

CORPORATE RESOURCES

Please ask for: Iain Livingstone
Direct Line: 01843 577140
Email: iain.livingstone@thanet.gov.uk
Date: 14/06/19



Dear Mr MacDonald,

Application by RiverOak Strategic Partners to upgrade and reopen Manston Airport Comments following Issue Specific Hearings for Deadline 8 submission

Please find below Thanet District Council's comments following the issue specific hearings held between 3rd June - 7th June 2019.

Schedule 2 Part 1 Definitions - Definition of 'Maintain'

TDC proposed the following wording to be used for the definition of 'maintain' in the next draft of the Development Consent Order (DCO):

"maintain" in relation to the authorised development includes to inspect, repair, adjust, alter, remove, refurbish, replace, improve or reconstruct to the extent assessed in the environmental statement and any derivative of "maintain" is to be construed accordingly.

TDC and the applicant have now agreed this wording and this should be reflected in the applicant's Deadline 8 submission.

Schedule 2 Part 1 Definitions - Definition of 'Airport-related Development'

Please refer to TDC's previous correspondence submitted at Deadline 7 for our suggested definition of this term.

Action point 3: Requirement 7 - Lighting Strategy

Thanet District Council (TDC) has agreed the following amendments to the wording of Requirement 7(2)(b), with a new item added at xiv) to read:

Reception: 01843 577000
Email: customer.services@thanet.gov.uk
Web: thanet.gov.uk
Facebook: [@ThanetDistrictCouncil](https://www.facebook.com/ThanetDistrictCouncil)
Twitter: [@ThanetCouncil](https://twitter.com/ThanetCouncil)
Head office: Cecil St, Margate, CT9 1XZ

“Lighting Strategy substantially in the form of to meet requirements set out in the Draft Lighting Strategy”

The Draft Lighting Strategy should also be included in Schedule 10 as a certified document.

Requirement 10 - Landscaping

TDC will comment on the Draft Landscaping Plan to be submitted at Deadline 8 by the applicant, to ensure that our previous comments regarding the landscaping along eastern boundary of the site have been taken into account.

In addition to this, TDC agrees to the inclusion of a new part to Requirement 10, at 10(3), to read:

“A landscaping scheme referred to in sub-paragraph (1) must be substantially in the form of the [draft landscaping plan].”

The Draft Landscaping Plan should also be included in Schedule 10 as a certified document.

Requirement 19 - Airport-related commercial facilities

TDC has agreed with the applicant that a form of words will be submitted at Deadline 8 to amend the wording of Requirement 19 to ensure that the airport use on the site to the south of Manston road has come into operation prior to the occupation of any units on the ‘northern grass site’ to ensure the connection between “airport-related” development and the authorised development. This matter has been previously raised by TDC within our Local Impact Report at 4.2.16.

Schedule 2 Part 1 and 2 - Discharging Authority

TDC agrees with the revised position of the applicant that Thanet District Council should be the discharging body for the various requirements, with the Secretary of State remaining at Articles 8, 9 and 37 of the Draft DCO. TDC awaits the further draft of the DCO to include the draft revisions to Part 2 as submitted by TDC at Deadline 7a (Appendix 1) relating to procedure for the discharge of requirements.

Comments on information submitted at Deadline 7a

Please find attached the report of Ricardo Energy and Environment on behalf of the Council into the documents produced with regard to the impact of noise on schools and the changes to the Noise Mitigation Plan (NMP). The conclusions and requests for alterations are summarised below:

- It is requested that the full set of contours for easterly and westerly operations are issued;
- A QC2 limit for night time movements is requested, in line with other airports operations at night, rather than a QC4 limit as currently proposed in the NMP;
- A demarcated engine test area should be set out in a plan attached with the DCO and that this is located away from noise sensitive receptors and at a location agreed with TDC;
- A half hourly limit for ATMs during school hours should be considered, based on the analysis in NS2.16 and included in the NMP.

- It is recommended that if noise insulation cannot be demonstrated that it can be suitably applied to the park homes in Smugglers Leap, then a potential relocation package for those properties should be confirmed as a formal requirement in the DCO or NMP.

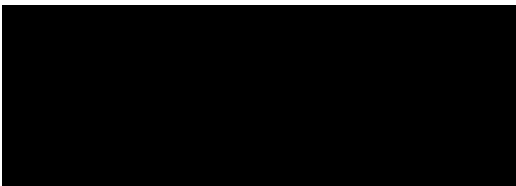
We respectfully request the Examining Authority to consider these comments when assessing these matters and we await the applicant's submission at Deadline 8 following the action points from the Issue Specific Hearing 6 on 5th June.

Action point 28 - Comments on Bird Mitigation

TDC have investigated the use of the Council's Strategic Access Management and Monitoring Plan (SAMM) by the applicant to overcome Natural England's concern over the impact of the development on the integrity of the Thanet Coast and Sandwich Bay Special Protection Area (SPA). The SAMM is primarily focussed on the impact of recreational disturbance in relation to human recreational activities, with contributions required from residential development in the district to fund mitigation/survey work at the SPA to address this impact. The contribution amount is linked to the housing targets within the Draft Local Plan to create a 'per dwelling' requirement. The SAMM project is specifically targeted to mitigate a particular impact, and there is no provision in the SAMM for contributions/mitigation to mitigate the impact of the proposed development (aircraft movements and the noise associated). The SAMM is therefore not considered the appropriate mechanism for mitigating this particular impact on the SPA.

If further clarification is required then please do not hesitate to contact me on the information above.

Yours sincerely



Iain Livingstone
Planning Applications Manager
Thanet District Council



Ricardo
Energy & Environment

Manston Airport DCO Application: Review of Further Noise Documentation June 2019

Report for Thanet District Council, 14th June 2019

Customer:**Thanet District Council****Customer reference:**

n/a

Confidentiality, copyright & reproduction:

This report is the Copyright of Thanet District Council and has been prepared by Ricardo Energy & Environment, a trading name of Ricardo-AEA Ltd under contract '*Consultancy Agreement Support for Manston Airport NSIP Application*' dated 17th January 2019. The contents of this report may not be reproduced, in whole or in part, nor passed to any organisation or person without the specific prior written permission of Thanet District Council. Ricardo Energy & Environment accepts no liability whatsoever to any third party for any loss or damage arising from any interpretation or use of the information contained in this report, or reliance on any views expressed therein, other than the liability that is agreed in the said contract.

