



Department
for Transport

Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions

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Date to be inserted

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Foreword

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1. Introduction

- 1.1** Section 70(2) of the Transport Act 2000¹ requires the Civil Aviation Authority (CAA) to take account of any guidance on environmental objectives given to it by the Secretary of State. In 2001, the Secretary of State gave directions² to the CAA under Section 66(1) of the Transport Act 2000 setting out the circumstances when the CAA must also seek the approval of the Secretary of State for airspace changes which might have a significant effect on the level or distribution of noise and emissions. This was followed in January 2002 when the then Department for Transport, Local Government and the Regions issued specific guidance to the CAA which has subsequently formed the basis of how the CAA interprets its environmental duties in respect of approving changes to the UK's airspace structure. Since 2002, there have been a number of significant events which have, or will do so in the foreseeable future, affect UK airspace. These are:
- a.** in December 2003, the Department for Transport issued The Future of Air Transport White Paper which recognised the need to improve the efficiency of UK airspace and it looked to the CAA, as the independent regulator responsible for the planning and regulation of UK airspace, to bring forward a structured programme for the redesign of UK airspace. The White Paper also recognised the importance of the need to take into account the environmental impacts arising from airspace changes. The need to develop a more strategic approach on airspace was endorsed subsequently by the Transport Select Committee in its 2009 report on “the use of airspace”;
 - b.** since 2009, the CAA has been leading work, with support from the Department for Transport, the Ministry of Defence, NATS and the Irish Aviation Authority³ to develop the Future Airspace Strategy (FAS) for the period up to 2030. The CAA's primary objective is to develop a “safe, efficient airspace that has the capacity to meet reasonable demand, balances the needs of all users and mitigates the impact of aviation on the environment”. This national strategy is aligned fully with our commitments under the Single European Sky (SES) legislation including implementation of the Single European Sky Air Traffic Management Research (SESAR) programme and our engagement with the Irish on the UK/Ireland Functional Airspace Block (FAB). Following development and consultation with industry, the Strategy was presented in June 2011 and set out the need to address: existing pressures on airspace; the challenges arising from future air traffic growth; the development and implementation of new technology; and the requirement to mitigate

¹ Section 70(2) of the Transport Act 2000 can be found at Annex A of this Guidance.

² These Directions can be found at Annex B of this Guidance.

³ The Irish Aviation Authority's involvement is because of the joint UK/Ireland Functional Airspace Block which was established in June 2008 under the Single European Sky initiative.

aviation's impact on the environment. The Strategy also took into account the Coalition's position on additional runways and its desire to reduce aviation's contribution to climate change, a factor which has become increasingly important since 2002;

- c.** in December 2012, the industry-led FAS Industry Implementation Group launched its plan for delivering Phase 1 of the FAS up to c2025. A considerable component of the plan will entail the redesign of the UK's terminal airspace to make it more efficient by using new procedures such as Performance-Based Navigation and better queue management techniques; and
 - d.** in March 2013, the Government launched its Aviation Policy Framework⁴ which set out the Government's objectives and principles to guide plans and decisions at the local and regional level, including with respect to airspace. This document replaced the 2003 Future of Air Transport White Paper.
- 1.2** It is therefore now appropriate that the Government revisits and refreshes the 2002 Air Navigation Guidance to the CAA to take into account these policy and technical developments whilst remaining consistent with the overall legislative framework.
- 1.3** Underpinning this new Guidance are two key objectives. The first is the recognition that the UK needs to improve the efficiency of our UK airspace network and that includes mitigating the environmental impact of aviation. Secondly, is a reaffirmation of the need to consult local communities near airports when airspace changes are being considered in the vicinity of these airports. The Government recognises that it is not an easy task to always balance the interests of local communities and relevant stakeholders with those of the aviation industry, but we are confident that the CAA will continue to play an active role in ensuring that an appropriate balance is maintained in the future.

Purpose of Guidance

- 1.4** The purpose of this Guidance is to provide the CAA and the aviation community with additional clarity on the Government's environmental objectives relating to air navigation in the UK. However, when considering airspace changes, there may be other legitimate operational objectives, such as the overriding need to maintain an acceptable level of air safety, the desire for sustainable development,⁵ or to enhance the overall efficiency of the UK airspace network, which need to be considered alongside these environmental objectives. We look to the CAA to determine the most appropriate balance between these competing characteristics.

⁴ Aviation Policy Framework, Department for Transport, March 2013.

⁵ Sustainable development has both environmental and economic connotations, the need to enable aviation to grow sustainably if the UK economy is to remain competitive and achieve the objective for growth and employment.

Definition of altitude in this Guidance

- 1.5** Throughout this document, altitude is expressed in feet above mean sea level (amsl) in order to provide a common datum. However, we would expect airspace change sponsors to take account of the altitude of the specific surface level involved when developing their proposals. This is particularly the case when airspace changes involve an altitude lower than 7,000 feet (amsl).

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2. Emissions and local air quality

Emissions

- 2.1** At the global level, aviation is a growing contributor to greenhouse gas emissions (GHG) that cause climate change. The Government's climate change strategy on aviation is to ensure that the aviation sector makes a significant and cost effective contribution towards reducing global emissions. The Aviation Policy Framework sets out the priorities for action on climate change at global, EU and national levels in the aviation context. The focus is expected to remain on actions to target CO₂ emissions in the near future but as scientific evidence of the effects of non-CO₂ emissions becomes clearer it is likely that the approach taken will be revised. The CAA should, therefore, keep abreast of the Government's climate change strategy and priorities as well as broader developments in climate science, especially as they relate to aviation.
- 2.2** The CAA has the opportunity to contribute to the Government's aim of reducing CO₂ emissions by prioritising the most efficient use of airspace including procedures that enable aircraft to climb efficiently, allow direct routings, reduce holding times and facilitate the consistent use of continuous descent and low power/low drag procedures. The potential to maximize CO₂ efficiency is primarily above 7,000 feet (amsl) where local impacts are not a priority. CO₂ efficiency is also a consideration below 7,000 feet (amsl), although at these altitudes it must be balanced with other local impacts. More information on the altitude-based priorities is given in Chapter 4 of this Guidance.
- 2.3** Initiatives to enhance efficiency in the airspace across the UK, such as the SES and introduction of the UK-Ireland FAB, are expected to lead to an estimated reduction of 116,000 tonnes of fuel and 370,000 tonnes of CO₂ between 2012 and 2015.⁶ Although this also includes savings in Irish airspace, it demonstrates the important contribution which a more efficient use of airspace can make to reduce the impact of aviation on the environment.

