

Reference: Manston Green

Project No: 1918735

Technical note

Re: Manston DCO Application – Noise Comments

The purpose of this note is to consider the impact of the Manston Airport DCO on Manston Green outline consent to ensure that the reserved matters stage of the Manston Green development is not unduly restricted. The note considers two matters:

1. Noise conditions pursuant to the outline planning permission; and
2. The DCO Noise assessment.

1.0 Introduction and Background Information

- 1.1 Sharps Redmore (SR) was previously instructed to carry out a noise assessment for the development of land to the east and west of Haine Road, Ramsgate, known as Manston Green. Outline planning consent¹ was granted by Thanet District Council for 785 dwellings, highways infrastructure, primary school, small scale retail unit, community hall, and public open space was granted subject to conditions.
- 1.2 Noise from Manston Airport was considered in Chapter 9 of the Environmental Statement (ES), which accompanied the application for outline consent. The assessment was based on information contained within the 2009 Kent International Airport Masterplan (KIAM), considered the future worst-case (2018) noise levels.
- 1.3 This assessment was updated to take into account the future aspiration beyond 2018, as set out in KIAM, which was to increase Air Traffic Movements (ATMs) from the projected 46,000 in 2018 to 74,000 in 2033. The updated assessment was submitted to the Council on the 2nd July 2015, as referred to in Condition 35 above, and resulted in no changes to the conclusions of the noise assessment for Manston Green. Therefore, it was considered that Manston Green would not be significantly affected by the operations at the airport (as set out in the KIAM).
- 1.4 Planning permission for Manston Green was granted by Thanet District Council for the outline scheme in July 2015, subject to conditions. Conditions 35 and 36 related to the impact of noise from Manston Airport and required the following:

Condition 35: The construction phases 1a, 1b, 2a, 3a and 3b as detailed on the approved phasing plan shall not commence until a scheme for protecting the development which falls

¹ Planning Application OL/TH/14/0050 – Application outline planning permission including access for the erection of 785 dwellings, highways infrastructure works (including single carriageway link road), primary school, small scale retail unit, community hall, public open space.

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within these phases from aircraft noise has been submitted to, and approved in writing by, the Local Planning Authority.

The scheme shall cover all the development which has been identified to be impacted based upon the submitted aircraft noise contours 2033 – 92 summer $L_{Aeq16hr}$ submitted by the applicant on 2nd July 2015. Unless otherwise agreed in writing by the Local Planning Authority such a scheme must demonstrate that the guideline noise levels from Tables 5 and 6 of BS 8233:1999 can be achieved. Any dwelling requiring noise protection shall not be occupied until all works which form part of the approved scheme have been completed in respect of that dwelling. The approved works shall thereafter be retained.

REASON: In the interests of the amenities of residential dwellings in close proximity to Manston Airport and the A256 Haine Road, in accordance with National Planning Policy Framework paragraph 17.

Condition 36: No dwellings shall be constructed within part of the site that falls within Noise Category C as set out within the Thanet Local Plan 2006.

REASON: To ensure that the development result in sufficient quality of residential development without resulting in harm of living conditions which future occupiers would expect to enjoy, in accordance with Thanet Local Plan Policies and paragraph 17 of the National Planning Policy Framework.

- 1.5 The airport development as outlined in the KIAM has not come forward and permission is being sought through a DCO (Development Consent Order) to reopen and develop Manston Airport into a dedicated air freight facility, which also offers passenger, executive travel and aircraft engineering services.
- 1.6 The purpose of this note is to consider the impact of the Manston Airport DCO on Manston Green outline consent to ensure that the reserved matters stage of the Manston Green development is not unduly restricted. This note is based on the information provided in the Chapter 12 of the Environmental Statement submitted in July 2018.

2.0 Existing Noise Criteria

- 2.1 The masterplan for the Manston Green development was developed based on the guidance within the KIAM which set out the following assessment levels.
 - 57 dB community becomes aware of airport noise;
 - 63 dB noise mitigation of some form recommended for residential dwellings;
 - 63 dB the area closest to the airport within which residential land use is discouraged.

