



Gatwick Airport Northern Runway Project

Environmental Statement

Appendix 14.9.10: Noise Insulation Scheme – Clean Version

Book 5

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1 Introduction

- 1.1.1 This is revision 1 to the Northern Runway Project Noise Insulation Scheme, submitted during the DCO Examination at Deadline 4 on 15 May 2024.
- 1.1.2 At present, the Northern Runway at Gatwick cannot be used when the main runway is in use, and vice versa. The Northern Runway Project would allow the coordinated use of both the main and northern runways at Gatwick. Aircraft would be able to depart from the northern runway in between movements (arrivals and departures) on the main runway.
- 1.1.3 The required changes to the airfield, to enable this dual runway operation could be complete by around 2029, and from this point, both runways would be available for coordinated use throughout the day.
- 1.1.4 Our air noise forecasts show that the combined noise from the two runways would show small increases in some areas and small decreases in others. Overall noise levels in the day would increase compared to 2019. To help mitigate the noise impacts associated with the airport's growth under the Northern Runway Project we have undertaken a review to assess how our existing Noise Insulation Scheme (NIS) should be improved. In order to provide fair noise mitigation to those already affected, the new scheme offers noise insulation to properties within given air noise levels predicted with the operation of the Northern Runway regardless of whether noise levels go up or down as a result of the Northern Runway. Our ground noise forecasts show some areas near the airport's perimeter where ground noise would increase during co-ordinated dual runway operations. The new noise insulation scheme would also be available in these areas to help mitigate impacts on receptors in these areas. The details are set out in this document.
- 1.1.5 We also include new measures to assist the small number of residential properties within the highest noise areas to move home if they choose to do so, and proposals for sound management interventions in the most noise affected schools. We have sought views on these proposals as part of the PEIR

consultation and considered those when developing this scheme that is submitted as part of the DCO application.

- 1.1.6 This revision 1 to the Noise Insulation Scheme is submitted at the DCO Examination Deadline 4 on 15 May 2024, addressing comments and questions from the Examination Authority, and stakeholder representations made, including the response provided by GAL on 26th March at Deadline 2 in **ES Appendix 14.9.10 Noise Insulation Scheme Update Note [REP2-032]**. The main changes include:

- Details on administering the scheme
- Increases in the funding amounts
- Further details of the acoustic package offered including acoustic ventilator air flow details to address overheating
- Clarification on eligibility for the Home Relocation Assistance Scheme
- Additional detail to the Schools Insulation Scheme to include Nurseries and to give details of survey processes.

2 Current Gatwick Noise Insulation Scheme

- 2.1.1 The current Gatwick NIS was based on a $L_{eq, 16hr}$ 60dB contour forecast in 2014 for growth to 46 million passengers per year, with 15km extensions to cover areas under the extended runway centreline and adjusted to accommodate various residential areas. At the time of its introduction in 2014, this was seen as one of the most innovative schemes in the UK and exceeded Government policy that noise insulation should be provided at levels of $L_{eq, 16hr}$ 63dB. Approximately 2,000 homes are covered by this scheme.
- 2.1.2 The Gatwick NIS has recently been reviewed, and currently (June 2023) offers replacement acoustic glazing and doors up to a cost of £4,300 plus VAT. Recipients can top up to increase the package provided at the same rates. There is currently no scheme for noise insulation for schools or for home relocation assistance.