Local air quality

- 2.4** The Aviation Policy Framework sets out the Government's policy on air quality which is to "seek improved international standards to reduce emissions from aircraft and vehicles and to work with airports and local authorities as appropriate to improve air quality".⁷

⁶ <http://www.nats.co.uk/wp-content/uploads/2012/07/UK-Ireland-FAB-Report-2011.pdf>

⁷ Aviation Policy Framework, section 3.48, page 65, Department for Transport, March 2013

2.5 Aircraft engines, airport related traffic on local roads and surface vehicles all contribute to air pollution around airports. Oxides of nitrogen (NOx) and particulate matter are the two most important emissions affecting the air quality around airports. Studies have shown that NOx emissions from aviation related operations reduce rapidly beyond the immediate area around the runway. Due to the effects of mixing and dispersion, emissions from aircraft above 1,000 feet (amsl) are unlikely to have a significant impact on local air quality. Therefore the impact of airspace design on local air quality is generally negligible compared to changes in the volume of air traffic, and local transport infrastructures feeding the airport.

2.6 While the CAA should prioritise noise below 4,000 feet (amsl), consistent with the altitude-based priorities and the Government's policy to give particular weight to the management and mitigation of noise in the immediate vicinity of airports,⁸ there could be circumstances where local air quality may be a consideration. This could be a situation where prioritising noise creates unacceptable costs in terms of local air quality or might risk breaching legal limits. The CAA should therefore take such issues into account where relevant.

⁸ Aviation Policy Framework, section 3.25, page 60, Department for Transport, March 2013.

3. Noise

- 3.1** Aircraft noise is one of the most important environmental impacts of aviation for communities living close to airports as well as those living further afield under the main arrival and departure tracks. The Government has made it clear therefore that it wants to strike a fair balance between the negative impacts of noise and the economic benefits derived from the aviation industry.⁹ In addition, the benefits from any future growth in aviation are expected to be shared between the aviation industry and local communities.
- 3.2** The Government's overall policy on aviation noise, as established in the Aviation Policy Framework, is to limit, and where possible reduce, the number of people in the UK significantly affected by aircraft noise.¹⁰ The UK aviation industry is expected therefore to address noise from low level air traffic as a local environmental priority in line with the altitude-based priorities set out in Chapter 4.1 of this Guidance. Individual airports should be encouraged to work with the appropriate air traffic service providers to give particular weight to the management and mitigation of noise in the immediate vicinity of their airports.¹¹ This principle is further clarified in the chapter on altitude-based priorities, but it is left to the CAA to determine what should be classed as the "immediate vicinity" taking account of individual circumstances such as location of the airport, numbers of people likely to be affected by noise, and the size and operating characteristics of the aircraft involved.
- 3.3** In implementing this policy, the Government fully recognises the ICAO "balanced approach" principle to aircraft noise management.¹² The CAA has an opportunity to support the Government on the third principle "noise abatement operational procedures", particularly with regard to optimising how aircraft are flown and the routes they follow to reduce the noise impacts.
- 3.4** The CAA can also support those airports considering using the powers available to them to set suitable noise controls at their airports. In addition, the CAA should, where relevant and without compromising its independence, also support the efforts made by airports to mitigate noise where changes are planned which could adversely impact the noise climate, particularly in the case of proposals for new airport capacity or changes to operational procedures. In these cases the Government expects the CAA to consider new and innovative approaches to

⁹ Aviation Policy Framework, section 3.2, page 55, Department for Transport, March 2013.

¹⁰ The Aviation Policy Framework states that the Government will continue to treat the 57dB LAeq 16 hour contour as the average level of daytime aircraft noise marking the approximate onset of significant community annoyance. However, it also makes clear that not all people within this contour will experience significant adverse effects from aircraft noise. Nor does it mean that no-one outside of this contour will consider themselves annoyed by aircraft noise.

¹¹ Aviation Policy Framework, section 2.25, page 60, Department for Transport, March 2013.

¹² <http://legacy.icao.int/env/noise.htm>

regulation and for the industry to innovate in noise management techniques such as the provision of respite for communities already significantly affected by aircraft noise (see Chapter 7.9 of this Guidance).

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4. Specific navigational guidance

Altitude-based priorities

- 4.1** The usual maximum altitude for a Noise Preferential Route (NPR) is 4,000 feet (amsl) and this reflects the long standing view that noise from aircraft flying above this level is much less likely to affect the key noise metrics used for determining significant community impacts. As aircraft continue to climb from 4,000 feet (amsl) their noise impact reduces. Set against this, there is also a need to ensure that aircraft operations are efficient and that their emissions are minimised. So when considering airspace change requests, the CAA should keep in mind the following altitude-based priorities:
- a.** in the airspace from the ground to 4,000 feet (amsl) the Government's environmental priority is to minimise the noise impact of aircraft and the number of people on the ground significantly affected by it;
 - b.** where options for route design below 4,000 feet (amsl) are similar in terms of impact on densely populated areas, the value of maintaining legacy arrangements should be taken into consideration;
 - c.** in the airspace from 4,000 feet (amsl) to 7,000 feet (amsl), the focus should continue to be minimising the impact of aviation noise on densely populated areas, but the CAA may also balance this requirement by taking into account the need for an efficient and expeditious flow of traffic that minimises emissions;
 - d.** in the airspace above 7,000 feet (amsl), the CAA should promote the most efficient use of airspace with a view to minimising aircraft emissions and mitigating the impact of noise is no longer a priority;
 - e.** where practicable, and without a significant detrimental impact on efficient aircraft operations or noise impact on populated areas, airspace routes below 7,000 feet (amsl) should, where possible, be avoided over Areas of Outstanding Natural Beauty (AONB) and National Parks as per Chapter 8.1 of this Guidance; and
 - f.** all changes below 7,000 feet (amsl) should take into account local circumstances in the development of airspace structures.
- 4.2** The concept of altitude-based priorities reflects the Government's desire that only significant environmental impacts should be taken into account when considering the overall environmental impact of airspace changes. Any environmental impacts that are not priorities based on the above altitude-based criteria need not be assessed on the assumption that they would not be significant.