Contact:

Ben Stansfield
Ricardo Energy & Environment
Bright Building, First Floor, Manchester Science
Park, Pencroft Way, Manchester M15 6GZ

t: +44 (0) 1235 75 3154**e:** ben.stansfield@ricardo.com

Ricardo is certificated to ISO9001, ISO14001
and OHSAS18001

Author:

Adam Glass (Anderson Acoustics), Katherine
Cowell

Approved By:

Ben Stansfield

Date:

14 June 2019

Ricardo Energy & Environment reference:

Ref: ED11353109- Issue Number 1

Table of contents

1	Introduction.....	1
1.1	Background and purpose of this report	1
2	Review of applicant responses	2
2.1	Background	2
3	Review of Noise Mitigation Plan.....	39
3.1	Noise Mitigation Plan Changes	39
3.2	Noise Mitigation Plan Assessment of Changes	39
3.3	Noise Mitigation Plan Recommendations	40

1 Introduction

1.1 Background and purpose of this report

RiverOak Strategic Partners Ltd proposes the upgrade and reopening of Manston Airport. This proposed development is a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008 and therefore requires an application for a Development Consent Order (DCO) which includes an Environmental Statement (ES).

The noise hearing was held on 22nd March 2019. Following this, the Examining Authority issued questions for the applicant and Ricardo Energy & Environment provided an assessment of the applicant response in May 2019. A further hearing was held on 5th June 2019 and this report provides a review of:

- Considers the current noise documentation in light of matters raised in the Ricardo Energy & Environment assessment of May 2019.
- The applicants written response to the Examining Authority third questions in relation to schools (Ns3.2) and the related contour.
- A view on the cap (para 2) that has now been included within the updated Noise Management Plan.

The assessment of the above has been undertaken by Anderson Acoustics in association with Ricardo Energy & Environment. The findings are provided in section 2 and 3 of this report.

2 Review of applicant responses

2.1 Background

Following the Noise Issue Specific Hearing on 22 March 2019 the Examining Authority (ExA) issued the request for the following material for Deadline 5. The Applicant submitted their response to the questions posed by the ExA on 29th March 2019 in a document entitled: “Applicant’s Written Summary of Case put Orally – Noise Hearing and associated appendices”[TR020002/D5/ISH3]. The Applicant provided responses to the ExA’s second written questions on the 3rd of May and answers to the ExA’s third written questions on the 24th of May for Deadline 7a.

Further to a request from Thanet District Council (TDC) to Ricardo, an assessment has been undertaken by Anderson Acoustics to provide a review of the adequacy of the responses submitted by the Applicant. This assessment is presented in Table 1.1 and includes both an assessment of the robustness of the Applicant’s responses as well as recommendations for TDC to consider in terms of actions or next steps. The table has been updated to include the materials submitted up to Deadline 7a. In addition, the final section of this report provides comment on the changes to the noise mitigation plan made by the Applicant, which arose following the hearing and following revisions to the Noise Mitigation Plan up to Deadline 7a.

Table 2.1 Assessment of applicant responses

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
1. A list of properties falling within the proposed noise insulation and ventilation scheme for residential properties and a map showing their location;	A list of residential properties eligible for the noise insulation and ventilation scheme are presented in Appendix A of this document, together with Figure 12.21 (of the ES), which shows the location of the eligible residential properties on a map.	The list of residential properties eligible for noise insulation and ventilation is presented in both list and plot form to allow identification of the properties. The list of properties eligible appears to include commercial and industrial properties that would not be eligible for the scheme. The list also includes the Smugglers Leap Park Home estate. These park homes may not be suitable for the application of noise insulation given their construction. It is further noted that the eligibility shown is for contours averaged for both easterly and westerly operations, rather than an actual day of westerly or easterly operation. Using the average mode has the effect of reducing the contours as the noise is spread across the routes in a way that would not necessarily happen in a day of operation at the airport. The eligibility contours should be provided separately for both easterly and westerly operations to derive noise insulation eligibility.	Recommendation: Request a version of the list showing the properties that are eligible and can have noise insulation and ventilation applied. Where there is doubts over the suitability of the property to receive noise insulation this should be flagged and rehousing should be considered. Request westerly and easterly operation contours to be provided and for these revised plans to form the basis of noise insulation and rehousing eligibility.	<p>The applicant has submitted in Appendix NS3.7 of Appendices to Answers to Third Written Questions TR020002/D7a/TWQ/ Appendices a map showing the properties eligible for noise insulation for easterly and westerly operations, as requested.</p> <p>Nevertheless, The Applicant has stated that the noise insulation strategy proposed in the NMP meets the requirements of the Aviation Policy Framework (APF) and the use of the easterly and westerly operation contours is considered by the Applicant to be compliant with the APF. The Applicant cites the precedent set in the London City Airport appeal where the Inspectors report stated that average mode contours (as opposed to single mode contours) should</p>	<p>No further action. It is considered that as the APF requirements are met anything further for the noise insulation scheme would be at the discretion of the Applicant.</p> <p>Nevertheless, the Figures provided by the Applicant in Appendix NS3.7 appear to show the noise insulation and ventilation eligibility based on single mode operations.</p> <p>Relocation for the park homes at Smugglers Leap if noise insulation cannot be applied should be confirmed in the NMP.</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
				<p>be used to determine noise insulation eligibility.</p> <p>It is however noted that Figure 12.31 and Figure 12.32 (of Appendix NS3.7 of Appendices to Answers to Third Written Questions TR020002/D7a/TWQ/ Appendices) state in the figure titles "Eligibility for Manston noise insulation and ventilation scheme - westerly operations." and "Eligibility for Manston noise insulation and ventilation scheme - easterly operations." Respectively. Given the Applicants statement in NS3.7 it can be considered these were supplied for information purposes but this is not certain.</p>	
2. A note on the proportion of the daytime	Appendix 12.4 Baseline Study of the ES [APP-057] includes summary statistics for each long	The response clarifies that the baseline measurement periods with wind speed > 5ms ⁻¹ have been removed in line with best	No further action requested on this matter.	n/a	n/a

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
<p>and night-time baseline noise monitoring readings removed due to wind speeds being above 5 mph</p>	<p>term baseline survey location (LT1 to LT7). In line with best practice noise measurements which occur during precipitation and / or average wind speed greater than 5ms⁻¹ have been removed from the baseline sound recordings. The last column in the table is described as 'Periods affected by rain %'. This describes the percentage of measurements where there was precipitation and / or wind speed greater than 5 ms⁻¹. For example, at LT1 28% of measurements during the day (07:00 - 23:00) were affected by rain and or wind. These measurements were discarded from the analysis before the baseline noise level for that time period was derived. Similar statistics are provided for the other time</p>	<p>practice rather than just the "Periods affected by rain %" as indicated by the final table header. The exclusion of the data during periods of rain and wind speeds greater than 5ms⁻¹ is agreed as part of best practice.</p>			

