

Southampton International Airport Ltd.



Noise Action Plan 2018 - 2023

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Section 1 - Foreword by the Managing Director of Southampton Airport

Southampton Airport is an award winning regional airport owned by AGS Airports Ltd. The airport serves around 40 direct European destinations with great onward connections through major transport hubs like Schiphol, Amsterdam.

Southampton Airport supports the growing commercial, leisure and cultural success of the region and provides air services that are valued for both business and leisure purposes. The airport remains one of the largest employment sites in the area supporting approximately 950 jobs and contributes in excess of £160 million per year to the region.

Southampton Airport is conscious that it needs to reach a balance that allows growth in a sustainable manner whilst also enhancing the economic and social benefits to the region, but ultimately remaining a good neighbour to local residents. It is with this in mind Southampton Airport's Noise Action Plan (NAP) details how it will continue to work proactively and in collaboration with a variety of stakeholders to mitigate noise from our activities. This new NAP runs from 2018-2023 and describes a range

of measures that are in place to manage noise impacts from our activities. The previous NAP was adopted by the Government at the end of 2011, however to align with European legislation and following Government guidance Southampton Airport revised and extended the NAP to cover the period 2013 -2018.

Part of being a responsible neighbour and business means that Southampton Airport accepts it's responsibility to the local community and has put in place a number of practical measures to manage noise over the last few years and into the future. These actions have resulted in a sustained reduction in noise complaints with the airport receiving only 30 complaints in 2017.

Southampton Airport continues to work with our airline business partners to invest in aircraft fleet that are quieter and have improved environmental credentials; replacing older aircraft that have higher emissions and noisier engines. The introduction of precision based navigation will reduce the range of approaches that aircraft could make to the runway and will improve the overall noise profile for approaching aircraft. Positive improvements

like this provide clear demonstration of how Southampton Airport is working towards reducing noise impacts for many local areas.

Southampton Airport is confident that this new and updated version of the NAP continues to demonstrate the importance that the airport places on the issue of noise and our aim to minimise the impact of noise from aviation operations wherever practicable.



Neil Garwood
Managing Director
Southampton Airport

Section 2 - Executive Summary

The Environmental Noise Directive requires certain civil airports in England to produce noise maps and Action Plans. The Directive operates in five yearly cycles known as Rounds, with the current round (Round 3) requiring the operators of these airports to produce noise maps in 2017, using data from the 2016 calendar year.

The Southampton Airport Noise Action Plan identified the actions and measures that Southampton Airport is taking to minimise the impact of aircraft noise on local communities both now and in the future. The noise action plan covers the period from 2018 to 2023 and is planned to be adopted by the Secretary of State for Environment, Food and Rural Affairs in January 2019.

In June 2016, the EU referendum took place and the United Kingdom voted to leave the European Union. Until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force. During this period the Government will continue to negotiate, implement and apply EU legislation.

The revised Noise Action Plan 2018-2023 was issued to the Southampton Airport Consultative Committee and to the wider public at the beginning of April 2018 with a six week consultation ending on 8 May 2018. The committee consists of a broad range of members including public representatives such as councillors, residents associations and interest groups. This process followed the guidance of DEFRA.

This revised Southampton Airport Noise Action Plan details the long term strategy the airport has set to manage noise including the overall objective:

Continuing to work within the framework established by national and local government, the airport will be a responsible neighbour and seek to minimise the impact of aircraft noise on the local community.



Section 3 - Purpose and scope of the Southampton Airport Noise Action Plan

PURPOSE

The purpose of the Noise Action Plan is to set out our plan to manage and, where practical and possible, reduce the adverse effects of aviation noise. As part of the process to produce this new 2018 – 2023 plan, Southampton Airport has reviewed the 2013 – 2018 Noise Action Plan, and held public consultation with local communities and stakeholders.

During the period of the noise action plan for 2013 – 2018 Southampton Airport have made significant progress with addressing noise issues however we recognise the importance of continuing to manage aircraft noise responsibly with our local communities. Southampton Airport supports the Air Navigation Guidance objective to limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise.

Southampton Airport has introduced updates and enhancements to our current actions to build upon the progress it has made over the past five years working with our neighbours and stakeholders.

Southampton Airport Noise Action Plan basis

Southampton Airport has been defined as a major airport for the purposes of the Noise Regulations and as such is required to complete this noise action planning process.

Noise regulation contours are specific types of contour that have a defined methodology under the Noise Directive. These contours are modelled with aircraft movements and noise impacts split into distinct times of the day (day / evening / night). The L_{den} contour is a combined contour covering all three periods. Additional artificial weightings are added to evening and night time movements. These contours are discussed in more detail later in this document and additional detail is available in the technical glossary and abbreviations section in Appendix A.

The noise contour maps have been defined by the European Union (EU) Environmental Noise Directive 2002/49/EU (END) and are intended to:

- Provide a basis for future strategy and policy making to tackle noise issues
- Establish a baseline for 2016 noise levels
- To assist in the development of co-ordinated Noise Action Plans.

The Noise Regulations require noise action plans to be based on the results from the noise regulation contour maps, which were produced in 2017 for 2016. This Noise Action Plan focuses on areas affected by noise from the airport as identified by the updated 2016 noise contours.

However, Southampton Airport recognises that the population affected by aircraft noise extends beyond these noise contours. To address this, the Southampton Airport Noise Action Plan goes beyond the recommended scope of the Guidance for airport operators for producing noise action plans by proposing to continue or implement noise actions that aim to provide benefits to areas outside of these contours and the defined agglomeration. Southampton Airport has updated its noise contours on an annual basis since 2011.

SCOPE OF THE NOISE ACTION PLAN

This Noise Action Plan complies with the European Union (EU) Environmental Noise Directive 2002/49/EU (END) and associated UK government regulations. The airport operator (Southampton Airport Limited) is deemed the competent authority for preparing the Noise Action Plan. Guidance from UK government states that Noise Action Plans should be designed to manage noise issues and effects arising from aircraft departing from and arriving at the airport, including noise reduction if necessary. The scope of the Southampton Airport Noise Action Plan does not include any noise from road and rail traffic associated with the airport.

Noise maps for major road and rail routes in the vicinity of Southampton Airport are produced by other parties. Details of these are available on the following website: <https://www.gov.uk/government/publications/open-data-strategic-noise-mapping>.



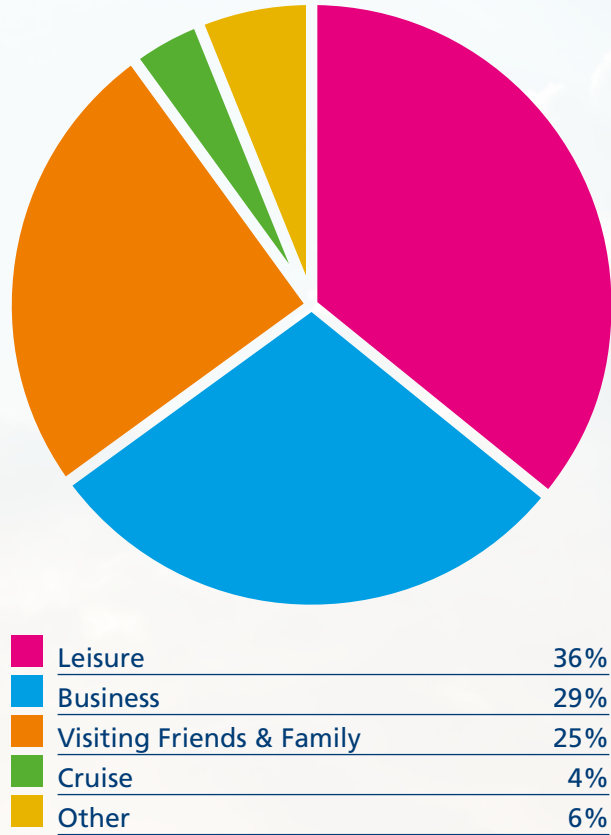
DESCRIPTION

Southampton Airport is located in the borough of Eastleigh, just north of the city of Southampton in Hampshire. Over one hundred years ago, in 1910, the first aircraft took off from an area of flat land which has now been developed into Southampton Airport. In 2017 Southampton Airport achieved the milestone of 2 million passengers and it is expected to see steady growth in years to come. Routes from Southampton Airport enable passengers to travel to around 40 destinations throughout mainland Europe, the Channel Islands, and the UK.

Typically the aircraft that fly in and out of Southampton Airport are modern, regional aircraft, such as the Embraer 195 (118 seats) and the Bombardier Dash 8 Q400 (78 seats).

The most popular reasons for using Southampton Airport are business, leisure and visiting friends and relatives as shown in Figure 1.

FIGURE 1: REASON FOR USING SOUTHAMPTON AIRPORT IN 2017



Southampton Airport is bordered directly to the south by the M27 motorway which runs east to west and also connects to the M3. To the east of the airport lies the Itchen Valley Country Park. To the north lies a largely industrial area in Eastleigh, which continues to be used by the rail industry as sidings and maintenance depots. There is also warehousing and other heavy industry located in this area. Directly to the west of the airport lies the dual track rail line which serves both passenger and freight trains, including regular services to London Waterloo. Southampton Airport Parkway station is the main rail station to the airport. The A335 Wide Lane / Southampton Road also runs adjacent to the airport, next to which there are university playing fields. There are also some residential dwellings to the northwest of the airport which have been recently expanded. The airport is geographically situated in a natural gentle depression or “bowl” due to the surrounding topography.

Local population in the Eastleigh / Southampton “Agglomeration”

According to the Office of National Statistics and the latest available 2011 Census Data, the Borough of Eastleigh has a population of 125,200 and Southampton has a population of 239,400.

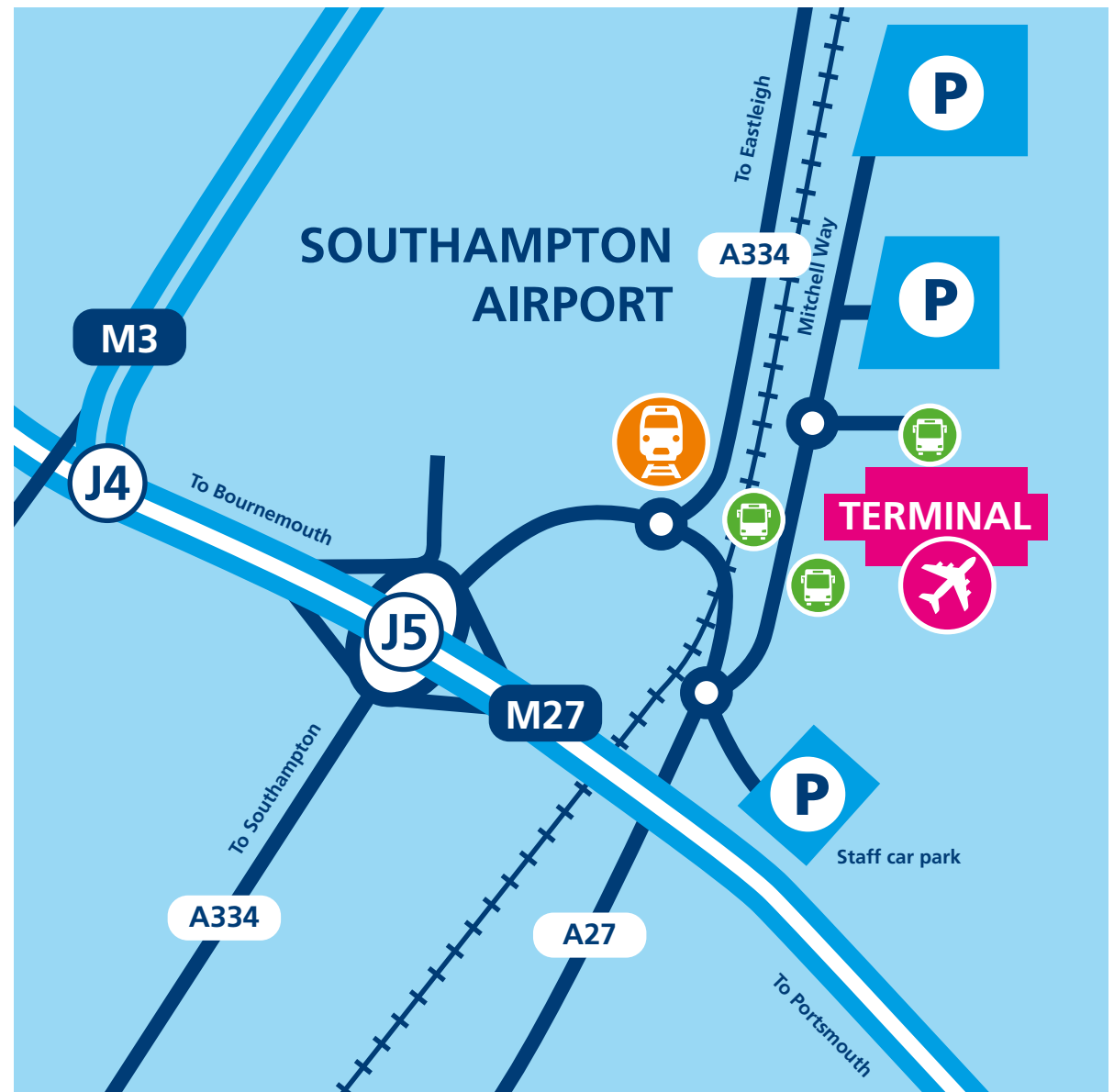


FIGURE 2: DIAGRAMMATIC REPRESENTATION OF CONNECTIVITY FOR SOUTHAMPTON AIRPORT

FUTURE GROWTH

In March 2013, the UK Government published its Aviation Policy Framework. This superseded the 2003 Air Transport White Paper and sets out the long term strategy to enable the UK aviation sector to flourish and support economic growth whilst at the same time addressing environmental issues such as noise and carbon emissions.