Departure procedures

- 4.3** Departure procedures should be designed to enable aircraft to operate efficiently and to minimise the number of people subject to noise nuisance on the ground, whilst taking into account the overriding need to maintain an acceptable level of safety.
- 4.4** Steeper climb gradients can have environmental advantages and disadvantages depending on the local circumstances of the airport. Where steeper climb gradients immediately after take-off are considered necessary for air traffic control (ATC) purposes, consideration should be given to the effect this may have on the use of noise reduction take-off procedures (including the use of “cut-back”). Maximum permitted noise limits for aircraft taking off have been set by the Secretary of State at Heathrow, Gatwick and Stansted, and by airport operators elsewhere (in some cases in compliance with planning conditions), and the CAA should be aware of these limits.

Continuous Climb Operations

- 4.5** The use of Continuous Climb Operations (CCO) has implications for both noise and CO₂/fuel efficiency. CCO is considered to have an overall neutral impact on noise, but it does involve the redistribution of noise with more noise at the beginning of the flight and less noise further away from the airport as aircraft do not level off at low altitudes.¹³ Consequently, achieving CCO has the potential to reduce fuel burn as aircraft reach efficient cruising levels earlier thus leading to fuel savings and a reduction in the amount of emissions, including CO₂. CCO also means aircraft get above some of the most complex and congested low level airspace more quickly. Once clear of these areas there is generally more opportunity for aircraft to be routed directly onto their chosen path, and thus saves flying time, track miles, and this allows more efficient aircraft operations.
- 4.6** CCO forms a significant component of the FAS and the Government is keen to see it introduced across the UK over the coming years as part of the overall modernisation of the UK airspace network. The CAA is encouraged therefore to continue to work with the aviation community to introduce CCO more widely in the coming years where its impacts are in line with the altitude-based priorities in Chapter 4.1 of this Guidance.

Arrival procedures

- 4.7** Where airports are close to populated areas, landing noise is often seen as a more serious problem than departure noise. This is because of the much improved climb performance of modern jet aircraft and the dispersal of departures between several routes, in contrast to landing aircraft which must follow a straight final approach track at comparatively lower altitudes (for a given range from the airport).

¹³ Reducing the Environmental Impacts of Ground Operations and Departing Aircraft: An Industry Code of Practice, http://www.heathrowairport.com/static/Heathrow/Downloads/PDF/Departures_code_of_practice-LHR.pdf, pg 21, pg 21

- 4.8** A number of factors determine the level and distribution of noise from landing aircraft, such as the alignment of the runway, the location of the runway threshold, the angle of the glide path, the position of holding areas in relation to the final approach tracks, and the associated procedures for integrating landing traffic in the initial and intermediate approach phases. For the foreseeable future, measures targeted at the last of these factors are likely to offer the greatest potential for reducing noise from landing aircraft.

Continuous Descent Operations

- 4.9** Continuous Descent Operations (CDO) relate to continuous descent from cruising altitude. The more common, Continuous Descent Approach (CDA), which typically starts from 6,000 feet, is thus a subset of a CDO. The Government's desire is that radar manoeuvring areas and the positions of holding stacks are designed and managed in ways that will assist and promote the consistent use of CDO and "low power/low drag" (LP/LD) operating procedures.
- 4.10** A code of practice for arriving aircraft was established to address the noise from approaching aircraft in 2001 (revised in 2006) and this includes advice on measures to reduce noise from arriving aircraft, including CDO and LP/LD.¹⁴
- 4.11** When a CDO procedure is flown the aircraft stays higher for longer (in comparison to a conventional approach), descending continuously from the bottom of the stack (or higher if possible) and having no more than one phase of level flight not longer than 2.5nm (which require increase engine thrust) of flight prior to intercepting the glide path. Being higher for longer and using less engine thrust means the noise impact on the ground is reduced (up to 5 decibels) in locations 10–25nm from the airport and directly under the approach path. The use of CDO procedures can also mean significant fuel savings and reduced emissions since less engine power is required.
- 4.12** Consideration should, therefore, be given to how the use of CDO and LP/LD procedures can be promoted in the course of developing new procedures and when considering proposals for changes to existing airspace arrangements. Both procedures should be regarded as "best practice" for use at all airports where local circumstances (such as terrain clearance) do not preclude it.

Navigational accuracy

- 4.13** Navigation has been identified as one of the five components of the overall airspace system as part of the FAS. At the moment the airspace route network in the UK is based on "conventional navigation" whereby required routes are aligned to ground based navigation aids. However, most aircraft in the UK have modern Performance Based Navigation (PBN) technology that does not require ground based navigation aids, but there is no standardisation of how they interpret the conventional

¹⁴ Noise From Arriving Aircraft: An Industry Code of Practice, 2006, second edition.

route structure. Consequently, different aircraft/operators on the same route can often be seen to overfly different areas. The FAS includes a plan to redesign UK airspace based on the use of PBN by 2020.

Performance Based Navigation (PBN)

- 4.14** PBN is the framework that defines the performance requirements for aircraft navigating on an air traffic service (ATS) route, terminal procedure or in a designated airspace. Its two main components are Area Navigation (RNAV) and Required Navigation Performance (RNP) specifications.
- 4.15** The use of PBN will enhance navigational accuracy and introduce a number of key benefits. These include: the ability to reduce the amount of ground-based navigational-related infrastructure needed; a safer and more efficient ATC system requiring less controller intervention; more efficient aircraft operations leading to less cost, flying time and emissions; and the ability to allow more predictable patterns of over flight as well as stabilised arrivals and approaches which can generate less noise. Moreover, if used appropriately, PBN offers the flexibility to circumnavigate densely populated areas. When combined, these benefits will enable a significant improvement to be made to the overall efficiency and capacity of the UK airspace network which will allow the sustainable development of the air traffic network to accommodate future traffic levels.
- 4.16** With PBN, the overall level of aircraft track-keeping is greatly improved for both approach and departure tracks, meaning aircraft will be more concentrated around the published route. This will mean noise impacts are concentrated on a smaller area, thereby exposing fewer people to noise than occurs with equivalent conventional procedures.
- 4.17** Improvements in aircraft track-keeping can also offer the potential for aircraft to be concentrated within a particular part of the NPR if desired, as well as providing the potential for tracks to be alternated to introduce an element of respite for those under the tracks, see Chapter 7.9 to 7.12 of this Guidance. Concentration as a result of PBN is likely to minimise the number of people overflown, but is also likely to increase the noise impact for those directly beneath the track as they will be overflown with greater frequency than if the aircraft were more dispersed. Equally, alternation is also likely to increase the number of people who are affected by aircraft noise (albeit in a more predictable manner) and so should always be introduced only following consultation with the relevant local communities and stakeholders in accordance with Chapter 9 of this Guidance.
- 4.18** The move to PBN will require the updating of existing route structures such as Standard Instrument Departures (SIDs), Standard Terminal Arrival Routes (STARs) and Initial Approach Procedures (IAPs). Updating individual routes in terminal areas can fall into one of two categories: "replication" where the existing route alignment is preserved as much as possible whilst catering for the greater navigational accuracy of PBN, or "redesign" where seeking to optimise the introduction of PBN

will require consideration of a different alignment altogether (for instance when increased runway capacity is a specific objective). The appropriate approach to take will depend on the particular circumstances.

