.

North West Sussex Statement of Common Ground – May 2020:

2.15 This SoCG was prepared and signed during May and June 2020 i.e. 7-8 months prior to the publication of the current Regulation 19 version of the Plan in January 2021.

2.16 Whilst the document identifies the strategic matters to be considered in relation to housing need it merely quantifies the level of unmet need, which at that time was identified as 5,995 dwellings, and does no more than that.

2.17 Since that time the level of unmet need that the Council envisages will arise from its current draft Regulation 19 version of the Plan has increased to 6,680 dwellings³.

2.18 The content of the SoCG is therefore out-of-date and there does not appear to have been any update to either to reflect the increased unmet need arising from Crawley nor to move forward the important debate about how it is to be addressed. This does not represent active and ongoing engagement.

West Sussex Statement of Common Ground – April 2020:

2.19 This SoCG does not deal with housing need and delivery and in this respect no further comment is provided at this stage.

SoCG between Crawley and Reigate and Banstead ("RBBC") – February 2021:

2.20 This SoCG, having been produced after the publication of the current Regulation 19 draft Plan, identifies the up-to-date level of unmet need of 6,680 dwellings, which again reinforces the fact that the North West Sussex SoCG is out-of-date.

2.21 Point 9 of the SoCG simply concludes that RBBC is not in a position to meet any unmet need arising from Crawley. No review programme is in place and there does not appear to be any expectation set out by either party for further discussion on the matter.

2.22 This cannot meet the duty for active and ongoing engagement.

³ Paragraph 3.1.5 on Page 11 of the Unmet Needs and Duty to Cooperate Topic Paper – January 2021

SoCG between Crawley and Mole Valley – January 2021:

2.23 This SoCG concludes at Point 7 that due to the need to undertake site-specific exceptional circumstances testing to determine whether it is appropriate for individual sites to be released from the Green Belt, it is not currently considered possible to meet any of Crawley's housing needs within Mole Valley.

2.24 Mole Valley has not closed the door on the concept of meeting some of Crawley's unmet need, yet the SoCG does not set out any review programme and there does not appear to be any intention by either party to revisit the position.

2.25 This cannot meet the duty for active and ongoing engagement.

SoCG between Crawley and Tandridge:

2.26 This document is now over 2 years old and no update has been provided in the evidence base.

2.27 In simple terms the document cannot meet the duty for active and ongoing engagement because nothing has been produced by either party to update the key actions identified under heading 2.1 – Housing i.e. TDC and CBC will engage through a wider duty to cooperate forum with others to find opportunities for meeting unmet need.

2.28 The failings identified above in relation to the Duty to Cooperate are matters that a number of other Local Planning Authorities have recently got into difficulties with including Sevenoaks and Wealden both of which have had to abandon their Examinations.

2.29 It is particularly important in relation to Crawley, which is heavily dependent upon its neighbours in order to meet the full Local Housing Need ("LHN") calculated via the Government's Standard Method.

Missing Evidence:

2.30 The Council's consultation pages on its website states that a number of key evidence documents have either not yet been prepared or are in the process of being completed. The Council intends to upload the missing documents as and when they become available⁴.

2.31 This approach is inherently unsound. The Council is undertaking the formal Regulation 19 consultation with only partial evidence available. The publication of the missing

⁴ Paragraph 1.15 of the Plan also refers to the fact that the evidence base is incomplete.

evidence after the close of the consultation will mean that those wishing to provide comment/representation are unable to do so.

- 2.32 A similar situation occurred in relation to Epping Forest District Council wherein a further consultation was required to ensure all parties had sufficient opportunity to respond before the Plan was submitted for Examination.
- 2.33 The Council's approach of trickle feeding documents into its evidence base and extending the consultation period doesn't address the main issue here, which is that the Regulation 19 draft Plan was published in January 2021 without all of its supporting evidence. How can evidence published after the draft Plan be taken to have informed the production of the draft Plan?
- 2.34 This is a fundamental issue that goes not only to the question of Soundness but also Legal Compliance. The Plan and its supporting evidence was clearly not ready for publication in January 2021 and at that time was incomplete.

3.0 Housing Need, Housing Requirement/Target and, Supply

Policy H1, SA (Topic Area C) and Table 5.1, Paragraphs 12.1 – 12.43 – OBJECT: Unsound

3.1 As a starting point it is important to note that the Plan is being prepared in the context of the current National Planning Policy Framework 2019 (“the Framework”).

Local Housing Need (“LHN”):

3.2 The basis for the calculation of the LHN is therefore set out in the Framework and corresponding National Planning Practice Guidance (“PPG”), namely, the Government’s Standard Method as updated in December 2020.

3.3 The Council has correctly identified that it must apply the Standard Method to calculate its LHN as set out at Paragraph 12.8 on Page 149 of the Plan.

3.4 The LHN figure calculated by the Council equates to 12,000 dwellings or 750 dpa for the period 2021 - 2037⁵.

3.5 The PPG advises that the LHN figure should be updated to reflect the latest data and should only be fixed for a period of 2 years from the date the Plan is submitted to the Planning Inspectorate for examination⁶.

3.6 In this respect the LHN figure for Crawley will need to be updated to reflect the position as at 2020 because the current figure contained in the Plan has been calculated to a base date of 2019.

3.7 Further to our Regulation 18 and earlier Regulation 19 Representations the Council does now appear to have quantified its affordable housing need, which equates to 739 dpa⁷. That level of affordable housing need is substantially greater than the level identified in the context of the adopted Local Plan (527 dpa at the upper end of the scale identified). In fact the affordable housing need identified equates to some 98.5% of the total LHN and 148% of the actual number of dwellings planned for as set out in Policy H1 of the Plan.

⁵ See Table at bottom of Page 149 of Regulation 19 draft Plan and also Table 1 and Paragraph 3.1.2 of Housing Needs Topic Paper – January 2021

⁶ Housing and Economic Need Assessment section of PPG - Paragraph: 008 Reference ID: 2a-008-20190220 Revision date: 20 02 2019

⁷ Table 67 on Page 156 of the SHMA November 2019

- 3.8 The Plan as currently drafted is therefore set up to fail in terms of meeting the acute affordable housing needs of the Borough. This cannot be a Sound approach.
- 3.9 The Unmet Needs and Duty to Cooperate Topic Paper (January 2021) acknowledges the scale of the problem but does not identify an action plan for how the needs will be met⁸. This matter must be resolved before the plan is submitted for examination because it forms part of the DfC consideration and is therefore a matter of legal compliance.
- Housing Requirement/Target:
- 3.10 The Council's approach to the identification of a suitable housing requirement or target has been largely to rely on the existing supply sources identified in the adopted Local Plan housing trajectory. Little if any work appears to have been undertaken to identify new sources of supply or indeed to establish if those existing sources have the capability to deliver further housing over and above the numbers previously identified. The Council does not appear to have advanced its consideration of new supply sources since the last Regulation 19 consultation either.
- 3.11 Given that the LHN has increased and the affordable housing need has grown exponentially it is incumbent upon the Council to explore all avenues for meeting as much of its own needs within the Borough boundaries.
- 3.12 Instead the Council has taken the approach that 5,320 dwellings (332.5 dpa) is the maximum that can be delivered and the remaining 6,680 dwellings will need to be provided by its neighbours. This of course is where the problem lies in the Council's strategy because no agreement has been reached with any of its neighbours for provision to be made.
- 3.13 By way of example Horsham District Council in its Regulation 18 draft Plan set out three growth scenarios: 1,000 dpa, 1,200 dpa and 1,400 dpa⁹. These options were set against its LHN of 965 dpa, which would indicate an allowance for unmet need ranging from 35 dpa – 435 dpa. Horsham's position on the extent of unmet need arising from Crawley that it is prepared to accommodate is therefore unclear at the present time.

⁸ See Paragraph 3.1.10 on Page 12 of the Unmet Needs and Duty to Cooperate Topic Paper – January 2021

⁹ See Paragraph 6.14 on Page 52 of the Regulation 18 consultation version of the Horsham District Local Plan 2019 - 2036

- 3.14 It is not acceptable for the Council to reach such an advanced stage in the preparation of its Plan without having any agreements in place as to the extent of its unmet need that can be addressed by neighbouring authorities.
- 3.15 The Council's approach as set out in the Plan is therefore completely unsound in that it fails to plan positively, it is not effective and certainly does not accord with the Framework. Furthermore, the Council's cooperation thus far with its neighbours under the DtC must be called into question.
- 3.16 Furthermore the Council's position has become materially worse since the previous Regulation 19 consultation took place. In that version of the Plan the Council proposed a minimum housing provision of 5,355 dwellings over a 15 year period (359 dpa), which lead to a shortfall of 5,940 dwellings. In effect this updated Regulation 19 consultation version plans for less housing over a longer plan period that leads to a greater level of unmet need. This cannot represent positive planning.
- 3.17 The Council's approach is also not entirely supported by the conclusions of its own Sustainability Appraisal (January 2021) ("SA"). The SA includes an option that meets both the full affordable housing requirement (generating a housing target of 1848 dpa) along with an option that meets the Standard Method calculation of 750 dpa. Both options score considerably better than the chosen option (Option 5) in terms of meeting housing needs¹⁰. It is however unclear why some of the negative scores in relation to employment growth, health and infrastructure have been attributed to these higher housing growth options. The negative scores are attributed to 'anticipated impacts' rather than being based on any tangible evidence. It must be the case that the Council hasn't based the assessment on tangible evidence because it has already identified that significant portions of the evidence base in relation to matters such as Transport modelling are yet to be completed and published.
- 3.18 In this respect the conclusions of the SA cannot be relied upon and a further SA should be undertaken once the evidence base is complete.
- [Housing Supply and Trajectory:](#)
- 3.19 The Council's housing requirement/target as set out in Policy H1 of the Plan is entirely based, it says, on the available housing supply. It is however clear to Danescroft that the Council has not properly considered all sources of supply to determine the true extent of available land and its capacity to provide new homes.

¹⁰ Pages 203-206 of the SA – January 2021

- 3.20 A prime example of this is Danescroft's land interest at Steers Lane, which gained Outline Planning Consent for upto 185 no. dwellings in January 2020. This is a site that the Council currently has allocated within the adopted Local Plan for a minimum of 75 no. dwellings and which it proposed to remove as an allocation in the first Regulation 19 draft consultation but now includes for 185 no. dwellings based on the Outline Consent¹¹.
- 3.21 Further consideration is given to Danescroft's promotion site in Section 4 below.
- 3.22 Turning to the Council's housing trajectory appended to the Plan it is apparent that there are problems with the supply the Council has identified and relies upon to meet its heavily reduced housing target of 5,320 dwellings.
- 3.23 The Council proposes a stepped housing trajectory of:
- 350 dpa – Years 1-5
 - 450 dpa – Years 6-10
 - 220 dpa – Years 11-16
- 3.24 This compares with the previous Regulation 19 consultation version of the Plan as follows:
- 500 dpa – Years 1-5
 - 450 dpa – Years 6-10
 - 121 dpa – Years 11-15
- 3.25 The application of the stepped housing trajectory is in order to engineer a rolling 5-year supply of deliverable housing land in accordance with Paragraph 73 of the Framework. It is clear from above that rather than seek to rectify the deficiencies in the supply that Neame Sutton (and others) identified in the context of the previous Regulation 19 consultation the Council has simply modified its stepped trajectory to lower the initial 5-year requirement even further.
- 3.26 When the Council's supply sources are examined and, in the absence of any clear evidence from the Council to demonstrate compliance with the deliverability test set out at Annex 2 of the Framework, it is apparent that even with a modified stepped trajectory the Council is unable to demonstrate a rolling 5-year supply of deliverable housing sites.

¹¹ Table on Page 17 of the Housing Supply Topic Paper – January 2021

- 3.27 The position is made worse if the Council was to seek to apply Paragraph 74 of the Framework¹² and a 10% buffer is applied to the calculation.
- 3.28 The tables attached at Appendix 3 of these representations demonstrate the deficiencies in the Council's housing trajectory when the Annex 2 test is applied to the following supply sources:
- Policy H2 Key Housing Sites
 - Broad Location East of London Road
 - Broad Location Town Centre
 - SHLAA Sites
 - Windfalls
- 3.29 Neame Sutton considers that a number of the Council's other supply sources may also fail the Annex 2 test, but it is clear from the headline analysis set out in Appendix 3 to these Representations that the trajectory fails even if only windfalls are reduced.
- 3.30 The Council therefore needs to rectify the deficiencies in its heavily reduced housing trajectory as a bare minimum for the Plan to be found Sound. The simple solution to this is to identify more supply. These points were put to the Council by Neame Sutton and others in the context of the first Regulation 19 consultation and the current version of the Plan has not rectified those deficiencies.

¹² It is unclear from the evidence whether the Council does intend to fix its 5-year housing land supply via Paragraph 74 of the Framework or not.

4.0 Site-Specific Representations in Relation to Land at Steers Lane, Crawley

Policy H2, Paragraphs 12.47 – 12.50, Policy CL4, Policy EP4, Noise Annex, SA – OBJECT: Unsound

- 4.1 At the point of the Regulation 18 consultation stage in September 2019 the Council included Danescroft's promotion site within the Plan as an allocation for a minimum of 75 no. dwellings.
- 4.2 In the context of the first Regulation 19 consultation the Council had inexplicably removed the site as an allocation albeit that the land remained within the defined urban area on the draft Plan Proposals Map. The only evidence produced by the Council to support its removal of the site as a housing allocation at that time was contained in Strategic Housing Land Availability Assessment ("SHLAA") (January 2020) wherein the Council concludes the site was not suitable due to the presence of a noise constraint relating to the potential second runway at Gatwick Airport¹³.
- 4.3 The justification set out in the SHLAA for the removal of the site was based on a revision to the Council's Noise Annex contained at Page 270 of the draft Plan, which lowered the previously accepted predicted noise level for the proposed second runway from 66 dB down to 60dB. No evidence was presented by the Council to support the change in the noise level that it considered as the threshold for residential development.
- 4.4 The change was particularly odd given that the Council remained of the opinion (as set out in the draft Noise Annex at that time) that 66dB was the appropriate noise level in relation to surface transport. In other words it was acceptable for a residential proposal to come forward in an area affected by road transport noise up to 66 dB, but not if aviation noise is at 60 dB. This cannot be right.
- 4.5 Since that time Area A of the promotion site has received Outline Consent for up to 185 no. dwellings allowed on Appeal in February 2020 based on 66 dB for aviation noise being the appropriate level to consider. The Council now acknowledges the developability of Area A in this latest Regulation 19 consultation version of the Plan and proposes the allocation of Area A for 185 no. dwellings in draft Policy H2.