Southampton Airport is ideally located to serve central southern England which means that additional ground transport movements to larger London hub airports is reduced. In 2017, 2 million passengers travelled through Southampton Airport and there were 44,418 air transport movements.

Southampton Airport plans to publish its Master Plan in 2018 following public consultation. The Master Plan details the expected future growth and how the airport plans to manage this. The DEFRA Guidance for Airport Operators to produce noise action plans under the terms of the Environmental Noise (England) Regulations 2006 (as amended) outlines that Noise Action Plans should be reviewed whenever a major development occurs. For further information about the Master Plan go to: <http://www.southamptonairport.com/about-us/our-vision/>

The DEFRA Guidance for Airport Operators acknowledged that noise is an inevitable consequence of a mature and vibrant society and that people enjoy and benefit from air transport in terms of business, leisure, the movement of goods and employment opportunities.

CONSULTATION

The revised Noise Action Plan 2018-2023 was issued to the Southampton Airport Consultative Committee and to the wider public at the beginning of April 2018 with a six week consultation ending on 8 May 2018. The committee consists of a broad range of members including public representatives such as MPs, councillors, residents associations and interest groups. This process followed the guidance of DEFRA.

Following the public consultation, the outcome of the consultation and the proposed actions and amendments to the Noise Action Plan were presented for endorsement at the Technical Working Group and the Airport Consultative Committee.

The final version of the Noise Action Plan will be published by January 2019 and incorporate a record of consultation responses and how Southampton Airport has taken these into consideration.



Section 4 - Legislation

The mitigation and management of aircraft noise relies heavily on National and International initiatives and regulation imposed by:

- The International Civil Aviation Organization (ICAO);
- The European Union;
- The UK Government;
- Local authorities; and
- Southampton International Airport itself.

ICAO AND THE 'BALANCED APPROACH'

ICAO is a specialised agency of the United Nations, created to promote the safe and orderly development of international civil aviation throughout the world. It sets standards and regulations necessary for aviation safety, security, efficiency and regularity, as well as for aviation environmental protection. After a Standard is adopted it is put into effect by each ICAO member state in its own territories.

ICAO recognises that aircraft noise is the most significant cause of adverse community reaction related to the operation and expansion of airports and it requires all of its member states to adhere to an approach to managing

aircraft noise known as the 'Balanced Approach'. The Balanced Approach aims to address noise management in an environmentally responsive and economically responsible way, and encompasses four principal elements:

1. Reduction of noise at source;
2. Land-use planning and management;
3. Noise abatement operational procedures; and
4. Operating restrictions on aircraft.

Our Noise Action Plan embraces the Balanced Approach and the plan outlined in Section 10 adopts this format.

ICAO is also responsible for aircraft certification and it has set progressively tighter certification standards for noise emissions from civil aircraft. Aircraft operating in member states must conform to these standards, which are known as 'Chapters'.

The Chapters set maximum acceptable noise levels for different aircraft under specific test conditions. Chapter 2 aircraft have been banned from the EU since 1 April 2002, unless they are granted specific exemptions. The vast majority of civil aircraft now operating therefore fall within Chapters 3 and 4, i.e. they have a smaller noise

footprint than the previous Chapter 2 aircraft. All new aircraft manufactured from 2006 onwards must meet the requirements of Chapter 4.

In 2014 the ICAO Council adopted the new Chapter 14 noise standard for jet and propeller-driven aircraft. This will be the mainstay of ICAO aircraft noise regulations for the coming years. It is applicable to new aircraft types submitted for certification on or after 31 December 2017, and on or after 31 December 2020 for aircraft less than 55 tonnes in weight.

EUROPEAN UNION

There are several European Union directives and regulations that apply to the regulation of aircraft noise.

- EC Directive 92/14/EEC banned Chapter 2 aircraft from landing in the EU from 1 April 2002.
- EC Directive 2002/49 (known as the 'Environmental Noise Directive') requires member states to publish noise maps and noise management action plans for major airports (more than 50,000 movements a year) every 5 years.
- EC Directive 2002/49 (known as the 'Environmental Noise Directive') requires strategic noise maps to be produced for the main sources of environmental noise (major roads, major railways, major airports) and for agglomerations in England. (See appendix C)
- Regulation (EU) No.598/2014 of the European Parliament and of the Council of 16 April 2014 on the establishment of rules and procedures with regard to the introduction of noise related operating restrictions at union airports within a Balanced Approach.

UK GOVERNMENT

The UK Government plays an important role in setting policy for aviation noise management. The Civil Aviation Acts of 1982 and 2006 granted the UK Government the power to introduce mitigation and noise control measures.

In accordance with EC directive 2002/49 (Environmental Noise Directive), there are UK Statutory Instruments for the Environmental Noise (England) Regulations 2006 as amended. This Noise Action Plan is in accordance with these statutory instruments.

The 2013 Aviation Policy Framework (APF) set out the challenges of noise control at airports, and noted the Government's recognition of the Balanced Approach principle of aircraft noise management. More recently, the UK Government has published, and consulted on, its Airspace Policy (AP) framework.

The Government's consultation response on the AP provides an update to the some of the policies on aviation noise outlined in the APF and should be viewed as current Government policy.

The Government has also published the Air Navigation Guidance 2017, which provides guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management. Importantly the AP sets out a range of new proposals that the Government will implement that are relevant to the Noise Action Plan:

- Changes to aviation noise compensation policy;
- The creation of an Independent Commission on Civil Aviation Noise (ICCAN); and
- New metrics and appraisal guidance to assess noise impacts and their impacts on health and quality of life.

Changes to aviation noise compensation policy

The Government has proposed a number of changes to aviation noise compensation policy in order to improve fairness and transparency. Southampton Airport supports these proposals and will take them into account in the development of our Noise Insulation Scheme: please refer to Section 10 for further information.

The independent commission on civil aviation noise

The Government has proposed the creation of an Independent Commission on Civil Aviation Noise (ICCAN). ICCAN will be responsible for creating, compiling and disseminating best practice to the aviation industry on the management of civil aviation noise and will be responsible for advising government in this area. Southampton Airport supports these proposals and will carefully consider any relevant best practice guidance published by ICCAN.

New metrics and appraisal guidance for assessing noise impacts

Long term exposure to environmental noise such as road, rail and aircraft noise can lead to impacts on health and quality of life. This is recognised and addressed in noise policy which aims to avoid, mitigate and minimise the adverse impacts of noise on health, in the context of sustainable development. Southampton Airport shares these objectives and have adopted them as part of our Noise Action Plan.

Thresholds for noise assessment are defined in current

government policy in terms of the Lowest Observable Adverse Effect Level (LOAEL). The LOAEL is the level above which adverse effects on health and quality of life can be detected. Current policy proposes a LOAEL of 51 dB L_{Aeq} , 16hr based on the most recent large-scale research study in the UK on aircraft noise (Survey of Noise Attitudes 2014: Aviation, SoNA).

A night-time LOAEL of 45dB L_{Aeq} , 8hr is also proposed in the policy, based on the Government's current monetisation methodology (known as WebTAG) and the World Health Organisation's methodological guidance for estimating the burden of disease from environmental noise. Southampton Airport supports such proposals to assess noise down to these thresholds and has reflected this in its noise mapping.

LOCAL AUTHORITIES

Section 106 Planning Obligations

Planning obligations under Section 106 of the Town and Country Planning Act 1990, commonly known as s106 agreements, are operational conditions to which Southampton Airport is bound. They are focused on site specific mitigations of the impact of development and operations. The planning obligation is a formal document issued and monitored by Eastleigh Borough Council.



Section 5 - Background to aircraft noise and regulation

Air noise is created by aircraft approaching or taking off from airports and by aircraft taxiing/manoeuvring around the airfield.

This noise is caused by two things:

- By air moving over the aircraft's fuselage (body) and wings – known as the airframe
- By the aircraft's engines themselves.

When air moves over the aircraft's body, it causes friction and turbulence, which make noise. The amount of noise created varies according to aircraft size and type as well as the way the aircraft is flown such as speed, the angle of approach and the way in which wing flaps are deployed. This means noise can differ even for identical aircraft. Engine noise is created by the sound of the engine's moving parts and by the sound of the air being expelled at high speed once it has passed through the engine.

Departing aircraft create noise when taking off due to the high degree of thrust required. This creates noise from the aircraft's engines. However, this allows aircraft to climb quickly and therefore reduce their noise impact by flying at

a higher altitude. Air moving over the airframe of arriving aircraft generates noise, as the aircraft becomes less aerodynamic in order to slow down. However the thrust and thus engine noise is reduced. Nevertheless landing aircraft are closer to the ground for a longer distance which may increase noise disturbance over a wider area.

Aircraft being manufactured today are considerably quieter than 20 years ago. It is expected that today's aircraft will be replaced by even quieter models in the future. Although aircraft engines are quieter, there are more aircraft flying today. This means that whilst average levels of noise per aircraft movement are lower than before, the frequency of aircraft movements has increased and hence noise "events" have increased. At Southampton Airport, the number of aircraft movements have increased from 40,501 in 2013 to 44,419 in 2017.

Noise is a very subjective issue and each person reacts differently. A noise which one person is affected by may not necessarily affect the next person. The time of the day, location and circumstances of any noise heard can all produce different reactions. Attitudes and reactions to noise are as important as the noise level experienced,

but these attitudes are less understood than the technical science of sound-generation and measurement.

Air Quality & CO2 Interdependencies

There are a number of interdependencies which affect noise management including the emission of local air pollutants and carbon dioxide (CO2) from aircraft engines. Most of the technological advances in aircraft design in the last 20 years have led to both a reduction in noise and CO2 emissions. However in some cases, the drive towards quieter aircraft has resulted in an increase in emissions of local air pollutants, such as oxides of nitrogen (NOx). The challenge for the aviation industry is to manage and balance these three issues simultaneously.

Section 6 - Measuring aircraft noise - noise contours

Noise contours are the common method used in the UK and internationally to measure and assess aircraft noise around airports. Noise contours are produced using sophisticated computer modelling software, based on an array of inputs. These inputs typically include the number of flights at an airport, the type of aircraft operating and performance of that particular aircraft, the routes that the aircraft take and assumptions about how the aircraft are operated at each airport. As noise can be a subjective issue, noise contours are used to quantify and assess noise impacts more quantitatively. There are a number of variables that can affect how noise is heard on the ground including: background noise levels, distance from the noise source, elevation above ground level, the phase of flight an aircraft is in when it passes over and the weather conditions at the time such as wind or cloud cover which affect the way in which sound travels.

Routine noise contours - average summer day 16-hour LAeq contours

Every year the airport commissions detailed noise modelling using the CAA Environmental Research and Consultancy Department (ERCD). The output of this modelling is an estimate of the average aircraft related noise experienced by people living around an airport during the busier summer period.

This provides average noise levels for the busiest time in terms of the number of aircraft movements during the 16 hour period 07:00 to 23:00. This includes the busiest three months of the year, from mid-June to mid-September, when the number of aircraft movements peak. These noise contours are the most common international measure of aircraft noise. Southampton Airport provides these noise contours to Eastleigh Borough Council each year and they are presented to the Southampton Airport Consultative Committee to illustrate the noise climate for the previous year of operation.

Noise regulation contours – average annual day dB

Lden contours

The Environmental Noise (England) Regulations 2006 requires that strategic noise mapping should be conducted at five yearly intervals. Unlike the conventional average summer day 16-hour dB L_{Aeq} routine contours which are used to evaluate noise changes at the airport each year, the regulations require the contours to cover different periods of the day, known as: (L)day, (L)evening, (L)night, and dB (L)den (day, evening & night combined).

Section 7 - Results of the Southampton Airport 2017 noise contour mapping

Southampton airport produces annual noise contours which are modelled by the ERCD in accordance with the Government Noise Regulations. Tables 1 to 5 show the various results of the noise mapping including the area, population and households potentially exposed to noise within each of the prescribed contour bandings. Data from L_{day} , $L_{evening}$, L_{night} , L_{den} and L_{Aeq} noise contours has been included.

This assessment was carried out utilising a strategic residential population location dataset. The following paragraphs summarise the method used in constructing this dataset.

Residential dwellings and buildings containing residential dwellings were identified through the 2015 (OS) AddressBase Premium and Topography layer respectively. An average population per residential dwelling was calculated for each discrete dwelling utilising population data attained from the mid-year population estimates from the Office of National Statistics (ONS), June 2015.

The total number of residential dwellings and the total associated population were calculated for each residential building polygon (the building's footprint), taking into account building polygons with multiple dwellings. Examples of building polygons containing multiple dwellings located within a single polygon include tower blocks and apartments.

