

## London Airspace Consultation

**Comments from Protect Kent**

*The Kent branch of the Campaign to Protect Rural England*



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### **NOTE:**

Where reference is made in this document to NATS, it is also intended to apply equally to the other partners in the airspace change proposals, such as Gatwick, Southend, London City & Biggin Hill airports.

We give references to paragraphs of the consultation documents by using the Part letter and paragraph number (*i.e.* A 1.7 refers to Part A paragraph 1.7).

## **PART 1 CPRE Protect Kent**

CPRE Protect Kent exists to promote the beauty, tranquillity and diversity of rural Kent by encouraging the sustainable use of land and other natural resources in town and country. CPRE Protect Kent covers the whole of Kent and Medway, so comments are necessarily general, but with some specific examples. We trust you will have due regard for the local responses from individuals and Parish Councils who will have a far better appreciation of the impacts on their own areas.

We are pleased that A 4.10 says that you... *'will continue to engage with key representative bodies (such as consultative committees, planning authorities and aviation groups) as part of the Phase 2 development programme to ensure that the design process is transparent.'* Please ensure that we are included as one of the 'key representative bodies'.

If you feel unable to accept our proposals we wish to meet with you to discuss why our proposals are unacceptable.

## **PART 2 Key Aspects for CPRE Protect Kent**

We welcome changes where benefits can be delivered without detriment, such as higher altitudes and flights over water. However we are very concerned that the proposals are effectively expansion by the back door without any democratic control. New areas could be blighted by being overflowed, and some areas could be seriously affected by intensification of air traffic because of the narrower flight paths.

The actual potential impacts on the ground are not known, because final routes remain undefined. **The industry and its advisory bodies recognise the need for more research into the effects of aircraft noise on people, so this should be completed before these proposed changes are considered.**

**The changes should be deferred until after 2017, to coincide with the new transition altitudes. For all these reasons a second consultation is required.**

Careful management of Point Merge with daily route changes could provide additional noise benefits.

The consultation does not appear to recognise the requirements of the European Noise Directive for there to be no increase in noise, nor for emissions (and hence activity) to be restrained to meet the Climate Change Act.

We strongly disagree with the idea of trying to 'balance' the impacts of noise and climate change. Our primary concern is to ensure that there is no increase – and indeed, preferably a decrease - in noise, visual intrusion and global warming emissions; this should be the primary objective and the proposals should be designed to achieve that.

Most of Kent is rural, but the proposals do not appear to have sufficient regard to the maintenance of their relative tranquillity.

There is no recognition that many of the areas of concern are above sea level.

There should be a requirement for all aircraft (with exceptions for aircraft such as gliders, which may not have a power source) to be fitted with transponders to help air traffic controllers and others to identify intrusive aircraft.

### **PART 3 Aspects not covered by the Questions**

#### **3.1 Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014 (The Guidance)**

We do not consider that the Consultation complies with the spirit or the letter of the 'Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014'.

Paragraph 1.5 refers to the way in which actual aircraft heights would affect noise levels, but this detail is not available because final routes are unknown and the height under the swathes is not constant.

Paragraph 2.2 refers to climate change emissions, and also to the non-CO<sub>2</sub> effects of aviation, which appear to have been omitted.

There appears to be no reference to air quality, which may have been assumed to be negligible, although paragraph 2.6 of the Guidance says that it could be significant for activity up to 1,000 feet, and if the air traffic volume changes. As the proposals are for maximum use of Gatwick runway 26, as well as increasing activity from greater airspace efficiency, air quality impacts cannot be considered negligible, and therefore need to be assessed.

Paragraph 4.17 requires consultation of the relevant local communities. The current consultation does not meet that remit because the 'relevant local communities' have not yet been identified - showing swathes does not identify which specific communities would be affected.

It is unclear if the proposed changes affect helicopters - paragraph 4.21 requires special care of this issue.

Paragraph 6.7 d. requires a detailed report of the numbers affected, and that can only be undertaken once final routes are known.

Apart from the new Point Merge, the proposals do not take the opportunity for 'creative solutions' (paragraph 7.9), such as a seven-day rota for Point Merge routes (see Question 6).

We therefore consider that a second consultation is essential to provide and consult on all the information required under the Guidance.

#### **3.2 Uncontrolled Expansion**

The proposals could achieve airport expansion by the back door because of the scope for a huge increase in the number of flights which can use existing runways. In particular the Gatwick Runway 26 proposals imply that planes could be flying over every minute or less (See: B 3.6), increasing runway capacity by up to 50%.

It is also stated that the Point Merge proposals alone could provide sufficient additional capacity for the NATS traffic forecasts up until 2025 ( E 3.11). This means that the proposed system could significantly increase the number of planes using our airports without any effective control.

Thus the proposals need to be rigorously assessed and implemented to ensure that the impacts are not increased and stay within legal and advisory limits.

### **3.3 Climate Change Act**

The Climate Change Act puts a legal requirement for emissions to be reduced, although this responsibility is spread over many producers. Nevertheless as the industry has so far received preferential treatment despite aircraft emissions being around twice as damaging as those from other industries, it is essential that it plays its part in the national reductions. The Government's '*Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014*' requires (paragraph 2.2) to take note of it, and also of the non-CO<sub>2</sub> effects of aviation. This requirement means that air transport movements cannot increase unless compensatory action is taken to restrain emissions. For airspace, this means that more flights can only be accommodated if the aircraft are actually quieter and have much lower emissions.

### **3.4 Rural Areas and Tranquillity**

As the Campaign to Protect Rural England we are especially concerned with rural areas, which form the major part of Kent, and which have relatively low background noise levels so are particularly susceptible to aircraft noise. Some of the changes mean higher flightpaths and increased operation over water, which we strongly support. However, while the proposals could relieve some people currently affected by aircraft noise, without very careful planning and management they could turn new areas into noise ghettos and increase noise under existing flight paths.

In our responses we challenge the assumption that air traffic is more important than the people or countryside below airspace, and insist that the least damaging routes must be used. Hence our strong support for much more activity to be over water rather than over land, especially for Kent which is surrounded on three sides by water, and some of the land areas proposed in consultation around the coast are important for nature so there could be impacts on biodiversity or conflict with the European Birds Directive (Directive 2009/147/EC)

It also appears that insufficient consideration has been given to using this airspace change as an opportunity to be more radical and reduce the impacts on areas such as the Kent Downs AONB by shifting more flights over the Thames Estuary, North sea and the Channel, especially as the Thames Estuary in particular seems empty of air traffic. There is a strong justification for using such routes since the historical navigation by visual or radio beacons no longer applies and aircraft are able to fly anywhere using electronic guidance.

Although NATS states that all altitudes are given as heights above sea level, there appears to be no account taken of the lower actual aircraft height above ground and hence increased noise level, and this needs to be shown in the second consultation.

Although we are particularly concerned about tranquillity, which is about much more than just noise, noise is the primary impact on areas below flight paths.

For rural areas, the International Standards Organisation recommends a 10dB difference in the assessment of noise in rural areas and in urban residential areas, to allow for the difference in background noise levels.

This factor has for many years been acknowledged in the noise regulations for factories and is used by local authorities and contained in British Standard 4142.

### ISO Recommendations for Community Noise Limits

District Type	Daytime Limit	Evening Limit 7-11pm	Night Limit 11pm-7am
Rural	35dB	30dB	25dB
Suburban	40dB	35dB	30dB
Urban residential	45dB	40dB	35dB
Urban mixed	50dB	45db	40dB

In Kent most, if not all, those affected by aircraft noise live in rural areas. **The ISO figures mean that flight paths and their air traffic will have to be designed to ensure that these lower limits are not exceeded, as well as meeting the other standards described in Part 6 of this document, 'Our aspirations for tranquillity and air transport noise'.**

### 3.5 Noise

The Government Aviation Policy Framework (APF) (March, 2013), said: '*...3.19: the Government recognises that people do not experience noise in an averaged manner and that the value of the LAeq indicator does not necessarily reflect all aspects of the perception of aircraft noise. For this reason we recommend that average noise contours should not be the only measure used when airports seek to explain how locations under flight paths are affected by aircraft noise.*'

The fundamental problem, as the Government, the airspace change sponsors and and the industry acknowledge, is that more research is required into the way in which people are annoyed by aircraft noise. See **Part 5 Annex 1 Noise Measurement**, as an example of the need for proper research into this issue. This is an essential requirement before the proposed changes can be considered in detail.

There appears to be an assumption that air traffic *must* be allowed to increase or to fly where it wishes, regardless of the impact. In particular, we again draw attention to the European Noise Directive (END) which specifically requires that noise is not increased, and where possible, it is reduced.

We appreciate that this may not seem easy, but as a legal requirement it must be met.

In A 3.18 reference is made to: '*the way in which these objectives are best balanced*'. We do not agree with '*balance*': global warming emissions and noise cannot be compared as they are measured in completely different units. There are legal requirements to reduce both emissions (Climate Change Act) and noise (END), so it is essential that neither are increased. This may be difficult, but not impossible considering the way in which the industry frequently flaunts its less noisy aircraft and lower emissions.

Although it is possible to estimate the total emissions change for a set of proposals, it is impossible to do so for noise.

Not only does noise have the peculiarity of being logarithmic, so doubling the number of flights only increases *average* noise levels by 3 dB which is barely noticeable (although everyone would notice

the increase in number of planes). Moreover the human reaction is not standardised, as noted by the Aviation Policy Framework. So allowing noise to increase up to a certain level is unacceptable, because some people will be adversely affected by lower noise levels. Hence the END requirement for no increase in noise anywhere must apply, separately from consideration of emissions.