¹³ Page 146 of SHLAA January 2020

- 4.6 All of the above points relate to Area A of the promotion site, which equates to just over half of the area.
- 4.7 The remainder of the land (Area B on the plan attached at Appendix 1) has the capability to deliver upto a further 100 no. dwellings. The only constraint on this land relates to the potential second runway at Gatwick Airport and the consequent impact in terms of noise contours.
- 4.8 Danescroft's acoustic specialists Bickerdike Allen Partners ("BAP") has undertaken a sensitivity check of the Gatwick Airport noise contours having regard to the changes in national aviation policy and in particular the change in appropriate for the future of Gatwick Airport as set out by Gatwick Airport Limited ("GAL") (see **Appendix 2**).
- 4.9 The sensitivity check prepared by BAP confirmed that the whole of Area B is actually situated outside of the key 66dB contour based on the most likely foreseeable future contour for land use planning i.e. 2028 using the main and standby runways. It is therefore clear that Area B is unconstrained by aviation noise and with no other impediments to development should be released as an allocation for housing in the Local Plan.
- 4.10 Danescroft's acoustic specialists Bickerdike Allen Partners ("BAP") has also undertaken an Acoustic Review with specific reference to draft Policy EP4, which is attached at **Appendix 2**.
- 4.11 It is clear that, as drafted, Policy EP4 is unsound and requires modification. BAP has set out in detail why the unacceptable daytime noise level proposed by the Council of 60dB is not appropriate and does not reflect the evidence base.
- 4.12 BAP has set out a recommended modification to the draft Policy to provide a simplified approach to daytime noise levels set at a common threshold of 66 dB and night time levels set at 63 dB¹⁴.
- 4.13 Without these changes Policy EP4 is unsound because it does not reflect the evidence nor government policy on the matter of aviation noise.
- 4.14 As a consequence of the Council's overly restrictive and flawed approach to aviation noise levels it has failed to properly assess the suitability of Area B for residential development. The opportunity to deliver a further 100 no. dwellings on

¹⁴ See Table 5 on Page 31 of BAP Acoustic Review in Appendix 2

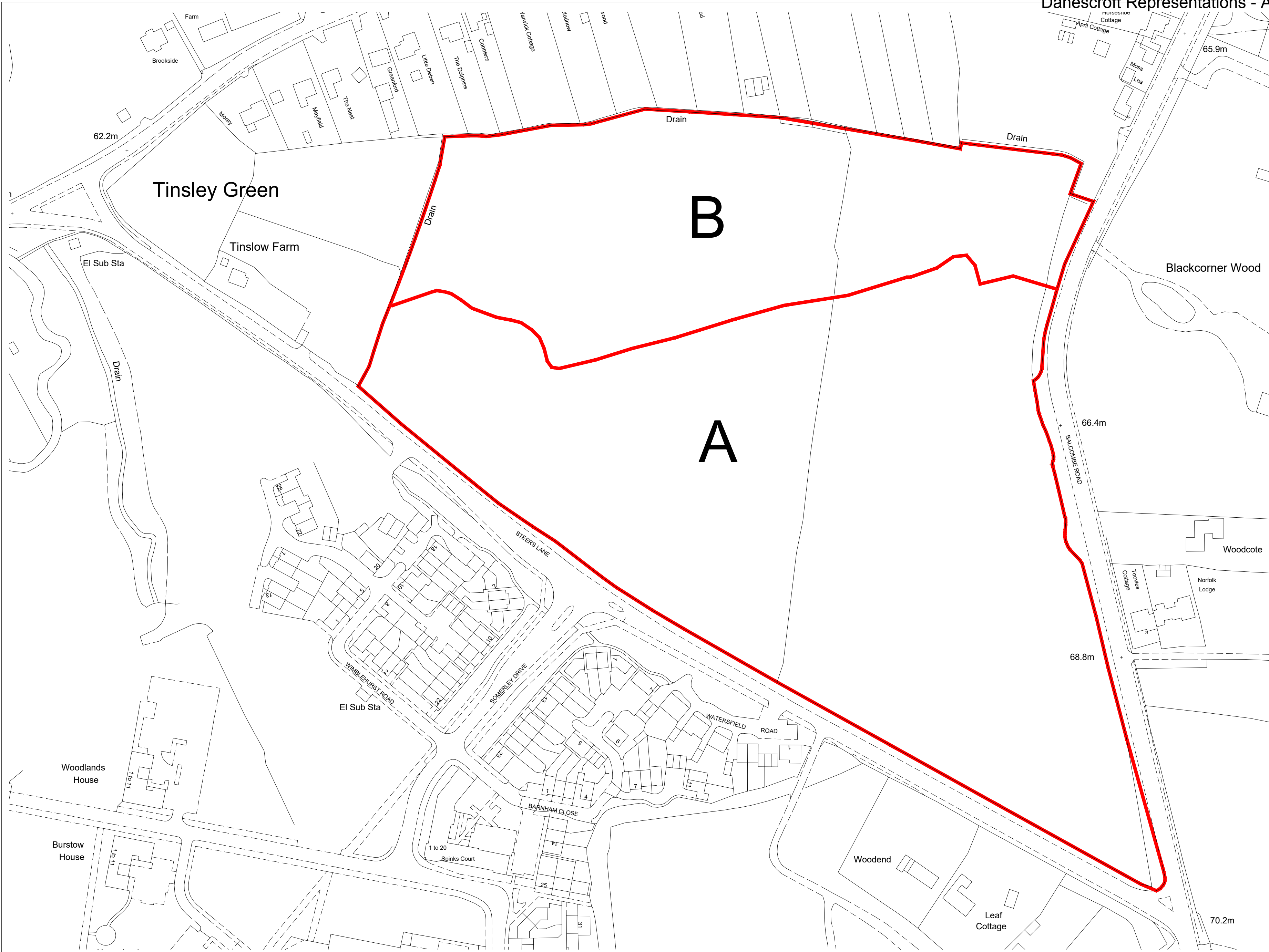
Area B comprising a mix of open market and affordable homes has therefore been missed by the Council.

- 4.15 Area B should therefore be included as land suitable for residential development, particularly in the light of the recent report by the Government's Climate advisors (Climate Change Committee) regarding the future of air travel in the context of the accelerated climate change agenda¹⁵ i.e. no net increase in airport capacity in the UK.
- 4.16 The inclusion of Area B as a housing allocation would enable the Council to deliver upto another 100 no. dwellings (40 no. of which would be affordable) making a valuable contribution to the significant housing needs in the Borough.
- 4.17 Danescroft would welcome the opportunity to work with the Council in relation to the allocation of Area B for housing as part of the emerging Local Plan.

¹⁵ Climate Change Committee Reports – December 2020

5.0 Areas Where Changes are Required for Plan to be Legally Compliant and Sound

- 5.1 As set out in Section 2 of these representations the Plan is currently not legally compliant.
- 5.2 The Council therefore needs to rectify the significant deficiencies in the Plan's evidence base, particularly in relation to DtC, and then restart the Regulation 19 consultation stage for a third time. This is essential to ensure that the Plan does not fail at the Examination stage.
- 5.3 As part of addressing the significant deficiencies in the Plan's evidence base the following key changes are required to the Plan for it to be made Sound:
1. Restarting the SHLAA process to properly assess the potential from all land sources within the Borough to accommodate the housing needs of the Borough;
 2. Consider the opportunities for allocating further land that may be released from the Gatwick Airport noise constraint as a result of the revisions proposed in these representations to draft Policy EP4 and the inevitable change in approach that GAL will need to take regarding the future of the airport in the context of the Government's current accelerated Climate Change agenda combined with the long lasting affects of the Global Pandemic i.e Steers Lane Area B;
 3. Revise draft Policy EP4 to reflect the recommendations in the BAP Report attached at Appendix 2 of these Representations;
 4. Allocate Area B for 100 no. residential units capable of release immediately;
 5. Ensuring that the evidence base is complete before proceeding to a fresh Regulation 19 consultation;
 6. The SA needs to be undertaken again once the evidence base is complete to avoid unsubstantiated assumptions being applied to the assessment process; and,
 7. Addressing the delivery deficiencies in the housing trajectory to ensuring a rolling 5-year housing land supply can be achieved across the Plan period i.e. addressing the Annex 2 deliverability test.
- 5.4 Without the above changes/actions the Plan fails the Legal Compliance test in terms of the DtC and the evidence base and is also unsound.



North arrow pointing North (N), South (S), East (E), and West (W).

Scale bar: 0, 25m, 50m

Area A - 5.582Ha (13.793Acres)
Area B - 2.693Ha (6.655 Acres)

REV.	DATE	REVISIONS:	BY	REV.	DATE	REVISIONS:	BY	STATUS:

CLIENT:	Steers Lane Crawley
SCALE:	1:1250 (A2 ORIGINAL)
DRAWN:	jg
DATE:	Sept2018
PROJECT:	18028
DRAWING:	S101
	B

OSPA
architecture planning masterplanning
Broadmeade House, Farnham Business Park,
Weydon Lane, Farnham, Surrey GU9 8QT.
info@osparchitecture.com www.osparchitecture.com
Tel: 01252 267878

© COPYRIGHT EXISTS ON THE DESIGNS AND INFORMATION SHOWN ON THIS DRAWING
This drawing may be scaled or cross referenced to the scale bar for planning application purposes only. Do not scale for any other purpose. Use figured dimensions only. Subject to site survey and all necessary consents. All dimensions to be checked by user and any discrepancies, errors or omissions to be reported to the Architect before work commences. This drawing is to be read in conjunction with all other relevant materials.

Project: **Steers Lane Crawley Phase 2**
File Ref: A11375_01_MO001_1.0
Date: 15/02/2021
Subject: **Gatwick Contour Sensitivity Check**

1.0 INTRODUCTION

Bickerdike Allen Partners LLP (BAP) have been appointed to provide acoustic consultancy services in relation to a development site at Steers Lane in Crawley. This site is close to Gatwick airport.

BAP were previously involved in a planning application for development on part of this site. The local authority reference was CR/2018/0894/OUT for up to 185 dwellings. The applicant appealed a non-determination from the local authority. The planning inspectorate appeal reference was APP/Q3820/W/19/3236721.

This 2018 outline planning application was assessed against the 2015 Crawley Brough Council Local Plan (CBLP) policy ENV11. The planning application was granted consent on appeal. The development complied with the policy on aircraft noise. This adopted a standard of 66 dB $L_{Aeq,16h}$ as an upper limit based on a noise contour for Gatwick airport with an additional wide spaced Southerly runway. This noise contour was prepared in 2003. This report reviews updates in noise contours, airport expansion plans and aviation policy.

2.0 EXISTING (2015) LOCAL PLAN POLICY ENV11

The relevant section of the policy is reproduced below.

*“People’s quality of life will be protected from unacceptable noise impacts by managing the relationship between noise sensitive development and noise sources. **To achieve this, Policy ENV11 should be read in conjunction with the Local Plan Noise Annex.**”*

A. Noise Sensitive Development

Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not be exposed to unacceptable noise disturbance from existing or future uses.

Noise sensitive uses proposed in areas that are exposed to significant noise from existing or future industrial, commercial or transport (air, road, rail and mixed) sources will be permitted where it can be demonstrated that appropriate mitigation, through careful planning, layout and design, will be undertaken to ensure that the noise impact for future users will be made acceptable. Proposals that would expose future users of the development to unacceptable noise

levels will not be permitted. **For transport sources, the Unacceptable Adverse Effect is considered to occur where noise exposure is above 66dB L_{Aeq,16hr} (57dB L_{Aeq,8hr} at night).**

Noise contours are produced in relation to aircraft noise from nearby Gatwick. The size of these contours depends on which scenario is being considered. The 2015 local plan noise annex stated the following with regards to noise contours.

*“All the above levels would include the predicted noise from any proposed or required changes in transportation noise **including the potential 2nd wide spaced runway at Gatwick Airport** as set out in the 2003 White Paper and any forthcoming replacement policy document. Details of the predicted noise contours associated with a possible wide-spaced second runway at Gatwick Airport are set out in Figure 1 of this Noise Annex, which **draws upon the noise contours published by the Civil Aviation Authority (CAA) in their report: ERCD report 0308. Figure 1 of the Noise Annex will be updated should these contours be superseded by subsequent noise contours published by the CAA.**”*

For application CR/2018/0894/OUT the development was tested against the ERCD 0308 2nd wide spaced runway future contours. These contours were produced by the CAA in 2003 in relation to Central Government Policy work on the Future of Air Transport in a 2003 White Paper for an assessment year of 2030 with 486,000 PATMS (annual passenger air traffic movement). These contours are somewhat dated now with regards to the assumptions used. No night time contours were published for the same scenario.

3.0 DRAFT LOCAL PLAN POLICY EP4

The January 2021 draft local plan includes the emerging new policy on residential development near to Gatwick airport. This is discussed in detail in January 2021 Topic Paper 7; Development and Noise Technical Appendix. The 2021 draft local plan sets a very different performance standard compared with the existing 2015 local plan both in terms of the contour used and the noise policy adopted.

Crawley Borough Council’s draft planning policy EP4 relates to residential development near to sources of transportation noise. The policy states:

"A. Noise Sensitive Development

Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not be exposed to unacceptable noise impact from existing, temporary or future uses.

Noise sensitive uses proposed in areas that are exposed to noise above the Lowest Observed Adverse Effect Level (LOAEL) or at the Significant Observed Adverse Effect Level (SOAEL) from existing or future industrial, commercial or transport (air, road, rail and mixed) sources will be permitted where it can be demonstrated good acoustic design has been considered early in the

planning process, and that all appropriate mitigation, through careful planning, layout and design, will be undertaken to ensure that the noise impact for future users will be made acceptable. Noise sensitive uses proposed in areas that are exposed to noise at the Unacceptable Adverse Effect level will not be permitted.

For surface transport noise sources, the Unacceptable Adverse Effect Level is considered to occur where noise exposure is above 66dB $L_{Aeq,16hr}$ (57dB $L_{Aeq,8hr}$ at night).

For aviation transport sources the Unacceptable Adverse Effect is considered to occur where noise exposure is above 60dB $L_{Aeq,16hr}$. (57dB $L_{Aeq,8hr}$ at night).