The estimated total number of people and dwellings exposed above various noise levels in 2016 derived from the strategic mapping of noise from aircraft using this airport are shown in the tables below.

Population and dwelling counts have been rounded as follows:

- The number of dwellings has been rounded to the nearest 50, except when the number of dwellings is greater than zero but less than 50, in which case the total has been shown as "< 50".
- The associated population has been rounded to the nearest 100, except when the associated population is greater than zero but less than 100, in which case the total has been shown as "< 100".



NOISE LEVEL (dB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 55	2,350	5,600
≥ 60	300	800
≥ 65	0	0
≥ 70	0	0
≥ 75	0	0

TABLE 1: ESTIMATED TOTAL NUMBER OF PEOPLE AND DWELLINGS ABOVE VARIOUS NOISE LEVELS, L_{DEN}

Note: Table 1 is a specific indicator required by the Environmental Noise Directive and is reported in the 5dB bands defined by the Directive. Tables 2 to 5 use routine UK aviation banding.

NOISE LEVEL (dB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	3,850	9,300
≥ 57	1,250	3,000
≥ 60	400	1,000
≥ 63	< 50	<100
≥ 66	0	0
≥ 69	0	0

TABLE 2: ESTIMATED TOTAL NUMBER OF PEOPLE AND DWELLINGS ABOVE VARIOUS NOISE LEVELS, L_{DAY}

NOISE LEVEL (dB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	2,100	4,900
≥ 57	700	1,700
≥ 60	100	300
≥ 63	< 50	<100
≥ 66	0	0
≥ 69	0	0

TABLE 3: ESTIMATED TOTAL NUMBER OF PEOPLE AND DWELLINGS ABOVE VARIOUS NOISE LEVELS, L_{EVENING}

NOISE LEVEL (dB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	3,450	8,200
≥ 57	1,100	2,700
≥ 60	350	800
≥ 63	< 50	<100
≥ 66	0	0
≥ 69	0	0

TABLE 4: ESTIMATED TOTAL NUMBER OF PEOPLE AND DWELLINGS ABOVE VARIOUS NOISE LEVELS, $L_{AEQ, 16H}$

NOISE LEVEL (dB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 48	0	0
≥ 51	0	0
≥ 54	0	0
≥ 57	0	0
≥ 60	0	0
≥ 63	0	0
≥ 66	0	0

TABLE 5: ESTIMATED TOTAL NUMBER OF PEOPLE AND DWELLINGS ABOVE VARIOUS NOISE LEVELS, L_{NIGHT}

Following receiving the Airport Noise Action Planning data pack from Defra, the airport undertook a review against the previous data provided in 2012. The outcome of this was that there were no significant changes both positively or negatively to impacted areas within the Noise Contours.

This information was shared and discussed at the Technical Working Group and the Airport Consultative Committee and minutes of these meetings are available through the Eastleigh Borough Council website.

Section 8 - Southampton Airport noise strategy & objectives

Southampton Airport has set the following long term objective for the management of aircraft noise:

Continuing to work within the framework established by national and local government, the airport will be a responsible neighbour and seek to minimise the impact of aircraft noise on the local community.

Southampton Airport supports the growing commercial, leisure and cultural success of the region and provides air services that are valued for both business and leisure purposes. The airport remains one of the largest employment sites supporting around 950 jobs and contributes in excess of £160 million per year to the region.

As well as the benefits provided by the airport, Southampton Airport recognises that aircraft noise can be an important issue for local communities. Although the noise generated by the airport cannot be eliminated, Southampton Airport is conscious that it is important to reach a balance that allows growth in a sustainable manner whilst also enhancing the economic and social benefits to the region, and ultimately remaining a good neighbour to local residents.

This Noise Action Plan therefore sets out our plan to manage and, where practical, reduce the adverse effects of aircraft related noise. Southampton Airport has introduced updates and enhancements to its current actions to build upon the progress it has made over the past five years working proactively and in collaboration with a variety of stakeholders and neighbours.

Southampton Airport has reviewed the four key strategic themes that were published as part of the 2013 – 2018 Noise Action Plan and intend to keep these existing themes; however we plan to build upon the work already undertaken within these areas as well as ensuring that these are developed within the framework set out in the ICAO Balanced Approach to Aircraft Noise Management. Below are our five strategic themes for 2018 – 2023 and within Section 10 of this Noise Action Plan there are full details of the actions and proposed new actions set against these themes

1. Demonstrate our continuing commitment to managing aircraft noise at source.
2. Engaging with our local communities affected by aircraft noise to better understand their

concerns and priorities, and responding to these as far as practically possible in noise strategies and communication plans.

3. Influencing planning policy to minimise the number of noise sensitive properties around Southampton Airport.
4. Organising ourselves to manage noise efficiently and effectively, achieving a full understanding of aircraft noise to inform our priorities, strategies and targets.
5. Ensuring Southampton Airport has effective Noise Abatement Operational Procedures.

Section 9 - Noise Management at Southampton Airport

The airport currently has in place a number of mitigation measures to manage and reduce the adverse effects of airport related noise. Alongside this, Southampton Airport has built upon the progress made across the last five years to introduce some significant updates and additions to its current measures in line with the latest developments in policy and research relating to noise.

SECTION 106 AGREEMENT

Southampton Airport adheres to a strict agreement, which since its inception in 1990 has been designed to minimise the impact of the airport operation on the local community. This agreement forms part of our planning agreement with Eastleigh Borough Council, and is legally binding. It includes:

Night time closure

There are very strict limits on the number of scheduled night flights that Southampton Airport may operate during the night period. The night period is defined from 23:00 to 06:00, or to 07:30 on Sunday mornings. The airport is permitted to operate 10 scheduled night flights per month, but not more than 100 in any 12 month period. However, occasionally flights operate during these times for unexpected reasons such as poor weather or as a result of en-route air traffic control delays. Additionally some ambulance flights carrying patients or transporting donor organs are accepted during night hours, for emergency medical reasons.

Noise preferred routeing of aircraft

Noise preferred routes for departing aircraft and for aircraft arriving 'visually' (in good visibility) were introduced in 2007 following a wide scale consultation with local stakeholders, residents and councils. These routeings aim to divert aircraft away from the most densely populated areas where it is possible to do so. The airport ensures, as far as is reasonably practical, that aircraft using the airport adhere to the preferred routes. There are however occasions when the noise preferred routes cannot be followed by aircraft and examples of this are the avoidance of poor weather or other air traffic in the area.

Strict limits on helicopter movements

The annual number of daytime helicopter movements is restricted, and helicopter movements are banned during night hours, in order to minimise the noise for our neighbours.

Ban on noisier types of aircraft

Noisier aircraft which do not meet strict industry standards, referred to as ICAO 'Chapter 3', are not permitted to visit Southampton Airport. The airport was one of the first in the country to ban aircraft that do not meet this standard.

Strict limits on aircraft training movements

The number of flying training movements is restricted. Although some flying training takes place, this has significantly reduced in recent years.

Engine ground running

There are strict limits on the times, the location and the number of occasions that aircraft engine ground running can take place, which is required for engine testing. No engine ground running is permitted during night hours.

In summary, this agreement is of great significance in minimising the impact of aircraft noise on the local community and provides governance on the way that Southampton Airport operates. Monitoring and reporting against these regulations are undertaken at the Southampton Airport Consultative Committee.

NOISE AND FLIGHT EVALUATION UNIT AND COMMUNITIES

Southampton Airport monitor aircraft noise issues, and record and investigate complaints and enquiries received from the local community through our dedicated Noise and Flight Evaluation Unit. The unit is manned during office hours by specially trained staff that can answer any questions and provide information on noise initiatives.

Southampton Airport operates a Noise telephone line (02380 62 7070) and a dedicated email address (sounoisecomplaints@southamptonairport.com) through

which complaints are logged onto our system. A key part of our noise strategy is to give out as much information as possible and to provide our neighbours and stakeholders with an insight into airport activities. Southampton Airport report on the number of complaints received as part of the Technical Working Group and Consultative Committee.

Following the introduction of NoiseDesk software in 2018, Southampton Airport now use this system to:

- Track and report on adherence to noise preferred routes
- Monitor NPR deviations and quickly address these with airlines
- Investigate noise complaints and identify specific flights in relation to post code.

Subsequent to the implementation of the new software, the airport is working with airlines to introduce a full Local Operating Procedure to be followed in the event of a deviation from a noise preferred route. More details of this can be found in Section 10.



NOISE INSULATION AND LAND-USE PLANNING

Southampton Airport engages directly with the local planning authorities to ensure awareness of aircraft operations is considered in the development of sensitive land use. As part of this the airport contributes to local development plans and seeks to influence policy where appropriate.

The Government's current aviation policy is set out in the Aviation Policy Framework (APF). The Consultation Response on UK Airspace Policy provide a recent update to some of the policies on aviation noise contained within the APF, and is considered to represent the current government policy. The policy now requires financial assistance to be offered towards the noise insulation of residential properties in the 63dB_{L_{Aeq}}, 16h noise contour or above.

Southampton Airport is proposing to update its noise insulation scheme to reflect these recent changes in aviation policy: see Section 10 for further details and Section 7 table 4.

AIRCRAFT TECHNOLOGY

As part of the AGS group (Aberdeen, Glasgow and Southampton Airports), Southampton Airport are represented within Sustainable Aviation, an alliance of UK airlines, airports, aerospace manufacturers and air navigation service providers.

The group members regularly attend and contribute to the meetings of Sustainable Aviation and work with our partners to promote research and development of even quieter aircraft.

Modern aircraft are now significantly quieter than the first generation of jet aircraft, and ICAO are setting progressively tighter noise certification standards for new aircraft.



Section 10 - Noise Actions: Southampton Airport

Noise Action Plan 2018 - 2023

ACTIONS CLOSED FROM LAST NAP

ACTION	TIMESCALE	PERFORMANCE INDICATOR	ESTIMATED NO, OF PEOPLE
1 Southampton Airport will evaluate and install an updated aircraft tracking system to improve the accuracy of the existing track keeping system. This will help to evaluate and assess flights, particularly for aircraft at lower levels and allow enhanced feedback to be given to the community living immediately to the North or South of the runway.	2015-18	System installed and operational	Communities within and beyond the 55dB LDen contour (Estimated 11,200+)
2 Southampton Airport will undertake a Stakeholder Consultation for Airspace Change Proposal for changes for GNSS approaches to the south.	2013	Consultation was undertaken between 8th October 2013 and 31st January 2014	n/a
3 Southampton Airport will publish a report on the GNSS consultation findings	2014	The report was published on 30th April 2014 and GNSS went live on 2nd April 2018	n/a

REDUCTION OF NOISE AT SOURCE

ACTION		TIMESCALE	PERFORMANCE INDICATOR	NO. OF PEOPLE
4	Southampton Airport will continue to operate a differentiated aircraft charging system to discourage noisier aircraft. Classified as Chapter 3 High aircraft.	Ongoing	Number of flight movements of Chapter 3 and 4 aircraft.	
5	Southampton Airport will continue to undertake reviews of the differentiated aircraft charging system on an annual basis to discourage noisier aircraft.	Annual review	Number of affected movements since introduction.	Communities within the 55dB LDen contour (Estimated 5600 people)
6	We will continue to work with our partners in the aerospace sector through Sustainable Aviation to achieve the visionary noise goals of FlightPath 2050 which seek to achieve a 65% reduction in perceived noise, or 15dB, from aircraft by 2050 compared to 2000.	Ongoing	Progress against the EU Flightpath 2050 target of a 65% reduction in perceived noise, or 15dB, from aircraft by 2050 compared to 2000	

NOISE ABATEMENT OPERATIONAL PROCEDURES

ACTION	TIMESCALE	PERFORMANCE INDICATOR	NO. OF PEOPLE
7 Southamton Airport will continue to restrict aircraft operations during the night time period from 23:00 hrs to 06:00 hrs (Mon-Sat) and 23:00 to 07:30 hrs on Sundays (with permitted exceptions as per the Flying Controls Agreement).	Ongoing	Number of movements reported to Airport Consultative Committee.	
8 Southamton Airport will continue to prohibit helicopter movements during the night time period from 23:00 hrs to 06:00 hrs and 07:30hrs to 23:00hrs on Sundays.	Ongoing	Number of movements reported to Airport Consultative Committee.	
9 The number of helicopter movements will continue to be restricted to 7,500 movements a year (during the day). Helicopter training flights will also continue to be limited to air crew familiarisation with the airport.	Ongoing	Number of movements reported to Airport Consultative Committee.	Communities within the 55dB LDen contour (Estimated 5600 people).
10 Southamton Airport will continue to ban noisier Chapter 2 aircraft i.e. aircraft that do not meet the standards of ICAO Annex 16 Chapter 3 or FAA FAR Part 36 Stage 3. Southamton Airport will also adhere to the ICAO Chapter 14 noise standard for jet and propeller-driven aircraft, applicable to new aircraft from 31st December 2017.	Ongoing	Reported to Technical Working Group Annually	
11 Southamton Airport will continue to apply and monitor the agreed Noise Preferred Routes for aircraft.	Ongoing	Noise preferred route infringements to follow LOP and addressed with airlines	
12 Southamton Airport will continue to use aircraft track keeping systems to proactively monitor aircraft routing and report off track occurrences to airlines.	Ongoing	Noise preferred route infringements reported to the Technical Working Group.	Communities within and beyond the 55dB LDen contour (Estimated 11,200+)
13 Following the implementation of the 'NoiseDesk' system, Southamton Airport will publish a Local Operating Procedure to outline the process of addressing NPR deviations with our airlines including financial penalties.	12 months after adoption of NAP	Review and report within 12 months of implementation	