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	periods assessed. The occurrence of wind >5ms ⁻¹ or precipitation was determined using a weather station mounted at baseline survey location LT3 – Grove House.				
3. A list of UK airports at which the Integrated Noise Model is employed	<p>Three example airports have been identified that used the Integrated Noise Model to develop their current Noise Action Plans (hyperlinks to the action plans are provided):</p> <ul style="list-style-type: none"> • East Midlands 2019-2023 Noise Action Plan • Luton 2019-2023 Noise Action Plan • Belfast 2013-2018 Noise Action Plan 	<p>The Applicant has identified that the Integrated Noise Model (INM) has been used to develop the current Noise Action Plan (NAP) at East Midlands Airport, Luton Airport and Belfast Airport. It is noted that the Belfast 2013 – 2018 NAP for George Best Belfast City Airport has a draft 2019-20124 NAP to replace the 2012 – 2018 NAP and the aircraft noise modelling was conducted by Wood (the Applicant's consultants). It is noted the Federal Aviation Authority now consider INM a legacy aviation environmental modelling tool and was replaced by the Aviation Environmental Design Tool (AEDT) in May 2015. The reason for using the INM was given in the hearing as the modelling was initiated before the release of AEDT.</p>	No further action requested on this matter.	n/a	n/a

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
4. A note on the input and role of CBRE in informing the determination of the noise contour used to identify Category 3 persons in the Book of Reference [REP3-194]	<p>Response not listed. Found in Appendix 2</p> <p>1 CBRE have advised that Category 3 persons are those that fall within the 63dB noise contour.</p> <p>2 The test applied by CBRE has been diminution of market value due to physical factors (in this case noise) on a fixed valuation date. CBRE has provided guidance on how these factors can influence amenity and give rise to sustainable claims for compensation under Part 1 of the Act. In order to do this, CBRE have made comparisons with Part 1 claims arising from other developments and the likelihood of such sustainable claims being made by those</p>	<p>For the purposes of the aircraft noise modelling INM is considered as a suitable model.</p> <p>No response is given in Table 2.1 of the Applicants response document. Nevertheless, the response can be found in Appendix 2 of the Applicants response document. The response details that Category 3 persons are those that fall within the 63dB contour. The appendix details that the CBRE was guided by the noise specialist team in terms of identifying the property numbers within the contour. Once the revised single mode contour maps have been produced the list of properties and Category 3 persons should be revisited. It is not clear if the park homes at Smugglers Leap have been considered with regard to the type of construction and if noise insulation measures can be effectively applied.</p>	Update of list of properties following revision of the contours and consideration of suitability of noise insulation for the park homes at Smugglers Leap.	The Applicant has provided a list in Appendix NS3.7 of Appendices to Answers to Third Written Questions TR020002/D7a/TWQ/A ppendices of properties based on the average mode contours that they state conforms with the APF.	Request confirmation the park homes at Smugglers Leap will be relocated if noise insulation cannot be effectively applied. At present the Applicant says it will be considered.

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>outside of the noise contour.</p> <p>3 CBRE was guided by the noise specialist team in terms of identifying the property numbers within the contour. This information was then used to fix the zone for assessing potential Category 3 parties arising from aircraft noise, based on the predicted noise levels, which was jointly decided by CBRE and the Applicant.</p>				
<p>5. Combined aircraft and traffic LAeq 16 hour and 8 hour contours if the traffic noise component exceeds screening</p>	<p>We are not aware of any previous Environmental Impact Assessment (EIA) noise assessment where significant effects are determined using combined aircraft and road traffic noise contours.</p> <p>It is widely accepted that people respond differently to noise from different sources. This is illustrated by the</p>	<p>The Applicant is unaware of any EIA where significant effects are determined using combined aircraft, and road traffic noise contours. The Applicant further states that the separate source specific guideline values and noise dose-response relations for road and aircraft noise are described in the WHO Guidelines for the European Region 2018. The Applicant further considers that no guidance is provided for assessing the combined effects</p>	<p>Request consideration of the cumulative impact of combined development noise levels at receptors through combined predictions and contour maps.</p>	<p>The Applicant has submitted a response in NS3.3 that references TR20002/D7a/TWQ/Appendices which provides combined road traffic, air traffic and ground noise predictions.</p> <p>It is understood by the Applicant that assessing the total noise level from the development should</p>	<p>It is considered, having regard to IEMA guidance, that assessing the total noise level from the development should not form the basis of the assessment of annoyance but the change in noise levels should be considered. These predictions are also needed by the local authorities to inform any development proposals received. The Applicant</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>evidence presented in the most recent World Health Organisation (WHO) guidance on noise (Environmental Noise Guidelines for the European Region, WHO 2018) which sets out separate source specific guideline values and noise dose-response relationships for Road, Rail and Aircraft noise. No guidance is provided for assessing the combined effects of exposure to multiple sources of noise. Whilst total noise from multiple sources can be determined, there is no reliable dose-response data to show what the effect of these combined sources of noise is on people. Therefore, it is more appropriate to consider the noise sources separately and determine the overall effect.</p>	<p>of exposure to multiple sources. The Applicant considers that conventionally noise from separate sources for airport applications is dealt with separately and is considered not feasible to derive a “cumulative noise impact”.</p> <p>ProPG (Professional Practice Guidance on Planning & Noise) provides guidance on the assessment of cumulative noise from transport sources on new residential development. ProPG uses the combined free-field noise level from all transport sources and also commercial noise where the character of the commercial noise is not dominant to provide an initial risk of noise at proposed development sites. The area within the 50 dB $L_{Aeq,8hr}$ contour, which can be found in the Ecology Chapter of the ES (shown in Figure 2.1 included below) and above would be classified as “Medium Risk” and an Acoustic Design Statement would be required to demonstrate how the adverse impacts of noise would be mitigated and minimised and also be required to clearly</p>		<p>not form the basis of the assessment of annoyance.</p>	<p>has provided combined development noise levels.</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>We are therefore confident that the approach taken in the Environmental Statement (ES) is robust and any revised transport modelling that may be undertaken to confirm significant impacts should adopt a receptor-based approach, rather than a noise contour approach.</p>	<p>demonstrate that a significant adverse noise impact is avoided.</p> <p>The IEMA Guidelines for Environmental Noise Impact Assessment recommend that the change in noise levels as well as the absolute noise levels are considered. At present the noise assessments do not consider the total noise level or the total change in noise levels and so the 'with development' and the 'without development' scenarios are difficult to fully consider.</p> <p>It is noted that without the consideration of the cumulative sources noise of air noise, ground noise, traffic noise and plant noise the predicted significance of the effect may be understated.</p> <p>It is understood the noise assessments of the for the Heathrow expansion DCO are using combined noise impact contours.</p> <p>Note: See Figure 2.1 beneath this Table 2.1.</p> <p>Combined noise level predictions at receptor locations should be provided in addition to the noise contours.</p>			