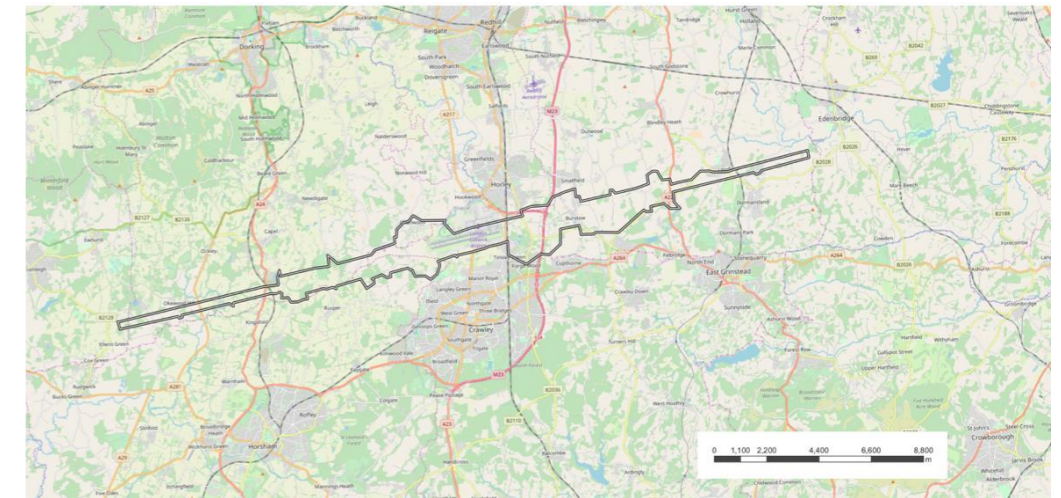


Diagram 2.1 Current Gatwick Noise Insulation Scheme

- 2.1.3 An interactive map of the current scheme is available here: [LGW NIS¹](#)

3 Considering a Future Noise Insulation Scheme for Gatwick with the Northern Runway Project

- 3.1.1 It is Government policy that the L_{eq} "metric" should be used as the primary metric for assessing the effects to health and quality of life from exposure to aviation noise.
- 3.1.2 We also note that the Government has been consulting on noise insulation schemes as part of its future aviation policy. In its consultation *Aviation 2050 — the future of UK aviation* (December 2018) it proposed a number of measures including: a) extending the noise insulation policy threshold beyond the current 63dB $L_{Aeq, 16hr}$ contour to 60dB $L_{Aeq, 16hr}$ and b) to require airports to consider how effective their existing noise insulation measures are, the effectiveness of noise insulation, and whether other factors (such as ventilation) need to be considered.
- 3.1.3 We have also looked at other major airports' proposed NIS schemes and how our proposed scheme would benchmark with those offered elsewhere. We have noted particularly that several other airports provide for logical tiers of NIS grants, with a more generous NIS scheme for people living in areas of higher noise.

¹ <https://aircraftnoise.gatwickairport.com/2021/03/29/noise-insulation-scheme/>

We have also added a night noise qualifying noise level in recognition of the importance of mitigating noise impacts at night.

4 The Proposed DCO Noise Insulation and Compensation Scheme

4.1 Geographical Extent

- 4.1.1 We intend to continue to use the L_{eq} noise metric to set a new boundary for our Noise Insulation Scheme.
- 4.1.2 However, to enhance the existing NIS we will introduce new outer and inner NIS zones which will offer a tiered noise insulation package depending on the noise experienced at the location. Those living closer to the airport and experiencing higher levels of noise will benefit from a more extensive insulation package than those living further away and experiencing lower levels of noise.
- 4.1.3 We expect the largest L_{eq} contour area to occur about 3 years after the commencement of dual runway operations, i.e., in about 2032 based on the assumed construction programme. The Environmental Statement assesses the noise impacts of the Project on the basis of a range in the rate of fleet transition from older to newer quieter aircraft, referred to as the Central Case and the Slower Transition Case. This is to address uncertainty in the rate at which airlines will transition to quieter aircraft in the future. The Slower Transition Case results in older noisier aircraft flying for longer giving higher noise levels than the Central Case. We propose to base the new NIS on the worst-case end of this range as used to set the Noise Envelope Limits, i.e. those associated with the Slow Transition Fleet. As such, we propose to use the forecast 2032 L_{eq} contour area to set the geographical boundary for our enhanced NIS. By taking the 'worst-case' assessment year, and fleet, consistent with the noise limits set in the Noise Envelope it ensures a conservative approach is taken to the revised NIS footprint and so provides robust noise impact mitigation.
- 4.1.4 The **Inner Zone** will be based on the predicted $L_{eq 16 hr}$ 63dB daytime and $L_{eq 8 hr}$ night 55dB summer air noise contours for 2032. The inner zone would be formed on the larger of these, the $L_{eq 8 hr}$ night 55dB, which fully encloses the $L_{eq 16 hr}$ 63dB daytime contour. These noise levels have been assessed as the levels where noise effects to health and quality of life to residents would become significant if noise insulation was not provided. We propose that people living in these areas should be able to apply

for a full package of noise insulation (see the table below for details).