- 4.19** For replication, the requirement is to preserve the existing route alignments as far as possible in the vicinity of airports. However, when a redesign of an airspace route is being considered, the environmental objective should be for the modified route to achieve the optimal package of benefits with respect to the altitude-based priorities presented in Chapter 4.1 of this Guidance.
- 4.20** In view of the importance which the Government attaches to delivering the benefits of PBN at the UK's busiest airports, Chapter 5.11 of this Guidance sets out special provisions for assisting the CAA to oversee its introduction at the designated airports. In addition, the CAA should continue to examine ways in which to take advantage of modern navigation technologies, especially those which have the potential to bring a net environmental benefit and to improve the efficiency of the overall airspace route network.

Helicopters

- 4.21** The CAA should recognise the unique noise characteristics of helicopters and their consequent environmental impact in terms of noise when a change to airspace is proposed under the CAA's Airspace Change Process. Where significant helicopter activity is involved, either where the proposal concerns the amendment to formally established helicopter routes within controlled airspace or where helicopters movements are a predominant factor, the CAA should encourage change sponsors, where operationally practicable, to consider options that minimise the environmental impact of helicopter activity and take account of that impact when assessing proposals.
- 4.22** Where the CAA is aware that airport/aircraft operators are considering local changes to helicopter routings and procedures that fall outwith the Airspace Change Process, the CAA should promote the use of voluntary noise abatement procedures which take into account local circumstances.

Devolved functions and planning

- 4.23** It is recommended that the CAA keep abreast of planning policy and guidance issued by the Government and devolved administrations, especially those regarding noise and air pollution.
- 4.24** In particular the CAA should be familiar with:
 - a.** the National Planning Policy Framework which sets out the Government's planning policies for England and how these are expected to be applied;

- b.** Scotland's National Planning Framework which provides the context for development plans and planning decisions and the Scottish Planning Policy which contains the Scottish Government's expectations for planning;
- c.** Planning Policy Wales which sets out the context for planning policy in Wales;
- d.** any relevant Planning Policy Statements issued by the Northern Ireland Department of Environment;
- e.** any guidance and advice notes issued by the Government or devolved administrations; and
- f.** National Policy Statements for major infrastructure.

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5. Noise Preferential Routes (NPRs)

Origin and definition of an NPR

- 5.1** The concept of NPRs was first established at a number of major UK airports in the early 1960s, but over time the exact definition and purpose of an NPR has become less than clear. This Guidance seeks to provide some clarity therefore on what the Government considers is the purpose of an NPR and to establish a mechanism for adding new or amending existing NPRs at UK airports.
- 5.2** In the early 1960s, it began to be the custom to draw a line on the map to try and identify a preferred SID route for aircraft to fly in order to minimise their noise profile on the ground in the immediate vicinity of the airport, subject to operational requirements. The effect was to create SIDs that up to a specified distance and altitude from the airport would form an NPR and this also had the effect of concentrating departures on a number of dedicated routes. So in the initial stages of the SID, it would also be described as an NPR and share the same characteristics.
- 5.3** It was recognised that not all aircraft would fly the SID perfectly, since changing weather patterns, the navigational accuracy of pilots, and different aircraft types inevitably meant that some aircraft were flying some distance away from the specific line of the NPR. To try and compensate for the variance between the NPR line and the actual flight paths being flown by aircraft, it became an accepted practice to add a geographic swathe of airspace either side of some of the NPR lines. This had the effect of creating a containment area within which departing aircraft should ideally remain when flying below a given altitude as well as aiding the monitoring of compliance with track keeping. This is a common practice today, although a number of NPRs continue to have no swathe attached to them.

The role of NPRs

- 5.4** It has been the view of successive Governments since the 1960s that the balance of social and environmental advantage lies in concentrating departing aircraft along the least possible number of departure routes, whilst remaining consistent with airspace management considerations and the overriding need to maintain an acceptable level of safety. The Government's Aviation Policy Framework recognises the important role which NPRs play in giving effect to this policy and managing the impact of aircraft noise by providing clarity to those living in the vicinity of airports on the likelihood of disturbance from departure noise. Existing

NPRs should therefore continue to operate, but the Government also recognises that with the adoption of new performance based navigation techniques some of the existing NPRs at UK airports may need to change to reflect either long-standing current practice or to benefit from the use of the new systems. Any proposals to change NPRs will, of course, need to be consistent with the legislative framework and with this Guidance.

Ownership of NPRs

- 5.5** The ownership of NPRs in the UK in operation today falls into three categories:
- a. NPRs at the designated airports.** For many years, the Government has used Section 78 of the Civil Aviation Act 1982 to establish NPRs at the 3 largest London airports - Heathrow, Gatwick and Stansted which have been designated in law for the purpose of noise regulation (the so called “noise designated airports”). At present, these NPRs can only be introduced or amended with the approval of the Secretary of State;
 - b. NPRs imposed by local authorities made under Section 106 of the Town and country Planning Act 1990.** Some local authorities have sought to mitigate the noise impact on their communities by imposing special Section 106 orders on non-designated airports within their authority area. These orders set out the obligations imposed on the airport and establish a noise containment NPR which the airport needs to follow for its departing aircraft. These NPRs can only be approved or amended by the relevant local authority and the CAA; and
 - c. NPRs imposed voluntarily by non-designated airports as good practice.** Some airports as a matter of good practice, and with a view to mitigating their local environmental impact, have established NPRs for their airports. These NPRs could be introduced or amended if approval is given by the CAA.

Publication of NPRs

- 5.6** Routes conforming to the NPRs at the designated airports are published by the Department for Transport in the UK Aeronautical Information Publication (AIP). Although the likely amount of noise disturbance is best illustrated in a relevant noise footprint or contour published by airports in their annual reports/websites, maps depicting NPRs provide a simple means of conveying where departing aircraft are expected to be in the immediate vicinity of an airport.
- 5.7** Routes conforming to the NPRs at all the non-designated airports are also published in the UK AIP. This activity is coordinated by the CAA, though the information is sponsored by the relevant airport.