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
<p>6. A note on the use of the 60 dB LAeq (16 hour) day indicator time contour rather than a 30 minute period/individual indicator noise events in assessing impacts on sensitive schools and community facilities</p>	<p>This query was raised in the noise hearing in the context that UK design guidelines for the upper limit for internal levels in schools (Acoustic design of schools: performance standards - Building bulletin 93) are defined as 30-minute period noise levels whilst, the ES presents screening criteria for schools as LAEQ,16hr. Significant effects on the schools are predicted when the screening criteria is exceeded by 3dB or more.</p> <p>If the airport operates an evenly distributed timetable, the LAEQ,16hr at a given receptor would be equivalent to the LAEQ,16hr. A distorted timetable could result in 30-minute periods throughout the day which are higher or</p>	<p>The Applicant has provided a note that states that HS2 Phase 1 and the A14 Huntingdon to Cambridge Improvement Highway Scheme did not consider the BB93 metric of LAeq,30mins and used LAeq,16hr as the screening criteria. Single mode (westerly and easterly) LAeq,30mins and LA01,30mins contours would allow the potential impact on schools and outdoor teaching to be assessed. BB93 recommends that at least one area suitable for outdoor teaching activities is below 50 dB LAeq,30mins.</p>	<p>Request single mode LAeq,30mins and LA01,30mins contours so the effect on schools, in particular the outdoor curriculum, can be considered.</p>	<p>The Applicant has responded in NS2.16 by considering the distribution of flights over the day (increased ATMs around opening and closure of the airport). The ES used an even distribution of ATMs. With an even timetable there is 2.25 ATMs in 30-minutes whereas with the distribution of flights over the day (increased ATMs around opening and closure of the airport the ATMs during school hours are reduced. The approach in the ES is considered to be acceptable for the LAeq,16hr though the LAeq,30mins timetable clarification in NS2.16 is welcomed to confirm the LAeq,30mins is not higher than presented in the ES.</p>	<p>It is suggested that TDC request that the DCO secures the limits of ATMs during the school day periods based on the analysis in Table 1 of NS2.16 to ensure that the potential impacts are not worse than modelled.</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>lower than the LAEQ,16hr. Whilst this is possible, we consider that the 16hr metric is an appropriate ES screening criteria that will reliably identify schools which will typically and regularly be exposed to noise levels that could lead to exceedances of guideline values of BB93. The screening criteria adopted in the ES is consistent with other major infrastructure schemes examined and approved by the Secretary of State, such as High Speed 2 Phase 1 and the A14 Huntingdon to Cambridge Improvement Highway Scheme.</p> <p>Furthermore, we consider that there are sufficient safeguards in place to protect all schools potentially effected by noise from the airport. Paragraph</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>3.4 of the revised Noise Mitigation Plan [REP4-023 Revised Noise Mitigation Plan] commits to assess the need for mitigation at all schools within the 50dB LAeq,16hr noise contour. This is regardless of whether a significant effect has been identified at the school or not. All schools will have an assessment undertaken which takes into account the design criteria set out in BB93 since, as agreed in principle with Public Health England [paragraphs 4.1.18 and 4.1.19 of the Draft Statement of Common Ground between the Applicant and Public Health England, REP4-008], paragraph 3.2 of the revised Noise Mitigation Plan now makes reference to BB93 in the definition of “reasonable” noise</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>insulation and ventilation for schools:</p> <p>“3.2 For the purposes of this paragraph a reasonable level of noise insulation and ventilation is defined according to the use of the building in question. In the case of schools, “reasonable” in this context means:</p> <p>3.2.1 taking account of the existing building structure;</p> <p>(a) a level of insulation and ventilation designed to achieve acoustic conditions inside rooms consistent with BB93: acoustic design of schools – performance standards; or</p> <p>(b) where existing conditions already exceed acoustic conditions defined in BB93, a level of insulation and ventilation designed, as a</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>minimum, to maintain existing acoustic conditions inside classrooms.</p> <p>(c) alternative ventilation which avoids overheating in classrooms.”</p>				
<p>7. A note on ‘dose-response curves’ and where the onset of annoyance from aviation noise begins to occur</p>	<p>Annoyance is a commonly used indicator to measure the quality of life impact of environmental noise exposure on communities around airports. Annoyance responses from social surveys together with noise exposure data are used to determine exposure-response relationships (ERFs). For annoyance, ERFs are usually expressed the percentage of the population highly annoyed (%HA) by a noise source at a given level.</p> <p>In 2017 the WHO completed a systematic review of the evidence surrounding the</p>	<p>The Applicant has provided a note on the annoyance indicator summarising current research and policy. It is noted that the CAA’s 2014 Survey of Noise Attitudes (SoNA) sampled populations living near airports. These studies are made on populations habituated to aircraft noise and with Manston Airport not having operated in the past 5 years the population around Manston should not be considered as habituated to aircraft noise. In consequence, the annoyance for the population around Manston airport is likely to be greater than indicated by the SoNA study.</p>	<p>Request consideration of onset of annoyance in populations not habituated to aircraft noise.</p>	<p>The Applicant has responded in NS3.5 of Answers to Third Written Questions TR020002/D7a/TWQ considering the APF uses $L_{Aeq,16hr}$ average mode contours of 63dB for the onset of significant annoyance (the SOAEL) and is using 50dB $L_{Aeq,16hr}$ as the onset of annoyance as the LOAEL which is below the level required by the APF. The Applicant considers this is suitable for describing the onset of annoyance in populations not habituated to aircraft noise.</p>	<p>No further action requested as the requested notes have been produced.</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>different health determinants of noise, including annoyance. The review informed the recommendations set out in WHO's 2018 guidance on noise (Environmental Noise Guidelines for the European Region, WHO 2018). Figure 13 of this guidance presents Exposure response Functions (ERFs) from 12 aircraft noise studies. (It is important to note that the noise metric on the y-axis is Lden not LAEQ,16hr. A common conversion between the two metrics is LAEQ,16hr = Lden - 2dB).</p> <p>There is a large variation in the ERFs between the studies, however, a clear relationship between increasing annoyance with increasing noise level can be seen. WHO undertook a</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>regression analysis of the data in all studies to generate an ERF. This is shown as a black line in the figure.</p> <p><i>[Note: see figure provided beneath this Table 2.1.]</i></p> <p>It is important to note that WHO’s most recent guidance provides guidance on the onset of effects. It does not define limit values, nor does it set “effect levels” (LOAEL, SOAEL UAEL etc). The WHO Environmental Guidelines for the European Region (2018) state that “data and exposure–response curves derived in a local context should be applied whenever possible to assess the specific relationship between noise and annoyance in a given situation”. This is acknowledged by Government in their</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>draft aviation strategy who make the following statement on the WHO 2018 guidance:</p> <p>“3.106 There is also evidence that the public is becoming more sensitive to aircraft noise, to a greater extent than noise from other transport sources, and that there are health costs associated from exposure to this noise. The government is considering the recent new environmental noise guidelines for the European region published by the World Health Organisation (WHO).73 It agrees with the ambition to reduce noise and to minimise adverse health effects, but it wants policy to be underpinned by the most robust evidence on these effects, including the total cost of action and recent UK specific evidence which</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>the WHO report did not assess.”</p> <p>Since the EIA for Manston Airport commenced, government has set LOAEL values for aircraft noise in its Response to consultation on noise policy in 2017:</p> <p>“2.70 The government acknowledges the evidence from recent research which shows that sensitivity to aircraft noise has increased, with the same percentage of people reporting to be highly annoyed at a level of 54 dB LAeq 16hr as occurred at 57 dB LAeq 16 hr in the past. The research also showed that some adverse effects of annoyance can be seen to occur down to 51dB LAeq.</p> <p>2.71 Taking account of this and other evidence on the link between</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>exposure to noise from all sources and chronic health outcomes, we will adopt the risk based approach proposed in our consultation so that airspace decisions are made in line with the latest evidence and consistent with current guidance from the World Health Organisation.</p> <p>2.72 So that the potential adverse effects of an airspace change can be properly assessed, for the purpose of informing decisions on airspace design and use, we will set a LOAEL at 51 dB LAeq 16 hr for daytime, and based on feedback and further discussion with CAA we are making one minor change to the LOAEL night metric to be 45dB LAeq 8hr rather than Lnight to be consistent with the daytime metric. These metrics will</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>ensure that the total adverse effects on people can be assessed and airspace options compared. They will also ensure airspace decisions are consistent with the objectives of the overall policy to avoid significant adverse impacts and minimise adverse impacts.”</p> <p>The “recent research” referenced is the CAA’s 2014 Survey of Noise Attitudes (SoNA 2014). SoNA 2014 sampled populations living near nine airports in England (Birmingham; East Midlands; Gatwick; Heathrow; London City; Luton; Manchester; Newcastle; and Stansted), with 77% of the sample living around Heathrow airport.</p> <p>The ERF derived from the SoNA study is presented below .</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<i>[Note: see the table provided beneath this Table 2.1.]</i>				
8. A breakdown of the components of the overall cost estimate for the Revised Noise Mitigation Plan [REP4-022] including an assessment of the measures needed to be undertaken at the Smugglers Leap residential caravan park	A breakdown of the components of the overall cost estimate for the Revised Noise Mitigation Plan is provided as Appendix C.	<p>The Applicant has provided a cost breakdown of the £5.6 million provision in the Noise Mitigation Plan (NMP). Within this total there is £2,750,000 allocated for noise insulation and ventilation, including for some properties in “Smugglers Leap Caravan Site”. No mention is made if it is feasible to install the noise insulation and ventilation to a park home, or if relocation will be given if the noise installation and ventilation does not give suitable performance to the park homes.</p> <p>It is noted that £5,000 relocation allowance has been made available for 8 properties. This does not consider if the noise insulation and ventilation can be effectively applied to the park homes at Smugglers Leap or if they will need to be relocated.</p>	Request further information from the Applicant on how effective noise insulation and ventilation will be on park homes and if noise mitigation and ventilation cannot be suitably applied consideration for relocation will be made. For clarity further clarification on the 8 properties where a relocation allowance has been made available is sought from the Applicant.	The Applicant states in NS3.6 of Answers to Third Written Questions TR020002/D7a/TWQ that it is not possible to comment on how effective noise insulation and ventilation will be on caravan park homes without undertaking a detailed survey and inspection. The Applicant states the surveys will be undertaken by the Airport Operator’s approved contractor for the noise insulation works.	It is noted that the Applicant has not made allowance for the relocation of the Smugglers Leap Park Homes in the event that noise insulation cannot be suitably applied as it is not considered likely to occur. Although the Applicant says they will consider the requirement for relocation if noise insulation cannot be effectively applied. It is recommended that the consideration that the park homes will be relocated if noise insulation cannot be suitably applied is confirmed as a formal requirement in the DCO or NMP.
9. A note clarifying the	No response given in main document but	The Applicant has not provided a response in the main response	No further action requested.	n/a	n/a


Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
operation in practice of Section 7 of the Revised Noise Mitigation Plan [REP4-022] including the form and frequency of monitoring reports on infringements and on late arrivals	updated section 7 of revised NMP provides the information.	document. Nevertheless, inspection of the NMP shows that the Applicant has committed to producing quarterly reports detailing complaints and any monitored noise level breaches and off-track flights.			
10. An estimate of the possible number of late running passenger and freight flights that could land between 2300-0600 in a year	No response given.	The Applicant has not provided a response in the main response document. Nevertheless, inspection of Appendix 3 shows the Applicant has provided details of Ryanair summer 2019 arrivals after 22:00 but this does not provide the requested information.	A response to the request should be provided that covers all passenger and freight flights. It is of particular concern that no response has been provided on the potential freight flights at night.	In NS 2.7 of the Applicant's Answers to Second Written Questions TR020002/D6/SWQ the Applicant clarifies that only late running flights planned to arrive before 23:00 and humanitarian or emergency flights will be allowed to land after 23:00.	Request that measures are put in place by the Applicant and secured through the DCO or NMP to prevent repeatedly late running flights.
11. A list of the QC2 and QC4 aircraft used in the assessment	The following table lists QC2 and QC4 aircraft from the forecast.	The Applicant has provided a list of the QC2 and QC4 aircraft from the forecast. The QC4 aircraft is a Boeing 747-400. It is understood the Applicant seeks	Request note on why a QC4 limits are required instead of a QC2 limit.	No response appears to be provided.	A response should be requested to be provided by the Applicant.