The true objective is to reduce noise and emissions where possible, or to make them no worse than at present, so proposals need to be framed within that objective.

Pleasingly, raising the height of aircraft will not only help with noise reduction but will also reduce their visibility, thus further enhancing tranquillity, providing that flight numbers are not increased.

Unfortunately people on the ground are – by definition – above sea level, but there appears to be no evidence showing how the actual flight paths will be closer to the ground, and therefore noisier – since all aircraft altitudes are given in ‘height above sea level’. Hence the second consultation is required to show how actual aircraft heights would affect noise levels, as required by the Government's ‘*Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions, 2014*’, paragraph 1.5.

**Table 5.1 of the *Airports Commission Discussion Paper on Noise* suggests an historic reduction in certified aircraft noise levels; the improvement curve is clearly flattening out and becoming asymptotic to zero. In other words NATS cannot assume that future aircraft will be less noisy than the current fleet. Hence the only room for avoiding any increase in noise, as required by European Noise Directive (END), is to alter operating procedures or restrain the number of flights.**

### 3.6 Controlling Noise

We feel it important that the policy expressed in the Government’s Aviation Policy Framework – “*as a general principle, any benefits from future improvements in aircraft noise performance should be shared between the aviation industry and local communities*” should be fulfilled. This leads us to the view that a set of noise ceilings (envelopes) should be set for each airport as well as the areas under flight paths. These would be reduced progressively over time so that neighbours of the major airports and those under flight paths can enjoy some degree of improvement, as aircraft become quieter. This improvement must not be undermined by any increase in aircraft movements. The baseline for the envelopes should be set at or below the current noise levels. It must be emphasised that such noise ceilings alone would not guarantee reduced annoyance because – for those directly under the flight paths - annoyance is now more related to the number of events than it is to the noise of those events, hence the need for a cap on the number of aircraft movements as well as a gradually tightening noise envelope.

We welcome Heathrow’s league table published under its ‘Fly Quiet’ programme<sup>1</sup>, which we hope will lead to better performance by the airlines. Although this first round is relatively unchallenging (e.g. all achieved the ‘pre 0430’, and nearly all the ‘pre-0600’ target), and there are no obvious penalties for transgressions, it shows the way ahead.

We therefore expect that if permission is granted for these proposals that it will only be on condition that a similar scheme is set up and managed by NATS (and other airport control services), with

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<sup>1</sup> <http://mediacentre.heathrowairport.com/Press-releases/Airlines-rated-on-noise-performance-6f0.aspx>

publication by the CAA, as required under its Environmental Information publication duties. The initial requirement will be for a quarterly league table, with minimum targets. Furthermore after an initial bedding down stage to refine parameters, we expect that NATS shall be required to enforce penalties for non-conformance.

An important factor is whether aircraft are less noisy for the whole of their flight path. Noise measurements for aircraft are only at the ICAO measuring points, not at distances which are further away from the runway, so there is a misapprehension that people further away will be unaffected by aircraft noise (see under *Operating restrictions* in Part 6, '*Our aspirations for tranquillity and air transport noise*'). The well documented reports of annoyance from planes being caused at considerable distances from airports such as Heathrow, Stansted, Luton, East Midlands, etc. shows that monitoring needs to be carried out much further away from the runway.

If permission is granted for changes, then a condition of permission must be the requirement of such noise monitors. These would be provided by the airport or NATS according to who controls the airspace being monitored.

As Gatwick Airport Ltd (GAL) is a joint sponsor of these proposals, we expect GAL to implement stronger noise controls as described in '*Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014*' paragraph 3.4.

### **3.7 Second Consultation**

It is claimed in A 4.29 that 'This consultation describes the full range of potential effects for this proposal.'

For noise in particular it is impossible to weigh up and compare the effect of changing noise levels in different areas. For example the effect of a 3 dB change at one noise level is different from the effect of a 3 dB change at another level. Noise contours and footprints are only a rough guide, which is why a second consultation is essential.

We are very concerned that you appear to seek to avoid a second consultation. We do not consider that this is possible, because any change is bound to bring unwelcome effects to some areas, even if that is not apparent initially. These will bring about many objections, as occurred for proposed Terminal Control North changes, which is why a second consultation is essential to avoid the risk of Judicial Review under the Aarhus Convention.

### **3.8 Public Responses**

It is well known that public responses and complaints are not a reliable indicator of the dimension of the issue of aircraft noise, because they do not accurately reflect the numbers affected, or potentially affected, by aircraft noise. See for example, Airports Commission *Noise Discussion Paper*, Paragraph 2.2 and [www.chchearing.org/noise-center-home/noise-archives/intrusive-community-noises-yeild-more-complaints](http://www.chchearing.org/noise-center-home/noise-archives/intrusive-community-noises-yeild-more-complaints).

Similarly the number of people who respond to this Consultation will not reflect the numbers potentially concerned about the issues. Thus the proposals need to be rigorously assessed and implemented to ensure activity stays within limits and does not increase noise levels on the ground

because people who may not have responded so far will be very angry if increased flights or noise suddenly start disturbing their life.

### **3.9 Transponders**

One of the reason that people do not complain about intrusive aircraft is because air traffic controllers are not always able to identify the aircraft complained of, because the aircraft does not have a transponder or the ATC do not have the appropriate equipment (an example is Kent International Airport at Manston), so the ATC cannot give details of the height *etc.* of the relevant aircraft.

We therefore consider that all aircraft (with exceptions for aircraft such as gliders, which may not have a power source) should be fitted with transponders to enable ease of identification by air traffic controllers, and we trust you will support us in this.

## **Part 4      Answers to the Questions**

This Section lists the questions presented in the London Airspace Consultation document.

**NOTE:** Where reference is made to NATS, this is also intended to apply equally to the other partners in the airspace change proposals, such as Gatwick, Southend, London City & Biggin Hill airports.

CPRE Protect Kent covers the whole of Kent and Medway, so comments are necessarily general, with some specific examples. We trust you will have due regard for the local responses from individuals and Parish Councils who will have a far better appreciation of the impacts on their own areas. We give references to paragraphs of the consultation documents by using the Part letter and paragraph number eg: A 1.7 refers to Part A paragraph 1.7.

### **Question 1**

Gatwick Airport is seeking to realign all Runway 26 departure routes below 4,000ft to help make best use of the existing runway.

Please indicate the extent to which you support or oppose this objective to realign all Runway 26 departure routes below 4,000ft to help make best use of the existing Runway. Please state the reasons why you support or oppose this objective.

We are astonished at the proposed 'Making best use of the runway' (B 3.6) because this conflicts with the claim (A 3.12) that the airspace change is not about providing expansion or extra flights. Together with other NGOs our responses to the Airports Commission has highlighted the current spare capacity, and the lack of need for expansion. Although that view has not yet been fully accepted by the Commission, the Commission has considerably more work to do, and we expect our view to prevail.

This is supported by the fact that the Commission has had to provide potential solutions without being able to assess their impacts, and it is the impacts that are likely to sway the balance. Therefore we consider that enabling greater capacity by making these changes would mean that most of the benefits are exceeded by their impacts.

Although some general benefits have been described in the consultation, in the case of noise, the increased heights resulting in reduced noise on the ground is negated by narrower low level routes where noise will increase. Similarly the reduction in emissions from better routes is negated by the ability to fly more aircraft.

The requirement, described in A 1.7, for NATS: *'to be capable of meeting, on a continuing basis, any reasonable level of overall demand for air traffic control services'* relates only to the air traffic control service that NATS provides. In other words, NATS has to have the staffing and equipment to be able to manage the aircraft wishing to fly in the areas controlled by NATS. For example, NATS has to have an effective telephone system but is not responsible for providing airspace. This is very different to saying that airspace must be provided for all planes that might fly, because the UK has legal commitments to manage carbon emissions, for example, as well as ensuring the END is not contravened by allowing noise to become worse. This should be made clear in all future documentation.

The consultation document at A 3.12 says: *'We assume a level of growth in demand of the coming*

years; this consultation seeks information to help us identify the airspace solution that best meets the demand. **This consultation is not on growth in air traffic demand itself.**

Although this consultation may not be about growth in air traffic or indeed the potential demand (which is not the same, of course), if implemented the proposals would allow significant expansion at airports. Further to our comment on A 1.7 above, NATS should not just 'assume' a level of growth (although that may be valid for its own business planning for staffing *etc.*): instead it should be seeking how to best manage the existing traffic within the restrictions of the limits on noise, emissions and other factors.

Furthermore it should be using the Department for Transport forecasts which decline each time a new forecast is produced. Their forecasts do not appear to take account of the fact that Air Transport Movements (ATMs) are now lower than a decade ago<sup>2</sup>, so should therefore be aligned to current ATMs and the latest DfT forecasts.

The NATS forecasts similarly appear to fail to recognise these facts, **therefore there is no need for an immediate airspace change.**

We very much welcome and support moves to raise altitudes of aircraft by raising the transition altitude referred to in A 4.6, and its introduction in 2017 provides a window to properly assess the current proposals so that both can be implemented together. This would have the benefits of avoiding two (or more) changes, making it easier to communicate to the public and to be simpler and safer for airline operators to implement.