Use of NPR swathes by airports

- 5.8** Since the concept was first used, a considerable number of airports in the UK have established NPRs for the initial part of the SID’s nominal

track for aircraft departing from their airports. In many cases, a lateral swathe has been defined either side of the NPR which is defined by a specified amount of airspace emanating from the end of the runway. These lateral swathes are usually drawn to cover the areas over which aircraft are expected to fly up to a specified altitude, often this is 4,000 feet (amsl), but it can be higher or lower depending on the individual circumstances. In some instances, locally defined NPRs have a set length rather than a defined altitude. The width of the NPR lateral swathe can also vary but is often 3km, ie 1.5km either side of the NPR, which is then usually considered to be the NPR nominal track. As navigational accuracy improves, for example with the introduction of PBN, the width of the lateral swathe is expected to narrow.

- 5.9** For long-established NPRs, the nominal track may no longer reflect the published SID route loaded into an aircraft's flight management system and flown. This is because of a range of operational and efficiency factors, but the principle should be that the NPR and the published SID's nominal track are the same.

General guidance on all Noise Preferential Routes (NPRs)

- 5.10** In dealing with airspace change proposals involving an NPR, the CAA must take into account the following considerations:
- a.** the directions given to the Civil Aviation Authority by the Secretary of State under Section 66(1) of the Transport Act 2000;
 - b.** the need to work collaboratively with airport operators to seek to ensure that NPRs are used appropriately;
 - c.** that non-designated airports are encouraged to make use of powers in Section 38A-C in the Civil Aviation Act 1982 to ensure greater compliance by airlines in mitigating the effect of noise connected with the departure of aircraft at their airports;
 - d.** that NPRs should, within operational constraints, be designed to minimise the noise impact for those living near the vicinity of the airport;
 - e.** that the size of NPR swathes and the length of the NPR should be commensurate with ensuring a high degree of compliance by operators and reflect the performance characteristics of modern aircraft;
 - f.** that once established the NPR should be considered fixed unless removed/amended by a new airspace change request. As there can be some movement of the promulgated route caused by magnetic drift,¹⁵ this needs to be corrected since if uncorrected it could result in the location of the SID's nominal track becoming disassociated from the NPR, so altering who might be affected on the ground and thus not providing sufficient clarity for those living under or near the flight paths concerned;

¹⁵ A navigational compass points to magnetic north but this is not a fixed geographic point. As the position of magnetic north drifts, there is a need to make the necessary consequential adjustments to ensure navigational accuracy. As satellite-based navigation does not rely on magnetic north, this problem will be less of an issue in the future.

- g.** that the operating procedures for NPRs should be consistent, and the CAA should work with the airports to ensure that this is the case where practicable;
- h.** that any proposal to change an existing NPR, or to introduce a new one, will be considered an airspace change and require appropriate consultation with the relevant airport, airspace users, and local authorities and communities in the vicinity of the airport. The consultation should also be in accordance with the Civil Aviation Authority (Air Navigation) Directions and with Chapter 9 of this Guidance;
- i.** when an airspace change involving an NPR is made, the new SID should be based on the NPR. Thus a change to a SID's nominal track is likely to require the NPR to also be moved to ensure that both are coincident;
- j.** when an airspace change involving a change to an NPR is being considered, the possibility of introducing respite should also be considered where operationally feasible and the view of local communities taken into account (see also Chapter 9 of this Guidance);
- k.** the monitoring by airport operators of the use of NPRs by their customers and their noise impact is to be encouraged;
- l.** the precise location of the NPRs should be reviewed immediately if safety concerns regarding the use of the NPR are raised; and
- m.** any changes to NPRs must be published in the AIP as part of the airspace change process.

Specific guidance on the introduction of replicated SIDs at the designated airports

- 5.11** The designated airports have a large number of NPRs which have been established over many years. It is recognised that: most of the SIDs associated with these NPRs use conventional navigational techniques; a number of SID nominal tracks are no longer centred on the NPR; and the introduction of PBN is likely to require a significant number of the existing routes to be updated to reflect the use of the new procedures. As many of the required amendments to the SIDs to make them PBN compliant will reflect the actual routes flown by aircraft already and to ensure a smooth process exists for handling the necessary airspace change applications, the CAA can approve the replication of SIDs using PBN at the designated airports providing that:
- a.** the new PBN-based SID is considered by the CAA to be an acceptable replication of the existing SID flown by aircraft;
 - b.** the Department is informed of the application and the decision reached by the CAA;
 - c.** the opportunity afforded by the airspace change involving a replicated SID should be used to ensure that the NPR is coincident with the PBN-based SID and any consequential realignment undertaken;

- d.** the airspace change sponsor should carry out appropriate consultation and assessment of the airspace change involving the PBN-based SID and NPR to the satisfaction of the CAA;
 - e.** the new PBN-based SID does not create a significant detrimental environmental impact for the community under or near the flight path; and
 - f.** it is the responsibility of the CAA to ensure that the details of any newly approved NPR and SID are published in the appropriate AIP.
- 5.12** For any proposed PBN-based airspace change at the designated airports which does not meet the criteria set out in 5.11 above, the airspace change would require the approval of the Secretary of State (see Chapter 6 of this Guidance).

New NPRs at airports

- 5.13** For completely new NPRs at any airport, the expectation is that the NPR would be designed to reflect the SID's nominal track. The CAA can approve the location, length and width of any proposed new or amended NPRs at the non-designated airports subject to the expectation that there will be no significant detrimental impact on the environment (see Chapter 6.6 to 6.9 of this Guidance).

Approval for new or amendments to existing NPRs at the designated airports

- 5.14** The Secretary of State will still be required to approve completely new NPRs, or significant alterations to existing NPRs, at the designated airports. The process for obtaining this approval is set out in Chapter 6.3 of this Guidance.

6. Role of the Secretary of State on proposals to amend UK airspace arrangements

- 6.1** There are two specific circumstances when approval must be sought from the Secretary of State for an airspace change. These are for an airspace change involving the need to move an NPR at a designated airport or when an airspace change proposal may have a significant detrimental impact on the environment.