The draft Annex states the following with regards to noise contours:

*"All the above levels would include the predicted noise from any proposed or required changes in transportation noise including the potential additional southern wide spaced runway at Gatwick Airport, for which land is required to be safeguarded in the 2013 Aviation Policy Framework. Details of the predicted noise contours associated with a possible wide-spaced southern runway at Gatwick Airport are set out in **Figure 1 of this Noise Annex, which shows the noise contours identified in Plan 31 of the Gatwick Airport Master Plan 2019 (Air Noise Map – Additional Runway – Summer Day - 2040)**. Planning applications for noise sensitive development will be considered on the basis of these noise contours. Figure 1 of the Noise Annex will be updated by the council should these contours be superseded by subsequent noise contours published by Gatwick Airport and approved by the CAA."*

This noise policy is inconsistent with current national planning policy and technical guidance on noise. This is discussed in more detail in BAP report reference A11375_01_MO002_1.0. This note is limited to a discussion as to what is the most appropriate noise contour to use for land-use planning.

The draft local plan now refers to a more recent contour (published in 2014 and 2019). This is still for the worst-case scenario of Gatwick operating with a additional southern wide spaced runway. However this contour has been produced with more recent assumptions regarding aircraft type/fleet mix and is more representative than the old 2003 ERCD contour.

4.0 2018/2019 MASTERPLAN CONTOURS

Gatwick airport published a draft masterplan in 2018 including noise contour information for a number of different future development scenarios. In 2019 Gatwick published their final masterplan. A masterplan (and associated noise contours) is an indication of how the airport would like to develop in the short, medium and long term. It is common for information on masterplan aspirations to be followed by planning applications. A master plan is produced by the airport, not the government. Noise contours are produced by the CAA. However, these are

produced based on flight paths, aircraft movement and fleet mix forecasts provided the airport. This can introduce a potential difference compared to noise contours produced by Government.

Gatwick have stated a commercial preference for a second “standby” northern runway in the short to medium term. This is essentially to widen the existing northern taxiway to allow for higher capacity without substantial infrastructure required for an additional wide spaced second runway. The Gatwick master plan statement on a need for additional wide spaced runway is reproduced below.

“Gatwick is no longer actively pursuing plans for an additional runway, but there nevertheless remains the possibility of building and operating one in the future. Should this, or a future, Government decide to support an additional runway at Gatwick, we would be ready to take this forward with a view to seeking development consent. Should such policy support materialise, then it would be feasible to open the additional runway towards the end of the 5 to 15 year period. It is for this reason that we have included the additional runway in this draft master plan.”

The master plan also states: *“Although the Government’s Airports National Policy Statement supports a third runway at Heathrow, we believe an additional Gatwick runway, built to the south, should continue to be safeguarded. We believe it is in the national interest to preserve this opportunity to build a new runway in the south east to meet longer term demand growth. DfT’s forecasts show that by 2025 the main London airports, with the exception of Stansted, are expected to be effectively full and that, even with a third runway at Heathrow, UK airport capacity constraints will be apparent by 2030 and in subsequent years.”*

On 03rd September 2019, Gatwick Airport Ltd submitted a scoping report to the Secretary of State for Transport in pursuance of its intention to obtain a Development Consent Order (DCO) with regard to a Nationally Significant Infrastructure Project for the amendment of Gatwick Airport to support dual runway operations through the routine use of the existing Northern runway and to accommodate up to 74 million passengers per annum. The development will include amendments to taxiways, terminals and ancillary facilities, highways and rivers; as well as temporary construction works, mitigation works and other associated development.

BAP understand that there will be a second consultation on the DCO application for the northern runway in the summer of 2021 with an application via the DCO process in 2022.

A wide spaced second runway at Gatwick is not a likely future scenario. Current government policy set out in the Airports National Policy Statement 2018 supports a third northern runway at Heathrow. Preliminary work on the Heathrow DCO planning application was carried out in 2018 and 2019. A legal appeal regarding the validity of the governments policy was resolved in December 2020.

Information on likely future contour impacts are presented below compared with the most recent current noise contour information for Gatwick (ERCD report 2002 published in 2020).

Plan ¹	Publication date	Forecast Year	Scenario	No. of passenger air traffic movements (PATM) (000s)	No. of passengers per year (mppa)	Population within 57 dB (000s)	Size of contour >57 dB, km ²
ERCD 2002 FigureB15	2020	2019	2019 Actual	285	46.6	2.6	38.7
27	2018	2028	Main and standby runway (day)	360-365	65-67	3.9	n/a
28	2018	2028	Main and standby runway (night)	360-365	65-67	4.9 ¹	n/a
29	2018	2032	Main and standby runway (day)	375-390	68-70	4.1	n/a
30	2018	2032	Main and standby runway (night)	375-390	68-70	4.9 ¹	n/a

Table 1 - Comparison of Crawley preferred noise contour against recent CAA published contours

¹ Plan reference taken from ERCD report/2018 Gatwick Airport Draft Masterplan

5.0 DAY TIME NOISE – ADDITIONAL WIDE SPACED SECOND RUNWAY

The noise contours in the Gatwick master plan were prepared by Civil Aviation Authority (CAA) ERCD. BAP have reviewed the *Air Noise Map – Additional Runway – Summer Day – 2040* contour referred to in the Local Plan Annex both in terms of location relative to the Steers Lane site and absolute size. This contour is compared with a baseline scenario of the ERCD 0308 daytime contour previously used by Crawley in Table 2.

Plan	Publication date	Forecast Year	Scenario	No. of passenger air traffic movements (PATM) (000s)	No. of passengers per year (mppa)	Population within 57 dB (000s)	Size of contour >57 dB, km ²
ERCD 0308 Figure 3.4	2003	2030	One additional wide-spaced southern runway	486	76	13.2	84.0
Gatwick 2019 Masterplan Plan 31	2014 & 2019 ²	2040	One additional wide-spaced southern runway. Same as 2014 airports commission submission ¹	560	95	15.4	66.5

Table 2: Comparison of 2040 contour with 2030 contour

Table 2 demonstrates that the use of the more recent (2014 & 2019) future estimate of noise levels from Gatwick with an additional southern wide-spaced runway results in a lower contour area. This is likely to be due to more realistic assumptions regarding aircraft source sound levels and fleet mix than those available for the 2003 prediction.

The site's position in relation to the 2040 Summer Day contour is shown below in Figure 1. A more detailed A3 is appended.

¹ The Gatwick 2019 masterplan states that "For our work for the Airports Commission we submitted, in 2014, detailed information on the noise impacts of the proposed additional runway as forecast at that time. The 2040 summer day contours are shown in Figure 5.14." The 2014 Airports Commission included multiple scenarios for 2014. BAP have assumed that the contour is the larger 95mppa option 3 "scenario"

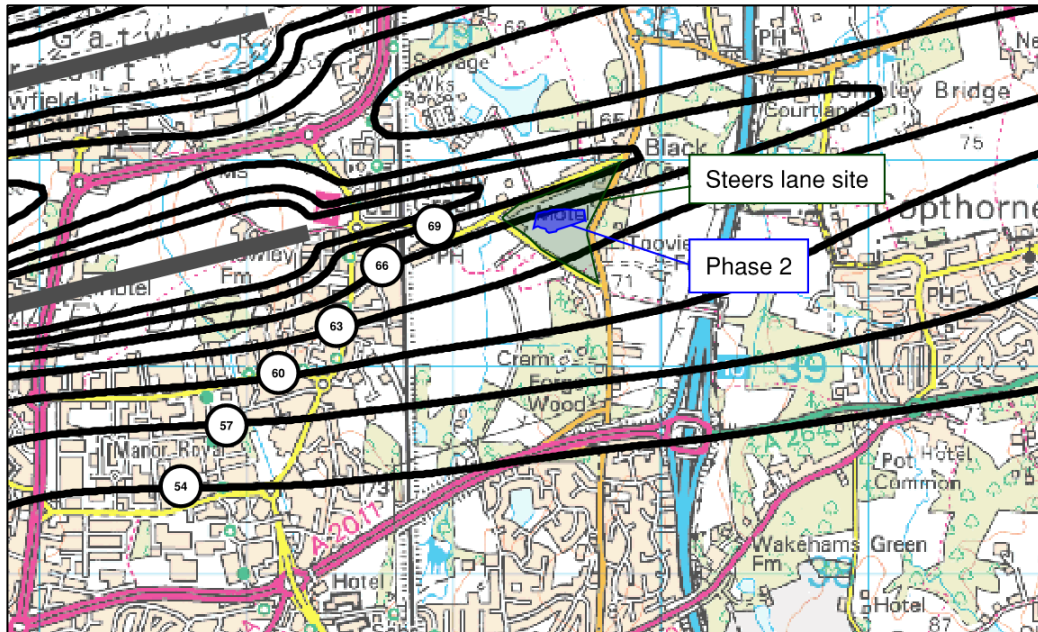


Figure 1: Site location in relation to 2040 Summer Day contour

The development site is wholly within the 63 dB contour, with the 66 dB contour crossing a small part of the Northern portion of the site.

6.0 NIGHT TIME NOISE

The 2040 Summer Night contour did NOT form part of the 2019 Gatwick masterplan but has previously been published by Gatwick for work by Airport's Commission in 2014. This is shown in Figure 2.

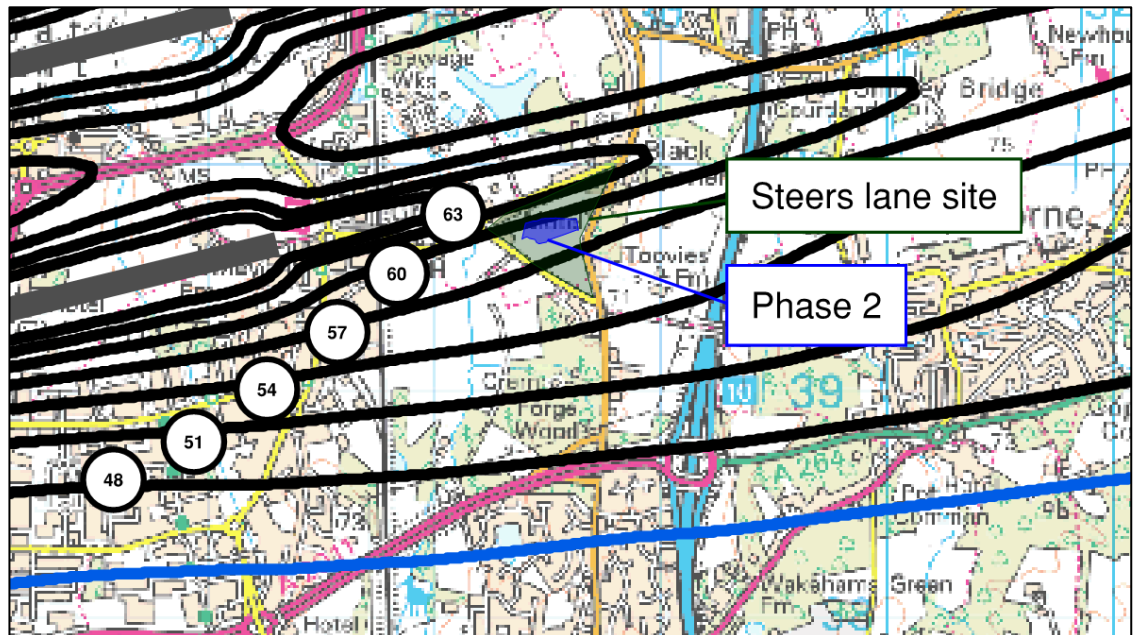


Figure 2: Site location in relation to 2040 Summer Night contour

Phase 2 is wholly within the 57 dB contour, except a small portion to the North which is within the 60 dB contour.

7.0 SUMMARY

Daytime

Ignoring safeguarding for a second runway, the most likely foreseeable future contour for land use planning would be the 2028 scenario using both the main and standby runways. This is the preferred development option for Gatwick airport.

The 66 dB $L_{Aeq,16h}$ daytime and 57 dB $L_{Aeq,8h}$ night time contours do not encompass the Steers Lane site. It would need to be agreed with the local authority that this contour supersedes the 2014 wide spaced second runway contour.

This would seem unlikely. Current central government policy is that a new runway is needed in the south-east of England and that this runway should be at Heathrow. However there is uncertainty that this new runway will be delivered. Crawley's policy position has consistently been to safeguard land on the precautionary principle that a wide spaced second runway at Gatwick could be built.

Night time

Unfortunately, while the more recent (2014 & 2019) published daytime contours indicate there is more flexibility on noise sensitive development for the Steers Lane site the night time contours indicate a more stringent noise constraint to the daytime noise contours. The control of night noise from this designated airport is still in the remit of Central Government not Gatwick airport.

The issue with the Gatwick masterplan contours discussed above is that these are not government policy documents. Post 2003 government policy contours are discussed below.

8.0 AIRPORT'S COMMISSION 2014-2015

The contours preferred by Crawley are the Gatwick Airport 2019 Masterplan contours taken from previous noise information submitted by the airport in 2014 to the Independent Airports Commission, also known as the Davies commission.

The Independent Airports Commission followed up on the 2003 White Paper and investigated 3 options for expanding aviation capacity. Two options involved additional runway capacity at Heathrow. One option was for a new full length wide spaced runway at Gatwick.

The report included a recommendation that the best solution was to expand Heathrow with a third runway to the north-west of the airport. The Commission did not agree with Gatwick Airport Limited's view that a second wide spaced runway was an appropriate solution.

Noise contours were produced for a 2-runway airport and submitted by Gatwick airport.

Independent noise contours for a 2-runway airport were also prepared by Jacobs on behalf of the Independent Commission. Various scenarios were assessed. These include both future development which is constrained by environmental (carbon) restrictions. Contours were also produced which allowed a high level of airport growth on the assumption that the negative environmental impact would be mitigated through carbon trading. Contours were produced for years 2030, 2040 and 2050.

The night time contours potentially constrain development on the site.

There is a risk that this could be raised during the planning application that the development does not comply with the local plan policy based on this worst-case night-time contour. This risk is low. The contours have been in the public domain since 2014 and we are not aware that the local authority has raised this risk.

There is a reasonable planning argument that the night time noise impact can be adequately mitigated. The adverse night time effects of aircraft noise are limited to potential sleep disturbance and/or annoyance within bedrooms at night. This can be mitigated through the

acoustic design of new dwellings to provide adequate sound insulation and ventilation to protect the health and wellbeing of future occupants.

9.0 AIRPORTS NATIONAL POLICY STATEMENT, JUNE 2018

The Airports Commission recommendation for a third runway at Heathrow was adopted and become policy in Airports National Policy Statement: *“New runway capacity and infrastructure at airports in the South East of England, DfT 2018”*.