**It would be beneficial to defer changes until after 2017, to coincide with the changes to the new transition altitudes, especially as this would allow adequate time for the second consultation.**

Our primary concern, as highlighted elsewhere, is to ensure that there is no increase in noise, visual intrusion and global warming emissions, and preferably a decrease in these. Hence the proposals should be designed to achieve that primary Objective.

## Question 2

This proposal is considering extra routes to enable periods of respite. This would mean implementing two routes in a particular direction instead of one, with a schedule for using each route to provide periods of relative respite for people living in the area beneath the routes. While this would provide respite, it would also increase the geographic area regularly exposed to noise. Please indicate the extent to which you support or oppose this objective of providing respite routes, given that it potentially impacts more people in order to offer respite. Please state the reasons why you support or oppose the objective of providing respite routes.

The proposals could relieve some people who are currently affected by aircraft but it could also turn new areas into noise ghettos.

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<sup>2</sup> CAA Airport Statistics - 2.095 million ATMs at reporting airports in 2001, 2.089 million ATMs at reporting airports in 2012

Respite routes (B 3.22) may be valuable, but it is impossible to assess until detailed proposals are available. This means that respite proposals need to be developed and then consulted upon – simply using this consultation for that is totally insufficient.

Respite examples shown in Fig B6, C6 & B7, C7 indicate that the alternative route may be longer, but in that case the turn would be shallower and therefore less noisy and use less fuel. We consider it is more important to have higher and preferably straighter routes, with continuous descent or ascent with turns as high as possible.

We are especially concerned that: *'avoiding overflight of a town would almost always mean flying instead over surrounding countryside which may be valued for its relative tranquillity'* (B3.19) because aircraft are particularly intrusive in such areas, and their numbers should be reduced rather than increased.

**Paragraph A 4.29 seems to imply that ensuring the new routes will be within the 'consultation swathes' will avoid any concerns, despite the footnote 17 to B 4.12 acknowledging that the new routes will be more concentrated (and so noisier). We do not consider that it is possible to avoid a second consultation, because these narrower routes are bound to bring unwelcome change to some areas, even if that is not apparent initially.**

Although we are obviously protective of rural areas we also support maintaining urban areas' attractiveness for residents, which also means ensuring that noise levels do not increase.

In view of Aviation Policy Framework paragraph 3.19, to which the CAA and NATS must have regard, it is totally unacceptable to restrict consideration to areas at or above 57 dB Leq and the 90 dB SEL levels, as suggested in B 3.27, because any noise increase is against the END, regardless of whether it is at 17, 27, 37, 47, or 57 dB, and also the human response is not restricted nor defined by these levels, as stated in the Aviation Policy Framework.

**In view of this, a second consultation on the actual proposed routes is essential, together with assessment including lower noise levels and using other metrics as described in Part 6, "Our aspirations for tranquillity and air transport noise".**

### **Question 3**

Please indicate which, if any, place(s) or area(s) within the consultation swathes you think require special consideration in the on-going design process. Please describe the characteristics of these locations, stating whether they should be considered due to concerns about noise impact, visual impact and/or any other impact.

**Respite routes can only be commented on by providing a second consultation once the proposed routes are known.**

The *'Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014'* paragraph 4.17 requires consultation of the relevant local communities. The current consultation does not meet that remit because the 'relevant local communities' have not yet been identified - showing swathes does not identify which specific communities would be affected.

Subject to these provisos, respite seems beneficial and therefore we support it even if there are some additional emissions, especially if these extra emissions would be more than compensated for by the reduced emissions from Point Merge (see Tables G1 & G2).

#### Question 4

In what, if any, geographic locations should options be considered for altering routes for respite purposes?

What should the criteria be?

Our primary concern is to avoid flying over areas with low background noise levels, and obviously, avoiding National Parks, Areas of Natural Beauty (AONBs) and areas of high landscape value. Specific locations include historic, cultural and recreation sites.

We would draw attention to the CPRE Tranquillity Maps, as these show the relative level of tranquillity and therefore give an initial appreciation of areas to avoid. Hever Castle, with its international visitor profile and its open air theatre, is an obvious example of an area to avoid. We appreciate that there are practical difficulties in avoiding all susceptible sites. For example moving flights several miles north of Hever would then affect Sevenoaks Weald village and Ide Hill, which would be undesirable.

**We therefore reiterate the need to ensure that existing noise levels are not made worse, and that they are reduced for those locations where existing noise levels are damagingly intrusive, such as at Hever Castle.**

This may be a situation whereby a steeper glide slope would yield benefits.

#### Question 5

Altering routes to fly around environmentally sensitive areas rather than overhead is likely to mean more fuel burn and more CO<sub>2</sub> emissions because the altered route would usually be longer. In general, which should take precedence - minimising overflight of sensitive areas by flying a longer route around them, or flying the direct route overhead the area to keep the route shorter and minimise fuel burn and CO<sub>2</sub>?

What, if any, factors should be taken into account when determining the appropriate balance of flying around environmentally sensitive areas versus overhead (for instance the altitude of the aircraft may be a factor, or the frequency/timing of flight)?

Our preference is that **'Flying longer routes around environmentally sensitive areas should always have greater precedence than flying overhead on shorter routes which minimise fuel burn/CO<sub>2</sub>'**. Because the additional emissions are not significant compared to the overall emissions, the additional fuel burn is unlikely to be greater than savings from other parts of the proposals. The longer routes will usually mean larger-radius turns, thus reducing noise as well as fuel use and emission. This is an important priority because noise from aircraft in the air cannot be reduced by barriers *etc.*

In A 4.26 reference is made to the potential for reducing fuel burn, but it is not made clear that this is per flight, and therefore misleading. The changes would enable far more flights, which would cause a far greater increase in emissions than those saved by the proposals. It is contradictory to

seek to reduce emissions while enabling more flights! The proposed reductions in emissions will only occur if flights are maintained at their current level. Hence the first priority for emission reductions is to reduce the number of air transport movements, or as minimum, not to increase them. As the traffic data show, far more passengers are being carried with fewer Air Transport Movements, so this restriction does not mean preventing people from flying.

As noted elsewhere, we also disagree with the idea that noise and emissions should be considered alongside one another – they both need reducing. The joint consideration is only needed where, for example, options to reduce emissions cause no increase in noise levels.

Regarding the question as to which ‘...**factors should be taken into account when determining the appropriate balance of flying around environmentally sensitive areas versus overhead**’, obviously if aircraft are at higher heights above ground, the noise and visual intrusion are decreased, so there is then reduced need for flying around sensitive areas. Each case would need to be assessed as the impacts would depend on the type of area, its height and background noise level. That information would then enable the **second consultation stage**, which is a requirement to ensure everyone can comment on the actual proposed routes (see also comment on A 4.29, and B 4.12 above). The ‘*Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014*’ paragraph 6.7 d. requires a detailed report of the numbers affected, which can only be done after a second consultation.

We do however agree with A 3.18 e, about ‘*the value of maintaining legacy arrangements*’, and we do not favour creating new routes, as they usually would mean increasing noise for the areas under the new route.

Clearly we are against night flights, not only because of the disturbance to people’s sleep, but also because the global warming is around double from night flights at our latitude<sup>3</sup>

## Question 6

This proposal is seeking to change the way aircraft use airspace by developing a system for managing arrivals based on Point Merge, rather than the holding stacks/vectoring currently in use.

Please indicate the extent to which you support or oppose our objective of providing a future arrival system based around Point Merge.

Please provide any additional information you think is relevant to our objective to redesign arrival routes around a Point Merge system.

We welcome the potential improvements from the use of Point Merge (C 3.4) which seem useful objectives. The reduction in stepped changes would be helpful to reduce noise, and in particular we welcome that fewer area will be overflown at lower altitudes, provided that this does not increase noise for those areas that are overflown, as required by the END.

In view of its higher altitude, advantage should be taken of moving the Point Merge over the sea, which might slightly increase flight length but would provide relief to those on the ground.

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<sup>3</sup> *The importance of the diurnal and annual cycle of air traffic for contrail radiative forcing*, Nicola Stuber, Piers Forster, Gaby Rädcl and Keith Shine. Nature 441, 864-867. 15 June 2006.

Flights over water would remove most of our concerns, and would leave just the lower parts of the flight paths to be resolved.

We welcome the opportunity provided by Point Merge to reposition the vast majority of low altitude air traffic approaching London City into a single flow, approaching from the east over the Thames Estuary (E 3.14, G 6.2 etc.) especially as it can be relocated over the Thames or the sea, as this would reduce noise impacts for people on the land. However, we would caution that the final routes need to be properly assessed (and consulted on in the second consultation) in terms of their impact on biodiversity and their compliance with the European Birds Directive (Directive 2009/147/EC), although these may be more of an issue over areas such as the North Kent Marshes.

We consider that Point Merge could provide advantages, especially as it is higher and allows continual descent approaches. It could also allow dispersion because the planes leave the 'fan' at different bearings, which could be beneficial in some locations.

**We support the Gatwick Area Conservation Campaign proposal that air traffic controllers should vary the routes taken from the arc so that they only merge on the final approach path. In addition the opportunity to use a seven-day variation system of respite for such routes should be taken, as the Guidance calls for 'creative solutions' (paragraph 7.9).**

The description in D 4.15 suggests that the Point Merge would not exactly coincide with existing holds and associated flight paths, so we again re-iterate the need for a **second consultation** once the preferred Point Merge location becomes apparent so that further fine tuning can be carried out.