- 4.1.5 For ground noise, the same qualifying noise levels would apply and the majority of properties qualifying would qualify due to air noise. There are 16 additional properties that qualify due to predicted levels of ground noise only, 7 at Rowley Farm, 8 on Charlwood Road and one in the Outer Charlwood assessment area as described in **Supporting Noise and Vibration Technical Notes to Statements of Common Ground, Appendix B - Ground Noise Fleet Assessment (Doc Ref 10.13.2)**.
- 4.1.6 For the new **Outer Zone**, we intend that the daytime $L_{eq 16 hour}$ 54 dB contour be used as the outer boundary. This goes significantly further than what emerging Government policy proposes should be required for a standard airport NIS.
- 4.1.7 The proposed outer zone covers a significantly larger area than the existing single-tier scheme, however, in a few areas the existing scheme extends a little further from the airport than the proposed outer zone where its boundary was drawn to match the patterns of settlement on the ground. We have taken the view that we should nevertheless include these areas within our scheme, despite the forecasts indicating they would not experience noise levels of greater than the $L_{eq 16 hour}$ 54dB limit. Our outer zone will provide for noise insulation and ventilation to noise sensitive rooms (see the table below) and is also open to people who have accessed the previous scheme, where additional insulation or ventilation would provide benefit.
- 4.1.8 Figure 1 shows the proposed Inner and Outer Zones. An interactive map of the proposed scheme is available here: <https://www.gatwickairport.com/business-community/future-plans/northern-runway/>
- 4.2 **The Acoustic Packages Offered**
- 4.2.1 The table below provides a description of the package of measures that would be offered to properties in the Inner and Outer Zones. The specific measures are based on an assessment by GAL of what insulation and ventilation is necessary for the individual property concerned.

Noise Insulation Scheme (NIS)	Zone definition	Summary of Proposed Insulation Package
New Inner Zone	$L_{eq 8 hr}$ night 55dB contour (incorporating $L_{eq 16hr}$ daytime 63dB contour)	Residential properties within this zone would be offered noise insulation in the form of replacement acoustic glazing or internal secondary glazing to all windows, acoustic ventilators and blinds to noise sensitive rooms (bedrooms, sitting rooms, dining rooms and studies). Replacement doors to noise sensitive rooms will also be offered if necessary. Additionally, the offer would include acoustic upgrading of bedroom ceilings where practicable and where the existing ceiling is found to allow more noise intrusion than the closed acoustic glazing provides.
New Outer Zone	$L_{eq 16 hr}$ 54dB contour	The New Outer Zone boundary covers a larger area and encompasses the existing NIS scheme. Residential properties within this zone would be offered acoustic ventilators to noise sensitive rooms. This would allow windows to remain closed more easily in summer, which, with modern double-glazed windows, would increase the sound attenuation of the window by approximately 15 to 20dB. For properties with older single glazed windows, double glazed windows would be offered to noise sensitive rooms in addition to ventilators to ensure equivalent levels of protection.

Inner Zone

- 4.2.2 Acoustic double glazing to noise sensitive rooms, with acoustic performance of at least $R_w+C_{tr} \geq 35$ dB tested to *BS EN ISO 10140-2:2021 – TC Acoustics. Laboratory measurement of sound insulation of building elements - Measurement of airborne sound insulation*. For properties where replacement acoustic double glazing is not suitable, such as some listed buildings, acoustic secondary glazing will be available. In such cases the secondary glazing will be subject to the design of the particular property but will generally be in the form of a separate frame at least 100mm from the external glazing.
- 4.2.3 Acoustic ventilators will be available for noise-sensitive rooms with an acoustic performance to reduce aircraft noise from outside to inside by at least 40dB(A) and to provide both passive and active fresh air supply, controllable from zero to at least 170 m³/h. This would allow for at least two air changes per hour to be provided for the vast majority of rooms treated. The acoustic ventilators are provided to allow windows to remain closed more often in warmer weather, but not to completely negate the need to open windows in certain circumstances.
- 4.2.4 Blinds will be available to acoustically upgraded windows exposed to direct sunlight.
- 4.2.5 Where external doors to noise sensitive rooms are judged to provide at least 5dB(A) less sound attenuation than the acoustic