Specific guidance on the NPRs at the noise designated airports

- 6.2** The NPRs at the designated airports are decided by the Secretary of State under Section 78 of the Civil Aviation Act 1982. So any change to the location of an existing or new NPR at a designated airport will need to be approved by the Secretary of State.
- 6.3** Chapter 5.10 of this Guidance on the NPRs at the designated airports enables the CAA to determine minor alterations to SIDs associated with NPRs when considering airspace change applications designed to introduce PBN-based routes which seek to replicate existing SIDs. However, for any airspace change proposal involving a designated airport which requires the NPR to be moved the CAA will:
- a.** inform the Department for Transport as soon as it receives an application or other notification to amend significantly or create a new NPR at a designated airport;
 - b.** inform the applicant that as the airspace change proposal may affect the specific location of an NPR at a designated airport the final decision rests with the Secretary of State and not the CAA;
 - c.** ensure that the applicant follows the CAA's airspace change process and undertakes the appropriate consultation as set out in the Civil Aviation Authority (Air Navigation) Directions, in Chapter 9 of this Guidance, and in accordance with the CAA's consultation requirements; and
 - d.** at the end of the assessment process recommend to the Secretary of State whether it considers the application should be approved or not. This recommendation must include an appropriate noise impact statement setting out clearly the expected number of people who may benefit or be affected by the airspace change, as well as providing

detailed information on the purpose of the application and the reasons underpinning the CAA's recommendation.

- 6.4** The Secretary of State will consider each recommendation by the CAA on its merits, and will provide a response to the CAA within 28 working days. This response could be to either accept the CAA's recommendation, ask for further information or a fresh consultation to be undertaken, or to reject the proposed airspace change.
- 6.5** The CAA will be responsible for informing the airspace change applicant of the outcome of its application, and the Department for Transport will ensure that any changes to the NPRs at the designated airports will be promulgated in the AIP.

Specific guidance on proposed airspace changes which may have a significant detrimental impact on the environment

- 6.6** The Secretary of State has given directions (See Annex B of this Guidance) to the Civil Aviation Authority under Section 66(1) of the Transport Act 2000 setting out the circumstances when the CAA must also seek the approval of the Secretary of State for airspace changes which might have a significant effect on the level or distribution of noise and emissions. For example, this might be a proposal for an airspace change introducing a new route below 7,000 feet (amsl) which would overfly a populated area or an AONB/National Park with a resulting significant impact.
- 6.7** The CAA will:
- a.** inform the Department for Transport as soon as it receives an application which might have a significantly detrimental impact on the environment;
 - b.** inform the applicant that as the airspace change proposal may have a significantly detrimental impact on the environment the final decision rests with the Secretary of State and not the CAA;
 - c.** ensure that the applicant follows the CAA's airspace change process and undertakes the appropriate consultation as set out in the Civil Aviation Authority (Air Navigation) Directions, in Chapter 9 of this Guidance, and in accordance with the CAA's consultation requirements; and
 - d.** at the end of the assessment process recommend to the Secretary of State whether it considers the application should be approved or not. This recommendation must include an appropriate noise impact statement setting out clearly the expected number of people who may benefit or be affected by the airspace change, as well as providing detailed information on the purpose of the application and the reasons underpinning the CAA's recommendation.
- 6.8** The Secretary of State will consider each recommendation by the CAA on its merits, and will provide a response to the CAA within 28 working days. This response could be to either accept the CAA's

recommendation, ask for further information or a fresh consultation to be undertaken, or to reject the proposed airspace change.

- 6.9** The CAA will be responsible for informing the airspace change applicant of the outcome of its application, and will also ensure that any approved airspace changes will be promulgated in the AIP.

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7. Concentration versus dispersal

General guidance on concentration v dispersal

- 7.1** Air traffic management considerations such as the requirement to maintain safe separation between departures, the need to minimise conflicts with inbound aircraft and the desire to make efficient use of runway capacity, inevitably give rise to a concentration of departures along a limited number of fixed routes. Standardising procedures also helps to reduce air traffic controller workload, which contributes to the safe and efficient use of available capacity. When combined with practical issues arising from the position of navigational aids, these considerations unavoidably give rise to a concentration of departing traffic along a relatively small number of routes.
- 7.2** It makes sense, therefore, that in order to mitigate the overall noise impact these routes should avoid densely populated areas as far as possible given operational constraints. Consequently, when examining the question of concentration versus dispersal from both an ethical and practical perspective, the Government's policy has for many years been that the best environmental outcome was to concentrate departures on the least number of practical routes which are designed specifically to minimise the number of people over-flown at low levels.
- 7.3** The issue of concentration versus dispersal was considered in the context of the Aviation Policy Framework.¹⁶ The outcome was the acceptance that, in general, the balance of social and environmental advantage lies in concentrating aircraft taking off from airports along the fewest possible number of specified routes and that these routes should avoid densely populated areas as far as possible. The framework also stresses that any changes to departure routes should avoid significantly increasing the number of people affected by aircraft noise.

Specific guidance on concentration v dispersal

- 7.4** Airspace change proposals relating to the initial stages of departure routes should be considered in the context of the altitude-based priorities presented in Chapter 4.1 of this Guidance.
- 7.5** The Government supports the adoption of PBN as endorsed by FAS (see Chapter 4.13). PBN will mean that aircraft following a particular route will adhere to the route more consistently than they do the historic conventional routes. This will increase the concentration of traffic and impact over the areas directly beneath the published NPR, but will reduce the overall extent of the areas overflown, thereby offering the

¹⁶ Aviation Policy Framework, sections 3.31 and 3.32, pages 61 and 62, Department for Transport, March 2013.

potential to reduce the number of people exposed to noise from aircraft flying below 7,000ft.

- 7.6** The policy on concentration versus dispersal has general application i.e. it is not confined to the designated airports. In the case of Heathrow, Gatwick and Stansted this policy is given effect by the Secretary of State's requirement for most departing aircraft to follow the NPRs which form the initial part of the SIDs. Many other airports also require pilots to adhere to NPRs or similar procedures designed to reduce disturbance in the vicinity of the airport.
- 7.7** The policy on concentration versus dispersal is focussed on departures because arrivals are generally already concentrated on the extended runway centreline by the time they reach lower levels. Notwithstanding this, where applicable, and in line with the altitude-based priorities presented in Chapter 4.1 of this Guidance, the above policy of concentration versus dispersal applies equally to arrivals.
- 7.8** While the CAA should follow a policy of concentration in most cases, the Government recognises that there may be local circumstances where the advantage lies in dispersing traffic, for instance when considering multiple routes, and NPRs where relevant, for the purposes of providing noise respite over areas which may be considered to be noise sensitive. It is important that any decisions about whether to concentrate or disperse traffic take account of the local context alongside the operation and generic environmental objectives presented in this Guidance. This local context may become apparent through appropriate consultation with the local community (see Chapter 9 of this Guidance).