We note that the arrivals from the east (Paragraph D 4.16) going to Gatwick are proposed to come over Romney Marsh towards Winchelsea. Romney Marsh appears to be rarely overflown, so we consider that the easterly approach should be over the Channel, with the higher parts (as described in Part F – see below) also over the Channel, around the east of Margate. This would reduce noise and visual intrusion over some of Kent's most tranquil areas, with a very small increase in total flight distance, and would be more than compensated by the reductions in emissions from the Point Merge process (see Tables G1 & G2).

We do not consider that the assumption implied by the use of 'as' in the last sentence of E 2.15 (*'the density of low altitude traffic over East London will increase as traffic levels recover and surpass previous peaks'*) is correct, because air transport movements have reduced since 2001, as larger aircraft are used (although we appreciate that this may be less significant for London City and Biggin Hill airports), and this trend is set to continue, as shown by evidence to the Airports Commission. Hence 'as' should be replaced by 'if'. The same argument applies for E 3.10, etc.

With regard to the references to the consultation by Southend Airport (E 2.21, F 2.17 and G13.3), please see **Part 7 CPRE Protect Kent Response to Southend Airport Consultation**, and ensure that regard is taken of the relevant points.

It is unclear as to which forecasts E 3.11 refers when it states that the *'...improved system efficiency that Point Merge enables will be able to accommodate forecast air traffic growth to 2025'*. We believe that these may be even higher than the Department for Transport (DfT) forecasts, which we consider to be on the high side. In addition the DfT tends to deal with passengers rather than Air Transport Movements (ATMs) and the trend is for there to be fewer ATMs per passenger as airlines

increase the use of larger aircraft. Hence the NATS forecasts for flights should follow this downward trend.

We would also be very interested to know the definition of '*any reasonable level of overall demand*' (E 3.11), because the requirement placed on NATS is for it to have the operational capability, such as robust backup for telephone systems, which has nothing to do with allowing or encouraging more flights. As noted above air transport movements are now lower than in 2001, so NATS should be well able to cope.

We urge much greater consideration for shifting the southern boundary of the Point Merge for London City (E 3.18) towards the north, to avoid the southern section being over land, to enable planes to fly as much as possible over the Thames and the sea.

#### **London City and London Biggin Hill arrival routes**

Reference is made in E 4.15 to '*aircraft approaching the estuary from the south may be turned in early towards the airports if there is no need to form a queue. Arrival shortcuts further to the south would follow a similar alignment to today's arrivals along the Kent Downs (this flow can be seen Figure E3); as this impact exists today we are not consulting over this area.*'

It is unclear if that impact is likely to change due to the changes that are proposed or due to increased traffic, so clarification of this is required, please, because an increase in the number of flights would be of concern.

Also this airspace change proposal should seek to reduce current impacts where possible, and thus we ask that this opportunity be used to shift some or all these flights over water.

We welcome the likelihood that aircraft departing from London City (E 4.16 and Figure E9) will be higher before reaching the Kent coast, but we suggest that continuing along the Thames estuary would be even better, and should be investigated, before the next stage of this consultation.

#### **Changes to London Gatwick Airport Arrivals**

F 3.44 says that '*the arrival route for Gatwick will come from the region of Margate heading towards Hastings.*' We strongly suggest that all operations should go over the sea east of Margate and then along the Channel to come inland as late as possible, to reduce the overland flightpath to a minimum. Also we strongly emphasise the benefit of shifting the Gatwick arrival flights (F 4.24, Figure F11) over the Channel to avoid overland flights, especially as Romney Marsh is rarely overflowed at present. This is especially relevant as the additional distance would be very small.

We very much appreciate the benefit that the higher altitude of aircraft over the Kent Downs AONB heading for the Point City, Biggin Hill and Southend Merge will provide to Kent (F 4.22). However eastern arrivals over Folkestone-Dover area could go east of Margate, over the sea, with a relatively small extra distance but great benefit to East Kent, and we ask for this to be pursued.

#### **London City departure routes**

Although the London City departures (F 4.23, Figure F10) should be at 7,000 feet and above, we urge consideration being given to shifting the some or all these departures over the Thames and the north sea to avoid east Kent, as this would reduce overflights above the AONB and tranquil areas of Kent.

## Question 7

Procedures for accommodating operators who are not compliant with the RNAV1 standard are yet to be finalised. Accommodating non-compliant operators will reduce overall system efficiency for the majority of the fleet which is RNAV1 approved.

To what extent should non-certified aircraft be accommodated (NB you may wish to highlight more than one of these options)?

Accommodated with time restrictions

Accommodated but with restricted route availability

Accommodated but with potential delay

Accommodated without restriction (and therefore reducing efficiency for all)

Should not be accommodated at all

What, if any, comments do you have on accommodating non-certified aircraft?

With regard to accommodating non-compliant RNAV1 operators G 6.2, we welcome any moves to allow aircraft such as General Aviation to fly higher, such as by using Controlled Airspace. Thus non-compliant aircraft should be accommodated as much as possible.

We also strongly support the need for all aircraft (with exceptions for aircraft such as gliders, which may not have a power source) to be fitted with transponders to enable ease of identification by air traffic controllers or others, and we trust you will support us in this.

## Question 8

Should fuel for the Point Merge arcs be considered part of the *contingency* fuel uplift, or part of the *flight plan* fuel uplift? Please state the reasons why you believe fuel for the Point Merge arcs should be considered part of the *contingency* fuel uplift or part of the *flight plan* fuel uplift.

No comment

## Question 9

This proposal seeks to reduce overall fuel burn across the fleet by as much as possible even if it means some individual routes may be less fuel efficient as a consequence.

Please indicate the extent to which you support or oppose this *objective*. Please state the reasons why you support or oppose this objective.

We welcome the proposal to ***'reduce overall fuel burn across the fleet by as much as possible even if it means some individual routes may be less fuel efficient as a consequence'*** (Page G 26). We strongly support minimising emissions overall, so support the objective of considering the whole fleet, rather than individual routes or airlines. This is only within the proviso that noise is not increased.

Fuel burn is not directly relevant to our concerns, although it may be a rough proxy for emissions. Although airlines are more concerned with fuel burn because of costs, we do not believe that should be a factor for NATS and this consultation, because the airlines have it within their power to use more efficient aircraft to minimise such costs, and thus emissions are far more important. In addition, as noted for emissions, the airlines are gaining from reduced fuel use from Point Merge, so must share that benefit as required by the Aviation Policy Framework and the *'Guidance to the Civil*

*Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014'* (paragraph 3.1) with those on the ground by reducing noise.

#### **Question10**

This proposal is seeking to lower some areas of controlled airspace to accommodate arrival flows  
To what extent would the proposed changes affect General Aviation (GA) operations? Would they  
have a large impact, a medium impact, a small impact or no impact at all?  
If you believe it would have an impact, please describe the operation that would potentially be  
affected.

Although the proposed lowered area of Controlled Air Space (CAS, G13.4, Figure G5) has a relatively small part over Kent, these parts are over sensitive areas, and lowering controlled airspace by 1,000 and 2,000 feet respectively would be noticeable. We therefore object to the proposal for a lowered CAS at 5,500 and 6,500 feet (FL65) as shown in Figure G5 because this would be liable to force some General Aviation to fly lower to avoid going into controlled airspace.

#### **Question 11**

Please provide any other information that you feel is relevant to the on-going development of the  
airspace covered by this consultation.

See also, **Part 3 Aspects not covered by the Questions**, above.

We are astonished at the forecast growth rates for Gatwick 17.9% growth by 2025 (Appendix G, page G1), as it overstates the real potential flight numbers. It has long been recognised that master plans are 'wish lists', not forecasts of the future, and the Gatwick master plan overstates the real potential, as shown by the responses to the draft plan.

Airports are notorious for greatly overstated forecasts, and we are sure you are aware that if all UK airports forecasts were added up they would total many times the UK population. Likewise the forecast growth rates for London City, Biggin Hill and Southend airports (Appendix H, Page H1) are also too high. Although the numbers involved are relatively small compared to the other London airports, an increase of 57.5% by 2025 seems not only extremely optimistic for the airports and very worrying to us, but it also conflicts with such accepted restraints as the Committee on Climate Change limitation of a maximum of 60% growth by 2050.

**Hence a more reliable indication of potential flights would be obtained from the DfT forecasts.**

## **PART 5    Annex 1    Noise Measurement**

### **Unsound Measurements By John Stewart<sup>4</sup>**

They won't know whether to laugh or cry this weekend, the residents of Sabine Road in Battersea. Their street has been named one of the quietest in London. Sabine Road, not far from Clapham Junction, is in an area where there have been countless complaints about aircraft noise the years. It's on the flight path to Heathrow.

**The researchers, from the noise consultancy firm 24 Acoustics have fallen into the classic trap of using the official UK method of measuring aircraft noise.**

*"To determine the quietest streets, researchers used existing data to locate which ones were outside of the 57 decibel noise contours for airports, and had a night road traffic noise level of lower than 35 decibels"*

**This reliance on the 57 decibel noise contour has made a mockery of their results.** It has meant that aircraft noise can be heard in just about all their top quietest streets. Streets in places like Fulham and Putney make it into the top 10<sup>5</sup>.