<p>windows provided, an acoustically superior door or where appropriate and practicable a secondary door will be available.</p>	<p>4.3.3 GAL will launch the Inner Zone scheme within 6 months following the commencement of Work Nos. 1 – 7 comprised in the Project (as defined in the DCO). All properties within the geographic area that qualify will be contacted with details of the scheme and invited to apply. Where any household requires assistance in understanding what is on offer, GAL will make further contact with the householder to explain the offer by telephone or in person, making use of translators if necessary.</p>	<p>funding up to £26,000 to be paid to the contractor. This limit may be reviewed in individual cases at GAL's absolute discretion if the appropriate standard of works set out above exceed this amount</p>						
<p>4.2.6 Where ceilings to bedrooms are judged to provide at least 5dB(A) less sound attenuation than the building fabric with acoustic windows provided, the property owner can request an acoustic survey by Gatwick Airport's contractor to determine if there is a practicable design to upgrade the ceiling or roof space insulation to reduce noise ingress from above.</p>	<p>4.3.4 Within not more than three years following the commencement of any of Work Nos. 1 – 7 comprised in the Project (as defined in the Draft DCO) GAL will contact all properties within the geographic area that qualify for the Outer Zone scheme and invite them to apply. Again, where any household requires assistance in understanding what is on offer, GAL will make further contact with the householder to explain the offer by telephone or in person, making use of translators if necessary.</p>	<p>4.3.9 Eligibility for the Inner Zone scheme noise insulation package due to ground noise based on predicted levels is given in Section 4.1 above. In addition, eligibility due to ground noise will be established on the basis of measurements of levels of ground noise carried out after the Project is operating. The areas where this is possible are mainly to the north (Oakfield Cottages) and to the south of the airport (Lowfield Heath) where the Inner Zone runs close to or inside the airfield. Where ground noise is assessed through measurement after opening, the cumulative noise levels from ground noise and air noise will be considered in assessing eligibility for the Inner Zone NIS.</p>						
<p>4.2.7 In all cases, the property owner would be consulted, with a suitable contractor and surveyor developing a practical design to reduce noise ingress as far as reasonably practicable. There may be a number of reasons why particular forms of insulation would not be practicable or desirable including, but not limited to; interference with use of the loft space for storage, the presence of plumbing or other equipment, or risk to the building structure or design.</p>	<p>4.3.5 GAL will also advertise the opening of the Inner Zone and Outer Zone schemes on their website and through the local press.</p>	<p>4.3.10 The priority will be to insulate properties within the Inner Zone. Residents wishing to take advantage of the scheme are anticipated to respond to the Airport on receipt of the application form. This will allow a programme to be developed to survey and insulate their properties. It is anticipated that the Outer Zone scheme would be launched once the majority of the Inner Zone scheme is complete (as described above) so as to give priority to those with the highest noise levels. Applications must be made with the property owner's consent (as described above). Eligible properties will be visited by the contractor to discuss and assess details of the insulation package appropriate for the property and the owner's requirements. The appropriate package of measures will be developed and installed by the contractor appointed by GAL to carry out the works. The following limits on costs will apply:</p>						
<p>Outer Zone</p>	<p>4.3.6 The Inner Zone scheme will be launched at the commencement of works to build the Project (as described above), with the aim of completing the scheme prior to opening of the Northern Runway. The scheme will remain after the runway opens and would be limited to one application per property. Applications must be made to GAL at the postal or email address provided and will require completion of an eligibility form. A phone number will also be provided for queries on the scheme to be discussed.</p>	<table border="0"> <tr> <td>▪ L_{eq 16 hr} 54 to 57 dB</td> <td>£4,500</td> </tr> <tr> <td>▪ L_{eq 16 hr} 57 to 60 dB</td> <td>£6,500</td> </tr> <tr> <td>▪ L_{eq 16 hr} 60 to 63 dB</td> <td>£10,500</td> </tr> </table>	▪ L _{eq 16 hr} 54 to 57 dB	£4,500	▪ L _{eq 16 hr} 57 to 60 dB	£6,500	▪ L _{eq 16 hr} 60 to 63 dB	£10,500
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▪ L _{eq 16 hr} 60 to 63 dB	£10,500							
<p>4.2.8 Where a property has single glazed windows, acoustic double glazing or secondary glazing will be available to noise sensitive rooms, as for the Inner Zone.</p>	<p>4.3.7 Whilst GAL may receive and will accept applications from tenants, the property owner's consent will be required before works are agreed and undertaken. Applicable buildings must be permanent lawful residential dwellings. GAL will consider the application, confirm to the applicant if they are eligible, and pass on details of eligible properties to the appointed contractor who will then make contact with the property owner (or their representative) to begin the process of identifying and installing the appropriate noise insulation measures.</p>							
<p>4.2.9 For all qualifying properties acoustic ventilators will be available for noise-sensitive rooms, as described above for the Inner Zone.</p>	<p>4.3.8 Eligible properties will be visited by a qualified surveyor to discuss and assess details of the insulation package appropriate for the property and the owner's requirements. The appropriate package of measures will be developed and installed with GAL</p>	<p>4.3.11 Only works to noise sensitive rooms (bedrooms, studies, living rooms and dining rooms) will be paid for. The acoustic insulation works are intended to improve acoustic insulation to noise sensitive rooms, not to otherwise improve the property. Any homeowner wishing to request additional acoustic treatments may do so at the same unit rates, paying any excess over the stated amount (as with the current NIS). The scheme will not replace acoustic insulation installed under the previous NIS</p>						
<p>4.3 Implementation</p>								
<p>4.3.1 After the commencement of the airfield works of the Project, details of this new scheme will be published on the Gatwick Airport website, replacing the details of the current scheme². This will include the package of insulation available, an interactive map to check eligibility, FAQs, and details of how to apply.</p>								
<p>4.3.2 Within three months following the commencement of any of Work Nos. 1 – 7 comprised in the Project (as defined in the Draft DCO [REP1-004]), GAL will submit to each relevant planning authority details of how the noise insulation scheme is to be promoted and administered to persons considered to be vulnerable to noise related effects to ensure equitable access to the noise insulation scheme.</p>								