Respite

- 7.9** The Aviation Policy Framework reaffirmed the Government's view that it is important to consider exploring options for respite wherever feasible for those already affected by noise, especially where frequency of movements has increased over time.¹⁷ The Government therefore encourages airports and airlines to work with the CAA, NATS and their local communities to consider creative solutions to protect and enhance the use of respite as a means of mitigating the impact of aircraft noise.
- 7.10** One such example is with the shift to PBN which is expected to be introduced widely in the UK over the coming years. The Government would therefore like to encourage airports, along with NATS and the CAA, to consider how PBN could be used to introduce an element of alternation for respite purposes, providing that this brings a noise benefit and where this is appropriate given local circumstances.
- 7.11** Other opportunities for arrivals such as varying joining points and reducing the amount of airborne holding are also encouraged as are trials which seek to understand the benefits and impacts of respite measures on local communities.
- 7.12** When seeking opportunities to provide respite for those already affected by aircraft noise it is important that decisions about respite should

¹⁷ Aviation Policy Framework, section 3.32, page 62, Department for Transport, March 2013.

always be made after considering the specific local circumstances and through engagement with the local community.

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8. National Parks and Areas of Outstanding Natural Beauty

- 8.1** National Parks and Areas of Outstanding Natural Beauty (AONB) are designated areas with specific statutory purposes to ensure their continued protection in relation to landscape and scenic beauty¹⁸. The statutory purposes of National Parks are to conserve and enhance their natural beauty, wildlife, and cultural heritage and to promote opportunities for the understanding and enjoyment of their special qualities by the public. The statutory purpose of AONB is to conserve and enhance the natural beauty of their area. In exercising or performing any functions in relation to, or so as to affect, land in National Parks and AONB, the CAA is required to have regard to these statutory purposes under s.19 and Schedule 2 of the Civil Aviation Act 1982.¹⁹
- 8.2** Flights over National Parks and AONB are not prohibited by legislation as a general prohibition against over-flights would be impractical. Government policy will continue to focus on minimising the over-flight of more densely populated areas below 7,000 feet (amsl), but balanced with emissions between 4,000 and 7,000 feet (amsl), as set out in the altitude-based priorities in Chapter 4.1 of this Guidance. However, where it is practical to avoid over-flight of National Parks and AONB below 7,000 feet (amsl), the CAA should consider doing so. In line with the altitude-based priorities, the noise impact of flights above 7,000 feet (amsl) is unlikely to be significant and so no consultation is required on their noise impact at above this level.

Tranquillity

- 8.3** Tranquillity is a subjective concept usually linked to engagement with the natural environment. In 2007, the CPRE compiled a list of what the concept of tranquillity means to people and created a national tranquillity map for England.²⁰ There is growing pressure to protect and preserve tranquil areas and the Government has recognised that a sense of tranquillity contributes to people's enjoyment of the natural environment.²¹ Therefore, whenever practicable and in line with the

¹⁸ A list of designated National Parks in the UK can be found at www.nationalparks.gov.uk . A list of designated AONB can be found at www.landscapesforlife.org.uk.

¹⁹ DEFRA, Duties on relevant authorities to have regard to the purposes of National Parks, Areas of Outstanding Natural Beauty (AONB) and the Norfolk and Suffolk Broads Guidance Note, 2005, <http://archive.defra.gov.uk/rural/documents/protected/npaonb-duties-guide.pdf>

²⁰ <http://www.cpre.org.uk/what-we-do/countryside/tranquil-places/in-depth/item/1688-how-we-mapped-tranquillity>

²¹ The natural choice: securing the value of nature, <http://www.defra.gov.uk/environment/natural/whitepaper/>

priorities presented in Chapter 4.1 of this Guidance, the CAA should also take into account the concept of tranquillity when making decisions regarding airspace below 7,000 feet (amsl).

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9. Changes to airspace arrangements

- 9.1** Where changes, other than short-duration trials, are proposed to the design or use of controlled airspace the CAA should ensure that adequate consultation is carried out in accordance with the Directions given under Section 66(1) of the 2000 Act, either by ensuring that the promoter of the change(s) undertakes the consultation, or by undertaking the consultation itself. In exceptional cases involving one or more of the designated airports, the Department for Transport may wish to be involved in the consultation or may even take the lead, and the CAA should check with the Department at an early stage to ascertain whether this is likely to be the case.
- 9.2** The CAA shall ensure that an adequate level of consultation is undertaken for any given airspace change. The level of consultation required should take account of the scale and impact of the change, the range of potential stakeholders involved and their ability to contribute, either directly or through a representative body. The minimum requirements set by the CAA should meet the standards set out in the Cabinet Office Guidance on Consultation. The method, form and extent of the consultation will vary depending on the circumstances and expected impacts of each case taking account of the altitude-based priorities presented in Chapter 4.1 of this Guidance. Some airspace changes are of a technical nature and have no significant environmental impact, such as a change to airspace classifications which does not affect airspace usage. Such changes may have no significant environmental impact and therefore might require no consultation with environmental stakeholders. In all cases, however, the CAA should determine the appropriate level of consultation required for a given change. The expectation is that where there is potential for significant detrimental impact, for example a proposal to move a low-level route and its associated impacts to a different geographical location, the consultation process should include:
- a.** the manager of the relevant aerodrome and its principal users (where the changes relate to a particular aerodrome);
 - b.** other principal users of the airspace (which may be done through representative bodies);
 - c.** local authorities²² in the neighbourhood of the aerodrome or directly underneath flight paths up to 7,000 feet (amsl) to which the proposed

²² For these purposes, county, district or borough and unitary authorities only need be consulted. If parish or town councils wish to respond directly, rather than through one of the aforementioned, they should be allowed to do so, but they should be consulted if they have made their interest known.

airspace change relates (changes above 7,000 feet (amsl) have no significant local impact and therefore local consultation is not usually going to be necessary);

- d. other organisations and individuals (if any) who may represent the interests of people living in the immediate vicinity of the aerodrome or directly underneath flight paths up to 7,000 feet (amsl) to which the proposed airspace change relates; and
 - e. the relevant airport consultative committee where one exists.
- 9.3** Consultation with environmental stakeholders will usually only be necessary where the proposed changes concern controlled airspace (classes A to E) at or below an altitude of 7,000 feet (amsl) or could have significant knock-on effects on how traffic uses adjoining class F or G uncontrolled airspace at or below the same altitude. The CAA should exercise its judgement, however, when considering the need or scope of the consultation where proposed change(s) would result in an overall improvement in noise levels for all those affected since consultation may not be necessary in such cases.
- 9.4** If the need for a consultation is deemed appropriate the CAA should ensure that any airspace change consultations are robust and sufficient in order for it to assist it in making an independent assessment of the proposal.
- 9.5** Where the proposed changes may have a significant detrimental effect on the level and distribution of noise in the vicinity of an aerodrome, or would be expected to significantly alter the size or shape of the standard daytime noise contours in use at the aerodrome, or the shape of noise footprints of the noisiest aircraft operating there at night, the consultation should include assessments of those effects on the basis of traffic levels expected at the time of implementation and forecast traffic levels for future periods where appropriate (e.g. where the change(s) would enable substantial growth in traffic or where that growth is already expected or planned).