The Policy stated that “the Government believes that there is clear and strong evidence that there is a need to increase capacity in the South East of England by 2030 by constructing one new runway.” A new runway at Gatwick was not supported by this policy.

A debate on Airport Expansion (2nd March 2020) has confirmed that the 2018 Airports National Policy Statement is still the policy of the current administration.

10.0 SUMMARY

The Steers Lane site has previously been developed using the ERCD 2030 66 dB $L_{Aeq,16h}$ contour as a constraint. This contour was published in 2003. In the Noise Annex to the Draft Local Plan (published January 2021) the Local Authority have stated that planning applications for noise sensitive developments will be assessed on the basis of Plan 31 of the Gatwick Airport Master Plan 2019 (Air Noise Map – Additional Runway – Summer Day - 2040).

This is a worst-case precautionary approach assuming that Gatwick will operate in the future with a second wide spaced southerly runway. This is not current central government policy and Gatwick airport has stated the following in their 2019 Masterplan

“3.3.8 Although we strenuously made the case for a new runway at Gatwick, we accept that it is current Government policy to instead supports the third runway at Heathrow and it is now for Heathrow’s owners to seek development consent for that project within the terms set out by the NPS.

3.3.9 In light of this policy position we are not actively pursuing a new additional runway. However, should this or a future Government decide to support a new additional runway at Gatwick, then we would be ready to re-examine this with a view to seeking development consent. In the meantime the land required for an additional runway should continue to be safeguarded from incompatible development, in line with current Government policy.”

The Noise Annex also includes scope for this contour to be superseded by "subsequent noise contours published by Gatwick Airport and approved by the CAA".

No night time contours for a wide space second runway at night have been reproduced in the Crawley local plan.

BAP have reviewed the 2040 Summer Day contour and policy documents to see if these would change the noise constraints on this site.

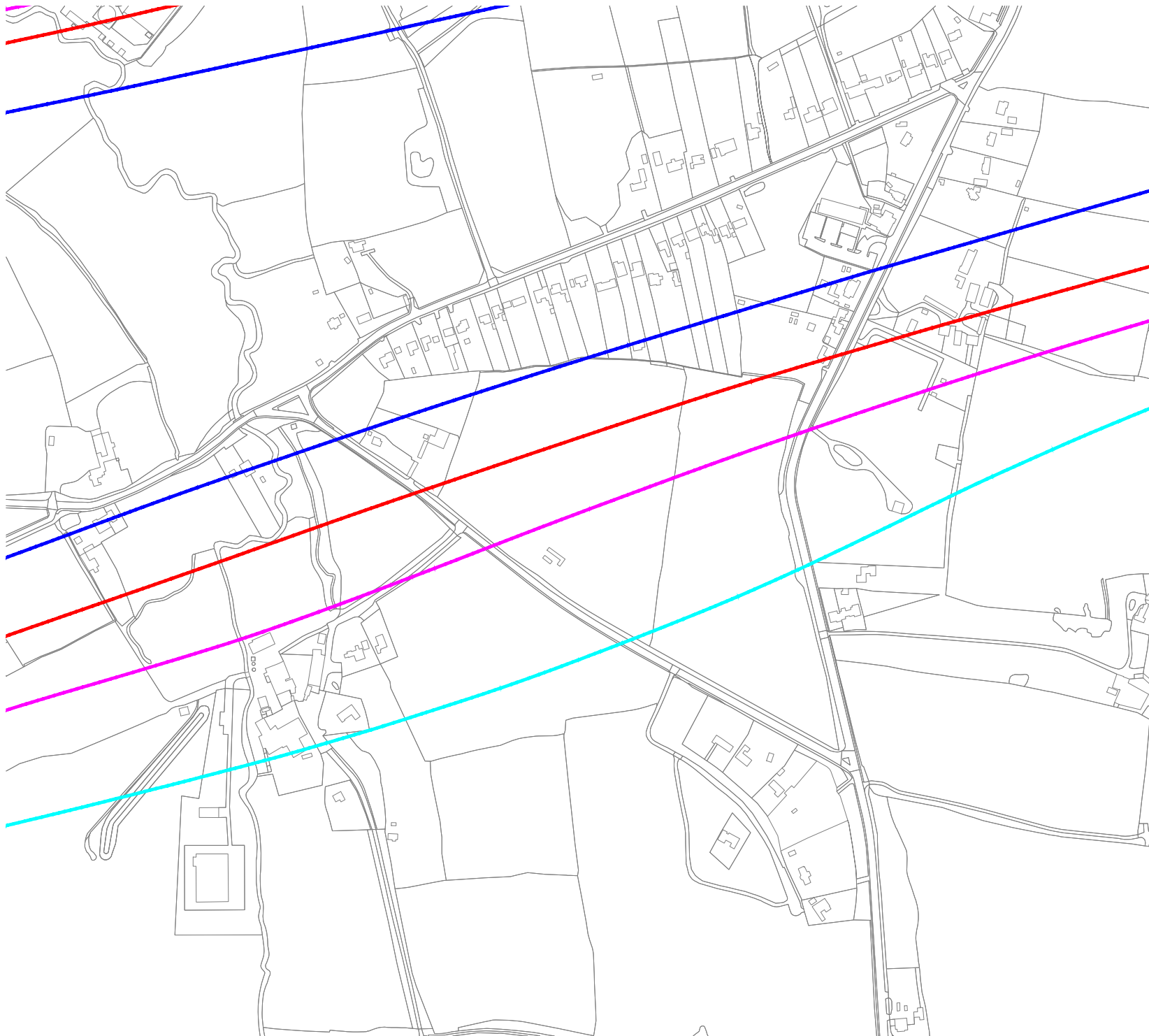
Night time noise contours for use in planning assessments were not specified in the January 2021 Noise Annex to the Crawley Local Plan. The 2019 Gatwick masterplan does not include a 2040 Summer Night contour. A 2040 Summer Night contour was published as part of previous work issued by Gatwick in 2014.

The Government currently controls night noise at the designated airports (Heathrow, Gatwick, Stansted). Current policy is given in *“Night flight restrictions at Heathrow, Gatwick and Stansted Decision Document”* from 2017. The policy is to *“Limit or reduce the number of people significantly affected by aircraft noise at night, including through encouraging the use of quieter aircraft, while maintaining the existing benefits of night flights”*. Therefore, any potential significant increase in night noise contours seems exceptionally unlikely as this would breach current aircraft night noise policy. The government are currently consulting on the night flight restrictions (2021) but no relaxation on night noise policy seems likely.

Jack Traveller
for Bickerdike Allen Partners LLP

David Trew
Partner

Enc.: A11375_01_DR001



This drawing contains Ordnance Survey data © Crown Copyright and database right 2021.

LEGEND:

- Wide Spaced 2040 (Plan 31)
63 dB $L_{Aeq,16h}$ (Day)
- Wide Spaced 2040 (Plan 31)
66 dB $L_{Aeq,16h}$ (Day)
- 57 dB $L_{Aeq,8h}$ Standard (Night)
- 57 dB $L_{Aeq,8h}$ Carbon Traded (Night)

1	Feb 2021	-	MP

REVISIONS

**Bickerdike
Allen
Partners**
Architecture
Acoustics
Technology

121 Salusbury Road, London, NW6 6RG
Email: mail@bickerdikeallen.com
www.bickerdikeallen.com

T: 0207 625 4411
F: 0207 625 0250

Steers Lane, Crawley

DRAWN: MP

CHECKED: DT

DATE: February 2021

SCALE: 1:5000

FIGURE No:

A11375_01_DR001_1.0

**DRAFT CRAWLEY BOROUGH LOCAL PLAN
2021-2037 POLICY EP4
ACOUSTIC REVIEW**

Report to

**Aidan Robson
Danescroft Land Limited
40-42 Parker Street
London
WC2B 5PQ**

**A11375_01_RP001_1.0
26th February 2021**

Bickerdike Allen Partners LLP is an integrated practice of Architects, Acousticians, and Construction Technologists, celebrating over 50 years of continuous practice.

Architects: Design and project management services which cover all stages of design, from feasibility and planning through to construction on site and completion.

Acoustic Consultants: Expertise in planning and noise, the control of noise and vibration and the sound insulation and acoustic treatment of buildings.

Construction Technology Consultants: Expertise in building cladding, technical appraisals and defect investigation and provision of construction expert witness services.

Contents	Page No.
2.0 Introduction	4
3.0 Background	4
4.0 Existing (2015) local plan policy ENV11	4
5.0 Draft local plan policy EP4.....	5
6.0 Test of soundness.....	7
7.0 Relevant national policy.....	8
8.0 commentary on draft policy EP4.....	25
9.0 Summary	32

Appendix 1: Glossary of Acoustic Terminology

This report and all matters referred to herein remain confidential to the Client unless specifically authorised otherwise, when reproduction and/or publication is verbatim and without abridgement. This report may not be reproduced in whole or in part or relied upon in any way by any third party for any purpose whatsoever without the express written authorisation of Bickerdike Allen Partners LLP. If any third party whatsoever comes into possession of this report and/or any underlying data or drawings then they rely on it entirely at their own risk and Bickerdike Allen Partners LLP accepts no duty or responsibility in negligence or otherwise to any such third party.

Bickerdike Allen Partners LLP hereby grant permission for the use of this report by the client body and its agents in the realisation of the subject development, including submission of the report to the design team, contractor and sub-contractors, relevant building control authority, relevant local planning authority and for publication on its website.

2.0 INTRODUCTION

- 2.1.1 Acoustic consultants Bickerdike Allen Partners LLP (BAP) have been appointed by Danescroft Land Limited to carry out a technical review with respect to policy EP4: Development and Noise as set out in the Draft Crawley Borough Local Plan 2021 – 2037 (issued Jan 2021).
- 2.1.2 The review has been prepared by Mr David Trew CEng BEng MIOA. Mr Trew is a Partner at BAP with a BEng (Hons) degree in Engineering Acoustics and Vibration from the Institute of Sound and Vibration Research (ISVR) at the University of Southampton. Mr Trew graduated in 1999 and has worked in acoustic consultancy at BAP for the last 21 years.
- 2.1.3 Danescroft Land Limited (DLL) would welcome a dialogue with Crawley Borough Council (CBC) in order to achieve an appropriate amendment to Draft Policy EP4 in order that it can be made sound.

3.0 BACKGROUND

- 3.1.1 To inform the context of this review DLL is the owner of land between Steers Lane and Balcombe Road in Crawley. BAP were previously involved in a planning application for development on part of this site. The local authority reference was CR/2018/0894/OUT for up to 185 dwellings. The applicant appealed a non-determination from the local authority. The planning inspectorate appeal reference was APP/Q3820/W/19/3236721.
- 3.1.2 This 2018 outline planning application was assessed against the 2015 Crawley Brough Council Local Plan policy ENV11. The planning application was granted consent on appeal. The development complied with the policy on aircraft noise. This adopted a standard of 66 dB $L_{Aeq,16h}$ as an upper limit based on a noise contour for Gatwick airport with an additional wide spaced southerly runway.
- 3.1.3 The Draft Local Plan seeks to update and significantly change the local policy with regards to residential development around Gatwick airport by reducing this daytime level to 60 dB $L_{Aeq,16h}$.

4.0 EXISTING (2015) LOCAL PLAN POLICY ENV11

- 4.1.1 The relevant section of the policy is reproduced below.
- 4.1.2 *“People’s quality of life will be protected from unacceptable noise impacts by managing the relationship between noise sensitive development and noise sources. To achieve this, Policy ENV11 should be read in conjunction with the Local Plan Noise Annex.*

4.1.3 A. Noise Sensitive Development

4.1.4 Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not be exposed to unacceptable noise disturbance from existing or future uses.

4.1.5 Noise sensitive uses proposed in areas that are exposed to significant noise from existing or future industrial, commercial or transport (air, road, rail and mixed) sources will be permitted where it can be demonstrated that appropriate mitigation, through careful planning, layout and design, will be undertaken to ensure that the noise impact for future users will be made acceptable. Proposals that would expose future users of the development to unacceptable noise levels will not be permitted. **For transport sources, the Unacceptable Adverse Effect is considered to occur where noise exposure is above 66dB $L_{Aeq,16hr}$ (57dB $L_{Aeq,8hr}$ at night).**

4.1.6 Noise contours are produced in relation to aircraft noise from the nearby Gatwick Airport. The size of these contours depends on which scenario is being considered. The 2015 local plan noise annex stated the following with regards to noise contours.

4.1.7 “All the above levels would include the predicted noise from any proposed or required changes in transportation noise including the potential 2nd wide spaced runway at Gatwick Airport as set out in the 2003 White Paper and any forthcoming replacement policy document. Details of the predicted noise contours associated with a possible wide-spaced second runway at Gatwick Airport are set out in Figure 1 of this Noise Annex, which draws upon the noise contours published by the Civil Aviation Authority (CAA) in their report: ERCD report 0308. Figure 1 of the Noise Annex will be updated should these contours be superseded by subsequent noise contours published by the CAA.”

4.1.8 For application CR/2018/0894/OUT the development was tested against the ERCD 0308 2nd wide spaced runway future contours. These contours were produced by the CAA in 2003 in relation to Central Government Policy work on the Future of Air Transport in a 2003 White Paper for an assessment year of 2030 with 486,000 PATMS (annual passenger air traffic movement). These contours are somewhat dated now with regards to the assumptions used and more recent contours are available consider both a scenario with an additional southern wide spaced second runway as well as Gatwick Airport’s preferred option of dual runway operations using the existing “northern” runway as a second runway.

5.0 DRAFT LOCAL PLAN POLICY EP4

5.1.1 The January 2021 draft local plan includes the emerging new policy on residential development

near to Gatwick airport. This is discussed in detail in January 2021 Topic Paper 7; Development and Noise Technical Appendix. The 2021 draft local plan sets a very different performance standard compared with the existing 2015 local plan both in terms of the contour used and the noise policy adopted. The 2021 draft local policy is broadly consistent with the existing 2015 policy with regards to road and rail noise. However a significant change is proposed for aircraft noise.