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
for the quota count	<i>[Note: see table provided beneath this Table 2.1).</i>	to have a QC4 limit at night. The Applicant states there will be no departures at night so it is unclear why QC4 are to be allowed when other airports such as Heathrow have introduced a QC2 limit at night.			
12. A note on Basner, 2006 assessment of additional wakenings being based on observations at an existing operational airport where the surrounding population have to an extent become habituated to night flights	We acknowledge that the Basner 2006 study (Aircraft noise effects on sleep: Application of the results of a large polysomnographic field study. The Journal of the Acoustical Society of America 119, 2772 (2006) was based on residents already exposed to aircraft noise. The study investigated 61 residents in the vicinity of Cologne / Bonn airport over 9 nights. It is the most comprehensive study on aircraft noise awakenings to date. As acknowledged by Public Health England [paragraphs 4.1.15 of the Draft Statement of Common Ground between the Applicant	The Applicant provides a response stating that it is considered unlikely that an equivalent study at a new airport would alter the conclusions of the ES. The Applicant also considers that between the assessment years (Year 2 and Year 20) the population would become habituated to the night flights. The Applicant states that <i>“In Year 20 the number of events was significantly below the threshold for triggering additional awakenings”</i> . The Applicant does not seem to have considered the potential for awakenings across the population overflow and appears to be only considering an awakening in an individual.	Request further information from the Applicant on how many awakenings there would be across the population overflow at night, rather than the potential for awakenings in an individual.	The Applicant has responded in NS2.17. of the Applicant's Answers to Second Written Questions TR020002/D6/SWQ stating that the Basner's findings are suitable for describing the effect of night-time aircraft noise on sleep in the 20 th year of operation, once the population has become habituated to the noise. The Applicant further notes that habituation is not complete as the Basner study shows individuals continue to display physiological reaction to aircraft noise despite being familiarised to aircraft noise. The Applicant notes <i>“that probability of noise causing</i>	The Applicant has provided the requested note and response on awakenings. The further information should be taken into account in the determination of the application as the ES indicates there would not be additional awakenings (in an individual). No further action required.

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>and Public Health England REP4-008] the data still under-pins the most recent WHO guidelines on sleep disturbance (Environmental Noise Guidelines for the European Region: A Systematic Review on Environmental Noise and Effects on Sleep). Similar studies have not been undertaken for new airports.</p> <p>Our study of additional awakenings was undertaken in Year 2 and Year 20. In Year 20, the surrounding population will have become habituated to aircraft noise. In Year 20 the number of events was significantly below the threshold for triggering additional awakenings.</p> <p>In Year 2, the forecast aircraft movements are much lower. In Year 2 paragraph 12.7.56 of the ES [APP-</p>			<p><i>physiological reactions is higher during the first nights of a laboratory experiment compared to the last nights of the experiment, indicating that habituation can happen quickly</i>'.</p> <p>In NS3.5 the Applicant provides a further response on the matter of total predicted awakenings. With a total population of 35,667 exposed to night time noise levels of >40dB L_{Aeq,8hr} there would be an additional 12,734 awakenings with the windows open, 10,917 with the annual average insulation (weighted for time windows closed) and 7,492 with the windows closed. The baseline awakenings for the population is calculated to be 856,008.</p>	

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>033,034,035] stated that “N-above contours demonstrate that residential properties in the vicinity of the Proposed Development will be exposed to up to one aircraft noise event in excess of 80 dB LASmax on an average night “. This is a very low number of noise events. Because of this, and whilst the Basner research is based on people already exposed to aircraft noise, it is considered unlikely that an equivalent study for a new airport would alter the conclusions of the ES for the opening, even if such a study was available.</p> <p>It should also be noted that the ban on scheduled night flights between 23:00 and 06:00 will mean that typically flights will be limited to the hour between 06:00 and</p>				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
13. A list of locally or nationally listed buildings falling within the proposed noise insulation and ventilation scheme	<p>07:00 which is a less sensitive part of the night period.</p> <p>Figure B1 in Appendix B of this document identifies listed buildings in relation to the noise insulation and ventilation scheme contour for Manston Airport.</p> <p>The figure demonstrates that there are no listed buildings within the noise insulation and ventilation scheme eligibility contours.</p> <p>During the noise hearings, the ExA made reference to listed buildings at Nethercourt Estate and Liverpool Lawn. The applicant can confirm that these buildings do not fall inside the noise insulation and ventilation scheme contour.</p> <p>Listed buildings at the Nethercourt Estate comprise two Grade II</p>	<p>The Applicant states that there are no listed buildings within the noise insulation and ventilation scheme eligibility contours. The contours provided are the 63dB $L_{Aeq,16hour}$ and 55 dB $L_{Aeq,8hr}$ night contours and repeated below in Figure 1.2. These contours show the residential eligibility criteria. It is not clear if Listed Buildings with a community purpose such as St Lawrence Church or Ramsgate Library are within the 60 dB $L_{Aeq,16hr}$ contour area as this is not shown. It is also considered the eligibility should be based on the westerly or easterly operations rather than the average across operations. Please see assessment of request point 1.</p> <p>Figure 1.2 Applicants Noise Eligibility Contour and Listed Buildings</p>	<p>The Applicant is to provide details of Listed buildings that considers the updated contour plans referenced under point 1 and / or the 60 dB $L_{Aeq,16hr}$ or $L_{Aeq,30mins}$ (in the case of schools) contour maps referenced in the previous column.</p>	<p>In HE2.2 and HE2.3 in the Applicants second responses the Applicant identifies 7 designated heritage assets within the Ramsgate area that are potentially sensitive to noise. The noise levels at the heritage assets are assessed as being below 54dB $L_{Aeq,16hr}$ and it is considered by the Applicant to not give rise to an adverse perceptual change in setting of the area and was scoped out of the detailed assessment.</p>	<p>The scoping procedure is agreed. No further action requested.</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>listed gate lodges to the former Nethercourt Park (Figure B1 1045840 Upper Lodge and 1336658 Lower Lodge).</p> <p>Liverpool Lawn is within the centre of Ramsgate and comprises Georgian terraced houses focused around a central lawn. There are a number of Grade II listed building entries, many of which comprise multiple properties. These comprise 1054018 (Figure B1), Nos 1-19 inclusive, with railed areas; 1085345 (Figure B1) 20, 21 and 22, Liverpool Lawn; 1085346 (Figure B1) 24-33, Liverpool Lawn; 1367450 (Figure B1) Liverpool House, Liverpool Villa, Nos 34 and 35 and railings; and 1054046 (Figure B1) Grace Cottage.</p> <p>There are further Grade II listed buildings</p>	 <p>Figure B1 - Listed buildings in the vicinity of the airport</p>			

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	immediately to the north-east at Adelaide Terrace and to the south at Prospect Terrace.				
14. A third revision to the Noise Mitigation Plan including inter alia clarification of structures and procedures of the Community Consultative Committee	A revised version of the Noise Mitigation Plan has been submitted.	The review is presented in section 3 of this technical note.	<p>This recommendation referred to section 3 of the May 2019 report. For ease of reference - it is recommended the Noise Mitigation Plan is updated for the following:</p> <ul style="list-style-type: none"> • Noise insulation and rehousing to be based on separate westerly and easterly contours that are likely to represent actual noise exposure on a particular summer day rather than a notional average of the two. • QC2 limit for night time movements. • Demarked engine test area to be set out in a plan attached with the DCO and that this is located away from noise sensitive 	<p>The consultative committee structure and outline of procedures is given in the 3rd and 4th revisions of the NMP. Further clarification is also given in NS3.10</p>	No further action is considered to be required at this stage.