² <https://aircraftnoise.gatwickairport.com/2021/03/29/noise-insulation-scheme/>

- unless its acoustic performance has significantly reduced below the level expected.
- 4.3.12 The limits on the funding amounts will be reviewed every three years or as necessary (by reference to cost inflation) to ensure the scheme continues to deliver the intended degree of sound insulation.
- 4.3.13 In all cases the contractor will make an appointment to visit the home and discuss and agree the work to be undertaken with the property owner. The contractor will provide a quotation for the works, for GAL and the property owner to agree before planning installation. In the Outer Zone it is expected that the majority of installations will proceed without further surveys. In the Inner Zone, where homeowners request further treatments such as to upstairs bedroom ceilings, GAL may require a survey to be undertaken to confirm what is appropriate.
- 4.3.14 GAL will carry out an audit of the noise insulation measures installed in both the Inner and Outer Zones to ensure they have been installed as specified and agreed with the home owner.
- 4.3.15 In the case of listed buildings, or for buildings within conservation areas, the property owner and/or occupier should contact the local council to establish if planning permission or listed building consent is required. Where planning permission or listed building consent is required, the owner should advise GAL and GAL's contractors will survey the property and submit the necessary application for the required consents following any requirements of the local conservation officer and Historic England's guidance *Energy Efficiency and Historic Buildings, Secondary Glazing for Windows, 2016*.
- 4.3.16 In order to ensure equitable access to the scheme, including for groups considered vulnerable to noise related health effects in ES Chapter: 18 Health and Wellbeing, there will be targeted support in how the scheme is promoted and administered. Details will be agreed with the relevant local authority public health teams and may include:
- tenants being able to initiate the application, with implementation still subject to landlord approval;
 - support for households that do not have English as a main language, have low literacy or where there are particular vulnerabilities due to age, disability or poor health; and
 - safeguarding and clear communication protocols for surveys and works in the homes of vulnerable persons.