NOISE ABATEMENT OPERATIONAL PROCEDURES

ACTION	TIMESCALE	PERFORMANCE INDICATOR	NO. OF PEOPLE
<p>14 Southampton Airport will continue to operate the Noise and Flight Evaluation Unit. This includes:</p> <ul style="list-style-type: none"> • Logging and responding to all complaints and enquiries received • Investigating and seeking further explanation from ATC and airlines where required. • Providing statistics and reporting these to the Consultative Committee three times a year 	Ongoing	Number of callers and confirmed noise complaints associated with the airport each month.	
<p>15 Southampton Airport will continue to communicate to stakeholders by publishing information on the airport website and also through communicating through forums around key noise initiatives such as aircraft routing.</p>	Ongoing	Positive feedback from Southampton Airport Community, Stakeholder Conferences and Airport Consultative Committee	
<p>16 Southampton Airport will continue to present key noise issues to the Southampton Airport Consultative Committee & Technical Working Group as appropriate.</p>	Ongoing	Meeting minutes	Communities within and beyond the 55dB LDen contour (Estimated 11,200+)
<p>17 Southampton Airport will provide feedback on our progress against the Noise Action Plan on a regular basis to Airport Consultative Committee.</p>	Annually	Progress of actions reported through Airport Consultative Committee	
<p>18 Southampton Airport will commission and publish noise regulation (L_{den}) contours annually, to monitor the effectiveness of the measures in this Noise Action Plan.</p>	Bi-annually	Submit contours to Eastleigh Borough Council and publish on Southampton Airport website	
<p>19 Southampton Airport will undertake a review of the results of the annual noise regulation (L_{den}) contours</p>	Bi-annually	Reviews reported through Airport Consultative Committee	
<p>20 Southampton Airport will deploy noise monitors at the direction of Technical Working Group to address any specific noise related issues. The data from monitoring will be published on the airport website and presented to Airport Consultative Committee</p>	Upon direction of the TWG	Findings reported to the Technical Working Group	

INFLUENCING PLANNING POLICY TO MINIMISE THE NUMBER OF NOISE SENSITIVE PROPERTIES AROUND OUR AIRPORTS

ACTION	TIMESCALE	PERFORMANCE INDICATOR	NO. OF PEOPLE
21 We will continue to engage with the local planning authorities to ensure awareness of aircraft operations is considered in the development of sensitive land use.	Ongoing	Annual review with local planning authority.	Southampton City Council and Eastleigh Borough Council
22 Southampton Airport will continue to commission an independent noise specialist to produce routine 16hr Summer L_{eq} noise contours each year to evaluate the noise climate at the airport.	Ongoing	Submitted to Eastleigh Borough Council and review through the Airport Consultative Committee.	Communities within and beyond the 55dB LDen contour (Estimated 11,200+)
23 We will develop and implement a Noise Insulation Policy to mitigate noise for residents most affected by aircraft noise in line with UK Airspace Policy.		Policy to be finalised and published within 12 months of adoption of this Noise Action Plan.	Residential properties within the 63dB $L_{Aeq, 16h}$ contour

ORGANISING OURSELVES TO MANAGE NOISE EFFICIENTLY AND EFFECTIVELY, ACHIEVING A FULL UNDERSTANDING OF AIRCRAFT NOISE TO INFORM OUR PRIORITIES, STRATEGIES AND TARGETS.

24 Our Noise Action Plan is consistent with the ICAO Balanced Approach. Southampton Airport will continually review the effectiveness of our mitigation measures in the context of the balanced approach to ensure that mitigation is considered in a consistent way with a view to addressing noise impacts in the most cost-effective way.	Ongoing	Tracking of Noise Action Plan and mitigation measures	
25 The Government has proposed the creation of an Independent Commission on Civil Aviation Noise (ICCAN). ICCAN will be responsible for creating, compiling and disseminating best practice to the aviation industry on the management of civil aviation noise and will be responsible for advising government in this area. Southampton Airport support these proposals and will carefully consider any relevant best practice guidance published by ICCAN	A w a i t i n g formation and guidance from ICCAN	Tracking of Noise Action Plan and mitigation measures	Communities within and beyond the 55dB LDen contour (Estimated 11,200+)

Section 11 - Provisions for evaluating implementation of the Southampton Airport Noise Action Plan

In order to evaluate the effectiveness and delivery of the Noise Action Plan, Southampton Airport have established performance indicators, timescales and targets which are outlined within Section 10. Southampton Airport are committed to monitoring and reporting on our progress through various avenues:

- Regularly as part of the Technical Working Group
- As part of the noise sections on our website
- Reported to the Airport Consultative Committee as part of a standing agenda item.
- Annually via an externally verified progress report.



Appendices

APPENDIX A: TECHNICAL GLOSSARY AND ABBREVIATIONS

Agglomeration	The Environmental Noise (England) Regulations 2006: An agglomeration is an area having a population in excess of 100,000 persons and a population density equal to or greater than 500 people per square km and identified in Regulations by the Secretary of State. For the first round of mapping to be reported in 2007, the population threshold is 250,000.
ANCON 2.3	Aircraft Noise Contour Model version 2.3. The UK civil aircraft noise contour model produced and maintained by ERCD.
ATC	Air Traffic Control.
CAA	Civil Aviation Authority.
Directorate of Airspace Policy	The Directorate of Airspace Policy (DAP), a Group within the Civil Aviation Authority (CAA), which sits alongside the groups responsible for Safety Regulation, Economic Regulation and Consumer Protection. The Directorate is staffed by civilian and military experts with experience of commercial, business, recreational and military aviation. The Government requires the Directorate of Airspace Policy to secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic whilst taking into consideration the requirements of operations and owners of all classes of aircraft. Additionally environmental implications and national security issues must be considered. The Directorate is also required to provide the UK Meteorological Authority and Regulation for Aeronautical Information services.
dB(A)	A unit of sound pressure level, adjusted in accordance with the A weighting scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Decibel (dB)	The decibel (dB) is a logarithmic unit of measurement that expresses the magnitude of a physical quantity relative to a specified or implied reference level. Its logarithmic nature allows very large or very small ratios to be represented by a convenient number. Being a ratio, it is a dimensionless unit. Decibels are used for a wide variety of measurements including acoustics, and for audible sound A-weighted decibels (dBA) are commonly used.
Defra	Department for Environment Food and Rural Affairs (UK Government).

DfT	Department for Transport (UK Government).
ECAC	European Civil Aviation Conference.
ERCD	Environmental Research and Consultancy Department of the Civil Aviation Authority.
FlightPath 2050	https://ec.europa.eu/transport/sites/transport/files/modes/air/doc/flightpath2050.pdf
FLOPC	Flight Operations Committee: Southampton Airport forum including Airline Partners, Aircraft operators and ATC
GNSS	Global Navigation Satellite System - a satellite base global positioning system for aircraft
ICAO	International Civil Aviation Organization.
L_{Aeq} 16h	The A-weighted average sound level over the 16 hour period of 07:00 – 23:00.
L_{day}	The A-weighted average sound level over the 12 hour day period of 07:00 – 19:00.
L_{den}	The day, evening, night level, L _{den} is a logarithmic composite of the L _{day} , L _{evening} , and L _{night} levels.
L_{Aeq}	Equivalent sound level of aircraft noise in dBA, often called equivalent continuous sound level.
L_{evening}	The A-weighted average sound level over the 4 hour evening period of 19:00 – 23:00 hours. An artificial 5 dB(A) weighting is added.
L_{night}	The A-weighted average sound level over the 8 hour night period of 23:00 – 07:00 hours. An artificial 10 dB(A) weighting is added.
LOP	Local Operating Procedure
Modal Split	If aircraft land from the north of the airport or depart to the south they are described as using runway 20. If aircraft land from the south or depart to the north, they are described as using runway 02. These runway numbers are clearly marked at both ends of the runway. This is referred to as the runway modal split.
NATS	Formerly known as National Air Traffic Services. NATS is licensed to provide en-route air traffic control for the UK and the Eastern part of the North Atlantic and also provides air traffic control services at several major UK airports.
Noise Regulation contours	These are L _{den} contours which have been prescribed under the noise regulations and form the basis for this Noise Action Plan. They include an L _{day} , L _{evening} , L _{night} , L _{Aeq} 16h and an L _{den} contour, which is a logarithmic composite of the L _{day} , L _{evening} , and L _{night} levels.

Noise Contour	Map contour line indicating noise exposure in dB for the area that it encloses.
Noise Sensitive Properties	These are defined under the Noise Regulations and include housing, hospitals and schools (within the noise regulation contours).
Routine noise contours	These contours are those produced every year for Eastleigh Borough Council. They use daily aircraft movements that take place in the 16 hour period (07:00-23:00) during the 92 day period 16 June to 15 September inclusive. They are produced retrospectively each year for the previous year.
Sustainable Aviation	A UK aviation industry initiative aiming to set out a long term strategy for the industry to address sustainability issues.
NoiseDesk	Aircraft track keeping monitoring system used by Southampton Airport

APPENDIX B: FINANCIAL INFORMATION: CURRENT SOUTHAMPTON AIRPORT COST OF NOISE MANAGEMENT

TYPE	DESCRIPTION	ESTIMATED COST
Staff	Noise and Flight Evaluation Unit, Environment, communications and Airside Operations team. Director's time.	£80,000
Computer/Software	Noise Track Keeping Software, website development and computer equipment	£25,000
Equipment	Deployment of noise monitors	£18,000
Flight Evaluation Unit Line	Dedicated Telephone line	£150
Research, Events and Subscriptions.	Research on noise and operational performance matters. Stakeholder conferences, venue costs & expenses. Technical Working Group, Consultative Committee, other noise meetings. Subscriptions.	£2,500
Consultancy	Preparation of annual noise contours	£6,000
Publications	Airport noise literature and Southampton Airport Noise Action Plan.	£7,000
Consultancy	Preparation of annual noise contours	£6,000
Publications	Airport noise literature and Southampton Airport Noise Action Plan.	£7,000

APPENDIX C: SOUTHAMPTON 'AGGLOMERATION' AS DEFINED BY DEFRA

Road, rail and air action plans have to give consideration to areas within the agglomeration and will ultimately form part of an Agglomeration Action Plan produced by the Secretary of State for Transport.