2.2 Based on the above assessment levels and the guidance in PPG 24 the indicative layout for the Manston Green development was designed with the following constraints:

- No development within the $L_{Aeq16hr}$ 63 dB contour;
- No development within the L_{Aeq8hr} 57 dB contour;
- Properties between the 57 dB $L_{Aeq16hr}$ and 63 dB $L_{Aeq16hr}$ would require mitigation measures to achieve internal noise guidelines in BS 8233:1999.

2.3 The constraints of aircraft noise based on the above criteria are shown in Figures 1 and 2. These were submitted as part of the outline planning application for the Manston Green Development.

FIGURE 1: Aircraft Noise Contours 2018 – 92 day Summer $L_{Aeq}(16hour)$



FIGURE 2: Aircraft Noise Contours 2018 – 92 day Summer $L_{Aeq}(16\text{hour})$



2.4 The above principles were enforced through planning conditions which relate to the reserved matters including Condition 35 and 26 of the outline consent for Manston Green. These conditions sets out the noise criteria against submission of the reserved matters will be determined. Condition 35 is a pre-commencement condition which requires submission of details to show that noise levels will meet the guideline values contained within BS 8233:1999. Condition 36 prohibits the construction of dwellings within the Noise Category C as set within the Thanet Local Plan 2006.

2.5 A summary of the criteria is shown in the tables below:

Table 1: BS 8233:1999

Limit	Guidance	Location
$L_{AeqT} = 55$ dB	Upper Limit for external steady noise	Gardens and Balconies
$L_{AeqT} = 30$ dB	Good resting/sleeping conditions for living rooms during the day	Internal – steady noise
$L_{AeqT} = 40$ dB	Reasonable resting/sleeping conditions for living rooms during the day	Internal – steady noise

$L_{AeqT} = 30$ dB	Good resting/sleeping conditions for bedrooms during the night	Internal steady noise
$L_{AeqT} = 35$ dB	Reasonable resting/sleeping conditions for bedrooms during the night	Internal steady noise
$L_{Amax} = 45$ dB	Limit for individual noise events for a reasonable standard in bedrooms at night	Internal

2.6 Condition 36 prohibits the construction of dwellings within the Noise Category C as set within the Thanet Local Plan 2006. Planning Policy Guidance Note (PPG24)(now revoked) set ranges for each Noise Exposure Category however in line with the guidance Thanet District Council adopted a precautionary approach and reduced the upper limit of category B to 63 dB(A). Policy EP 7- Aircraft Noise therefore recommends the following Noise Exposure Categories:

Table 2: Noise Exposure Categories

NEC	Predicted Aircraft Noise Levels (0700 – 2300) $L_{Aeq16hr}$	Advice
A	<57	Noise will not be determining factor
B	57 - 63	Noise will be taken into account in determining applications, and where appropriate, conditions will be imposed to ensure an adequate level of protection against noise.
C	63 - 72	Planning permission will not be granted except where the site lies within the confines of existing substantially built-up area. Where residential development is exceptionally granted conditions will be imposed to ensure an adequate level of protection against noise.
D	>72	Residential development will not be permitted

2.7 The noise assessment within the DCO ES (Chapter 12) provides further advice on noise criteria. It is not necessary to reproduce all the advice here, however in line with current planning policy within the National Planning Policy Framework (NPPF) and Noise Policy Statement for England it sets criteria based on the significance of impact. The suggested criteria are shown below:

Table 3: Summary of Operational Aircraft Noise Thresholds

Receptor	Period	LOAEL	SOAEL
Residential	Daytime (0700 – 2300hrs)	50 dB LAeq16hr	63 dB LAeq16hr
	Night Time (2300 – 0700 hrs)	40 dB LAeq8hr	55 dB LAeq8hr
	Night Time (2300 – 0700 hrs)	60 dB LASmax	One additional awakening

2.8 The primary aims of the NPPF (Feb 2019) is to avoid noise giving rise to significant adverse impacts from new development and reduce to a minimum potential adverse impacts resulting from noise from new development. Based on the criteria in table 3 this would restrict any noise sensitive development where day time noise levels would exceed 63 dB LAeq16hr and night noise levels exceed 55 dB LAeq8hr. The daytime SOAEL criterion recommended in the DCO Applications is the same as that required by planning condition 36 of the outline consent. The night time SOAEL criterion is slightly more stringent.