- 5.1.2 Crawley Borough Council's draft planning policy EP4 relates to residential development near to sources of transportation noise. The policy states:
- 5.1.3 *"A. Noise Sensitive Development*
- 5.1.4 *Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not be exposed to unacceptable noise impact from existing, temporary or future uses.*
- 5.1.5 *Noise sensitive uses proposed in areas that are exposed to noise above the Lowest Observed Adverse Effect Level (LOAEL) or at the Significant Observed Adverse Effect Level (SOAEL) from existing or future industrial, commercial or transport (air, road, rail and mixed) sources will be permitted where it can be demonstrated good acoustic design has been considered early in the planning process, and that all appropriate mitigation, through careful planning, layout and design, will be undertaken to ensure that the noise impact for future users will be made acceptable. Noise sensitive uses proposed in areas that are exposed to noise at the Unacceptable Adverse Effect level will not be permitted.*
- 5.1.6 *For surface transport noise sources, the Unacceptable Adverse Effect Level is considered to occur where noise exposure is above 66dB $L_{Aeq,16hr}$ (57dB $L_{Aeq,8hr}$ at night).*
- 5.1.7 *For aviation transport sources the Unacceptable Adverse Effect is considered to occur where noise exposure is above 60dB $L_{Aeq,16hr}$. (57dB $L_{Aeq,8hr}$ at night)."*
- 5.1.8 The draft Annex states the following with regards to noise contours:
- 5.1.9 *"All the above levels would include the predicted noise from any proposed or required changes in transportation noise including the potential additional southern wide spaced runway at Gatwick Airport, for which land is required to be safeguarded in the 2013 Aviation Policy Framework. Details of the predicted noise contours associated with a possible wide-spaced southern runway at Gatwick Airport are set out in **Figure 1 of this Noise Annex, which shows the noise contours identified in Plan 31 of the Gatwick Airport Master Plan 2019 (Air Noise***

Map – Additional Runway – Summer Day - 2040. Planning applications for noise sensitive development will be considered on the basis of these noise contours. Figure 1 of the Noise Annex will be updated by the council should these contours be superseded by subsequent noise contours published by Gatwick Airport and approved by the CAA."

- 5.1.10 The 2013 Aviation Policy Framework has since been updated by the Airports National Policy Statement: new runway capacity and infrastructure at airports in the South East of England , 2018. This National Policy Statement from Central Government found that an additional runway was needed in the south east by 2030. This additional runway should be at Heathrow, not Gatwick.
- 5.1.11 This noise policy is inconsistent with current national planning policy and technical guidance on aviation and noise. This is discussed in more detail below.
- 5.1.12 The draft local plan now refers to a more recent contour (published in 2014 and again in 2019). This is still for the worst-case scenario of Gatwick operating with a additional southern wide spaced runway. However this contour has been produced with more recent assumptions regarding aircraft type/fleet mix and is more representative than the old 2003 ERCD 0308 contours.
- 5.1.13 The use of a future noise contour assuming a second southerly wide spaced new runway at Gatwick airport is very much a precautionary approach to the assessment of potential noise effects on the health and wellbeing of future residents. Current central Government policy on aviation supports a new additional runway at Heathrow, not Gatwick. Gatwick airport is currently pursuing a planning application to use their existing northern standby runway as a permanent 2nd dual runway.

6.0 TEST OF SOUNDNESS

- 6.1.1 The National Planning Policy Framework (NPPF) (2019) establishes the meaning of “soundness” in relation to Local Plans at paragraph 35:
- 6.1.2 "*Local plans and spatial development strategies are examined to assess whether they have been prepared in accordance with legal and procedural requirements, and whether they are sound. Plans are ‘sound’ if they are:*

Positively prepared – providing a strategy which, as a minimum, seeks to meet the area’s objectively assessed needs¹; and is informed by agreements with other authorities, so that unmet need from neighbouring areas is accommodated where it is practical to do so and is consistent with achieving sustainable development;

Justified – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence;

Effective – deliverable over the plan period, and based on effective joint working on cross-boundary strategic matters that have been dealt with rather than deferred, as evidenced by the statement of common ground; and

Consistent with national policy – enabling the delivery of sustainable development in accordance with the policies in this Framework."

- 6.1.3 The following assessment considers Draft Policy EP4 within the context of NPPF paragraph 35. BAP do not consider draft policy EP4 (and the supporting noise annex) to be sound in its present form, although we believe that with appropriate minor modification it can be made so.

7.0 RELEVANT NATIONAL POLICY

7.1 National Planning Policy Framework 2019 (NPPF)

- 7.1.1 The National Planning Policy Framework (NPPF) sets out the Government’s planning policies for England and how these are expected to be applied. With regards to environmental noise assessment the NPPF states that

7.1.2 '170. Planning policies and decisions should contribute to and enhance the natural and local environment by: ...

7.1.3 e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; ...

¹ Where this relates to housing, such needs should be assessed using a clear and justified method, as set out in paragraph 60 of this Framework

- 7.1.4 *180. Planning policies and decisions should also ensure that new development is appropriate for its location taking to account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:*
- 7.1.5 *Mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life²;*
- 7.1.6 *Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and*
- 7.1.7 *Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation....*
- 7.1.8 *...182 Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.”*
- 7.1.9 In paragraph 170, the NPPF guards against “unacceptable risk” and “unacceptable levels” of noise pollution. This is considered later in the context of the national planning practice guidance.
- 7.1.10 Paragraph 180 refers to two situations in which there are impacts arising from noise, those that are potentially “adverse”, where the advice is to “mitigate and reduce to a minimum”, and those that may give rise to significant adverse impacts on health and the quality of life, where the advice is to “avoid”. Given the footnote reference (and the dates of the documents, both of which are extant), it must be taken that the Government intends the NPPF to be read together with the Noise Policy Statement for England, as well as the associated national planning practice guidance.

² Explanatory Note to the Noise Policy Statement for England, Department for Environment, Food & Rural Affairs, 2010.

7.1.11 With regards to the use of planning conditions Para 54 states

7.1.12 *“Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition.”*

7.2 Noise Policy Statement for England (NPSE)

7.2.1 The Noise Policy Statement for England (NPSE) provides the framework for noise management decisions to be made that ensure noise levels do not place an unacceptable burden on society.

7.2.2 The stated aims of the NPSE are to:

7.2.3 *‘Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development;*

7.2.4 *Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development; and*

7.2.5 *Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.’*

7.2.6 In the explanatory note, various important concepts are introduced (paragraph 2.20):

7.2.7 NOEL – no observed effect level *“This is the level below which no effect can be detected. In simple terms, below this level there is no detectable effect on health and quality of life due to the noise”.*

7.2.8 LOAEL – lowest observed adverse effect level (referred to below as “LOAEL”) *“This is the level above which adverse effects on health and quality of life can be detected.”*

7.2.9 SOAEL – significant observed adverse effect level (referred to below as “SOAEL”) *“This is the level above which significant adverse effects on health and quality of life occur.”*

7.2.10 The category levels are tied in with the NPSE’s aims as follows:

7.2.11 *“2.23 The first aim of the NPSE states that significant adverse effects on health and quality of*

life should be avoided while also taking into account the guiding principles of sustainable development (paragraph 1.8).“

7.2.12 "2.24 *The second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.*"

7.2.13 "2.25 *This [third] aim seeks, where possible, positively to improve health and quality of life through the pro-active management of noise while also taking into account the guiding principles of sustainable development (paragraph 1.8), recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim.*"

7.2.14 The NPSE does not identify specific noise based measures which define each category, saying that there is “no single objective noise-based measure that defines SOAEL that is applicable to all sources in all situations” (see NPSE paragraph 2.22). The Government acknowledges that there is emerging evidence as to the long term direct health effects of noise and explains its intention to keep research on the health effects of long term exposure to noise under review (NPSE paragraph 2.14)

7.3 Planning Practice Guidance Noise PPG(N) 2019

7.3.1 On 6 March 2014, the Department for Communities and Local Government (DCLG) launched a web-based resource providing planning practice guidance to assist local authorities in local planning matters. Guidance on noise is provided in a separate guidance note reference ID30. The advice was last updated on 22nd July 2019.

7.3.2 PPG(N) provides guidance on how to determine the noise impact, advising that local planning authorities should take account of the acoustic environment and in so doing consider:

- whether or not a significant adverse effect is occurring or likely to occur;
- whether or not an adverse effect is occurring or likely to occur; and
- whether or not a good standard of amenity can be achieved.

7.3.3 It states that in line with the Explanatory Note of the Noise Policy Statement for England, this

would include identifying whether the overall effect of the noise exposure is, or would be, above or below the “significant observed adverse effect level” and the “lowest observed adverse effect level for a given situation. These boundary levels are described in the guidance as follows:-

- Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
- Lowest observed adverse effect level: this is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- No observed effect level: this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

7.3.4 Guidance was provided on how to recognise when noise could be a concern. It explains that when noise is not noticeable, there is by definition no effect. As the noise exposure increases, it can slightly affect the acoustic character of an area but not to the extent there is a perceived change in quality of life. At this noise exposure level, no specific noise mitigation measures are required. As the exposure increases further, the lowest observed adverse effect level boundary is crossed. The noise starts to have an adverse effect and consideration needs to be given to mitigating and minimising those effects (taking account of the economic and social benefits being derived from the activity causing the noise).

7.3.5 The guidance advises that above the significant observed adverse effect level boundary, the planning process should be used to avoid this effect occurring, by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused.

7.3.6 At the highest extreme, noise exposure would cause extensive and sustained changes in behaviour without an ability to mitigate the effect of noise. The impacts on health and quality of life are such that regardless of the benefits of the activity causing the noise, this situation should be prevented from occurring.

7.3.7 Guidance on an interpretation of these boundaries is given below, based on the likely average response.

Perception	Examples of Outcome	Increasing Effect Level	Action
Not present	No effect	No Observed Effect	No specific measures required
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Present and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response, and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

Table 1 -2019 Planning Policy Guidance on noise

7.3.8 PPGN also advises “*The following documents published by other organisations may be of assistance:*

- *BS 8233:2014– Guidance on sound insulation and noise reduction for buildings (British Standards Institute 2014);*
- *Guidelines for Environmental Noise Impact Assessment (Institute of Environmental Management and Assessment, 2014);*
- *ProPG: Planning & Noise – Professional Practice Guidance on Planning & Noise- New Residential Development (Association of Noise Consultants, Institute of Acoustics and Chartered Institute of Environmental Health, May 2017).*

7.3.9 *Some of these documents contain numerical criteria. These values are not to be regarded as fixed thresholds and as outcomes that have to be achieved in every circumstance.”*

7.4 2017 CAP 1506

7.4.1 The Civil Aviation Authority regularly publish technical guidance on the assessment of aviation noise. One recent document was CAP 1506 published by the Policy Programmes Team *Survey of noise attitudes 2014: Aircraft.*

7.4.2 Historically the 57 dB $L_{Aeq,16}$ value associated with the onset of significant community annoyance was based on the 1985 UK Aircraft Noise Index Study (ANIS). The 57dB $L_{Aeq,16h}$ contour was chosen as the threshold of community annoyance because it ‘indicated a marked increase in some reported measures of disturbance’, with 63 and 69dB $L_{Aeq,16h}$ representing medium and high annoyance and subsequently incorporated into planning policy guidance. The 69 dB $L_{Aeq,16h}$ high annoyance value is considered by many to represent the Unacceptable Adverse Noise Level.

7.4.3 In the UK there were two more recent studies. The first was the Attitudes to Noise from Aviation Sources in England (ANASE) study in 2001. The second was the Survey of Noise Attitudes (SoNA) 2014. Both the ANASE study and the SoNA study suggested that people were more annoyed for the same “dose” of noise compared with the 1985 ANIS study. This can be seen in the table below.

Average summer day noise exposure, $L_{Aeq,16h}$ (dB)	Annoyance descriptors (ATWP)	% highly annoyed	
		ANIS 1982	SoNA 2014
51		3%	7%
54		5%	9%
57	Onset of significant community annoyance	9%	13%
60		14%	17%
63	Medium annoyance	23%	23%
66		34%	31%
69	High annoyance	48%	39%

Table 2 - Percentage highly annoyed as a function average summer day noise exposure, $L_{Aeq,16h}$

- 7.4.4 One key point from the above comparison is that if 9% of the population high annoyed is considered to be the “onset” of community annoyance this value should now be 54 dB $L_{Aeq,16h}$ rather than 57 dB $L_{Aeq,16h}$.
- 7.4.5 Another key point is that those exposed to 63 dB $L_{Aeq,16h}$ “medium” levels of aircraft noise are no more sensitive in 2014 than in 1982. T
- 7.4.6 hose exposed to “high” levels of noise this population would appear significant less annoyed compared to 1982. This may be due to the benefits of sound insulation schemes offered by airports to treat existing residential properties exposed to higher levels of aircraft noise.

7.5 ProPG 2017

- 7.5.1 Professional Practice Guidance on Planning & Noise (ProPG) is an industry guidance document referenced by central government policy guidance on noise. It was overseen by a Working Group consisting of representatives of the Association of Noise Consultants (ANC), Institute of Acoustics (IOA) and Chartered Institute of Environmental Health (CIEH), together with practitioners from a planning and local authority background. The project was jointly supported by the ANC, IOA and CIEH. The document provides guidance on how to assess the management of noise within the planning system.
- 7.5.2 The document advocates the use of a two stage system to assess sites. The first is a simple

“initial assessment”. The second stage is a more detailed assessment including;

- Good acoustic design
- Internal noise level guidelines ,i.e. recommended noise standards inside dwellings.
- External amenity area assessment, i.e. assessment of noise impact in gardens and communal amenity area.
- Consideration of “other relevant issues”