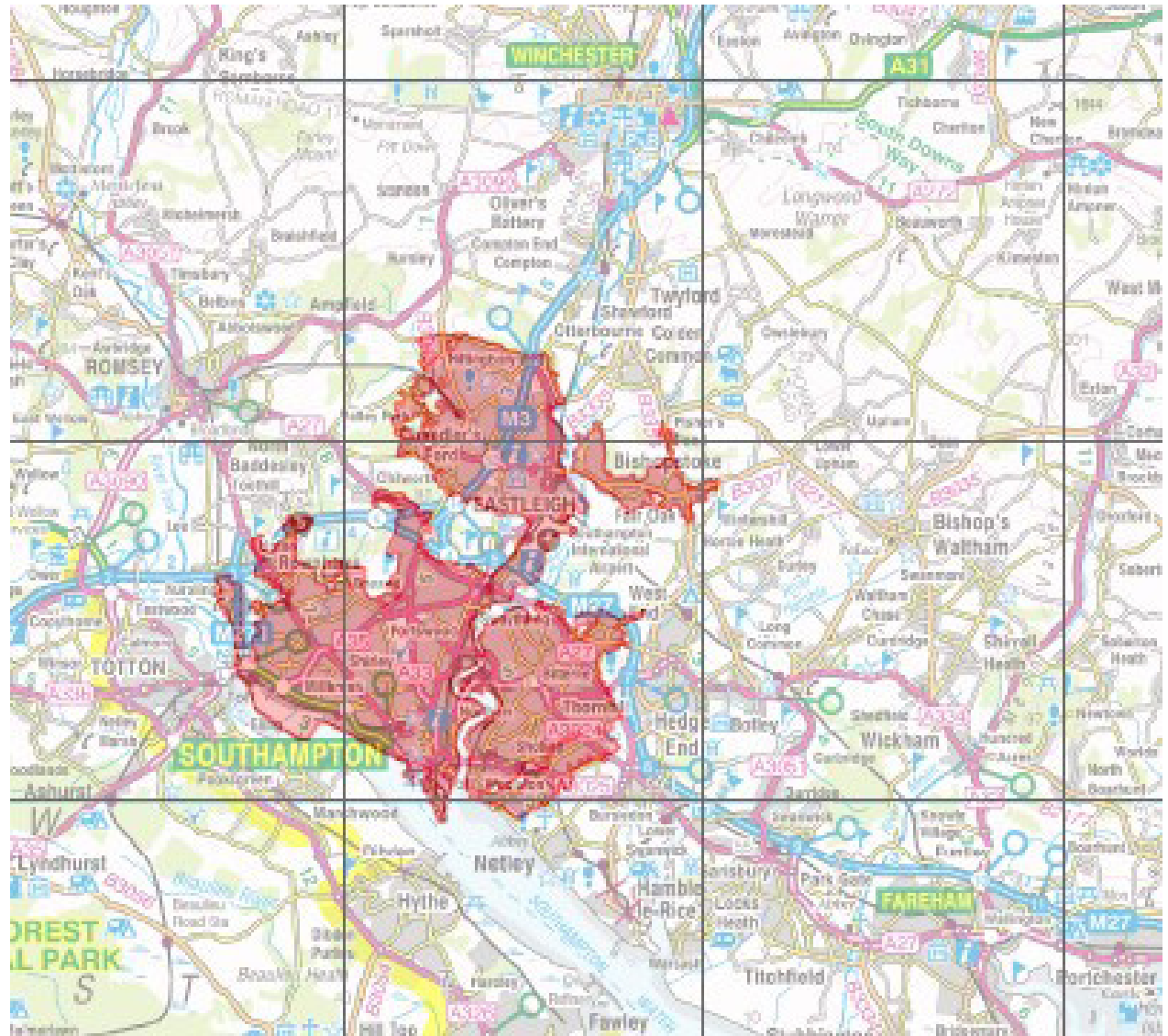
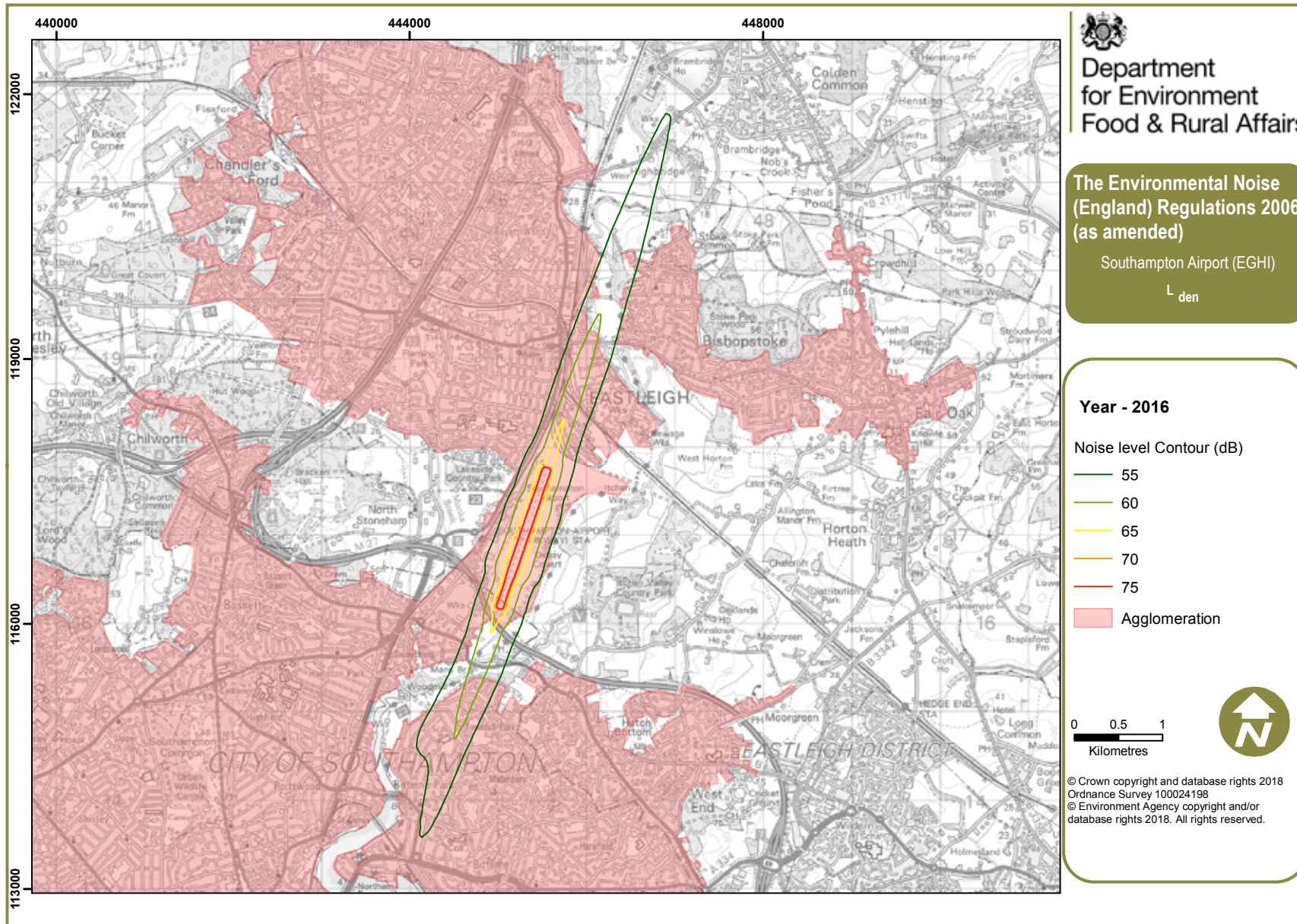


FIGURE 3: SOUTHAMPTON AGGLOMERATION

APPENDIX D: SOUTHAMPTON AGGLOMERATION WITH NOISE CONTOURS OVERLAPPED



All diagrams within this appendix have been reproduced with the permission of DEFRA.