3.0 DCO Application – Noise Assessment

3.1 The noise assessment for the DCO Application is contained within Chapter 12 of the Environmental Statement. The chapter provides an assessment of the potential noise and vibration effects that could arise as a result of the re-opening of Manston Airport as a dedicated air freight facility capable of handling over 10,000 air cargo movements/year. The following key aspects have been identified:

- Noise and vibration from construction of development;
- Renewed exposure to noise from aircraft from re-opening and mature operation of proposed development
- Renewed exposure to noise from aircraft on the ground and associated Ground Support Equipment (GSE) from re-opening and mature operation of proposed development; and
- Changes in and exposure to surface access noise, namely road traffic noise from vehicle movements associated with the operation of the Proposed Development.

3.2 The noise sensitive receptors closest to the airport are identified in Chapter 12, however, **no reference is made to the Manston Green Development. The only reference to Manston Green is within Chapter 18 which refers to cumulative effects which concludes that Manston Green (Site ID143) would be subject to a significant adverse effect from the proposed commercial airport in Year 20. No detail as to the number of properties potentially effect has been provided.** It is specified in para. 18.5.114 that the consent for Manston Green was consented under the provisions of Local Plan 2006 and therefore assumed existence and operation of the Airport. Neither Chapter 12 nor the noise section in Chapter 18 refers to the site constraints and whether the proposed commercial airport

would affect the future development of Manston Green. **This is a significant omission within the Environmental Statement and prevents a detailed analysis of the impact of the DCO on the reserved matters stage of Manston Green.**

Renewed Exposure from aircraft

- 3.3 The DCO Noise assessment of air craft noise including airside ground noise is presented from para. 12.7.38. The assessment considers the impact of air craft noise for both Year 2 and Year 20 using the forecast aircraft movements in Appendix 3.3 of the ES. Year 2 is considered the 'opening year' and year 20 is considered the 'worst-case' year in terms of noise.
- 3.4 It is understood that there will be a restriction on night-time flights, however, the current DCO has no limit on daytime flights and therefore the applied-for capability is the physical capacity of the Proposed Development to handle flights. Paragraph 12.7.39 and 12.7.40 of the DCO ES includes details on the number of aircraft movements on which the noise assessment is based. The forecast assumes that total aircraft traffic will grow from approx. 33 Air Transport Movements (ATMs) for a typical busy day in Year 2 to 79 ATM's per typical busy 24 hour day in Year 20. There will also be average of 16 non-ATM's per 24 hour day in all years, including general aviation and training flights. For year 20 the number of ATM's has been separated in day (0700 – 2300) and night (2300 – 0700 hrs) periods. During the daytime period, Year 20, the proposed development is forecast to handle approx. 72 aircraft movements (between 2300 and 0700 hrs) and 7 air craft movements on a typical night.
- 3.5 Based on the above the forecast Air Transport Movements (ATM's) referred to in the noise assessment for Year 20 is 26,280 (72 x 365) ATM's during daytime hours, 2,555 (7 x 365) ATM's at night and 5,840 (16 x365) non-ATM's. Based on these figures air craft air noise has been calculated using Federal Aviation Administration (FAA) Integrated Noise Model (INM) v.7.0d. The noise contours are shown in Figures 12.4 to 12.13 and include contours when significant adverse effects may occur and the lowest observed adverse effect level (LOAEL). Contours are provided for both day time and night time periods.
- 3.6 There is no reference to the approved Manston Green masterplan layout in the noise models. Without this level of detail it is not possible to carry out a detailed assessment of the impact on the Manston Green Development. In addition as different criteria have been used it is not possible to carry out a direct comparison to assessment levels against those upon which the Manston Green development was designed.
- 3.7 Notwithstanding the above, to estimate the impact of the DCO application, the proposed noise contours for night and day and been overlaid onto the Manston Green masterplan. The results are shown in Figure 3 and 4 below. These are illustrative, as the DCO noise assessment had not prepared such an assessment .