7.5.3 The guidance for the initial assessment is provided in Figure 1.

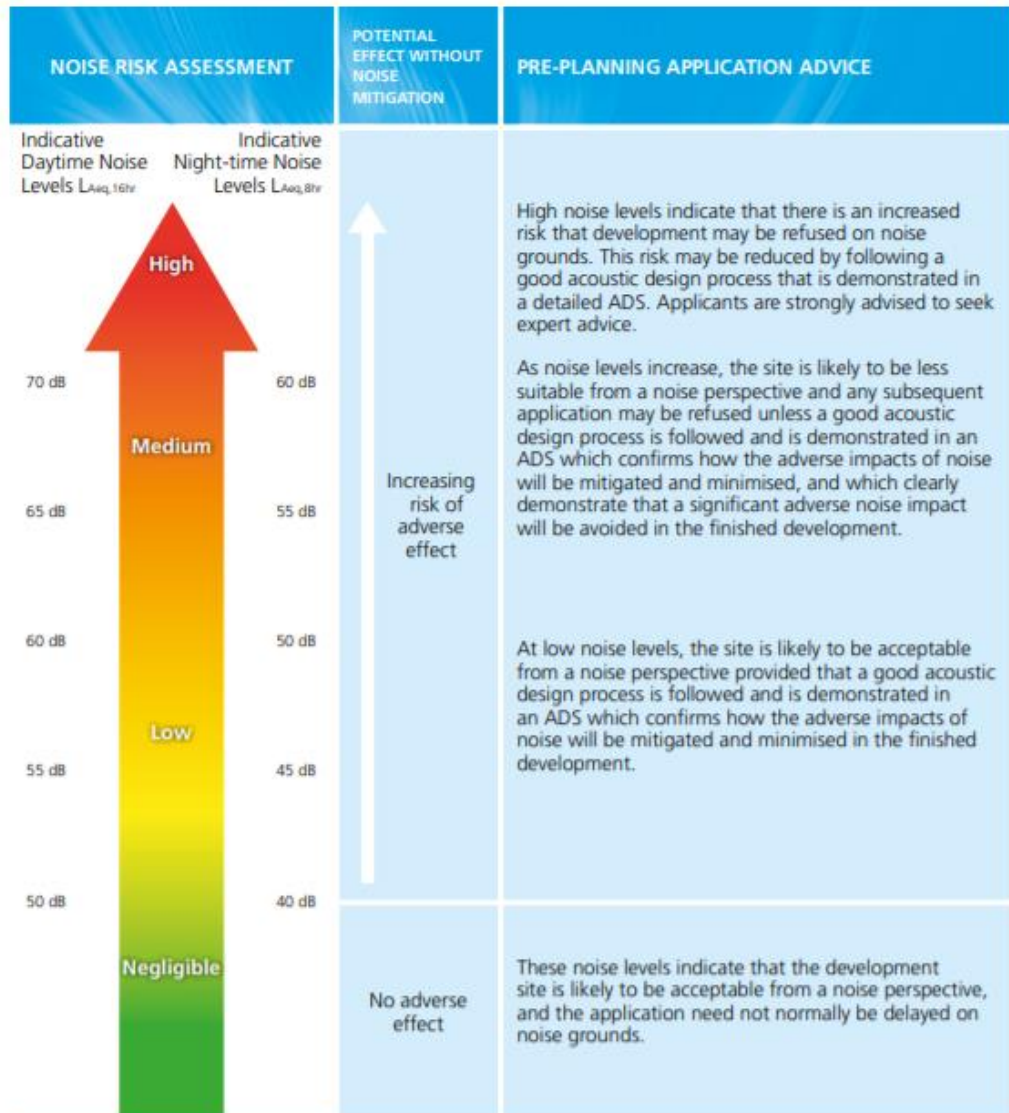


Figure 1 Notes:

- Indicative noise levels should be assessed without inclusion of the acoustic effect of any scheme specific noise mitigation measures.
- Indicative noise levels are the combined free-field noise level from all sources of transport noise and may also include industrial/commercial noise where this is present but is "not dominant".
- $L_{Aeq,16hr}$ is for daytime 0700 – 2300, $L_{Aeq,8hr}$ is for night-time 2300 – 0700.
- An indication that there may be more than 10 noise events at night (2300 – 0700) with $L_{Amax,T} > 60$ dB means the site should not be regarded as negligible risk.

Figure 1. Stage 1– Initial Site Noise Risk Assessment

Figure 1 - Extract from ProPG

7.5.4 A second Stage assessment requires an assessment of internal noise levels. These are almost

verbatim the same guidelines within industry standard BS 8233:2014. The only difference being that a guideline for individual noise events or noise maxima is included.

ACTIVITY	LOCATION	07:00 – 23:00 HRS	23:00 – 07:00 HRS
Resting	Living room	35 dB $L_{Aeq,16\text{ hr}}$	-
Dining	Dining room/area	40 dB $L_{Aeq,16\text{ hr}}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16\text{ hr}}$	30 dB $L_{Aeq,8\text{ hr}}$ 45 dB $L_{Amax,F}$ (Note 4)

NOTE 1 The Table provides recommended internal L_{Aeq} target levels for overall noise in the design of a building. These are the sum total of structure-borne and airborne noise sources. Ground-borne noise is assessed separately and is not included as part of these targets, as human response to ground-borne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.

NOTE 2 The internal L_{Aeq} target levels shown in the Table are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise. In cases where local conditions do not follow a typical diurnal pattern, for example on a road serving a port with high levels of traffic at certain times of the night, an appropriate alternative period, e.g. 1 hour, may be used, but the level should be selected to ensure consistency with the internal L_{Aeq} target levels recommended in the Table.

NOTE 3 These internal L_{Aeq} target levels are based on annual average data and do not have to be achieved in all circumstances. For example, it is normal to exclude occasional events, such as fireworks night or New Year's Eve.

NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise-sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events (see Appendix A).

NOTE 5 Designing the site layout and the dwellings so that the internal target levels can be achieved with open windows in as many properties as possible demonstrates good acoustic design. Where it is not possible to meet internal target levels with windows open, internal noise levels can be assessed with windows closed, however any façade openings used to provide whole dwelling ventilation (e.g. trickle ventilators) should be assessed in the "open" position and, in this scenario, the internal L_{Aeq} target levels should not normally be exceeded, subject to the further advice in Note 7.

NOTE 6 Attention is drawn to the requirements of the Building Regulations.

NOTE 7 Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal L_{Aeq} target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved. The more often internal L_{Aeq} levels start to exceed the internal L_{Aeq} target levels by more than 5 dB, the more that most people are likely to regard them as "unreasonable". Where such exceedances are predicted, applicants should be required to show how the relevant number of rooms affected has been kept to a minimum. Once internal L_{Aeq} levels exceed the target levels by more than 10 dB, they are highly likely to be regarded as "unacceptable" by most people, particularly if such levels occur more than occasionally. Every effort should be made to avoid relevant rooms experiencing "unacceptable" noise levels at all and where such levels are likely to occur frequently, the development should be prevented in its proposed form (see Section 3.D).

Figure 2. ProPG Internal Noise Level Guidelines (additions to BS8233:2014 shown in blue)

Figure 2 - Extract from ProPG internal noise levels

7.5.5 The ProPG provided guideline internal noise levels at which noise is considered “unacceptable”. These levels are 10 dB $L_{Aeq,16h}$ higher than the BS8233:2014 “desirable” internal noise levels.

7.5.6 Guidance on external noise levels in amenity spaces is provided in the ProPG. This is reproduced below.

“Element 3 – External Amenity

Area Noise Assessment

3(i) “If external amenity spaces are an intrinsic part of the overall design, the acoustic environment of those spaces should be considered so that they can be enjoyed as intended”.

3(ii) “The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$.”

3(iii) “These guideline values may not be achievable in all circumstances where development might be desirable. In such a situation, development should be designed to achieve the lowest practicable noise levels in these external amenity spaces.”

3(iv) Whether or not external amenity spaces are an intrinsic part of the overall design, consideration of the need to provide access to a quiet or relatively quiet external amenity space forms part of a good acoustic design process.

3(v) Where, despite following a good acoustic design process, significant adverse noise impacts remain on any private external amenity space (e.g. garden or balcony) then that impact may be partially off-set if the residents are provided, through the design of the development or the planning process, with access to

- a relatively quiet facade (containing openable windows to habitable rooms) or a relatively quiet externally ventilated space (i.e. an enclosed balcony) as part of their dwelling; and/or*
- a relatively quiet alternative or additional external amenity space for sole use by a household, (e.g. a garden, roof garden or large open balcony in a different, protected, location); and/or*
- a relatively quiet, protected, nearby, external amenity space for sole use by a limited group of residents as part of the amenity of their dwellings; and/or*
- a relatively quiet, protected, publically accessible, external amenity space (e.g. a public park or a local green space designated because of its tranquillity) that is nearby (e.g. within a 5 minutes walking distance). The local planning authority could link such*

provision to the definition and management of Quiet Areas under the Environmental Noise Regulations.”

The 4th element of a “Stage 2” assessment needs to include:

“2: Element 4 – Assessment of Other Relevant Issues

4(i) compliance with relevant national and local policy

4(ii) magnitude and extent of compliance with ProPG

4(iii) likely occupants of the development

4(iv) acoustic design v unintended adverse consequences

4(v) acoustic design v wider planning objectives”

7.5.7 Further commentary and examples can be found within the ProPG document of these scenarios.

7.6 2013 Aviation Policy Framework

7.6.1 Central government policy on aviation noise was published in 2013 and is reproduced below.

7.6.2 “Policy objective 3.12

7.6.3 *The Government’s overall policy on aviation noise is to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise, as part of a policy of sharing benefits of noise reduction with industry.*

7.6.4 *3.13 This is consistent with the Government’s Noise Policy, as set out in the Noise Policy Statement for England (NPSE)⁹³ which aims to avoid significant adverse impacts on health and quality of life.*

7.6.5 *3.14 Although there is some evidence that people’s sensitivity to aircraft noise appears to have increased in recent years, there are still large uncertainties around the precise change in relationship between annoyance and the exposure to aircraft noise. There is evidence that there are people who consider themselves annoyed by aircraft noise who live some distance from an airport in locations where aircraft are at relatively high altitudes. Conversely, some people living closer to an airport seem to be tolerant of such noise*

7.6.6 *3.15 To provide historic continuity, the Government will continue to ensure that noise exposure maps are produced for the noise-designated airports on an annual basis providing results down to a level of 57dB L_{Aeq 16 hour}.⁹⁴ To improve monitoring of the specific impact of night noise, we*

will also ensure that separate night noise contours for the eight-hour night period (11pm–7am) are produced for the designated airports.

- 7.6.7 3.16 *This does not preclude airports from producing results to a lower level or using other indicators to describe the noise impact of their operations, as appropriate (see paragraph 3.19 below). Some airports already map noise exposure to lower levels every five years under European legislation and we encourage those that routinely produce such contours on a voluntary basis to continue to do so, as a means of facilitating improved monitoring, transparency and communication of the impact of aircraft noise. Other airports which have significant night operations may also wish to produce separate night noise contours on a regular basis.*
- 7.6.8 3.17 *We will continue to treat the 57dB $L_{Aeq, 16}$ hour contour as the average level of daytime aircraft noise marking the approximate onset of significant community annoyance. However, this does not mean that all people within this contour will experience significant adverse effects from aircraft noise. Nor does it mean that no-one outside of this contour will consider themselves annoyed by aircraft noise.*
- 7.6.9 3.18 *The Airports Commission has also recognised that there is no firm consensus on the way to measure the noise impacts of aviation and has stated that this is an issue on which it will carry out further detailed work and public engagement. We will keep our policy under review in the light of any new emerging evidence.*
- 7.6.10 3.19 *Average noise exposure contours are a well-established measure of annoyance and are important to show historic trends in total noise around airports. However, the Government recognises that people do not experience noise in an averaged manner and that the value of the L_{Aeq} indicator does not necessarily reflect all aspects of the perception of aircraft noise. For this reason we recommend that average noise contours should not be the only measure used when airports seek to explain how locations under flight paths are affected by aircraft noise. Instead the Government encourages airport operators to use alternative measures which better reflect how aircraft noise is experienced in different localities, developing these measures in consultation with their consultative committee and local communities. The objective should be to ensure a better understanding of noise impacts and to inform the development of targeted noise mitigation measures.”*
- 7.6.11 *This 57 dB level does not differentiate between sound levels inside a home or noise levels within amenity spaces such as gardens, balconies or terraces.*

- 7.6.12 Also addition policy on Land-use planning and management is reproduced below.
- 7.6.13 *3.20 Chapter 5 explains the status of the Aviation Policy Framework and its interaction with existing planning guidance and policies. Land-use planning and management is one of the elements of the ICAO balanced approach which should be explored when tackling noise problems at an airport. In line with the Government's noise policy, the Government's National Planning Policy Framework (NPPF) says that planning policies and decisions should aim to avoid a situation where noise gives rise to significant adverse impacts on health and quality of life as a result of new development, and to mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions.*
- 7.6.14 *3.21 The NPPF expects local planning policies and decisions to ensure that new development is appropriate for its location and the effects of pollution – including noise – on health, the natural environment or general amenity are taken into account. This does not rule out noise-sensitive development in locations that experience aircraft noise. In the same way that some people consider themselves annoyed by aircraft noise even though they live some distance from an airport in locations where aircraft are at relatively high altitudes, other people living closer to an airport seem to be tolerant of aircraft noise and may choose to live closer to the airport to be near to employment or to benefit from the travel opportunities.*
- 7.6.15 *3.22 There can also be other good economic or social reasons for noises sensitive developments to be located in such areas. However, reflecting Government noise policy, the NPPF is quite clear that the planning system should prevent new development being put at unacceptable risk from, or being adversely affected by, unacceptable levels of noise pollution. Local planning authorities therefore have a responsibility to ensure that the land use element of the balanced approach is implemented in the context of their local plan policies, including any on noise. People considering moving to an area which may be affected by existing aircraft noise also have a responsibility to inform themselves of the likely impacts before moving to the area, and airport operators should ensure that all necessary information to inform such decisions is easily accessible.*
- 7.6.16 *3.23 Results from the 2011 Census show a general increase in population density. Consequently, within some noise contours around airports, the number of people has increased regardless of any change in noise. The Government will therefore take into account the trends in populations within the contours when monitoring the effectiveness of its overall policy on aviation noise."*

7.7 Aviation 2050 (2018)

7.7.1 The publication of the Aviation 2050 document in December 2018, represents the third (and final) stage in the consultation process underpinning the publication of the Government’s new national aviation strategy. As far as noise compensation/insulation matters are concerned, there is a current proposal to extend the noise insulation policy threshold to beyond the current 63 dB $L_{Aeq,16hour}$ contour to 60 dB $L_{Aeq,16 hour}$. This does not mean that 60 dB $L_{Aeq,16 hours}$ would be SOAEL, but rather it indicates that such a reduction would be in line with the policy requirement to mitigate and minimise. It is not known whether that proposal will remain in the final version of the strategy.

7.8 BS 8233: 2014

7.8.1 The British Standard BS 8233: 2014 “*Sound insulation and noise reduction for buildings – Code of practice*” provides guidance on the control of external noise and is a revision of its 1987 (and later 1999) predecessor. The standard presents a number of design ranges for indoor noise levels in spaces when they are unoccupied. These are presented in Table 3.

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB $L_{Aeq,16hour}$	-
Dining	Dining room/area	40 dB $L_{Aeq,16hour}$	-
Sleeping (daytime)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

Table 3 – Indoor ambient noise levels for dwellings

NOTE

Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or L_{AFmax} , depending on the character and number of events per night. Sporadic noise events could require separate values.