**The blame lies not with the researchers. I imagine that in good faith they accepted the official measurement of noise annoyance from aircraft. It was a mistake waiting to happen. For years HACAN, along with many other bodies, has argued the measurement is utterly misleading.**

We wrote in our response to the Airport Commission's consultation on noise:

*"The current 57 db Leq contour – the official area which defines where community annoyance sets in – excludes places like Putney and Fulham in West London! Not the real world!"*

**The European Commission agrees with us.** It requires member states to use a different metric – called 55Lden – when drawing up their noise maps. That is more realistic. It extends the noise boundaries to places like Vauxhall and Clapham. But even it does not cover all the places where people are annoyed. The ANASE Study, commissioned by the last Government but quietly buried when it found the findings were not to its taste, found that there is significance noise annoyance well beyond the 55Lden contour.

Of course the current 57 decibel cut-off point suits the aviation industry down to the ground because it minimises and underestimates the numbers affected by noise.

**However,** Sir Howard Davies, who heads up the Airports Commission, is known to be looking seriously at a more realistic metric.

**In their responses to the Commission's noise paper, MPs queued up to criticise the current cut-off point<sup>6</sup>:**

**Mary Macleod MP:** *"There is widespread evidence that the existing measure of the threshold of annoyance is inaccurate and misleading."*

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<sup>4</sup> <http://hacan.org.uk/blog/?p=158> November 10, 2013

<sup>5</sup> <http://www.standard.co.uk/news/london/silent-nights-the-capitals-10-top-quietest-streets-revealed-8928506.html>

<sup>6</sup> <https://www.gov.uk/government/publications/stakeholder-responses-to-airports-commission-discussion-papers>

**Zac Goldsmith MP:** *“The measurement of noise – and of noise annoyance/disturbance – needs revising. Currently it is misleading. Any noise measurement that does not reflect reality lacks credibility”.*

**Former Transport Secretary Justine Greening MP:** *“I believe this strongly shows that taking a traditional 57dB approach to assessing the level of noise annoyance from any new aviation strategy will exclude a large number of people who will be annoyed and affected but live outside of the 57dB noise contours.”*

**John Randall MP:** *“Clearly, a 57dB threshold is unhelpful if it excludes population areas that are experiencing significant annoyance from aviation noise”.*

**Murad Qureshi for the London Assembly Labour Group:** *“The committee has previously recommended the adoption of an Lden measure and the use of lower thresholds for identifying the areas most affected by aircraft noise”.*

**Boris Johnson, the Mayor of London:** *“The development of a new noise metric is strongly supported. It must fully represent sensitivity to and the impacts of aviation noise and how individual aircraft events are experienced during different times of day and night”.*

**Even the Government in its Aviation Policy Framework, published in March, recognised the current measurement was flawed:**

*“Average noise exposure contours are a well-established measure of annoyance and are important to show historic trends in total noise around airports. However, the Government recognises that people do not experience noise in an averaged manner and that the value of the LAeq indicator does not necessarily reflect all aspects of the perception of aircraft noise. For this reason we recommend that average noise contours should not be the only measure used when airports seek to explain how locations under flight paths are affected by aircraft noise.”*

## **PART 6: CPRE Protect Kent *Our aspirations for tranquillity and air transport noise***

### **CPRE Protect Kent response to the Airports Commission Discussion Paper: “Aviation Noise”**

#### **Our aspirations for tranquillity and air transport noise: August 2013**

##### **Tranquillity**

A particular concern for CPRE is protecting areas of tranquillity, by which we mean an absence or relative absence of forms of visual intrusion as well that from noise. CPRE’s research and the mapping outputs – maps and data – have been used by numerous National Park authorities, AONBs and by county, unitary and district councils, so the concept is well established for use in national and local policy.

CPRE’s expertise with regard to Tranquillity has been recognised by the CAA (ERCD Report 1207, June, 2012), and so we seek the use of the CPRE definition of tranquillity.

We hope that policies, guidance and information will implement our common aspirations embodied in the new National Planning Policy Framework (NPPF), for areas of tranquillity to be protected (NPPF paragraphs 77, 123), landscapes protected from intrusion (NPPF 115, 125) and the need to protect the intrinsic character and beauty of the countryside (NPPF paragraph 17).

The Noise Policy Statement for England separates “health’ and ‘quality of life’. Tranquillity is both a health and quality of life factor.

Data from CPRE<sup>7</sup> shows, for example, that in the early 1960's 31% of Kent suffered disturbance. This proportion had more than doubled by 2007, showing the need for strong action to avoid any further increase.

The Government Tourism Policy<sup>8</sup> highlights that Britain scores weakly on perceptions of natural beauty, one of the five most important criteria for attracting visitors. So we need to strengthen the performance of our visitor economy in the areas where it is relatively weak, in order to maintain the international competitiveness of the UK as a destination. It is therefore critical that our protected landscapes and wider areas of tranquillity are protected from intrusion by aviation.

##### **Rural areas**

The CAA’s Report (ERCD 1207, Paragraph 6.4) says there is a strong argument that any policy protecting Quiet Areas should apply both inside and outside an agglomeration, and we support this view.

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<sup>7</sup> [www.cpre.org.uk/resources/countryside/tranquil-places/item/1756-englands-fragmented-countryside-south-east-and-london-intrusion-statistics](http://www.cpre.org.uk/resources/countryside/tranquil-places/item/1756-englands-fragmented-countryside-south-east-and-london-intrusion-statistics)

<sup>8</sup>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/78416/Governme nt2\\_Tourism\\_Policy\\_2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/78416/Governme nt2_Tourism_Policy_2011.pdf) Appendix A

Everyone should be able to access space where they can 'get away from it all'. It is therefore important that areas of tranquillity are protected from aviation noise, whether in large parks or accessible natural greenspace in or near urban areas, or more generally in the countryside.

The 'Report on the Definition, Identification and Preservation of Urban and Rural Quiet Areas'<sup>9</sup> recommended that the upper average noise limit criterion for rural quiet areas should be 40 dB Laeq, 24h or its Lden equivalent.

The requirement of the European Noise Directive of maintaining, and where possible improving, the existing noise environment is the standard against which proposals must be measured.

### **'Balance'**

It is impossible to 'balance' noise against other environmental impacts or benefits. Noise is not comparable to global warming emissions, and there is no 'common currency' by which they can be compared.

We disagree with the idea of balance between impacts and benefits. There is a need for any changes to produce a reduction of impacts and an increase in benefits, or as at least an increase in benefits with no increase in impacts, or reduced impacts with the same benefits. The idea that if you receive economic benefits then that can be traded with increasing damage, is clearly untenable, and in the case of noise, for example completely against the European Noise Directive (END). Hence there is a need for minimum standards and proper assessment.

The only situation in which there might be a need to 'balance' different environmental impacts is when an impact, such as noise, has been reduced to such a level that further reduction would bring no benefit.

### **Noise**

Grant Shapps, the former housing minister, has highlighted the damage done by noisy or disruptive neighbours to communities. "My view for a long time has been that the voice of the victim seems to be the last thing taken into account, rather than the first thing."<sup>10</sup> We hope that sufferers or potential sufferers of aviation noise will now be the first to be considered in any proposals.

In the rejection of expansion at Coventry Airport<sup>11</sup> the Secretaries of State concluded that the harmful impact and the conflict with sustainability objectives was not outweighed by the socio-economic and other benefits. We trust that such analysis will be used to both protect residents and provide clarity to air transport operators.

The economic damage caused by noise is very difficult to calculate, but one estimate based on 'quiet areas' in urban locations gives an annual value between £19m and £1.4 bn, which shows the difficulty of estimation. The same report caveats that 'trying to put an absolute price on accessible

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<sup>9</sup> DOC REF: 7/7/2003 7/7/2003 DATE: 6/7/2003 4E 59492 Symonds Group Limited

<sup>10</sup> <http://www.telegraph.co.uk/news/politics/9498457/Grant-Shapps-III-lead-fight-against-neighbours-from-hell.html>

<sup>11</sup> [www.uk-airport-news.info/coventry-airport-news-160607.htm](http://www.uk-airport-news.info/coventry-airport-news-160607.htm) and [www.communities.gov.uk/pub/382/coventryairportsiskinparkwaywestcoventry\\_id1511382.pdf](http://www.communities.gov.uk/pub/382/coventryairportsiskinparkwaywestcoventry_id1511382.pdf)

quiet or relative quiet undermines the very richness of the characteristic". In other words we should value quiet areas for themselves, and protect them properly. ("The economics of quiet areas – final report"<sup>12</sup>).

Noise affects health in a variety of ways – for example the wider costs of dementia are put at £22.7bn a year, and dementia has a link to higher blood pressure which in turn is linked to higher noise levels. According to the Department of Transport's evaluation of less disturbing road vehicle noise (dft\_roads\_pdf\_038524.pdf) a reduction of 1 dB was worth £524m per annum in 2004. DEFRA's research reports that road traffic noise costs over £7bn a year<sup>13</sup>, while the costs of just acute myocardial infarction, stroke and dementia caused by road noise (which is less disturbing than aviation noise) is £1bn in the agglomerations surveyed for the European Noise Directive. The report "Quantifying the links between environmental noise related to hypertension and health effects"<sup>14</sup>, recognises that the figure is an under-estimate as it covers the costs to the individual not the health care costs nor the wider costs to society, which can be far higher, and this report only covers new cases of three diseases (not pre-existing cases becoming worse) and only for the populations in agglomerations (about 43% of UK population). Reducing noise provides health benefits so also reduces the costs the NHS of medical care and prescribed medicines, and improves learning in schools and better productivity at work.