FIGURE 3: DCO application noise contours – daytime

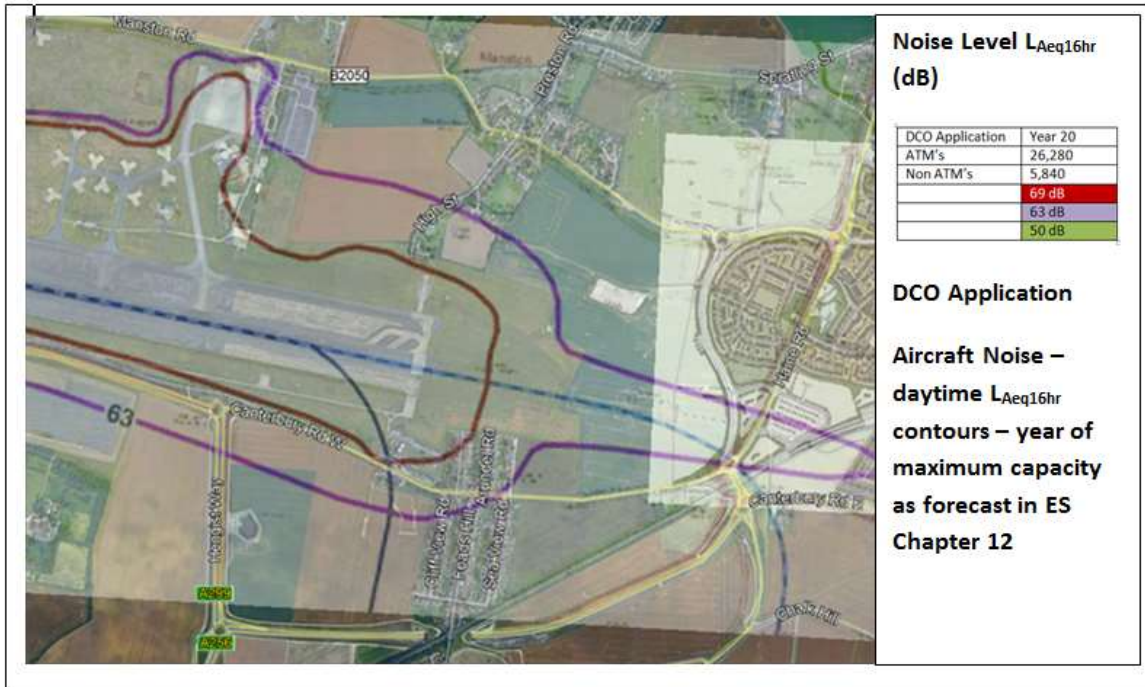


FIGURE 4: DCO application noise contours – night time



- 3.8 As discussed in section 1.0 of primary concern is whether the DCO application will result in restrictions on the reserved matters stage of the Manston Green Development. This will be determined by both requirement in the NPPF to avoid significant adverse impacts and also by Condition 36 of the Manston Green outline consent, restricts any residential development within Noise Exposure Category C.
- 3.9 As shown in Figures 3 and 4 above, based on the illustrative Manston Green masterplan, no noise sensitive development would be within 63 dB $L_{Aeq16hr}$ or night time 57 dB L_{Aeq8hr} contours, as required by Condition 36. The proposed DCO application would therefore, not unduly restrict the area of Manston Green which is available for development, based on the assessment of the forecasted number of ATM's within Chapter 12 of the DCO ES as described in paragraph 3.5 above.
- 3.10 With regard to maximum noise levels at night, as shown in Figure 12.11 of the DCO application, the southern part of the site will be subject to events exceeding 80 dB L_{ASmax} , however due to the proposed night time restrictions the number of events is low between 1 – 4. This impact is similar to position assessed when outline consent was granted for the Manston Green site. In terms of maximum night time noise levels the DCO application does not result in any further restrictions on the site.
- 3.11 The second restriction on the site, Condition 35, requires that guidelines levels in BS 8233: 1999 are met. As there is no model showing the 57 dB daytime contour it is not possible to determine whether the DCO application would result in more properties requiring specific noise insulation work to achieve internal noise levels within the requirements of BS 8233: 1999. This information is required to determine whether the DCO application may cause restrictions on the development of Manston Green.
- 3.12 The above comments are based on the ATM's forecast in para.12.7.39 and 12.7.40 of the DCO ES. However the DCO only restricts the movements on the daytime flights through the physical capacity of the Proposed Development. The Nationally Significant Infrastructure Project (NSIP) justification document (para. 22 and 23) suggests that maximum capacity of the proposed commercial airport could be 83,220. This is based on 19 cargo stands each handling 6 aircraft (12 movements) each day. This is significantly higher than the number of ATM's used in the noise assessment.
- 3.13 It not possible to accurately predict the impact of more than double the increase in ATM's using the information within the DCO application as this would depend on the type of aircraft and flight path. However, if we were to assume a similar mix as used in the noise models, a simple threefold increase in aircraft, could result in overall noise levels increasing by 5 dB. This would have an effect of adding 5 dB to the noise contours (i.e. the 63 dB contour would become 68 dB; the 50 dB contour would become 55 dB and so on.
- 3.14 The result of the above is that the 63 dB (lower limit of NEC C) contour could cross the area identified for residential development at Manston Green site resulting in a reduction in the area able to be developed for residential use and hinder the reserve matters application.