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
			<p>receptors and at a location agreed with the Local Authority.</p> <ul style="list-style-type: none"> • Details on how effective noise insulation and ventilation will be on park homes and if noise mitigation and ventilation cannot be suitably applied that consideration for relocation will be made. • Request single mode $L_{Aeq,30mins}$ and $L_{A01,30mins}$ contours so the effect on schools, in particular the outdoor curriculum, can be considered. 		
15. An expression of the commitment made that there would be no night time construction working	No Response	The Applicant does not appear to have submitted a response.	A response to the request should be provided by the Applicant.	In Ns3.8 the Applicant clarifies there will be no night time construction during Phase 1 but once the airfield becomes operational there will be a need for night time construction.	<p>It is considered that the management of construction noise can be managed through the s.61 processes of the Control of Pollution Act, 1974.</p> <p>Night time construction works will need to be justified and likely to be</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
<p>during the works to bring the airport back into operation, including a definition of 'night time' including a statement as to whether this includes start up and close down times and construction traffic movements and where this commitment may be secured</p>					<p>limited to works near the runway and taxiways. No further action is considered to be required.</p>
<p>16. Consider a tailored mitigation scheme (Note – this Request does not appear on the ExA note</p>	<p>The Aviation Policy Framework States the following regarding tailored noise insulation and compensation: “3.40 Any potential proposals for new nationally significant airport development</p>	<p>The Applicant has provided a response that states that the NMP and the noise insulation and ventilation scheme has been tailored to individual circumstances. It is generally agreed that the NMP provides a tailored mitigation scheme. Part of the response may, however, not be correct. The statement</p>	<p>The NMP is considered as a tailored mitigation scheme.</p>	<p>Please see Section 3 for discussion of the NMP.</p>	<p>Please see Section 3 for discussion of the NMP.</p>

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
of the documentation to be provided at Deadline 5).	<p>projects following any Government decision on future recommendation(s) from the Airports Commission would need to consider tailored compensation schemes where appropriate....”</p> <p>The correct interpretation of the above statement is that there is no single ‘off the shelf’ noise mitigation scheme that could be applied to all UK airports; any noise mitigation scheme needs to be tailored to the circumstances of the individual airport. Therefore, in the case of Manston Airport, the noise insulation and ventilation scheme has been tailored to individual circumstances in the following ways:</p> <ul style="list-style-type: none"> Noise insulation is offered for 	<p>“<i>The provision of noise insulation will avoid the significant adverse effects of those newly exposed to noise inside their homes as a result of the opening of Manston Airport, covering the cost of insulation and ventilation</i>” assumes that the noise insulation and ventilation will be effective enough on all homes, this, however, may not be the case for example the park homes. The statement would also assume that £10,000 compensation will be sufficient for all properties and it is contended that may not be the case and purchase and relocation may be required.</p>			

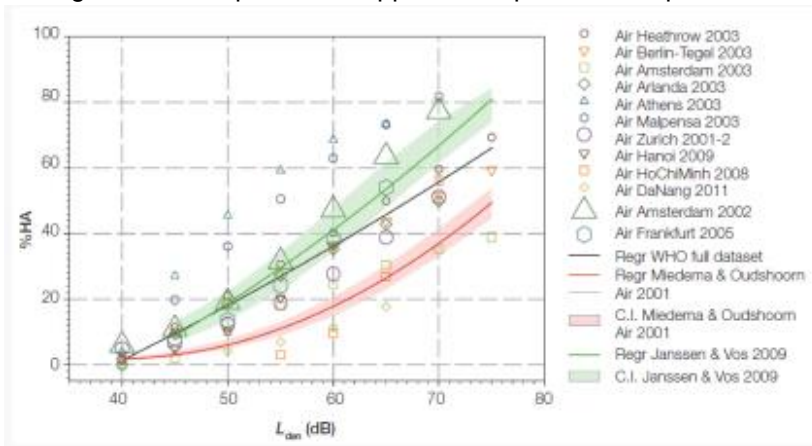
Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>night time noise as well as daytime noise. Night time noise has been a major concern for stakeholders and raised throughout consultation on the scheme;</p> <ul style="list-style-type: none"> The provision of noise insulation will avoid the significant adverse effects of those newly exposed to noise inside their homes as a result of the opening of Manston Airport, covering the cost of insulation and ventilation; 				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<ul style="list-style-type: none"> • The plan seeks to ensure that the scheme is proactive in that preferred contractors will be appointed to manage and carry out the works, rather than leaving this to property owners; • Where impacts that cannot be mitigated directly or do not fall within the noise insulation and ventilation contour, a separate community trust fund has been established to provide compensatory 				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>measures to be determined through consultation and to be administered by a community consultative committee.</p> <ul style="list-style-type: none"> • A community consultative committee with an independent chair will be established to oversee the implementation of the Noise Mitigation Plan. • A school's liaison committee will be established; and • The effectiveness of the scheme will be monitored by 				

Request	Applicant response up to deadline 5	Assessment of applicant response	Recommendation (of 2 nd May 2019)	Assessment of applicant response at deadline 7a	Current recommendation
	<p>the Community Consultative Committee.</p> <p>Further details of the scheme can be found in the Noise Mitigation Plan; however, it is certainly the case that compensation is tailored and that the commitments within the Noise Mitigation Plan go beyond the minimum Aviation Policy recommendation to offer “financial assistance towards insulation” to properties exposed to noise levels above 63dB LAEQ,16hr.</p>				

The figure below is part of the applicant response for request 7.