### **The European Noise Directive (END)**

A logical approach to managing noise suggests using the European Noise Directive (END, 2002/49/EC) as the baseline. The END aims to 'define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to the exposure to environmental noise.' This is to be achieved by 'informing and consulting the public about noise exposure, its effects, and the measures considered to address noise, in line with the principles of the Aarhus Convention', and 'addressing local noise issues by requiring competent authorities to draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good'.

Hence this requires that noise becomes no worse, in particular that quiet areas are maintained, and that noisiest areas are made quieter.

Using this approach avoids the need for arguments over the potential monetary or other values of noise.

### **Noise Metrics**

It is well known that aircraft noise is a very complex subject, so it is essential that the clearest metrics are used by decision makers, who are unlikely to be noise experts, and for public explanations. Omega<sup>15</sup> and others<sup>16</sup> have reported research showing that that a suite of metrics providing information on flight paths, number of flights at peak times and maximum sound levels would be

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<sup>12</sup> [www.defra.gov.uk/environment/quality/noise/research](http://www.defra.gov.uk/environment/quality/noise/research)

<sup>13</sup> [www.gov.uk/government/policies/protecting-and-enhancing-our-urban-and-natural-environment-to-improve-public-health-and-wellbeing](http://www.gov.uk/government/policies/protecting-and-enhancing-our-urban-and-natural-environment-to-improve-public-health-and-wellbeing)

<sup>14</sup> 2009 HSL [www.defra.gov.uk/environment/quality/noise/research](http://www.defra.gov.uk/environment/quality/noise/research)

<sup>15</sup> [www.omega.mmu.ac.uk/Events/OMEGA%20Noise%20Report%20Final%2026-2-09%20RD%20270209.pdf](http://www.omega.mmu.ac.uk/Events/OMEGA%20Noise%20Report%20Final%2026-2-09%20RD%20270209.pdf)

<sup>16</sup> eg [www.fican.org/pdf/supplemental\\_metrics.pdf](http://www.fican.org/pdf/supplemental_metrics.pdf)

particularly useful.

### **British Standard BS 4142:1997**

This standard describes a method for assessing whether the noise referred to is likely to give rise to complaints. It may be helpful in environmental planning and may be used in conjunction with recommendations on noise levels and methods of measurement published elsewhere.

BS 4142 takes into account background noise and the tonal effects of aircraft noise for which it requires a 5 dB penalty, and hence provides a more realistic comparator which is already widely known and used by professionals in the acoustic field.

Background noise measurement is important because it affects how humans react to aircraft noise.

For Tonal noise, we have heard complaints at some airports about buzz-saw and whining engine noise, particularly on approach about 20 miles away from an airport. The cause is understood to be the huge fan on the front of a modern high ratio bypass turbofan engine. It produces noise with a large tonal content which explains the whine. Some are worse than others depending on the bypass ratio (the bigger the bypass the harder the front fan has to work and the greater the risk of the blade tips going supersonic and making harsh noises). It is also compounded by the extent to which individual operators are prepared to bear the overhead cost of noise-suppression treatments: we understand that Singapore Airlines' A380s carry around 2 tonnes of additional kit at the front of the nacelles so as to meet Heathrow requirements for landings at night.

The CAA report (Paragraph 5.30, ERCD Report 1207, June, 2012), refers to research which shows that the louder the aircraft noise with respect to background levels, the greater the percentage of visitors who feel annoyed, so this supports the use of BS 4142.

### **'C' weighting of sound levels**

We continue to support a move away from the 'A' weighting, because that has been used for purely historical reasons when sound level meters were unsophisticated, and other weightings were more difficult to provide in one instrument. It does not reflect the predominately low frequency sounds of aircraft nor the tonal nature of such sounds, and the 'A' weighting was never intended for such use.

Unfortunately a perverse effect of using the A weighting has hidden changes in noise levels which would be revealed if other weighting were used. Research by the BBC and others showed that the ITU-R 468 noise weighting more accurately reflects how our ears respond to random noise. A 100 Hz source would have its noise level shown on the A-weighted scale as 18 dB lower than the same sound measured using C-weighting, showing that the 'A' weighting does not fully capture the loud low-frequencies contained in aircraft noise. This was demonstrated at the 2007 Stansted Public Inquiry by the National Trust, showing some 13 db difference between A and C readings. The WHO Guidelines require that where the two weightings give differing results, the C data should also be provided. Using 'C' weighting would more accurately reflect the effects of the tonal noise heard from aircraft. Further acoustic quirks are that lower frequency sounds have greater penetrating effect, they do not obey the inverse square law and loudness doubles for smaller increases in sound level, and are thus much more annoying than might be expected.

The recent report from the European Network on Noise and Health (Ennah) supports the use of 'C'

weighting especially for assessing aircraft noise and its effects on health and well-being<sup>17</sup> .

### **The 'Sydney metric'**

The 'Sydney metric' such as N70, which has been shown to provide a better correlation to how people experience aircraft noise, would be a very useful indicator.

### **Maximum Sound Level, Lmax, and Sound Exposure Level, SEL**

Both Lmax and the SEL show the maximum sound levels experienced. SEL may be better than Lmax, because it includes both the peak noise level and the length of time of the individual noise event, so can give better representation of noise from both fast moving commercial aircraft and slow but noisy microlights.

### **Average Noise Levels, Leq**

Although the END uses the averaging metric of Lden, which has some use as a historic comparator, it is not very helpful for aircraft noise. The Ennah report above, also confirms that Leq averaging is not a useful indicator, and that more attention is needed in relation to low frequency noise and health.

Averaging aircraft noise, which by its nature is an intermittent loud noise, gives a misleading impression. The Leq metric only increases by 3dB if the number of events is doubled, which is clearly misleading as to the impact of such a change.

The 'Attitudes to Aircraft Annoyance Around Airports (5A)' report<sup>18</sup> shows that annoyance is inherent to noise but that it is not only correlated to physical sound characteristics. Noise exposure, and its physical characteristics, account for about 25-30% of the variance in annoyance (*Miedema, Oudshoorn, 2001*). Hence using standard noise index-associated contours does **not** reflect the value or the actual annoyance of the residents of communities concerned.

The Final Report (April, 2006) also showed that a unit increase in noise is more noticeable than a unit decrease, (ie the negative value of a noise increase cannot be balanced by the positive value of the same noise decrease).

Threshold effects were examined in the SP1 movements model with thresholds at 45, 50 and 55dB(A) tested, and contrary to expectations, there was no support for the presence of threshold effects.

The valuation of changes in aircraft movements does vary, as would be expected, with the base level of aircraft noise in that the unit value of a change becomes higher as the base level of noise becomes higher.

The recent paper, 'Trends in aircraft noise annoyance: the role of study and sample characteristics'<sup>19</sup> says that: '*A significant increase over the years was observed in annoyance at a given level of aircraft noise exposure*'.

Continuing the use of Leq as a rough indication of relative noise means that a much lower level must

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<sup>17</sup> [www.ennah.eu/assets/files/ENNAHFinal\\_report\\_online\\_19\\_3\\_2013](http://www.ennah.eu/assets/files/ENNAHFinal_report_online_19_3_2013)

<sup>18</sup> [http://www.eurocontrol.int/eec/public/standard\\_page/proj\\_5A.html](http://www.eurocontrol.int/eec/public/standard_page/proj_5A.html)

<sup>19</sup> (<http://www.ncbi.nlm.nih.gov/pubmed/21476651>)

be used, as the weight of evidence, including that from the ANASE study,<sup>20</sup> showed that the averaging process used to define those locations where “significant community disturbance” occurs is fundamentally flawed and that many people are annoyed or disturbed by levels much lower than 57 dB Laeq. See also, for example Technical Report 11/2010, by the European Environment Agency and 'The Quiet Con' (HACAN) which elaborates on this.

### **Noise Level Targets**

#### **World Health Organisation (WHO)**

The Government has previously committed to the reduction of noise levels to the World Health Organisation noise standards (in the Consultation stage 1, Night Flying restrictions at Heathrow, Gatwick and Stansted, 2004)(WHO Guidelines for community noise 1999, and the Night Noise Guidelines for Europe, WHO 2009, E92845, ISBN 978 92 890 4173 7).

The UK is already a signatory to the WHO Charter on Environment, Transport and Health which includes the WHO community noise guidelines. As a signatory, there is an expectation that the Government will work towards achieving this goal.

However we have seen little evidence of any progress – indeed the noise levels seem to be continually increasing. So much stronger action is required to ensure achievement of the Guidelines.

We consider that a measurable objective is vital, so this means a standard for all to strive for. We note that the UK is in the minority among EU states for not having legally binding noise limit values (EUR-Lex – 52011DC0321 – EN). So we support the Government's commitment to achieve the WHO values for both day and night noise as the measurable objective.

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[\(http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/aviation/environmentalissues/Anase/](http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/aviation/environmentalissues/Anase/)

### **Other Targets or Metrics**

We strongly object to any proposal to use noise-per-flight metrics because it is the total noise which matters to people and the countryside. Noise-per-flight metrics may be useful to aircraft designers and operators for use to estimate the value of changing aircraft, but that is not relevant to the management of operational noise.

Noise disturbance from aircraft relates to the aircraft type and the number of air transport movements or flights so it is no use using the number of passengers for noise envelopes as passenger numbers will not directly affect noise levels.

We do not think that a reduction in the number of people affected by noise is a sufficient policy objective, as it ignores the relative effect of noise on quiet areas, which may have few people.