- 4.3.17 The proposed new scheme for residential properties offers a more comprehensive package of mitigation and considerably higher funding than the current scheme.

5 Schools Insulation Scheme

- 5.1.1 A new Schools Noise Insulation Scheme is also proposed for all schools with noise sensitive teaching spaces within the forecast 2032 $L_{eq\ 16\ hr\ 51\ dB}$ noise contour. Where schools are concerned that aircraft noise could be affecting teaching, each classroom area will be surveyed to assess the effects of all types of noise including local road traffic. Noise insulation measures could include improved glazing and acoustic fresh air ventilation and GAL will work with the schools to deliver a suitable noise insulation package if found to be required.
- 5.1.2 The scheme will apply only to classrooms used for teaching, including within nurseries or pre-schools, for rooms where formal teaching requiring low ambient noise conditions is undertaken. It will also be limited to schools where noise levels are forecast to increase as a result of the Project within the 2032 $L_{eq\ 16\ hr\ 51\ dB}$ noise contour.
- 5.1.3 The process for schools to apply for consideration for the noise insulation scheme would open upon commencement of routine operations on the Northern Runway as part of dual runway operations, because it may not be possible to carry out the noise surveys to establish if acoustic treatments should be offered until the Northern Runway is in routine use. The Applicant will write to all qualifying schools with the aim of carrying out surveys within 1 year and any remedial works within 2 years.
- 5.1.4 For any school applying for noise insulation, the Applicant will arrange an acoustic study to determine if remedial works are necessary and appropriate. The first stage will involve establishing if teaching areas are currently compromised by noise intrusion. This would involve surveys to compare internal noise levels with the standards set out in Building Bulletin 93, Acoustic design of schools: performance standards, 2015, such as the recommendation for aircraft or train noise to be no louder than 60 dB $L_{A1, 30\ minutes}$ or internal ambient noise levels to be no higher than 40 dB $L_{Aeq\ 30\ minutes}$. Schools meeting the standards would not require improvement. The second stage would involve analysing the internal noise levels to establish whether aircraft noise was contributing to the exceedance of the preferred standards. Where aircraft noise was at least as loud as other external noise sources, the need for remedial measures to be considered would

be established. In these cases, measures to improve the internal noise environment would be identified where practicable. In many cases this is likely to involve improving ventilation to allow windows to remain closed in warmer weather, or it could include upgrading the acoustic performance of glazing and would not normally include air conditioning or cooling.