7.8.2 The withdrawn 1999 version of BS 8233 included a guideline for noise maxima at night. “*For a reasonable standard in bedrooms at night, individual noise events (measured with F time-weighting) should not normally exceed 45 dB $L_{A,max}$* ”. This was consistent with the 1999 World Health Organisation Publication Guidelines for Community Noise. The current 2014 document does not provide a guideline value. In our experience the 45 dB $L_{AF,max}$ criterion is still a desirable level not to be exceeded for “regular” events. The definition of regular is subjective with different professionals taking different approaches. The World Health Organisation Guidelines referred to 10-15 events per night and this is frequently taken as a test for “regular” events.

- 7.8.3 With regards to gardens and external amenity spaces the current standard advises that:
- 7.8.4 *“For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. **In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.**”*
- 7.8.5 *Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses. However, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens and terraces, which might be intended to be used for relaxation. In high-noise areas, consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55 dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space.”*
- 7.8.6 The British Standard advises that *“If relying on closed windows to meet the guide values, there needs to be an appropriate alternative ventilation that does not compromise the façade insulation or the resulting noise level. If applicable, any room should have adequate ventilation (e.g. trickle ventilators should be open) during assessment.”*
- 7.8.7 Also *“Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved.”*

8.0 COMMENTARY ON DRAFT POLICY EP4

8.1.1 Against the background of the policy and guidance framework set out above, and BAP's expert views as to its application in this case, Danescroft's more specific representations on draft Policy EP4 are now set out. For the reasons given below, the policy incorrectly sets the level of UAEL. As it is currently worded, it is not consistent with Government policy or guidance, nor is it justified by evidence. Accordingly, it cannot be regarded as sound.

8.2 Draft Policy EP4: Development and noise

8.2.1 "A. Noise sensitive development

Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not be exposed to unacceptable noise impact from existing, temporary or future uses. Noise sensitive uses proposed in areas that are exposed to noise above the Lowest Observed Adverse Effect Level (LOAEL) or at the Significant Observed Adverse Effect Level (SOAEL) from existing or future industrial, commercial or transport (air, road, rail and mixed) sources will be permitted where it can be demonstrated good acoustic design has been considered early in the planning process, and that all appropriate mitigation, through careful planning, layout and design, will be undertaken to ensure that the noise impact for future users will be made acceptable. Noise sensitive uses proposed in areas that are exposed to noise at the Unacceptable Adverse Effect level will not be permitted. For surface transport noise sources, the Unacceptable Adverse Effect Level is considered to occur where noise exposure is above 66dB LAeq,16hr (57dB LAeq,8hr at night). For aviation transport sources the Unacceptable Adverse Effect is considered to occur where noise exposure is above 60dB LAeq,16hr. (57dB LAeq,8hr at night)."

8.2.2 A summary of all noise exposure hierarchy categories as given in the Crawley Local Plan Noise Annex is provided below in Table 4.

Descriptor	Daytime (07:00-23:00) threshold	Night time (23:00-07:00) threshold
NOAEL	<51dB $L_{Aeq,16hr}$ <65dB L_{AFmax}	<45dB $L_{Aeq,8hr}$ <60dB L_{AFmax}
LOAEL	51dB $L_{Aeq,16hr}$ 65dB L_{AFmax}	45dB $L_{Aeq,8hr}$ 60dB L_{AFmax}
SOAEL	For surface transport sources, between 55dB and 66dB $L_{Aeq,16hr}$ (54dB to 60dB $L_{Aeq,16hr}$ for aviation transport sources) 65dB to 82dB L_{AFmax}	Between 48dB and 57dB $L_{Aeq,8hr}$ 60dB to 82dB L_{AFmax}
UAEL	For surface transport sources 66dB $L_{Aeq,16hr}$ For aviation transport sources 60dB $L_{Aeq,16hr}$	57dB $L_{Aeq,8hr}$

Table 4: Summary of noise exposure hierarchy (Local Plan Noise Annex)

- 8.2.3 BAP agree with the almost all of the above policy. The principals of the policy follow current central government policy set out within NPPF, NPSE and PPG(N). The policy above also refers to “*good acoustic design*”. This design principle is described in the industry guidance document ProPG : *Planning & Noise – New Residential Development*.
- 8.2.4 The policy defines thresholds and guidelines to the various noise descriptors from PPG(N). This approach is reasonable although, consistent with central government guidance, these should be considered as guidelines rather than hard limits that that have to be achieved in every circumstance.
- 8.2.5 The area where BAP consider that the above policy is not consistent with national policy is the definition of the Unacceptable Adverse Effect Level for aviation noise as 60 dB $L_{Aeq,16h}$ daytime and 57 dB $L_{Aeq,8h}$ at night.
- 8.2.6 Central government planning guidance defines the unacceptable level as present and very disruptive and provides examples of outcomes as “*Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.*”
- 8.2.7 One objective method of defining this unacceptable level is to define where there is an inability to mitigate the adverse effects of noise. For the Heathrow Airport third runway DCO application preliminary environmental information report (PEIR) the daytime unacceptable level was set at a level of **71 dB $L_{Aeq,16h}$** . This was based on local (London Borough of Richmond SPD guidance and the ProPG) which provided a benchmark for unacceptable internal conditions as 10 dB $L_{Aeq,T}$ above recommended BS 8233: 2014 indoor ambient noise levels.
- 8.2.8 The ethos here was that BS 8233: 2014 recommends a “desirable” internal noise level of 35 dB $L_{Aeq,16h}$, this would become unacceptable at 45 dB $L_{Aeq,16h}$. Allowing a nominal 26 dB level difference for a standard dwelling with no additional noise mitigation this would correspond to an external aircraft noise level of 71 dB $L_{Aeq,16h}$. This approach is suitable when Heathrow’s consultants are assessing the impact of aviation noise on existing residential properties. The same procedure is used for the night time UAEL to provide a threshold of **66 dB $L_{Aeq,8h}$** . This, in our opinion, it is not suitable for Crawley where we are looking at the impact on new residential development near to the airport. Indeed the Richmond SPD³ provides a guideline (not a limit)

³ London Borough of Richmond - Development Control for Noise Generating and Noise Sensitive Development, 2018

that “high” noise levels occur at around **>69 dB L_{Aeq,16h}** during the day which “*indicate that there is an increased risk that development may be refused on noise grounds*”. The Richmond night time “high” level is **>60 dB L_{Aeq,8h}**.

- 8.2.9 Another method to define the unacceptable adverse effect level is to consider other airport infrastructure planning applications where airport operators have assessed noise effects on existing residential communities and this assessment has been tested at local planning application, DCO application or appeal.
- 8.2.10 Bickerdike Allen are regularly involved in assessing aviation noise impacts both for airport operators and for developers who are looking to develop sites affected by aviation noise. Historically we have adopted an unacceptable guideline of **>69 dB L_{Aeq,16h}**. This is based on the Aviation Policy Framework policy for where the Government expects airport operators to offer households assistance with the costs of moving.
- 8.2.11 A night time UAEL **63 dB L_{Aeq,8h}** is consistently used across many recent airport infrastructure development applications (Stansted/Bristol/Luton). Some recent airport applications did not adopt a night-time unacceptable level (London City/Manston).
- 8.2.12 The above guidelines do not consider the mitigation options available to developers of new dwellings. An existing dwelling near Gatwick airport built many years ago with standard double glazed windows and conventional slot or trickle ventilators will provide a reduction in aircraft noise of approximately 25 dB. A new build dwelling built near the airport can be designed with suitable high performance glazing and ventilation to ensure adequate internal noise conditions and provide a simple reduction in external noise of 35 dB or more.
- 8.2.13 As a result the daytime level at which there is an “*inability to mitigate effect of noise*” is around **>70 dB L_{Aeq,16h}** during the daytime and **>65 dB L_{Aeq,8h}** at night. These levels are broadly consistent with currently used and accepted UAEL guidelines used around airports.
- 8.2.14 Usefully, Crawley have provided a policy paper to explain their preferred standard of **60 dB L_{Aeq,16h}**⁴ to defined UAEL. The document references recent airport infrastructure projects (London City Airport **69 dB L_{Aeq,16h}** UAEL, Cranford Agreement Secretary of State’s Decision, February 201 UAEL **69 dB L_{Aeq,16h}**). But the topic paper relies on a 2015 planning application and subsequent planning appeal for a residential development in a small village in Cheshire East near Manchester Airport PP/R0660/W/15/3027388. This decision was based on the fact that

⁴ Crawley Borough Local Plan Topic Paper 7: Development and Noise Technical Appendix (Jan 2021)

external noise levels in gardens would exceed desirable guidelines. The following quote is provided.

- 8.2.15 *“The external noise environment would not be positive but would have a significant adverse impact on the quality of life of future residents. Whilst noting that an acceptable internal acoustic environment would technically be achievable, the sealed box solution would further detract from future residents’ quality of life and is an additional factor weighing against permission.”*
- 8.2.16 This decision was unusual. Dwellings do not need to be designed as a “sealed box” to mitigate against external noise. There are many parts of Crawley exposed to external noise from the M23 motorway, A roads such as the A2011 & A220, railway lines and aircraft noise. Dwellings in these locations can and have been designed to meet suitable internal noise levels but do not require anything to be sealed closed. In fact both the existing and proposed new noise policy annex require that dwellings should not be sealed to mitigate the effects of transportation noise.
- 8.2.17 The decision was also unusual by implying that residential development should be refused on the basis of external noise levels in gardens. This conflicts with current guidance (BS 8233: 2014 and ProPG)
- 8.2.18 *“For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development **should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.**”*
- 8.2.19 There were many other residential developments near Manchester airport exposed to noise levels greater than 60 dB $L_{Aeq,16h}$. Unfortunately details of all of these applications were not available to the planning inspector at the inquiry.
- 8.2.20 The above planning application was determined by Cheshire East Council (CEC). This council has recently closed a consultation on their own development policies including a detailed objective policy on aircraft noise ENV13. This policy defines a SOAEL as **63 dB $L_{Aeq,16h}$** and but does not

define what level becomes unacceptable. Residential development is permissible up to 63 dB $L_{Aeq,16h}$ with a policy recommendation that noise levels in gardens should be designed to achieve the lowest practicable levels.

8.3 Recommended Policy EP4: Development and noise

8.3.1 BAP recommend the following modifications to policy EP4 to make it sound and consistent with current policy. Suggested changes are [in blue underline](#). BAP consider that the Unacceptable Adverse Effect level for aircraft noise should be 69 dB $L_{Aeq,16h}$ during the daytime. However, this conflicts with the current local plan policy and would provide a different guideline to that for road and rail. BAP there consider that having a simpler noise exposure hierarchy as suggested below would address this issue. BAP have also added some minor modifications as noise standards in local plans should not be applied as rigid thresholds, as specific circumstances may justify some variation being allowed⁵.

8.3.2 "A. Noise sensitive development

Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not [normally](#) be exposed to unacceptable noise impact from existing, temporary or future uses. Noise sensitive uses proposed in areas that are exposed to noise above the Lowest Observed Adverse Effect Level (LOAEL) or at the Significant Observed Adverse Effect Level (SOAEL) from existing or future industrial, commercial or transport (air, road, rail and mixed) sources will be permitted where it can be demonstrated good acoustic design has been considered early in the planning process, and that all appropriate mitigation, through careful planning, layout and design, will be undertaken to ensure that the noise impact for future users will be made acceptable. Noise sensitive uses proposed in areas that are exposed to noise at the Unacceptable Adverse Effect level will not [normally](#) be permitted. For surface transport noise sources, the Unacceptable Adverse Effect Level is considered to occur where noise exposure is above 66dB LAeq,16hr ([63dB LAeq,8hr at night](#)). For aviation transport sources the Unacceptable Adverse Effect is considered to occur where noise exposure is above [66dB LAeq,16hr](#). ([63dB LAeq,8hr at night](#))."

⁵ PPG(N) Paragraph: 007 Reference ID: 30-007-20190722

8.3.3 A summary of all noise exposure hierarchy categories as given in the Crawley Local Plan Noise Annex is provided below in Table 4.

Descriptor	Daytime (07:00-23:00) threshold	Night time (23:00-07:00) threshold
NOAEL	<51dB $L_{Aeq,16hr}$ <65dB L_{AFmax}	<45dB $L_{Aeq,8hr}$ <60dB L_{AFmax}
LOAEL	51dB $L_{Aeq,16hr}$ 65dB L_{AFmax}	45dB $L_{Aeq,8hr}$ 60dB L_{AFmax}
SOAEL	<u>51dB to 66dB $L_{Aeq,16hr}$</u> 65dB to 82dB L_{AFmax}	<u>45dB to 63dB $L_{Aeq,8hr}$¹</u> 60dB to 82dB L_{AFmax}
UAEL	<u>≥66dB $L_{Aeq,16hr}$</u>	<u>≥63dB $L_{Aeq,8hr}$</u>

Table 5: Summary of noise exposure hierarchy (Local Plan Noise Annex)

¹Where noise maxima regularly exceed 60 dB $L_{AF,max}$ suitable mitigation will be required to meet internal noise standards as defined within the Noise Annex.

9.0 SUMMARY

- 9.1.1 The principles of the draft noise policy and associated noise annex generally follow central government policy, planning policy guidance and technical guidance relevant to environmental noise assessment. However the identification of 60 dB L_{Aeq} is an unacceptable daytime noise level for aircraft is not consistent.
- 9.1.2 BAP have presented some minor modifications to the proposed policy. BAP would be pleased to work with the council if there are any queries regarding the suggested minor modifications.

Jack Traveller
for Bickerdike Allen Partners LLP

David Trew
Partner

APPENDIX 1

GLOSSARY OF ACOUSTIC TERMINOLOGY

The Decibel, dB

The unit used to describe the magnitude of sound is the decibel (dB) and the quantity measured is the sound pressure level. The decibel scale is logarithmic and it ascribes equal values to proportional changes in sound pressure, which is a characteristic of the ear. Use of a logarithmic scale has the added advantage that it compresses the very wide range of sound pressures to which the ear may typically be exposed to a more manageable range of numbers. The threshold of hearing occurs at approximately 0 dB (which corresponds to a reference sound pressure of 2×10^{-5} Pascals) and the threshold of pain is around 120 dB.

The sound energy radiated by a source can also be expressed in decibels. The sound power is a measure of the total sound energy radiated by a source per second, in watts. The sound power level, L_w is expressed in decibels, referenced to 10^{-12} watts.