An objective to limit, and where possible reduce the number of people affected is insufficient because it implies allowing an increase in noise. The objective must be in line with the European Noise Directive (END) which requires that there is no increase in noise and that the noisiest areas should be made quieter.

For historical comparison, the use of contour areas may be useful, as that will cover both people and land which may be countryside (and so need protection). In addition, reducing contour areas will reduce the number of people affected. Although a hectare reduction of a contour in London will improve life for more people than a hectare in open countryside, this is relatively unimportant as airports are fixed, and what is under consideration is how the existing contours can be made smaller.

There is a relatively simple relationship between noise reduction and area affected – for each 3 dB noise reduction area increase by 1.6 times, so if 10 sq.km. are affected by the 57 dB level, then 54 dB will affect 16 sq. km.

### **Reducing Noise**

Obviously reduction at source is the most effective way to reduce noise. Hence the essential need is to have aircraft noise emission targets that keep ahead of the growth of air traffic, so that there is an actual reduction in noise levels. Hitherto, quieter aircraft have made little difference because the growth in traffic has far exceeded the reductions in noise emissions achieved.

So there is a need for not only targets for noise reductions per plane, but also targets for reduction in total noise, with restraint in the growth in air transport movements if the targets are not met.

The END requires actual reductions in noise, so simply reducing the noise emissions per plane is not enough.

We support the aim for continuous improvement, and support environmental management systems, such as the ISO 14000 standards.

## **Airport Noise Standards and Management**

We consider that all airports should have noise control regimes at least as good as those for the currently designated airports. A particular aspect of the regime at the designated airports is that: "The quotas allocated to each airport operating the system are gradually reduced year-on-year in order to achieve long term reductions in the impact of night time aircraft noise." (ERCD Report 1104 June 2011). This is a very simple but effective way of reducing the noise impacts, and should be applied to all environmental impacts as part of an environmental management system. Hence we have great concerns at allowing a 'free-for-all' approach of agreeing controls locally, which tends to mean having the fewest restrictions.

At present noise limitations for airports range from the clearly specified requirements for the Designated airports, down to those with no effective limits. This means that airport operators lack clear targets, the public and the local authorities are often unclear about noise limitations and noise experts have to research each airport's situation to know what standards are relevant. As noise is such a complicated subject, clarification is required.

Hence there is a very strong need for minimum standards, such as those listed above.

The present arrangement whereby the Local Authority in whose area the airport is located sets the airport noise controls causes many problems, because the aircraft affect neighbouring authorities who have no authority over the airport, although they may be consulted. This is apparent at many airports, for example Manston, Luton, Gatwick and Farnborough (Hants).

Consequently, to avoid uncertainty and disputes between local authorities or complaints from residents, there is a requirement for an equivalent to the current designation standards for *all* airports.

### **Operating restrictions**

#### *Relationship of ICAO certification Noise Levels to actual in-use noise levels*

The HACAN Response to the CAA Consultation on Future Airspace Usage<sup>21</sup> referred to: 'a letter from Dr Darren Rhodes of CAA/ERCD, 10th March 2005 saying that: '...ICAO is currently reviewing the noise certification process; the UK is chairing this task. Whilst this is naturally a long-term initiative, one item identified is consideration of a possible supplementary approach noise certification point more distant from the airport, where the aircraft would be in a configuration (different from that) required by the current demonstration test.' Subsequently, we understand, the ICAO work was discontinued at the request of the industry. It should be restarted.'

For approach noise, the ICAO certification is based on testing the noise the plane makes at a monitor 2km from touchdown - i.e. in the vicinity of the airport. That may not be appropriate to discriminate between planes for communities who suffer disturbance from approach noise at considerably greater distances from the airport.

The Committee on Aviation Environment Protection (CAEP) 7<sup>th</sup> Meeting, Montreal, 5 February 2007<sup>22</sup>, included the 'Report of WG1 Task concerning the future of the Noise Certification Scheme',

<sup>21</sup> [www.hacan.org.uk/resources/.../caa.airspace.response.from.hacan.pdf](http://www.hacan.org.uk/resources/.../caa.airspace.response.from.hacan.pdf) )

<sup>22</sup> [http://www.tc.gc.ca/media/documents/ca-opssvs/caep7\\_wp34.pdf](http://www.tc.gc.ca/media/documents/ca-opssvs/caep7_wp34.pdf)

and as Dr Rhodes suggests, it appears that the WG agreed that the current classification system does not work well for points "more distant from the airport" ,(page 22/55:

*"4.5 For arriving aircraft there are two locations at which significant numbers of people are highly annoyed, between 0 and 3 km and between 9 and 12 km. The certification point at 2 km is representative of the first location. The group recommends that the "problem" of noise arising from arriving aircraft at locations far away from the airport be studied by WG2. "* A report from the WG2 on this inconsistency has not been found.

The data showing very little difference between approach noise from the A380 and 747 planes over Barnes and Chiswick proves that there is a serious issue with the current ICAO certification relating to new, and supposedly less noisy planes. This also confirms previous CAA work which showed that aircraft of similar Certification rating could have noticeably different noise emissions in actual use.

### **Night noise**

It is important that the precautionary principle is applied, as that is part of the NPPF, so night flights should be banned. If night flights are not to be banned, we would expect to see real evidence of the need for any proposed night flights.

Banning night flights would be economically beneficial, as well as better for health, as has been shown, for example by CE Delft, January 2011.

Air-freight transport spends a small proportion, at 17%, in the airport to airport segment, out of its total travel time of 2 to 5 days. Hence banning night flights would make little difference to overall travel time, as the main delays occur on the ground. This was shown in the evidence to the Commission for Air traffic Noise, Frankfurt, November 2011.<sup>23</sup> Subsequently the German high court approved on 14/3/2012 a regulation for a permanent total night flight ban between 23.00 – 05.00 h at Frankfurt- a major German hub airport, showing that it is practical for large airports in successful European economies to have a proper night flight ban.

The CAA reports that awakenings from sleep rarely (but may occasionally) occur when level inside is below 45 dB Lmax, and this correlates to an outdoor noise level of 60 dB Lmax for partially open windows (ERCD Report 1104, June 2011).

However, for the night period, the WHO Night Noise Guidelines for Europe (WHO 2009, E92845, ISBN 978 92 890 4173 7) recommend 40 dB Lnight.

Hence these should be used for the maximum allowable noise levels for night time.

The 'night' period should provide at least 8 hours of uninterrupted sleep period from 11 pm to 7 am.

We support the proposal for costs to airlines for night slots to reflect the full costs on society including noise. Likewise we support requiring night landing fees to be set to avoid perverse consequences.

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<sup>23</sup> [http://cms.uni-kassel.de/unicms/fileadmin/groups/w\\_030110/Publikationen/Nr. 72\\_Verlagerungspotentiale\\_von\\_Nachtfluegen.pdf](http://cms.uni-kassel.de/unicms/fileadmin/groups/w_030110/Publikationen/Nr. 72_Verlagerungspotentiale_von_Nachtfluegen.pdf) English translation is available

### **Noise limits, monitoring and penalties**

We support strong incentives for noise reduction and noise limits together with monitoring and enforcement, and measures such as differential landing fees. However the differential charges must be standardised at all airports to avoid perverse incentives to divert aircraft to less suitable airports.

There should be a minimum penalty value such as £1500 per tonne MTOW for initial 3 dB over limit, which would increase with the standard scale of fines (Criminal Justice Act 1982, as amended). Having the penalty as a per tonne value, will ensure it is proportionate to the 'value' of the flight concerned.

A necessary pre-condition for all monitoring is for the airport to have adequate aircraft tracking equipment. Such equipment is available from £500, so there is no reason why the smallest airport (as opposed to aerodromes) cannot have this. So we request airport tracking equipment to be required and also that all the aircraft using the airport have transponders for the tracking equipment to identify them.

Note that most gliders and similar aircraft, for whom transponders could be problematic, usually use aerodromes, not airports, so transponder cost will not be an issue. Powered aircraft which tow gliders (as opposed to winching) should of course be required to have transponders

There should be reference to required standards, such as ISO 20906:2009 'Acoustics – Unattended Monitoring of aircraft sound in the vicinity of airports'.

We strongly support full implementation of 'Reducing the Environmental Impacts of Ground Operations and Departing Aircraft, An Industry Code of Practice', 2012, and the use of Continuous Descent Approach ([www.caa.co.uk/docs/68/Basic\\_Principles\\_CDA.pdf](http://www.caa.co.uk/docs/68/Basic_Principles_CDA.pdf)). In addition all airports should publish details of airlines which fail to achieve the requirements of these procedures. This is now being done by Gatwick, for example, and this provides a strong first incentive towards encouraging compliance, but fines are also needed for those who frequently contravene the requirements.

Departing aircraft typically achieve an 8 degree climb, which reduces the area affected by the loudest noise, so increasing the 3 degree glide slope usually used under CDA would provide further improvement.

### **Landing and Take-off Fees**

We fully support differential landing fees to encourage quieter aircraft. We think that there should be guideline values, so that if the quietest aircraft is charged 'U' the 'Unit' fee, then aircraft twice as noisy will pay 2\*U, four times as noisy 8\*U, and eight times as noisy 32\*U. This increasing scale would emphasise the increasing impact of the noise.