Renewed exposure from associated Ground Support Equipment (GSE)

- 3.15 Due to the lack of information available no quantitative assessment of noise from GSE, such as engine testing, the aircraft fuel farm, which it understood will be at the south eastern air boundary and vehicle movements on site has been carried out. Noise from GSE will potentially cause significant disturbance to future residents of Manstons Green.
- 3.16 Without any assessment is not possible to determine whether the noise from the GSE will have any impact on the proposed Manston Green development possible hinder the reserve matter application. It is considered even if detailed information was not available an indicative assessment of noise from GSE should have been carried out.

4.0 Summary and Conclusion

- 4.1 A review of Chapter 12 (noise and vibration) of the Environmental Statement which forms part of the DCO application for Manston Airport has been carried out. The purpose of the review is to determine whether the DCO application for a commercial airport will hinder the reserve matters application for the Manston Green development which was granted outline planning permission in July 2015.
- 4.2 The masterplan for Manston Green was developed having regard to the 2009 Kent International Airport Masterplan (KIAM). This considered the impact of aircraft noise on the proposed residential development, based on 2018 daytime noise contours and also have regard to aspirational growth to 2033. The masterplan was designed to ensure that no noise sensitive development would take place within Noise Exposure Category C. Planning conditions has been imposed on the outline consent to ensure the above.
- 4.3 SR has considered the impact of noise from the proposed DCO application for a commercial airport. The following matters have been identified:
- **The forecasted ATM's used in the noise model does not take into account the maximum capacity of the proposed airport as specified in para. 22 and 23 of the NSIP justification. The acoustic models therefore do not represent the maximum capacity of the airport**
 - No reference is made to Manston Green development in Chapter 12 'Noise and Vibration' of the DCO application.
 - The cumulative assessment (Chapter 18) has identified Manston Green, however, **no detailed** assessment of the potential impact to Manston Green has been carried out.
 - Based on forecast ATM's within Chapter 12 of the ES noise levels no residential part of the Manston Green development would be above either the 63 dB day time contour or 57 dB night time contours. It should be noted that the contours are based on c.33k ATM's not the full capacity applied for.
 - Due to the differences in noise criteria used, it is not possible to determine whether the DCO application would result in more properties requiring noise

mitigation works to achieve suitable internal noise levels, compared to the position agreed by Thanet Council when outline planning permission for Manston Green was granted. This information is required to determine whether the DCO application may cause restrictions on the development of Manston Green.

- Based on the maximum daytime capacity of airport noise levels would increase by approx. 5dB which is likely to result in restrictions on the area of Manston Green that could be developed for residential or other noise sensitive use. This could possible hinder the reserve matters application.
- No quantitative assessment of ground support equipment has been carried out. Without an assessment it is not possible to determine whether this would cause impact to the proposed residential properties at Manston Green.

4.4 It is recommended therefore that further assessment if the impact of the DCO application on Manston Green is carried out. This should include the production of new acoustic models showing the daytime 57 dB contour for both the forecast years (Year 2 and Year 20) as identified in Chapter 12 of the ES and the production of a new model showing the predicted noise levels based on the maximum capacity as identified in NSIP justification.