FIGURE 4: L_{DEN} NOISE CONTOURS OVERLAPPED ON SOUTHAMPTON AGGLOMERATION

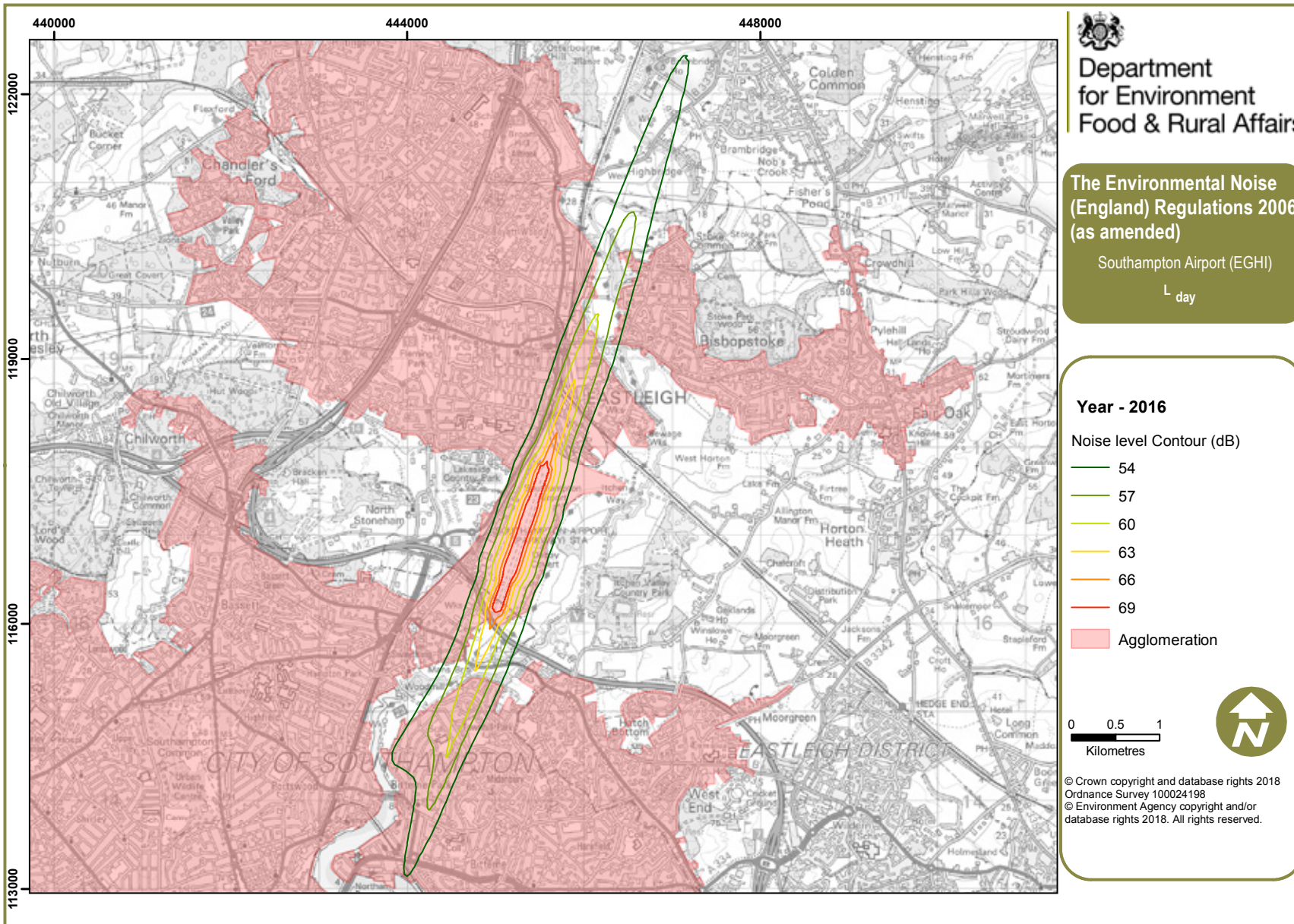


FIGURE 5: L_{DAY} NOISE CONTOURS OVERLAPPED ON THE SOUTHAMPTON AGGLOMERATION

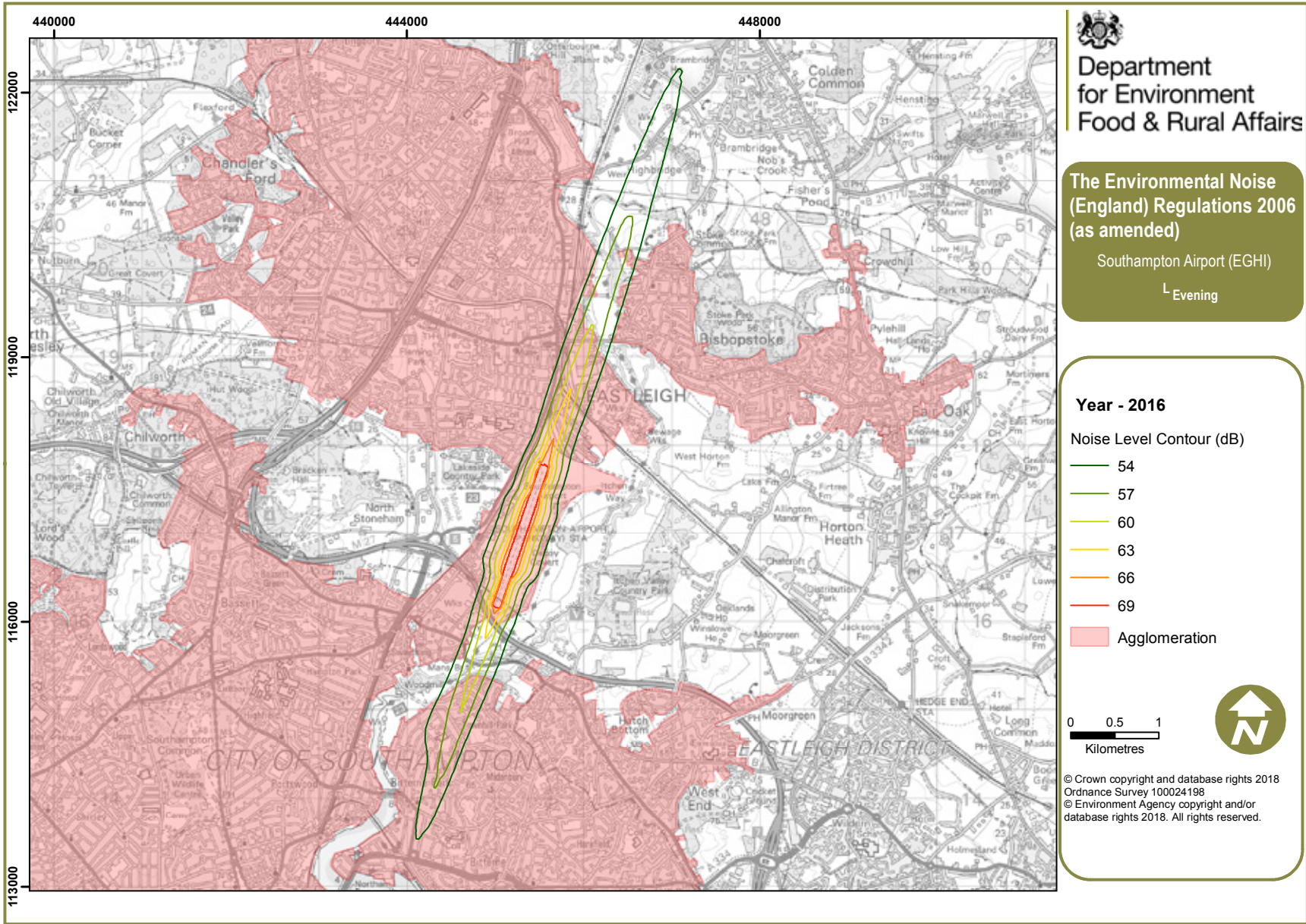


FIGURE 6: L_{EVENING} NOISE CONTOURS OVERLAPPED ON THE SOUTHAMPTON AGGLOMERATION

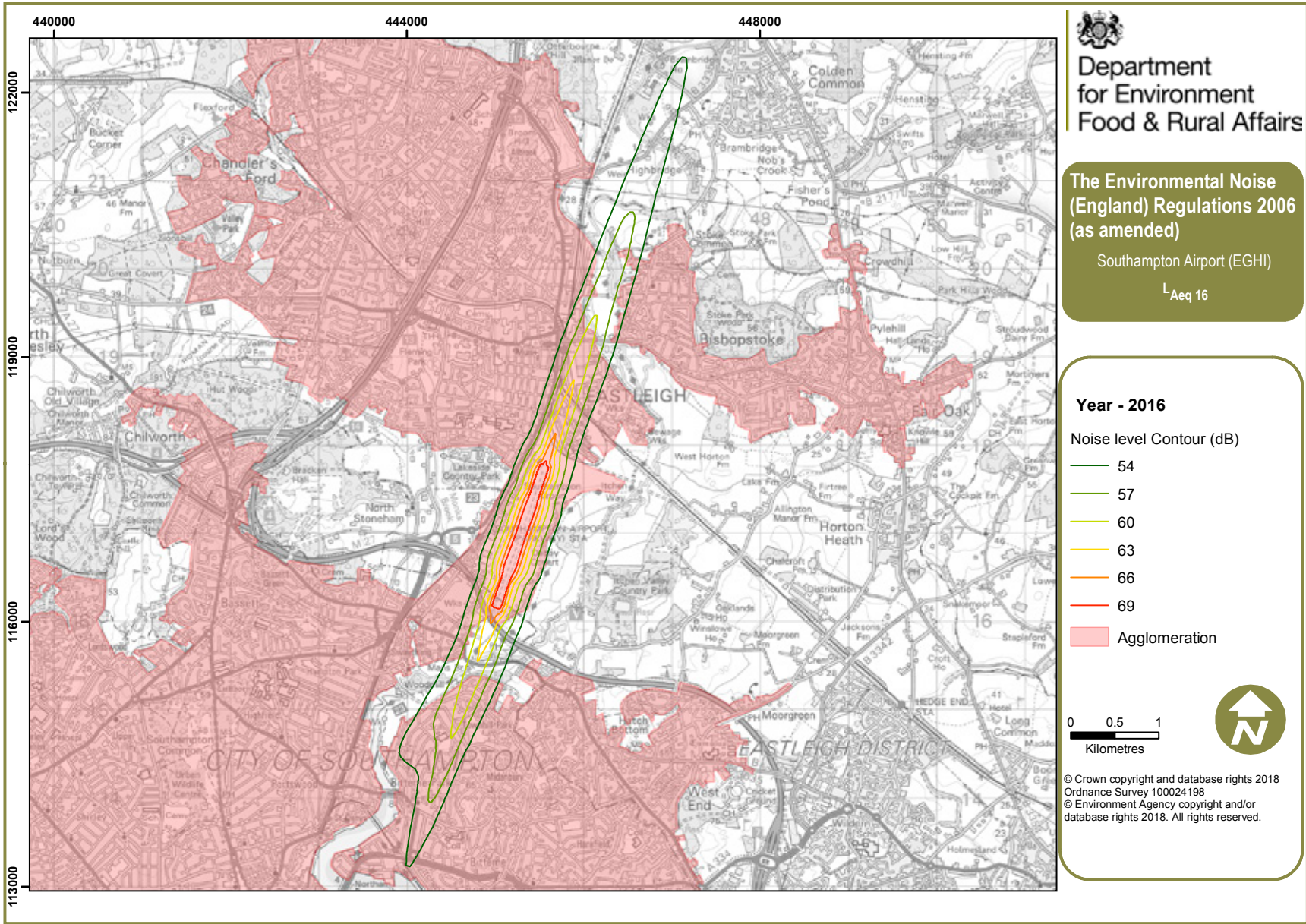


FIGURE 7: $L_{Aeq 16}$ NOISE CONTOURS OVERLAPPED ON SOUTHAMPTON AGGLOMERATION

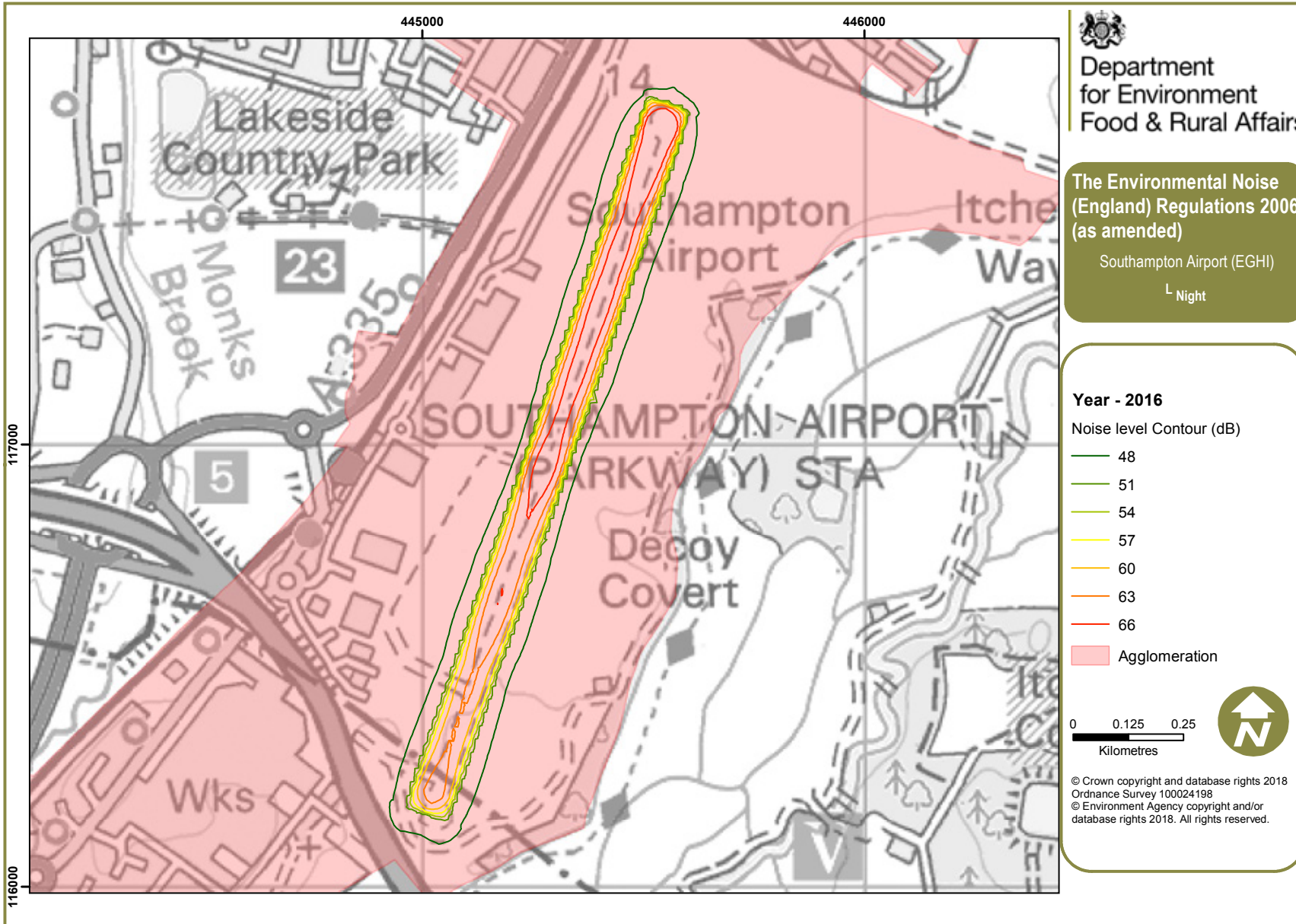
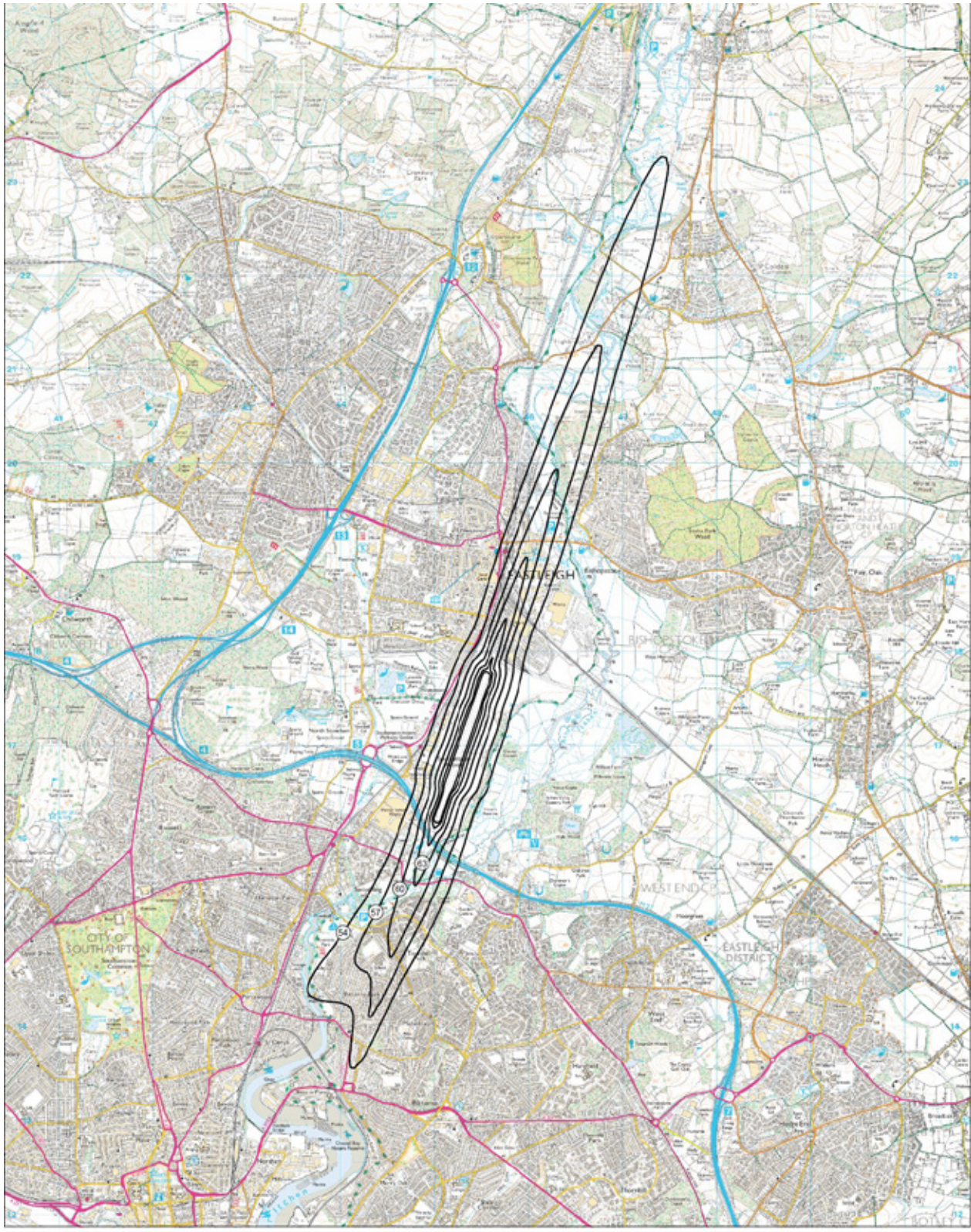


FIGURE 8: L_{NIGHT} NOISE CONTOURS OVERLAPPED ON THE SOUTHAMPTON AGGLOMERATION

APPENDIX E: "ROUTINE NOISE CONTOURS" - 2016DB L_{AEQ},16H



0 1 2 3 km

SOUTHAMPTON AIRPORT
2016 average summer day L_{AEQ,16hr} 54-72 dB(A) contours
Actual modal split 76% RWY 20 / 24% RWY 02

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APPENDIX F: "NOISE REGULATION CONTOURS" - 2016 DB L_{DEN}



SOUTHAMPTON AIRPORT
2016 L_{den} 55-75 dB(A) contours
Actual modal split 62% RWY 20 / 38% RWY 02

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APPENDIX G: USEFUL CONTACTS

Southampton Airport Noise & Flight Evaluation Unit

Telephone: 023 8062 7070
Email: sounoisecomplaints@southamptonairport.com
Post: Noise & Flight Evaluation Unit, Southampton Airport,
Southampton, SO18 2NL
Website: www.southamptonairport.com/about-us/aircraft-noise/

DEFRA

Website: www.defra.gov.uk

NATS (ATC)

Website: www.nats.co.uk

CAA

Website: www.caa.co.uk

Sustainable Aviation

Website: www.sustainableaviation.co.uk

Eastleigh Borough Council

Telephone: 023 8068 8000
Post: Eastleigh Borough Council, Leigh Road, Eastleigh, SO50 9YN
Website: www.eastleigh.gov.uk

Southampton City Council

Telephone: 023 8022 3855
Post: Southampton City Council, Civic Offices, Southampton, SO14 7LY
Website: www.southampton.gov.uk

Winchester City Council

Telephone: 01962 840 222
Post: Winchester City Council, City Offices, Colebrook Street,
Winchester, SO23 9LJ
Website: www.winchester.gov.uk

APPENDIX H: SOUTHAMPTON AIRPORT NOISE PREFERRED ROUTES

NORTHERN OPERATIONS

Aircraft Departing to the North (Runway 02)

Aircraft departing in a northerly direction are required to continue along the runway heading until reaching two and a half miles from the end of the runway. This avoids overflying the village of Bishopstoke to the north east, and densely populated areas of Eastleigh and Chandler's Ford to the North West. After this point aircraft will then route towards their next navigational waypoint.