The table below is part of the applicant response for request 7:

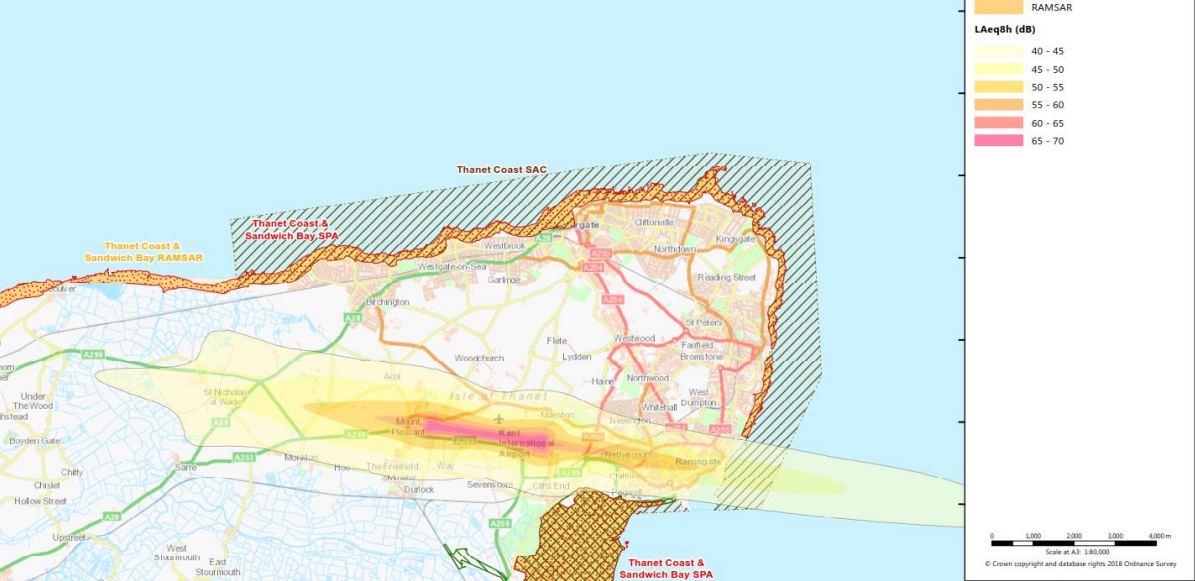
Average summer day noise exposure, $L_{Aeq, 16h}$ (dB)	% highly annoyed
	SoNA 2014
51	7%
54	9%
57	13%
60	17%
63	23%
66	31%
69	39%

The table below is part of the applicant response for request 11:

Approach		Departure	
IATA Code	Aircraft model	IATA Code	Aircraft model
QC 2			
744	Boeing 747-400	76V	Airbus A330-200
		77X	Lockheed L-100 Hercules
		748	Boeing 747-800
		76Y	Boeing 767-400
		332	Boeing 767-300
		LOH	Boeing 777-200
QC 4			
N/A		744	Boeing 747-400

The figure below is figure 2.1 and is part of the assessment of applicant response for request 5:

Figure 2.1 LAeq,8hr Contours From Ecological Chapter



3 Review of Noise Mitigation Plan

3.1 Noise Mitigation Plan Changes

The NMP was updated following the noise Issue specific hearing, on the 29th of March. The changes include:

- Emphasis on the ventilation as part of the noise insulation scheme;
- Confirmation that aircraft with a quota count of 8 and 16 cannot take off or land between 2300 and 0700;
- Confirmation that the annual quota applies during the hours of 2300 and 0700;
- Confirmation that an aircraft is deemed to have taken off or landed during the night time period by the appropriate air traffic controller unit as airborne or landed;
- Confirmation that for the relocation settlement all potentially affected dwellings will be valued within twelve months of the making of the Manston Airport DCO;
- Notification of occupiers of properties potentially eligible for the noise insulation and ventilation scheme and for the purchase and relocation assistance scheme;
- Reports on complaints received and the response to the complaints;
- Reports on breaches of mandated noise levels and off-track flights, including fines and levies paid into the Community Trust Fund;
- Confirmation there will be no open field testing of jet engines between 2300 and 0700;
- Daytime open field testing will take place in the airfield itself and in areas used by aircraft in normal operations.

The Noise Mitigation Plan was revised again on 3rd of May and the 24th of May.

The changes made to the revision issued on the 3rd of May include:

- A contour based noise limit to cap the annual average noise level (LAeq) produced by ATM's and General Aviation movements. The area enclosed by the 50dB(A) Leq16hr (0700-2300) , contour shall not exceed 35.8 sq km, and the area enclosed by the 40dB(A) Leq8hr (23.00-07.00) contour shall not exceed 47.4 sq km. Compliance with this requirement is;
- Inclusion of training flights in the General Aviation movement cap of 38,000 movements per annum;

The changes made to the revision issued on the 24th of May include:

- Inclusion of users of the airport (representatives and election procedure to be defined by the independent chair) on the Community Consultative Committee;
- The Community Consultative Committee will publish annual reports and hold at least one open public meeting per year;
- The level of fines for exceeding the 82 dB L_{ASMax} limit will increase on annual basis in line with CPI inflation.

3.2 Noise Mitigation Plan Assessment of Changes

The NMP was updated to take into account some of the questions asked and requests made at the noise issue specific hearing and follow on requests. The emphasis of the inclusion of ventilation within the noise insulation scheme is welcomed. It is also welcomed that the notification of potential eligibility

will be made to the property occupier and that the Applicant will manage the installation of noise insulation and ventilation.

A contour cap has been included to ensure the aircraft noise effects are not worse than predicted in the ES. The contour cap is welcomed to ensure that the effects are not worse than predicted in the ES. In order to show compliance with noise policy of reducing effects over time it is recommended that a target is considered to reduce the contour cap footprint on an annual basis.

The Applicant has stated that the LAeq,16hr will be the same as the LAeq,30mins and that therefore the LAeq,30mins contours are not required. Nevertheless, the Applicant considers that there will be 72 ATMs over a typical 16-hr busy day. With 72 flights in 960 minutes that is an average of an ATM every 13 minutes 20 seconds. Within a half hour period it would therefore be assumed that there will be 2.25 flights if the LAeq,16hour values are used. The Applicant has responded by modelling the distribution based on there being greater demand in the hours immediately after opening and before closure. This indicates the LAeq,30mins would not be more than for the LAeq,16hr.

3.3 Noise Mitigation Plan Recommendations

It is recommended the NMP is updated for the following:

- It is acknowledged that noise eligibility contours for easterly and westerly operations have been produced, however, it is requested that the full set of contours for easterly and westerly operations are issued;
- A QC2 limit for night time movements is requested, in line with other airports operations at night, rather than a QC4 limit as currently proposed in the NMP;
- A demarcated engine test area should be set out in a plan attached with the DCO and that this is located away from noise sensitive receptors and at a location agreed with TDC;
- A half hourly limit for ATMs during school hours should be considered, based on the analysis in NS2.16 and included in the NMP.



Ricardo
Energy & Environment

The Gemini Building
Fermi Avenue
Harwell
Didcot
Oxfordshire
OX11 0QR
United Kingdom
t: +44 (0)1235 753000
e: enquiry@ricardo.com

ee.ricardo.com