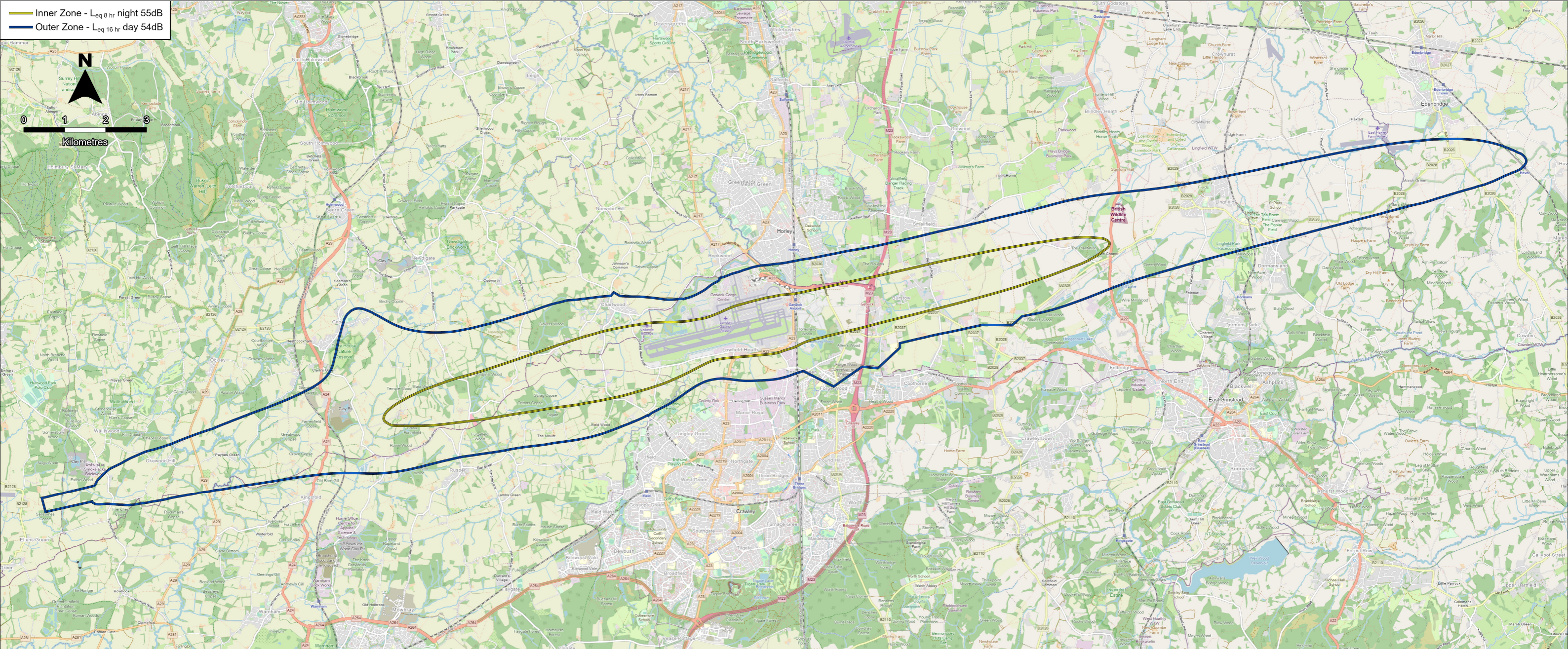
6 Home Relocation Assistance Scheme

- 6.1.1 In order to offer homeowners, the option to move from the areas most affected by the highest noise levels from the Project, homeowners within the $L_{eq\ 16\ hr\ 66\ dB}$ standard mode noise contour with the Northern Runway in operation (as modelled based on actual operations the previous summer), would be offered a package to assist them in moving. Our noise forecasts indicate about 100 homes in this noise zone in the noisiest year. Approximately 75 of these homes have already (2019) been above this noise level and we expect only a small number of homeowners to take up this offer.
- 6.1.2 Eligible applicants would receive a payment covering reasonable moving costs, estate agent fees up to 1% of the sale price, and stamp duty, up to a total maximum of £40,000. The scheme would be limited to one claim per property.
- 6.1.3 GAL will launch the scheme upon commencement of routine operations on the Northern Runway facilitated by the Project. Details of the scheme will be published on the Gatwick Airport website. This will include the assistance package available, FAQs, and details of how to apply.
- 6.1.4 Whereas the noise insulation scheme will be based on noise contours modelled from future forecasts of Air Traffic Movements in the ES, the Home Relocation Assistance Scheme will be based on standard mode noise contours reported in the Noise Envelope Annual Noise Monitoring and Forecasting Report reported each year.
- 6.1.5 After the first year when the first noise contours are published GAL will write to all properties that meet the noise level eligibility criteria with details of the scheme and how to apply. In each subsequent year GAL will write to any additional properties that newly meet the noise level eligibility criteria.
- 6.1.6 Homeowners wishing to be considered should respond to GAL to discuss the package available and to arrange suitable quotations and estimates using suppliers and contractors approved by GAL. The owner must have had no prior knowledge of the Proposed

Development, having acquired the property before the airport published its final masterplan in July 2019.

- 6.1.7 The costs available for home relocation assistance will be reviewed every three years to consider inflationary increases.

Inner Zone - L_{eq} 8 hr night 55dB
Outer Zone - L_{eq} 16 hr day 54dB



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ERM SharePoint: 0591082 - Gatwick Airport Limited Noise Study/Documents/GIS/IMAPS/0591082_Gatwick_Airport_Limited_Noise_Study_Air.aprx/0591082 - Proposed Noise Insulation Scheme Zones A3 Image