Aircraft Arriving from the North (Runway 20)

Non-Visual Approach (using specialist navigation equipment - ILS) Aircraft will join the standard approach path from no less than 8 nautical miles and at a constant 3° angle of approach.

Visual Approach

Aircraft making a visual approach will be aligned with the centre line of the runway from not less than 2 nautical miles when arriving from a southerly point of origin, and at 5 nautical miles when from northerly, easterly or westerly directions.

SOUTHERN OPERATIONS

Aircraft Departing to the South (Runway 20)

Aircraft taking off to the south will climb straight ahead to

500ft above mean sea level, and then turn right to follow a 217° heading. This heading will direct aircraft towards the path of the River Itchen and the track will be maintained until reaching Southampton Water or 2000ft above mean sea level, whichever is reached first. The exact point, at which aircraft reach 500ft and subsequently turn, will vary depending on many factors, such as engine type, aircraft weight and weather conditions.

Aircraft Arriving from the South (Runway 02)

Visual Approach

The point at which aircraft are required to be on alignment with the runway's centre line, when making a visual approach is four miles. Aircraft join the approach path over the less densely populated Southampton Water area to manoeuvre onto the runway centre line for arrival. The aircraft are then required to follow a 3° angle of approach for operational reasons.

EXCLUSIONS FROM NOISE PREFERRED ROUTES

The UK Civil Aviation Authority has a strict consultation process in place to ensure that all stakeholders are made aware of, and given an opportunity to feedback on any proposed permanent flight path changes. It is important to note that Southampton Airport will not permanently change any flight paths without following this process of

consultation. However, there are conditions when noise preferred routes will not be flown on a temporary basis. These include:

Type of aircraft

These routes only apply to commercial aircraft above 5700kgs and to all jet aircraft. Smaller aircraft types, such as the Trislander aircraft, smaller propeller aircraft and helicopters will not follow these routes as this would result in significantly increased journey times and increased fuel usage.

Operational activity

Occasionally aircraft will be directed by NATS not to fly the Noise Preferred Route due to weather conditions, other air traffic in the area, or for aircraft performance reasons. In addition, communities around the airport are likely to see and hear aircraft even if they do not fly directly overhead.

APPENDIX I: CONSULTATION RESPONSES

On the 10th of April 2018 the draft Noise Action Plan was submitted to the Airport Consultative Committee for consultation and it was also published on the airport's website. On the 22nd May the consultation period closed and we would like to thank all those who took the time to provide their feedback. Below is a summary of the comments received and the airport's response to those comments.

COMMENT	AIRPORT RESPONSE
<p>Your usual approach route for landings from the North passes to the West of Colden Common, following the less-populated gap between our village and Otterbourne, along the River Itchen's floodplain. Your noise contour maps illustrate this effectively as the contours extend northward until they are adjacent to our village to the West.</p>	<p>The contours are calculated and published by the environmental research and consultancy department (ERCD) of the Civil Aviation Authority (CAA).</p>
<p>My first point is that I do not believe that your contour mapping is adequately taking account of the local geography. Aircraft on approach fly down the valley created by the river, and the villages are further uphill. This means that the houses in the villages are horizontally much closer to the aircraft than the contours would suggest. I believe you need to expand your mapping activity to include the residential areas on either side of the approach path to allow for this.</p> <p>Similarly, either due to wind conditions or to save time, aircraft frequently fly directly over the village, with a greater noise impact when they do. You need to carry out your noise impact assessment over a longer period of time, to ensure that the sporadic days following that pattern are captured and their impact assessed.</p>	<p>Details of how the ERCD calculate the contours, including how terrain data is used as part of the model can be found here: https://www.caa.co.uk/Consumers/Environment/Noise/Features-of-the-ANCON-noise-modelling-process/</p> <p>We are proposing to continue with these actions, please refer to Section 10 of the Noise Action Plan.</p>
<p>As a former Eastleigh resident, I was used to the background noise from the airport, to the point that it was often only noticeable when it stopped in the evening, as the last manoeuvring aircraft stopped its engines. However, whilst I cannot hear that ground noise now, I believe that the noise impact of approaching aircraft is greater in Colden Common than it was in central Eastleigh, despite the aircraft being at a greater height above sea level. I believe this is due to the geography, as I state above, where the village is essentially "side-on" to the approaching aircraft.</p>	
<p>Despite my comment above, I believe the airport is generally efficiently and considerately run and a definite benefit to the region. I would ask you to consider the following action points:</p>	
<ul style="list-style-type: none">• Greater discipline in maintaining "straight-line" approach and departure routes on both northern and southern approaches, to a greater distance from the runway, to limit the high-impact areas affected. This would need to include both air traffic control instruction and penalties for airlines choosing to "cut the corner"	<p>We proactively monitor aircraft adherence to noise preferred routes and there is a new action as part of the 2018 – 2023 NAP to create a process for penalising airlines should deviations occur. For more details please refer to Section 10.</p>
<ul style="list-style-type: none">• Mandating steeper approach paths on landing, to increase the separation of aircraft from homes until closer to the runway	<p>A commonly used approach slope is 3° from the horizontal, currently the angle at SOU is 3° to runway 02 (landing from the South) and 3.1° to runway 20 (landing from the North). To make the angle of approach steeper would therefore require modifications of airspace which regrettably at present is not a viable option.</p>
<ul style="list-style-type: none">• Continuing to restrict the operation of older, noisier aircraft, with the restrictions increasing over time, to encourage airlines to invest in newer, quieter aircraft as they become available.	<p>We are proposing to continue with these actions, please refer to Section 10 of the Noise Action Plan.</p>

[continued >](#)

COMMENT

AIRPORT RESPONSE

Your wording around night flights has changed in the draft noise action plan. Is it your intention to open the airport at night and to use your quota of night flights (10 a month)?

We are not intending to open at night or to increase the use of the night flights quota.

Colden Common Parish Council are wishing to complain that Southampton Airport have not contacted us directly with this consultation. We have heard about it completely by chance.

The Noise Action Plan was distributed to all members of the Airport's Consultative Committee (ACC). The ACC is made up of MPs, town councillors, parish councillors and local community groups who together represent the local community. For a full list of consultative committee members and for details of the constitution, please see Eastleigh Borough Council's website: <https://meetings.eastleigh.gov.uk/mgCommitteeDetails.aspx?ID=267>

We believe we should have

- Been given at least 6 weeks so that we can inform our parishioners and get their reaction
- The Airport should have offered to come and talk to the communities most affected and the PC's
- Notified us of any exhibitions etc

Alongside publishing the NAP to our consultative committee, the airport also published the draft on the website and invited local residents who had recently submitted noise complaints to review and respond.

We wish our complaint to be acknowledged and answered and ask for at least 4 extra weeks consultation

Following the emails from Colden Common Parish Council and Twyford Parish Council, the consultation period was extended by to the 22nd of May giving a total of 6 weeks consultation.

It is the duty of Southampton Airport to notify organisations and associations directly affected by aircraft noise that a consultation is taking place. No such notification was received by Twyford Parish Council and I believe Colden Common Parish Council as well. By chance the aircraft noise consultation was brought to the attention of the Council today with a time limit of only one week to make a submission.

This is impossible and the Council requests an extension of one month in order to discuss the matter.

Thank you for consulting the Environment Service at Eastleigh Borough Council on your draft Noise Action Plan for 2018-2023, it is good to see that the Airport supports the Environmental Noise Directive, END, and is working to manage the impacts of noise on the local community.

Our comment:

1. Section 4 legislation

- a. the section on UK government legislation does not mention the UK statutory instruments pertaining to the END
- b. not clear why the sub sections: Changes to aviation noise compensation policy, The independent commission on civil aviation noise, and New metrics and appraisal guidance for assessing noise impacts are under the heading of 'Local authorities'.
- c. We are pleased that the airport supports the adoption of the LOAEL levels for daytime and night time operations noise assessment.

We have added these details to Section 4.

We have moved these sections into the UK Government legislation section.

[continued >](#)

2. Section 6 Measuring aircraft Noise

- a. The routine noise contours, based on a the summer aircraft movements, and reported as $L_{Aeq,16hr, 0700-2300}$, this measure is at variance with the permitted operational times of the airport and thus will be likely to underestimate the noise impact of operations over the summer.

This is a standard data measurement that is calculated and published by the environmental research and consultancy department (ERCD) of the Civil Aviation Authority (CAA) for all airports. We have asked the CAA to clarify the reasoning behind the contour bands and we will update the NAP once we receive a response.

3. Section 7 Results of noise mapping

- a. Tables 1,2,3 and 5; Table 1 uses a different banding of noise levels when compared to tables 2,3 and 5.
- b. There is no discussion or context given to describe of how the number of dwellings and people affected by noise as shown by the tables has changed from the previous plan. For example looking at the => 55 band for L_{den} , the 2013-18 plan shows 2300 dwellings / 5700 people, as opposed to this draft, which shows 2350 dwellings / 5600 people. We would have expected some discussion around changes in usage or aircraft type at the airport since the last plan to illuminate this part of the plan.
- c. Similarly. Table 4 shows the number of dwellings / people within the L_{Aeq} day contours, this shows <50 dwellings / 100 people in the 63 dB category, but no discussion of how this relates to the compensation policy is made.

These tables were supplied to us by DEFRA as part of the Airport Noise Action Planning Data Pack 2017. Table 1 is a specific indicator required by the Environmental Noise Directive and is reported in the 5dB bands defined by the Directive. Tables 2 to 5 use routine UK aviation banding. We have added a note to table 1 explaining this.

We have reviewed this as part of the Noise Action planning process and decided not to include a comparison due to the relatively small changes in the tables (both positively and negatively).

Further information will be provided in our Noise Insulation Policy.

4. Section 9 Noise Management

- a. Reference is made to Noise Insulation and Land-use Planning, this does not reference Table 4.

We have added a note within Section 9 to refer to Section 7: table 4.

5. Section 10 - Noise Actions / Action Plan

- a. It would be helpful to number the actions listed to facilitate communication on these matters.
- b. Reduction of noise at source – it would have been helpful to explain more about how the 3rd item, FlightPath 2050 will be incorporated into the operation of the airport , how the current situation compares to 2000 noise levels, and how it will lead to further reductions in noise levels.

We have added numbers to the actions.

As part of the AGS group we form part of a working group which looks to improve sustainable aviation across airports globally. We will continue to work as part of this and we will update our Airport Consultative Committee with any new and substantial objectives.

[continued >](#)

COMMENT

AIRPORT RESPONSE

- c. 'Working with local communities' - the 7th action listed refers to the deployment of noise monitoring equipment at the direction of the TWG. We would recommend that it is deployed to look at the dwellings identified in Table 4 to determine whether any or all that fall within the $63\text{dBL}_{\text{AeqT}}$ day contour are correctly identified. A view will also need to be taken as part of the development of the noise insulation policy as to how the assessment will take account of the delay between the production of contours, e.g. the current contour is based on 2016 aircraft data and 2015 population data.
- d. 'Influencing planning policy...' – we support the third item, to develop a Noise Insulation Policy. We would question why this has been placed in the sub category of influencing planning policy, it would be better perhaps located within the preceding sub section, or the following section 'Organising ourselves to manage noise efficiently ..'. See also comments in 4c and 5c above

Thank you for your recommendation. We will review this as part of the process of finalising the Noise Insulation Policy.

The headings reflect the ICAO balanced approach and follow our AGS group strategy in terms of Noise Action Plan actions.

I live in Colden Common near the Rising Sun pub. There is often unnecessary noise caused by aircraft flying overhead of this vicinity, on quite a regular basis.

We proactively monitor aircraft adherence to noise preferred routes and there is a new action as part of the 2018 – 2023 NAP to create a process for penalising airlines should deviations occur. For more details please refer to Section 10 of the NAP.

I walk around Colden Common village often, for the exercise -- there are often aircraft flying across the whole of Colden Common village, causing unnecessary noise.

It seems to me that the pilots of all these aircraft are turning on their approach, or departure, from the airport -- and 'taking a short cut' across this relatively high density population area.

Noise preferred routes for departing aircraft and for aircraft arriving 'visually' (in good visibility) were introduced following a wide scale consultation with local stakeholders, residents and councils. These routeings aim to divert aircraft away from the most densely populated areas where it is possible to do so. The airport ensures, as far as is reasonably practical, that aircraft using the airport adhere to the preferred routes.

This is crazy, given there are much better take-off and landing pathways / flight-paths (in this area to the north of the airport).

It would be much better, with less noise impact on households, if instead of flying / turning directly above Colden Common, they came-in / took off on a direct line, directly aligned with the airport runway for 15 miles, at a higher altitude over the built up areas 'directly' to the north. By using altitude on this direct path, it would significantly minimise any noise on that pathway.