Temporary airspace changes

- 9.6** A temporary airspace change is one that may, at the CAA's discretion, introduce new controlled airspace or modifications to existing structures or routes in order to provide temporary arrangements to cover specific events or operating conditions.
- 9.7** The airspace change will usually apply for a period of no longer than 90 days and the airspace will then revert back to its original state at the end of the designated period. Under extraordinary circumstances this may be extended but only with the express authorisation of the CAA.
- 9.8** Due to the temporary nature of the change, it may be appropriate that consultation is not required or that it should be limited in scope. However, the likely impact of the proposed change on the environment should be considered prior to implementation and this information should be used to help determine whether there was a specific need for

assessment and/or consultation. If a permanent or long-term arrangement were to subsequently become necessary, the full airspace change process will need to be completed by the airspace change sponsor and the airspace would revert back to its original state until such time as the full airspace change process could be completed.

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10. Revision of Guidance and enquiries

Revision/amendment of Guidance

- 10.1** This Guidance will be reviewed by the Department on a regular basis and may be amended or replaced as deemed necessary by the Secretary of State. Minor amendments may not need to be consulted on but it would be the intention to consult on any substantial changes to this document in line with the current Government policy on consultations at the time the change was proposed.

Enquiries about this Guidance

- 10.2** Any enquiries about this Guidance should be directed to:

Intentionally left empty.

Annex A: Section 70(2) Transport Act 2000

Section 70(2) of The Transport Act 2000 sets out the following legislative framework for the CAA:

70 General duty

(1) The CAA must exercise its air navigation functions so as to maintain a high standard of safety in the provision of air traffic services; and that duty is to have priority over the application of subsections (2) and (3).

(2) The CAA must exercise its air navigation functions in the manner it thinks best calculated -

(a) to secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic;

(b) to satisfy the requirements of operators and owners of all classes of aircraft;

(c) to take account of the interests of any person (other than an operator or owner of an aircraft) in relation to the use of any particular airspace or the use of airspace generally;

(d) to take account of any guidance on environmental objectives given to the CAA by the Secretary of State after the coming into force of this section;

(e) to facilitate the integrated operation of air traffic services provided by or on behalf of the armed forces of the Crown and other air traffic services;

(f) to take account of the interests of national security;

(g) to take account of any international obligations of the United Kingdom notified to the CAA by the Secretary of State (whatever the time or purpose of the notification).

(3) If in a particular case there is a conflict in the application of the provisions of subsection (2), in relation to that case the CAA must apply them in the manner it thinks is reasonable having regard to them as a whole.

(4) The CAA must exercise its air navigation functions so as to impose on providers of air traffic services the minimum restrictions which are consistent with the exercise of those functions.

(5) Section 4 of the Civil Aviation Act 1982 (CAA's general objectives) does not apply in relation to the performance by the CAA of its air navigation functions.

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Annex B: The Civil Aviation Authority (Air Navigation) Directions

In addition to Section 70(2) of the Transport Act, the Secretary of State has also exercised his powers under Sections 66(1) and 104(2) of the Transport Act 2000 in the Civil Aviation Authority (Air Navigation) Directions 2001, as amended by the Civil Aviation Authority(Air Navigation) (Variation) Direction 2004. The details are:

Environmental impact of air operations

1. Subject to section 70 of the Act the CAA shall perform its air navigation functions in the manner it thinks best calculated to take into account:
 - a. the Guidance given by the Secretary of State on the Government's policies both on sustainable development and on reducing, controlling and mitigating the impacts of civil aviation on the environment, and the planning policy guidance it has given to local planning authorities;
 - b. the need to reduce, control and mitigate as far as possible the environmental impacts of civil aircraft operations, and in particular the annoyance and disturbance caused to the general public arising from aircraft noise and vibration, and emissions from aircraft engines;
 - c. at the local, national and international levels, the need for environmental impacts to be considered from the earliest possible stages of planning and designing, and revising, airspace procedures and arrangements; and
 - d. the requirements of directions given under section 39 of the Act to licence holders, an authorised person or authorised persons generally.
2. Where changes to the design or to the provision of airspace arrangements, or to the use made of them, are proposed, including changes to air traffic control procedures, or to the provision of navigational aids or the use made of them in air navigation, the CAA shall:
 - e. where such changes might have a significantly detrimental effect on the environment, advise the Secretary of State for Transport of the likely impact and of plans to keep that impact to a minimum;

- f. where such changes might have a significant effect on the level or distribution of noise and emissions in the vicinity of a civil aerodrome, ensure that the manager of the aerodrome, users of it, any local authority in the neighbourhood of the aerodrome and any other organisation representing the interests of persons in the locality, have been consulted (which might be undertaken through the consultative committee for the aerodrome where one exists);
- g. where such changes might have a significant effect on the level or distribution of noise and emissions under the arrival tracks and departure routes followed by aircraft using a civil aerodrome but not in its immediate vicinity, or under a holding area set aside for aircraft waiting to land at a civil aerodrome, ensure that the manager of the aerodrome and each local authority in the areas likely to be significantly affected by the proposed changes, have been consulted; and where such changes might have one or more of the effects specified in paragraphs 2 (a), (b) and (c) of this Direction, the Civil Aviation Authority shall refrain from promulgating the change without first securing the approval of the Secretary of State.
- 3. The CAA shall advise the Secretary of State on the airspace aspects of any proposal to establish new, modify existing, or reactivate disused, civil or military aerodromes, including their associated traffic patterns.
- 4. In relation to its air navigation duties, the CAA shall maintain its capability to provide expert technical advice to the Secretary of State on environmental matters.
- 5. The CAA shall provide a focal point for receiving and responding to aircraft related environmental complaints from the general public.