Frequency, Hz

Frequency is analogous to musical pitch. It depends upon the rate of vibration of the air molecules that transmit the sound and is measure as the number of cycles per second or Hertz (Hz). The human ear is sensitive to sound in the range 20 Hz to 20,000 Hz (20 kHz). For acoustic engineering purposes, the frequency range is normally divided up into discrete bands. The most commonly used bands are octave bands, in which the upper limiting frequency for any band is twice the lower limiting frequency, and one-third octave bands, in which each octave band is divided into three. The bands are described by their centre frequency value and the ranges which are typically used for building acoustics purposes are 63 Hz to 4 kHz (octave bands) and 100 Hz to 3150 Hz (one-third octave bands).

A-weighting

The sensitivity of the ear is frequency dependent. Sound level meters are fitted with a weighting network which approximates to this response and allows sound levels to be expressed as an overall single figure value, in dB(A).

Environmental Noise Descriptors

Where noise levels vary with time, it is necessary to express the results of a measurement over a period of time in statistical terms. Some commonly used descriptors follow.

Statistical Term	Description
$L_{Aeq,T}$	The most widely applicable unit is the equivalent continuous A-weighted sound pressure level ($L_{Aeq,T}$). It is an energy average and is defined as the level of a notional sound which (over a defined period of time, T) would deliver the same A-weighted sound energy as the actual fluctuating sound.
L_{A90}	The level exceeded for 90% of the time is normally used to describe background noise.
$L_{Amax,T}$	The maximum A-weighted sound pressure level, normally associated with a time weighting, F (fast), or S (slow)

Sound Transmission in Rooms

Sound energy is reflected from the room surfaces and this gives rise to reverberation. At short distances from a sound source, the sound level will fall off at a rate of 6 dB per doubling of distance, as it would in the open air – this is known as the direct field. Beyond a certain distance, the effect of reverberation takes over and the level ceases to fall off significantly with distance from the source. This is known as the reverberant field. For receiver positions in this part of the room, sound levels can be reduced by applying sound absorbing finishes to the surfaces of the room. A 3 dB reduction can normally be obtained by doubling the absorption present, which corresponds to halving the reverberation time (see below).

Sound Insulation - Airborne

Voices, hi-fi systems, television and radio sound and musical instruments are all sources of airborne sound. They excite the air around them and the vibration in the air is transmitted to surrounding surfaces, such as walls, ceilings and floors. This sets these constructions into vibration and this vibration is radiated in neighbouring rooms as sound. Energy is lost in the transmission path and this is referred to as transmission loss or, more generally, sound insulation. The most simple measure of sound insulation is the sound level difference, D , which is the arithmetic difference between the sound level, in dB, in the source room and the sound level in the receiving room.

Other measures of sound insulation include the sound reduction index, R , which is a measure of the acoustical performance of a partition, obtained in a laboratory, and the standardised level difference, D_{nT} , which is used mainly in the sound insulation of domestic separating walls and separating floors. The relevant test procedures are laid down in BS EN ISO 140. A single figure “weighted” result can be obtained from one-third octave band test results by using a curve-fitting procedure laid down in BS EN ISO 717. The subscript “w” is added to the relevant descriptor (eg $D_{nT,w}$).

The sound reduction index, R , is used in the specification of components, such as partitions, doors and windows. It is important to bear in mind that the performance of components in the field is usually lower than can be obtained in a laboratory. The transmission of sound via other components common to both rooms (“flanking transmission”) can reduce the apparent sound reduction index (R') significantly.

Sound Insulation - Impact

In the case of impact sound, the building construction is caused to vibrate as a result of a physical impact. Footsteps on floors are the most obvious example. The vibration is radiated as sound in neighbouring rooms. Impact insulation is measured using a standard tapping machine, which drops weights cyclically onto a floor. The sound pressure level is measured in the receiving room below and the result is known as the impact level, L_i for laboratory tests and L'_i for field tests.

Housing Trajectory - COUNCIL POSITION - stepped trajectory - Sedgefield and 5% Buffer

Table 1

26-Apr-21

Supply Sources	Plan Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
	Years 1-5 2021/22	2022/23	2023/24	2024/25	2025/26	Years 6-10 2026/27	2027/28	2028/29	2029/30	2030/31	Years 11-15 2031/32	2032/33	2033/34	2034/35	2035/36	2036/37		
Permissions (large Sites)	17	42																59
Permissions (Small Sites)	15	10	2															27
Key Housing Sites (Policy H2) that are Deliverable	113	141	355	189	92	60	60	60	60	47								1177
Key Housing Sites (Policy H2) that are Developable						294	265	50	50	50								709
Local Plan Key Town Centre Opportunity Sites (Policy H2)		152			400	402	108	200	200									1462
Broad Location East of London Road						25	26	33										84
Broad Location Town Centre						10	54	48										112
SHLAA Sites (Deliverable)		12	8	16														36
SHLAA Sites (Developable)						21	60	28			30	15						154
Windfall	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	1440
TOTAL SUPPLY	235	447	455	295	582	902	663	509	400	187	120	105	90	90	90	90	90	5260
Requirement	350	350	350	350	350	450	450	450	450	450	220	220	220	220	220	220	220	5320
Annual Shortfall/Surplus	-115	97	105	-55	232	452	213	59	-50	-263	-100	-115	-130	-130	-130	-130	-130	
Cumulative Shortfall/Surplus		-115	-18	87	32	264	716	929	988	938	675	575	460	330	200	70		
Base 5 Year Requirement	1750	1850	1950	2050	2150	2250	2020	1790	1560	1330	1100	1100						
Shortfall/oversupply (Sedgefield)	0.0	-115.0	-18.0	87.0	32.0	264.0	716.0	929.0	988.0	938.0	675.0	575.0						
5 Year Requirement with Shortfall/oversupply	1750.0	1965.0	1968.0	1963.0	2118.0	1986.0	1304.0	861.0	572.0	392.0	425.0	305.0						
Adjuste 5 Year Requirement with 5% Buffer	1837.5	2063.3	2066.4	2061.2	2223.9	2085.3	1369.2	904.1	600.6	411.6	446.3	320.3						
Adjusted Annual Requirement (5yr)	367.5	412.7	413.3	412.2	444.8	417.1	273.8	180.8	120.1	82.3	89.3	64.1						
5 Year Supply	2014	2681	2897	2951	3056	2661	1879	1321	902	592	495	375						
Supply in Years	5.48	6.50	7.01	7.16	6.87	6.38	6.86	7.31	7.51	7.19	5.55	5.85						

Notes:

Applying the Council's Supply as set out in the trajectory included with the Reg 19 Plan

Housing Trajectory - COUNCIL POSITION - stepped trajectory - Sedgefield and 10% Buffer

Table 2

26-Apr-21

Supply Sources	Plan Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
	Years 1-5						Years 6-10					Years 11-15						
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37		
Permissions (large Sites)		17	42															59
Permissions (Small Sites)		15	10	2														27
Key Housing Sites (Policy H2) that are Deliverable		113	141	355	189	92	60	60	60	60	47							1177
Key Housing Sites (Policy H2) that are Developable							294	265	50	50	50							709
Local Plan Key Town Centre Opportunity Sites (Policy H2)			152			400	402	108	200	200								1462
Broad Location East of London Road							25	26	33									84
Broad Location Town Centre							10	54	48									112
SHLAA Sites (Deliverable)			12	8	16													36
SHLAA Sites (Developable)							21	60	28			30	15					154
Windfall		90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	1440
TOTAL SUPPLY		235	447	455	295	582	902	663	509	400	187	120	105	90	90	90	90	5260
Requirement		350	350	350	350	350	450	450	450	450	450	220	220	220	220	220	220	5320
Annual Shortfall/Surplus		-115	97	105	-55	232	452	213	59	-50	-263	-100	-115	-130	-130	-130	-130	
Cumulative Shortfall/Surplus			-115	-18	87	32	264	716	929	988	938	675	575	460	330	200	70	
Base 5 Year Requirement		1750	1850	1950	2050	2150	2250	2020	1790	1560	1330	1100	1100					
Shortfall/oversupply (Sedgefield)		0.0	-115.0	-18.0	87.0	32.0	264.0	716.0	929.0	988.0	938.0	675.0	575.0					
5 Year Requirement with Shortfall/oversupply		1750.0	1965.0	1968.0	1963.0	2118.0	1986.0	1304.0	861.0	572.0	392.0	425.0	305.0					
Adjusted 5 Year Requirement with 10% Buffer		1925.0	2161.5	2164.8	2159.3	2329.8	2184.6	1434.4	947.1	629.2	431.2	467.5	335.5					
Adjusted Annual Requirement (5yr)		385.0	432.3	433.0	431.9	466.0	436.9	286.9	189.4	125.8	86.2	93.5	67.1					
5 Year Supply		2014	2681	2897	2951	3056	2661	1879	1321	902	592	495	375					
Supply in Years		5.23	6.20	6.69	6.83	6.56	6.09	6.55	6.97	7.17	6.86	5.29	5.59					

Notes:

Applying the Council's Supply as set out in the trajectory included with the Reg 19 Plan 10% Buffer applied

Housing Trajectory - NS POSITION - stepped trajectory - Sedgefield and 5% Buffer

Table 3

26-Apr-21

Supply Sources	Plan Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
		Years 1-5 2021/22	2022/23	2023/24	2024/25	2025/26	Years 6-10 2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	
Permissions (large Sites)		17	42															59
Permissions (Small Sites)		15	10	2														27
Key Housing Sites (Policy H2) that are Deliverable		113	141	355	189	92	60	60	60	60	47							1177
Key Housing Sites (Policy H2) that are Developable							294	265	50	50	50							709
Local Plan Key Town Centre Opportunity Sites (Policy H2)							402	108	200	200	152	400						1462
Broad Location East of London Road							25	26	33									84
Broad Location Town Centre							10	54	48									112
SHLAA Sites (Deliverable)							12	8	16									36
SHLAA Sites (Developable)							21	60	28		30	15						154
Windfall							90	90	90	90	90	90	90	90	90	90	90	990
TOTAL SUPPLY		145	193	357	189	92	914	671	525	400	339	520	105	90	90	90	90	4810
Requirement		350	350	350	350	350	450	450	450	450	450	220	220	220	220	220	220	5320
Annual Shortfall/Surplus		-205	-157	7	-161	-258	464	221	75	-50	-111	300	-115	-130	-130	-130	-130	
Cumulative Shortfall/Surplus			-205	-362	-355	-516	-774	-310	-89	-14	-64	-175	125	10	-120	-250	-380	
Base 5 Year Requirement		1750	1850	1950	2050	2150	2250	2020	1790	1560	1330	1100	1100					
Shortfall/oversupply (Sedgefield)		0.0	-205.0	-362.0	-355.0	-516.0	-774.0	-310.0	-89.0	-14.0	-64.0	-175.0	125.0					
5 Year Requirement with Shortfall/oversupply		1750.0	2055.0	2312.0	2405.0	2666.0	3024.0	2330.0	1879.0	1574.0	1394.0	1275.0	755.0					
Adjuste 5 Year Requirement with 5% Buffer		1837.5	2157.8	2427.6	2525.3	2799.3	3175.2	2446.5	1973.0	1652.7	1463.7	1338.8	792.8					
Adjusted Annual Requirement (5yr)		367.5	431.6	485.5	505.1	559.9	635.0	489.3	394.6	330.5	292.7	267.8	158.6					
5 Year Supply		976	1745	2223	2391	2602	2849	2455	1889	1454	1144	895	375					
Supply in Years		2.66	4.04	4.58	4.73	4.65	4.49	5.02	4.79	4.40	3.91	3.34	2.37					

NOTES:

No Clear Evidence of Delivery Demonstrated in Council evidence base - Removal of 552 from first 5 years

No Clear Evidence of Delivery Demonstrated in Council evidence base - Removal of 36 from first 5 years

Windfalls removed from first 5-years as no compelling evidence

Notes:
Adjustments to Council's Supply to Reflect Requirements of the Framework particularly Annex 2

Housing Trajectory - NS POSITION - stepped trajectory - Sedgefield and 10% Buffer

Table 4

26-Apr-21

Supply Sources	Plan Period	Years 1-5					Years 6-10					Years 11-15					TOTAL	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		16
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	
Permissions (large Sites)		17	42															59
Permissions (Small Sites)		15	10	2														27
Key Housing Sites (Policy H2) that are Deliverable		113	141	355	189	92	60	60	60	60	47							1177
Key Housing Sites (Policy H2) that are Developable							294	265	50	50	50							709
Local Plan Key Town Centre Opportunity Sites (Policy H2)							402	108	200	200	152	400						1462
Broad Location East of London Road							25	26	33									84
Broad Location Town Centre							10	54	48									112
SHLAA Sites (Deliverable)							12	8	16									36
SHLAA Sites (Developable)							21	60	28		30	15						154
Windfall							90	90	90	90	90	90	90	90	90	90	90	990
TOTAL SUPPLY		145	193	357	189	92	914	671	525	400	339	520	105	90	90	90	90	4810
Requirement		350	350	350	350	350	450	450	450	450	450	220	220	220	220	220	220	5320
Annual Shortfall/Surplus		-205	-157	7	-161	-258	464	221	75	-50	-111	300	-115	-130	-130	-130	-130	
Cumulative Shortfall/Surplus			-205	-362	-355	-516	-774	-310	-89	-14	-64	-175	125	10	-120	-250	-380	
Base 5 Year Requirement		1750	1850	1950	2050	2150	2250	2020	1790	1560	1330	1100	1100					
Shortfall/oversupply (Sedgefield)		0.0	-205.0	-362.0	-355.0	-516.0	-774.0	-310.0	-89.0	-14.0	-64.0	-175.0	125.0					
5 Year Requirement with Shortfall/oversupply		1750.0	2055.0	2312.0	2405.0	2666.0	3024.0	2330.0	1879.0	1574.0	1394.0	1275.0	755.0					
Adjuste 5 Year Requirement with 10% Buffer		1925.0	2260.5	2543.2	2645.5	2932.6	3326.4	2563.0	2066.9	1731.4	1533.4	1402.5	830.5					
Adjusted Annual Requirement (5yr)		385.0	452.1	508.6	529.1	586.5	665.3	512.6	413.4	346.3	306.7	280.5	166.1					
5 Year Supply		976	1745	2223	2391	2602	2849	2455	1889	1454	1144	895	375					
Supply in Years		2.54	3.86	4.37	4.52	4.44	4.28	4.79	4.57	4.20	3.73	3.19	2.26					

NOTES:

No Clear Evidence of Delivery Demonstrated in Council evidence base - Removal of 552 from first 5 years

No Clear Evidence of Delivery Demonstrated in Council evidence base - Removal of 36 from first 5 years

Windfalls removed from first 5-years as no compelling evidence

Notes:
Adjustments to Council's Supply to Reflect Requirements of the Framework particularly Annex 2
10% Buffer Applied