Aircraft safety requires that wherever possible, aircraft have as direct approach as possible to the runway. As part of the Noise Action Plan we have worked to put actions in place to mitigate the effects of aircraft noise on the communities living under these flight paths. As part of this we will be monitoring adherence to noise preferred routes.

Alternatively, if aircraft must turn, on approach / take-off -- it would be better if the approached / departed via the west -- over the open countryside towards Silkstead.

If on rare occasions they must travel over the eastern side of the river Itchen valley -- it would be much more preferable if aircraft crossed the B3335 in the area with next to zero dwellings -- immediately to the north, or immediately to the south, of Twyford village --- instead of flying across Colden Common village.

Please will you email reply and confirm that you will in future, for evermore -- ban all aircraft from flying over Colden Common Village

[continued >](#)

COMMENT

AIRPORT RESPONSE

I would like to bring to your attention the increase in aircraft noise levels in Colden Common. I have lived here for over 20 years and noticed the increase in aircraft noise levels particularly where the incoming aircraft "cut the corner" across Colden Common as they approach Southampton airport. Could I ask you to consider aircraft avoiding the Colden Common area to reduce the increased levels of aircraft noise affecting our lives.

We proactively monitor noise preferred routes for arriving and departing aircraft and as part of this Noise Action Plan we are introducing an action to penalise airlines if they deviate from these routes without due cause. Future concerns around this issue should be sent to our flight evaluation unit: noisecomplaints@southamptonairport.com

As a resident of Fisher's Pond for some 30 years this item is of interest. We live on Portsmouth Road, a few house from the traffic lights in main road. Map reference 490208

Noise preferred routes for departing aircraft and for aircraft arriving 'visually' (in good visibility) were introduced following a wide scale consultation with local stakeholders, residents and councils. You can find details of these routes in appendix H. The noise preferred routes only apply commercial aircraft above 5700kgs and to all jet aircraft. Smaller aircraft types, such as smaller propeller aircraft and helicopters will not follow these routes as this would result in significantly increased journey times and increased fuel usage.

When we came here it seemed as though planes coming from the south and landing from the north seemed to turn left over our house.

A few years ago, maybe five, there was a new agreement and the planes from the south had to go up towards Twyford then turn south. This was quite a relief as noise was reduced.

Recently there has been an increase in noise. The scheduled airliners are following the rules. But there are an increasing number of small aircraft 'cutting the corner'. Particularly the small passenger jets which an executive might hire. Also light aircraft which might be privately owned.

We work closely with our business partners who operate aircraft under the minimum weight threshold to highlight the importance of the NPRs and also with Air Traffic Control to ensure that routings given to airlines comply with noise guidelines.

I believe there are private hire jets based at Eastleigh. The light aircraft may be amateur visitors.

[continued >](#)

COMMENT

There is a lot of background information and a useful table of actions, some completed, some in-course and others maybe yet to be started.

Of interest to me particularly is the noise contour maps and action tasks and the completed task regarding new tracking systems for deviating aircraft, of which there have been a few recently.

The level of noise (particularly due to the purple FlyBe craft and the vast increase in flights) has increased significantly. It seemed to me that the aircraft were following a 'dog-legged' approach from the North and it might be better if they followed a track closer to the railway line and the M3 motorway. However looking at the maps it is clear this is a miss-understanding on my part. However I feel I am correct when I say that until a number of years back, they did indeed stay further away from Colden Common than they do now.

What I think has changed is that planes seem to rarely approach from Winchester, over the Twyford Cutting (M3) and if they do they are higher up and further away than the majority. Instead the majority seem to come from Chilcomb, down to Twyford and keeping as far from the railway line as they can.

Now, I am aware that the area above Chilcomb, Easton and Ovington is being used to 'stack' flights where maybe a few years ago this was not the case? I travel this area frequently and it is clear to see. As a result when leaving the stack, they follow the above mentioned track down to Twyford and on. This is what I believe is different now. When this happens, they also seem to come in with a minimal time spacing between them (3 planes within 10 minutes for example)!

It is interesting that the maps (eg: Figure 5) show the urban areas in pink/red. More interesting is that Colden Common and Twyford is not similarly highlighted. Reading between the lines I have concluded that the noise measurements taken by a contractor does not include Colden Common and Twyford.

I would therefore like to see the plan moving forward to include extended measurements in this area and maybe this should also include further south as well?

Whilst I did try to follow the discussion regarding Chapter 3 aircraft, it was a bit heavy going and the information was not easily available. Disappointingly I could not find that these 'Purple FlyBe craft' fitted under this category!

My wish would be to discourage these 'noisier' craft in favour of the original craft and jets.

Finally, I was disappointed to find that the Colden Common Parish Council was not aware of this consultation.

As one of your neighbours, I would request that you undertake to involve both Colden Common and Twyford Parish Councils in future consultations etc.

Thank you for the opportunity to provide this feedback.

AIRPORT RESPONSE

Noise preferred routes for departing aircraft and for aircraft arriving 'visually' (in good visibility) were introduced in 2007 following a wide scale consultation with local stakeholders, residents and councils. These routeings aim to divert aircraft away from the most densely populated areas where it is possible to do so. The airport ensures, as far as is reasonably practical, that aircraft using the airport adhere to the preferred routes.

Due to airspace constraints, aircraft arriving onto runway 20 are required to fly a circuit in order to lose altitude prior to their final approach into the airport.

As defined in Defra's Noise Action Plan: Agglomerations Environmental Noise (England) Regulations 2006, as amended January 2014 an agglomeration is: "An area having a population in excess of 100,000 persons and a population density equal to or greater than 500 people per km² and which is considered to be urbanised". Colden Common and Twyford are not identified by Defra as part of the agglomeration.

The Figures 3 to 8 show how the noise contours overlay on the agglomeration however the agglomeration does not impact the calculation of the noise contours.

This information is calculated and provided by Defra.

Within Section 9 of the NAP we have outlined our continuation of a ban on noisier aircraft as well as working with the industry to encourage technologically advanced quieter aircraft.

The Noise Action Plan was distributed to all members of the Airport's Consultative Committee (ACC). The ACC is made up of MPs, town councillors, parish councillors and local community groups who together represent the local community. For a full list of consultative committee members and for details of the constitution, please see Eastleigh Borough Councils website: <https://meetings.eastleigh.gov.uk/mgCommitteeDetails.aspx?ID=267>

continued >

COMMENT

AIRPORT RESPONSE

I appreciate the efforts made by the airport authority at Southampton to keep the noise levels at acceptable levels for those residents under and near the flight paths of aircraft using the airport. The fact that few flights are permitted during the night (23.00 - 6.00 Monday to Saturday and to 7.30 Sundays) makes life easier for those of us near the flight paths. However, some aircraft do fly quite low over the Colden Common area rather than keep to the the river valley route into the airport and monitoring of complaints of this and other deviations will be good.

We proactively monitor noise preferred routes for arriving and departing aircraft and any future concerns around aircraft should be sent to our flight evaluation unit: noisecomplaints@southamptonairport.com

Although there has been an increase in the number of aircraft using the Southampton, I have not found that much increase in the noise heard. Level about the same but more frequent.

I live in Colden Common, and generally do not consider that aircraft noise is excessive or objectionable.

Please refer to section 10 of the Noise Action Plan where we have outlined our actions to proactively monitor aircraft tracks and deviations from the Noise Preferred Routes.

However, there seems to be an increasing number of planes that appear to deviate from the usual flight path when coming in to land. This results in them flying lower or closer (or both).

What, if anything, is done to follow up and apply sanctions to the aircraft? It would see the pain of being deafened in the garden if one knew that both airline and captain were to receive hefty fines.

We live in Highbridge, directly under the flight path of aircraft landing at Southampton from the NNE. The main problem we have with noise arises when there are frequent flights landing during sunny days in the summer since the noise as each aircraft passes overhead precludes conversation in the garden. It only really becomes irritating when several 'plane go over within a short time.

Regrettably small changes to the approach tracks of aircraft (by as little as 100m) are very difficult to achieve and guarantee. In addition to this, aircraft safety requires that wherever possible, aircraft have as direct approach as possible to the runway. As part of the Noise Action Plan we have worked to put actions in place to mitigate the effects of aircraft noise on the communities living under these flight paths and there is more information in Section 10 of this NAP.

From looking at your noise contours it occurs to me that the situation would be ameliorated if the approach for alternate flights were shifted by 100m to the west or east as this would give about a 3dB reduction in the noise at Wardle Road and would represent a change of 1.5 degrees to the approach angle at this point. I realise that this may not be feasible but I believe it is worth considering as it would make a significant difference to the perception of the noise.

A minor point - in the draft plan diagrams 5, 6 and 7 have spurious "54" dB markers.

Thank you for making us aware of this, we have asked DEFRA who provided the diagrams, to review the information provided and to update. Once we have received these we will update the Noise Action Plan.

[continued >](#)

COMMENT

AIRPORT RESPONSE

I live in Winchester and expect noise to a certain degree, but aircraft overhead going into Southampton Airport is over and above the expected noise level. Sitting in the garden, relaxing and then overhead noise, not once not twice but regular intervals, very annoying and it goes on into the late evening.

Would like an explanation why it is so regular the airtraffic overhead in a built up residential area, there are green areas nearby. Any further development to the airport as to size of aircraft would be a big problem to me and others in this area.

All aircraft that arrive and depart from Southampton Airport follow Noise Preferred Routes and these were introduced following a wide scale consultation with local stakeholders, residents and councils. These routeings aim to divert aircraft away from the most densely populated areas where it is possible to do so.

As part of the Noise Action Plan we have worked to put actions in place to mitigate the effects of aircraft noise on the communities living under these flight paths and further details of these can be found in Section 10. As part of this we will be monitoring adherence to noise preferred routes.

I would like to participate in this consultation as I believe noise over Twyford, where I live, has increased significantly over the last two years with an increased number of noisier jet engine aircraft compared to the more usual and quieter turbo propeller aircraft I am used to seeing.

In addition, the number of aircraft especially early mornings and early evenings appears to have increased.

I don't find it acceptable that this is happening, especially given that Twyford sits in the South Downs National Park, where noise and light pollution should be reducing not increasing!

I would hope it is possible to route aircraft (especially those landing which are lower) around Twyford so as to avoid entering airspace above the South Downs National Park.

All aircraft that arrive and depart from Southampton Airport follow Noise Preferred Routes and these were introduced following a wide scale consultation with local stakeholders, residents and councils. These routeings aim to divert aircraft away from the most densely populated areas where it is possible to do so.

As part of the Noise Action Plan we have worked to put actions in place to mitigate the effects of aircraft noise on the communities living under these flight paths and further details of these can be found in Section 10.

Yes I would like to participate in the plan as the noise from some of the planes is truly awful and they fly straight over the village of Twyford - why can they not further out into the country where there is less building and people – probably because it is more expensive for fuel.

Noise preferred routes for departing aircraft and for aircraft arriving 'visually' (in good visibility) were introduced following a wide scale consultation with local stakeholders, residents and councils. These routeings aim to divert aircraft away from the most densely populated areas where it is possible to do so. The airport ensures, as far as is reasonably practical, that aircraft using the airport adhere to the preferred routes.

As part of the Noise Action Plan we have worked to put actions in place to mitigate the effects of aircraft noise on the communities living under these flight paths. As part of this we will be monitoring adherence to noise preferred routes.

[continued >](#)

COMMENT

AIRPORT RESPONSE

We welcome the consultation. Having read the draft plan, there appears to be no Noise Preferred Route to the north in recognition of the northern villages to the airport. Otterbourne Parish Council would like to see this incorporated into the Noise Action Plan.

We have added an additional appendix with details of the Noise Preferred Routes for both North and South arrivals and departures.

Further to your consultation , I would make the following comments-

The noise that an aircraft produces varies depending on a number of factors. The larger the aircraft does not necessarily correlate with greater noise.

I'm concerned that it seems like larger and noisier planes are being used (this being a change). Size was always a consideration and smaller quieter planes generally used to minimise noise disturbance. It seems to me that occasionally larger planes are used. I am kept awake by and woken up by aircraft noise.

In Section 10 we have outlined actions to ban noisier aircraft and further to work with our partners in sustainable aviation to advance aircraft noise technology.

Secondly I understood there was an unwritten rule about earliest and latest take off and landing times but this has been denied. I am woken by planes, this is important to me and any slippage shortens my sleep.

Please refer to Section 9 which outlines our Section 106 agreement with Eastleigh Borough Council with regards to night flights.

Sleep is vital to good health, along with fresh air, which brings me to...

We work closely with Eastleigh Borough Council to monitor air quality and we have a number of ongoing environmental initiatives.

Planes dump huge quantities of particulate matter and it would be nice to know that this is acknowledged and considered, especially with the impending fines from Europe for failing air quality commitments. More locally, my wife and daughter are both asthmatic and as we are directly under the flight path, I am concerned that particulates exacerbate the problem and in my daughter's case, may even have caused it. Grateful for your comments.

The Noise Action Plan only concerns noise however we recognise the importance of this issue and you can find further information on our website here and within Section 8.6 of our masterplan:

www.southamptonairport.com/about-us/our-vision/

www.southamptonairport.com/about-us/our-local-environment/

End