While current fees tend to be based on ICAO certification, we disagree with arguments against Quota Count (QC) that larger aircraft could be penalised relative to smaller ones because they have larger footprint values. Strangely, noise certification regulations permit heavier aircraft to generate more noise, so there can be a 10 dB difference in aircraft nominally of the same certification, but of different weight (ERCD 0307 December 2003). The objective is to reduce the area affected by noise (and thus the number of people disturbed), so aircraft affecting a larger area should be penalised in order to encourage quieter aircraft.

However if QC values are to be used, then a rigorous review of them is required, to assign the QC to actual noise levels rather than certified because noise levels in use can be a whole QC different, and to remove the 9 EPNdB reduction applied by DfT for arrival noise, because most night flights are arrivals, so this reduction adversely affects people under the arrival route. Also the scale is now out of date, with some aircraft QC 0.25, and decreasing numbers above QC 4. The alternative of using the Effective Perceived Noise Level (EPNL) has the benefit of being used for the international certification of aircraft and perhaps better reflects the annoyance caused by aircraft as it includes duration and the tonality of aircraft noise (ERCD Report 1104, June 2011), thus indicating the effective disturbance caused by the aircraft.

We therefore support the use of differential landing fees, and for this differential to ensure fees reflect disturbance, especially at night.

### **Compensation Schemes**

Our view is that the first priority is for noise levels to be reduced so that compensation schemes would not be required. For many people, compensation or providing noise insulation does not remove the annoyance, so the next alternative is to offer to purchase the properties affected. Often airport staff would be happy to live in such houses, so the cost to the airport would be minimal. The third step is to offer either compensation or for provision of noise insulation.

Our assessment of most schemes is that they are meagre and inadequate. The noise levels seem much too high in view of the WHO guidance, and it would be better to have graduated schemes starting from lower noise levels. In addition to the average noise levels, we also recommend stronger support for use of individual maximum noise levels, as these are what wake people up.

With regard to compensation for noise increases this is actually against the END which requires quiet areas to be maintained and noisiest areas to be made quieter. This means that if an airport wants to expand it must use quieter aircraft, which is also consistent with the targets for noise contours to cover smaller areas over time, and the objective for continual improvement.

CPRE Protect Kent  
August 2013

## **Proposal to Re-Establish Controlled Airspace in the Vicinity of London Southend Airport**

### Consultation response from Protect Kent *The Kent Branch of the Campaign to Protect Rural England*

December 2013

#### General Comments

Our primary concern is the potential impact on Kent. Southend Airport activities primarily impinge on North Kent, although their flights may cause flights from other airports to be directed over Kent, so that this impact needs to be assessed as well. We are not clear from reading the Consultation Document as to whether that impact has been fully assessed, and we consider that this needs to be resolved before the proposals are implemented.

As a general principle, we support attempts to ensure that as many flights as possible go over water (in this case the Thames estuary) to avoid impacts over land, so we ask that the proposals be carefully reconsidered to see if further movement away from land is possible.

We also support moving flights upwards, as referred to in the Consultation, and as noted in some examples below. Again we would urge reconsideration to see if more can be done towards achieving this.

We made a submission to the Airports Commission on its Noise Discussion document (attached), which has particular relevance to these proposals, so we request that the proposals be evaluated in relation to our concerns about noise described therein.

Finally, the experience of our members in making complaints about individual aircraft is that without transponders on the relevant aircraft it can be difficult to pinpoint a particular aircraft and its location at the time of a complaint. This problem can be overcome by the use of transponders, and so we strongly support the requirement for all aircraft to have them (with obvious exceptions for aircraft such as gliders).

We therefore hope that you, as an airport, will use your influence to encourage their use, and in the case of this consultation to implement the proposals using an airspace classification that requires transponders.

Our comments in relation to your Consultation Document are presented *in italics* below the relevant sections of your text, reproduced for clarity.

3.1.1 LSA currently lies within uncontrolled airspace (Class G airspace). Uncontrolled airspace is airspace in which any category of aircraft can operate freely without reference to any ATC Unit, subject only to compliance with the Rules of the Air Regulations (RotAR).

3.1.2 An Aerodrome Traffic Zone (ATZ) is established around the airport with a radius of 2.5 Nautical Miles (NM) from the Aerodrome Reference Point (ARP) from the surface to 2000ft above aerodrome level (aal). This airspace extends to approximately 2NM along the final approach and departure paths and is the only airspace within which all aircraft are required to make their presence known to Southend ATC and comply with ATC Instructions.

3.1.3 From 3500ft above mean sea level (amsl) upwards, LSA is overlaid with Class A controlled airspace known as the London Terminal Control Area (LTMA). The configuration of the LTMA is shown at Figure 6. The LTMA is under the jurisdiction of NATS London Terminal Control (LTC) and has been established and developed over many years to serve the high density air traffic operations routing to and from the major London Airports

5.6.1 In summary, the turbine blades, when rotating, reflect radar energy as moving targets in the same manner as aircraft, but sometimes with a reflected energy level several times greater than reflections from an aircraft. Furthermore, the effects caused by the rotation of the blades vary according to the aspect of the turbine disc to the radar source.

*Comment: Our understanding is that there are technological solutions to this issue, for example, Aveillant's Holographic Radar™ which clearly distinguishes between moving objects with differing behaviours and 3D trajectories (see: [www.aveillant.com](http://www.aveillant.com)). It is therefore for the aviation industry to put its resources into resolving this, to reduce the impacts of aircraft on people caused by aircraft being re-routed because of wind farms.*

*It may be that mandating transponders would also help in relation to wind farms, because transponders would enable identification of aircraft even if there were problems with the radar.*

5.6.7 Whilst it may have been practicable to establish a marginally smaller volume of controlled airspace to the north-east of LSA to meet solely the regulatory requirements for IFP containment, nonetheless a small increase over the minimum is justified in this case to mitigate the effects of the wind farms on the provision of radar service over and in proximity to the established wind farms. The alternative would be the provision of Transponder Mandatory Airspace adjoining, vertically and laterally, any alternative controlled airspace configuration.

*Comment: We strongly support the use of Transponders because of the benefit they provide in easily identifying aircraft, especially where they are flying inappropriately. Hence we support provision of Transponder Mandatory Airspace instead of enlarging controlled airspace, because Transponder Mandatory Airspace would have the effect of encouraging greater use of transponders.*

8.2.6 Class D airspace does not require the mandatory carriage or operation of transponders in aircraft.

*Comment: We strongly support the use of Transponders because of the benefit they provide in easily identifying aircraft, especially where they are flying inappropriately. Hence the classification should be raised to that which does require transponders, as it would also reduce the workload on air traffic controllers.*

8.7.4 Once again, LSA is aware that this is a contentious airspace segment and a detailed post-Focus Group review was carried out by the LSA airspace design team in conjunction with NATS LTC and LAMP airspace planners. Regrettably, however, it has been concluded that there are no circumstances in which an earlier climb above 3000ft can be specified in LSA departure procedures. *(Our emphasis)*

8.10.2 CTA-4 provides the necessary controlled airspace continuum for departing aircraft climbing into the LTMA and Airways System. As noted previously, discussions with NATS LTC and LAMP planners indicates that there will be no opportunity for earlier climb of departing aircraft above 4000ft into the LTMA, thus CTA-7 is necessary to ensure controlled airspace containment in accordance with the CAA's requirement. *(Our emphasis)*

*Comment: We strongly support aircraft flying as high as possible to reduce the impacts on those below the flight paths, therefore we request that all involved seek solutions to enable earlier achievement of higher altitudes.*

11.5.3 Conversely, it is accepted that some pilots of light aircraft prefer to operate their flights outside controlled airspace notwithstanding that the airspace classification and airspace arrangements would permit access if they so wished. For these pilots, the introduction of the proposed controlled airspace may result in a small, but unquantifiable, change to the distribution of flights by light aircraft.

*Comment: We would appreciate receiving some indication of the potential impacts on Kent of such change to the distribution of light aircraft flights, please.*

11.6.3 The anticipated improved transfer of control arrangements between LSA and NATS LTC will enhance the opportunity for better climb profiles and descent profiles for CAT flights, which will reduce fuel burn and emissions. However, higher initial operating levels cannot be specified within in flight procedures for departing aircraft due to the interactions with other routes and traffic in the LTMA and the safety requirements for terminal airspace operations. For arriving flights the ability to remain at higher levels for longer must be balanced against the slightly longer routings involved.

*Comment: We strongly disagree with any suggestion of 'balance'. Noise and global warming emissions cannot be balanced because they are totally different phenomena; therefore the objective must be for both of them to be reduced.*

*We consider that the arriving flights' higher routings could enable more frequent continuous descent approaches which could provide both noise and emissions reductions, and thus be a win-win. The European noise Directive (END) requires that noise be reduced; this is a legal requirement. The Airport needs to consider how any increase in commercial flights can meet that requirement.*

11.8.1 Technical guidance material from the CAA does not require LSA to make an assessment of air quality as neither the airport nor the surrounding airspace lie within an Air Quality Management Area (AQMA).

*Comment: Although the airport and its environs are not within an AQMA, the airport should assess whether the increased air traffic with its concomitant road traffic would put the area at risk of being declared an AQMA, and if so take appropriate action to avoid that.*

11.3.2 In the complex airspace arrangements in the LTMA in the vicinity of LSA radar

vectored of departing aircraft, both from LSA and from LCY and other Airports, is and will remain essential to ensure the most effective and efficient use of the airspace as a whole.

*Comment: Although the 'effective and efficient use of airspace' is an objective of the aviation industry, this does not over-ride the industry's responsibility to the general public to control and reduce the impacts of its activities.*